The KCTCS Catalog serves as the students' guide to academic programs and services that our colleges provide. Students who enroll in an academic program should fulfill requirements as they exist at the time of such enrollment. If requirements change while the student is enrolled in a program, he/she may fulfill either the new or old requirements.

KCTCS makes every effort to include relevant, timely, and accurate information in the Catalog. However, KCTCS reserves the right to make changes in the calendar, admission policies, expenses, programs, curricula, course descriptions, or any other matters addressed or not addressed in this publication. Prospective students and enrolled students should check with college admission officers and academic advisers to learn of any changes. Also, some updates may be included in the online version of the Catalog located at kctcs.edu.
Welcome to the Kentucky Community and Technical College System. Higher Education Begins Here! Our statewide system of 16 colleges, located on 68 campuses, is here to provide you with a quality education that is both accessible and affordable.

If you are a new student at a KCTCS college or newly enrolled in a particular academic program, the 2012/13 Catalog is your guide to the many academic programs and student services we offer. It is an important tool to help you explore the educational opportunities available at each of the 16 KCTCS colleges.

Also, I invite you to visit our online version of the catalog located on the student section of the KCTCS website at kctcs.edu. This convenient, user-friendly tool allows you to easily search our more than 600 program options.

KCTCS prides itself in providing students with an education that is not only affordable and convenient, but is also relevant to the workplace. Teaching is our top priority. Our faculty focus on you and your educational goals. Our instructors bring real world experience into the classroom to assist you in meeting the challenges ahead.

Thank you so much for your interest in KCTCS. On behalf of the entire System, I wish you the best of luck on your educational journey. If you have further questions, contact the KCTCS college nearest you or call 1-877-KCTCS-4U (1-877-528-2748).

Sincerely,

Michael B. McCall, Ed.D.
President, KCTCS
History and Functions of KCTCS

Created by the Postsecondary Education Improvement Act of 1997, the Kentucky Community and Technical College System (KCTCS) is a statewide system consisting of 16 two-year colleges that provide quality postsecondary education and workforce training. KCTCS colleges are committed to making education accessible, relevant and responsive to the needs of students, employers and communities.

Sixty-eight KCTCS campuses are strategically located across the Commonwealth, from Ashland to Paducah, from Covington to Bowling Green. Additionally, KCTCS is the largest provider of online learning in the state offering more than 70 online programs. In the fall of 2011, more than 53,000 students were enrolled in KCTCS distance education courses.

KCTCS colleges confer three types of credentials — certificates, diplomas and associate degrees including: associate in arts, associate in science and associate in applied science — upon students who complete credit programs.

While continuing to emphasize its historical mission to provide general education, KCTCS is increasing its focus on occupational/technical education. KCTCS colleges have instituted more than 2,800 new programs and program options since 1998.

While providing credit-based academic and technical programs is a primary function of KCTCS, the System also views postsecondary education as a crucial resource for workforce development. KCTCS forges partnerships between colleges and businesses to provide Kentucky workers with the skills required today and to help industries and individuals develop the capabilities they will need tomorrow.

KCTCS also enhances learning opportunities for all Kentuckians through noncredit continuing education. From personal improvement to cultural activities, community development programs at KCTCS institutions are tailored to meet local needs. KCTCS colleges sponsor an array of fine arts programs that enrich their communities.

KCTCS institutions offer a wide range of student services, making the admission process easy to navigate. Students at KCTCS colleges are eligible for federal financial aid and a variety of need and merit-based scholarships.

While focusing on quality, KCTCS colleges are the best value in postsecondary education in Kentucky. Year in and year out, KCTCS tuition is the lowest in the Commonwealth. Students at community and technical colleges benefit from a single, simple tuition and charge structure.

KCTCS colleges are enhancing efficiency and service to the Commonwealth at each of the System's 16 colleges by consolidating functions, services and programs, and by pursuing single accreditation under the Commission on Colleges of the Southern Association of Colleges and Schools (SACS).

For more information on how KCTCS changes the lives of students, please visit our website at kctcs.edu.

Mission Statement

Kentucky Community and Technical College System

The mission of KCTCS is to improve the employability and quality of life of Kentucky citizens as the primary provider of:

- College and Workforce Readiness.
- Transfer Education.
- Workforce Education and Training.

Academic Calendar

In order to be responsive to the needs of communities and students, KCTCS institutions offer terms in a variety of lengths from two weeks to 16 weeks. The two primary terms begin in August and January. The colleges offer shorter sessions within these two terms, allowing students the flexibility to schedule classes to best meet their needs. A variety of sessions from two to eight weeks are also available during the summer months.

All KCTCS colleges follow a common policy for establishing important dates within each session such as deadlines for adding and dropping classes and receiving refunds. Students should contact the Records/Admissions office at their local college for the local academic calendar.

The following closings are applicable to all KCTCS institutions:

July
4 Independence Day

September
3 Labor Day

November
6 Presidential Election Day
22 Thanksgiving Day
23 Day After Thanksgiving

December
24 Institutional Closing
25 Institutional Closing
26 Institutional Closing
27 Institutional Closing
28 Institutional Closing
31 Institutional Closing

January
1 Institutional Closing
2 Institutional Closing
3 Institutional Closing
4 Institutional Closing
21 Martin Luther King Day

February
18 President's Day

March
29 Good Friday (1/2 Day)

May
27 Memorial Day
KCTCS Leadership*
*This page reflects KCTCS leadership as of July 1, 2012

Board of Regents
Mr. Porter G. Peoples, Sr., Board Chair
Ms. Marcia L. Roth, Board Vice Chair
Mr. Jackie B. Cecil, Board Secretary
Mr. Richard A. Bean
Mr. Elijah Buell, Jr.
Mr. Robert G. Cooper
Ms. Carolynn E. "Betsy" Flynn
Dr. Michael Ginsberg
Dr. Gail R. Henson
Ms. Jan M. Hite
Ms. Barbara A. Hoskins
Mr. John W. Pence
Ms. Doris C. Thomas
Mr. Thomas O. Zawacki

Foundation Board of Directors
Kathy Love, Chair
Rick Music, Secretary
F. Lee Hess, Treasurer
Lyle S. Hanna, Immediate Past Chair
Mark A. Bailey
Barry S. Bishop
Donna Covington
Greg Higdon
Jim LeMaster
Gregory G. Pauley
Linda L. Rumpke
Wes Sights
Dr. C. Nelson Grote, Emeritus Member
Dr. Thelma White
P.G. Peoples, Sr., Ex-Officio Member
Dr. Michael B. McCaill, Ex-Officio Member
Timothy R. Burcham, CFRE, Ex-Officio Member

President
Dr. Michael B. McCall

President’s Cabinet
Dr. Jay K. Box, Chancellor
Mr. Timothy R. Burcham, CFRE, Vice President
Mr. Paul B. Czarapata, Vice President
Ms. Beth R. Hilliard, Senior Executive Assistant to the President
Mr. J. Kenneth Walker, Vice President

College Leadership
Ashland Community and Technical College
Dr. Patricia K. Adkins (effective September 1, 2012)
President/CEO

Big Sandy Community and Technical College
Dr. George D. Edwards
President/CEO

Bluegrass Community and Technical College
Dr. Augusta A. Julian
President/CEO

Bowling Green Technical College
Dr. Nathan L. Hodges
President/CEO

Elizabethtown Community and Technical College
Dr. Thelma J. White
President/CEO

Gateway Community and Technical College
Dr. G. Edward Hughes
President/CEO

Hazard Community and Technical College
Dr. Stephen G. Greiner
President/CEO

Henderson Community College
Dr. Kristin T. Williams
President/CEO

Hopkinsville Community College
Dr. James E. Seabe
President/CEO

Jefferson Community and Technical College
Dr. Anthony L. Newberry
President/CEO

Madisonville Community College
Dr. Judith L. Rhoads
President/CEO

Maysville Community and Technical College
Dr. Ed Story
President/CEO

Owensboro Community and Technical College
Dr. James S. Klauber
President/CEO

Somerset Community College
Dr. Jo Marshall
President/CEO

Southeast Kentucky Community and Technical College
Dr. William B. "Bruce" Ayers
President/CEO

West Kentucky Community and Technical College
Dr. Barbara M. Veazey
President/CEO
Ashland Community and Technical College

Mission Statement/Status of Accreditation
Ashland Community and Technical College, a member of the Kentucky Community and Technical College System, is a public, two-year degree granting institution serving Northeast Kentucky with a tradition of accessible, affordable, and quality education and a commitment to meet the academic, workforce training, and lifelong learning needs of its community.

Teach with excellence. Serve with passion. Learn for life.

Ashland Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Ashland Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
- Associate in Arts
- Associate in Science

Occupational/Technical Curricula
- Agricultural Technology (C)
- Air Conditioning Technology (C, D)
- Appalachian Studies (C)
- Applied Process Technologies (C, A)
- Automotive Technology (C, D)
- Business Studies:
  - Business Administration Systems (C, D, A)
  - Medical Information Technology (C, D, A)
- Office Systems Technology (C, D, A)
- Computer Aided Drafting and Design (C, D)
- Computer and Information Technologies (C, D)
- Computerized Manufacturing and Machining (C, D)
- Cosmetology (C, D)
- Criminal Justice (A, C)
- Culinary Arts (C, D, A)
- Diagnostic Medical Sonography (A)
- Diesel Technology (C, D)
- Emergency Medical Technician (C)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Health Science Technology (A)
- Horticulture (C)
- Interdisciplinary Early Childhood Education (C, D, A)
- Manufacturing Industrial Technology:
  - Electrical Technology (C, D)

Industrial Maintenance Technology (C, D)
- Nursing (A)
- Paramedic Technology (C, A)
- Pharmacy Technology (C, D)
- Practical Nursing (C, D)
- Radiography (A)
- Respiratory Care (A)
- Surgical Technology (D)
- Welding Technology (C, D)

Contact Information
Ashland Community and Technical College
1400 College Drive
Ashland, KY 41101
(606) 326-2000, (800) 928-4256
ashland.kctcs.edu

College Drive Campus (CDC)
Roberts Drive Campus (RDC)
Technology Drive Campus (TDC)

General Information
Admissions
(606) 326-2000
Advising Center
(606) 326-2040
Adult Education and Literacy
(606) 326-2457
Business Office
(606) 326-2041
Center for Community, Workforce and Economic Development
(606) 326-2232
Community and Technical College Foundation
(606) 326-2077
Disability Services
(606) 326-2051
Financial Aid
(606) 326-2198
Human Resources
(606) 326-2044
Library
(606) 326-2169
Lifelong Learning
(606) 326-2072
Public Relations
(606) 326-2400
Records
(606) 326-2035
Veterans Affairs
(606) 326-2424
Website (webmaster)
(606) 326-2107

Administration
President – Dr. Patricia Adkins
(606) 326-2043
Dean of Academic Affairs – Dr. Janie Kitchen
(606) 326-2162
Dean of Administrative Services – W. S. “Stu” Taylor, III
(606) 326-2409
Dean of Business Affairs – Karen Blevins
(606) 326-2063
Dean of Community, Workforce and Economic Development – Dr. Larry Ferguson
(606) 326-2232
Dean of Institutional Advancement – Louise Shytle
(606) 326-2077
Dean of Institutional Planning, Research and Effectiveness – Steve Flouhouse
(606) 326-2055
Dean of Marketing and Community Relations – John McGlone
(606) 326-2400
Dean of Student Affairs – Willi McCullough
(606) 326-2068
Associate Dean of Advising and Student Retention – Cris McDavid
(606) 326-2003
Associate Dean of Information Technology – Farnoud Rafiee
(606) 326-2069
Associate Dean of Admissions/Registrar – Chandra Kumar
(606) 326-2008
Director of Financial Aid – Robin Lewis
(606) 326-2423
Faculty

Alley, Alan C, Assistant Professor, DC, Palmer College of Chiropractic, 1998
Bailie, Danny G, Professor, MS, University of Kentucky, 1971
Bayes, Nenna L, Professor, MA, Morehead State University, 2001
Beaver, Nick Paul, Assistant Professor, AA, Huntington College of Business, 1978
Bird, Pamela, Professor, MA, Morehead State University, 1978
Blair, Kathy, Instructor, MSN, University of Phoenix, 2012
Bogg, Christopher J, Associate Professor, AAS, Institute of Electronics Technology, 1992
Borders III, Andrew J, Assistant Professor, MS, Southern Baptist Theological Seminary, 1989
Bowman, Curtis D, Associate Professor, Certification, Collins Career Center, 1979
Bradley, Belinda, Associate Professor, AAS, Southern West Virginia Community and Technical College, 2007
Bradley, John M, Associate Professor, Certification, National Institute for Automotive Service Excellence, 1999
Bradley, Peggy L, Associate Professor, BS, Morehead State University, 1979
Bramwell, Keith, Professor, Diploma, University of Kentucky, 1965
Brown, Sara A, Associate/ Librarian II, MLS, University of Kentucky, 2004
Brown, Shawn Michael, Instructor, MA, Morehead State University, 2007
Bryant, Sheree Nicole, Associate Professor, AS, Ohio University Southern Campus, 2003
Burnett, Richard D, Professor, AS, Ashland Community and Technical College, 2003
Burton, Frederick J, Assistant Professor, AS, Morehead State University, 2001
Carr, Jennifer L, Professor, MSN, Bellarmine College, 1988
Cavin, Jacqueline L, Associate Professor, AAS, Ashland Community College, 1996
Chaffins, Robert A, Professor, BS, Morehead State University, 2000
Childress, David C, Associate Professor, Morehead State University, 1985
Coller, Rickey D, Associate Professor, AAS, Ashland Technical College, 2002
Conley, Richard R, Professor, MS, University of Kentucky, 1973
Cooksey, Daniel P, Assistant Professor, MS, Marshall University, 1979
Coots, Philip K, Professor, MA, Southern Illinois University, 1988
Cullum, Randolph, Assistant Professor, MA, Marshall University, 1981
Davis, John Mark, Associate Professor, MBA, Morehead State University, 1985
Davis, Virgil K, Professor, MA, Morehead State University, 1986
Dunn, Barbara E, Associate Professor, AAS, Ashland Community and Technical College, 2004
Edwards, Kathryn Harlucchi, Professor, MA, Marshall University, 1991
England, Tina, Instructor MSN, Walden University, 2010
Figgins, Edward D, Associate Professor, BA, Morehead State University, 1988
Flath, Mary C, Professor, PhD, Medical University of South Carolina, 1991
Flahive, Steven D, Professor, MS, Marshall University, 1991
Forman, Mary Lou, Associate Professor, MA, Morehead State University, 1978
Foxson, Woodrow, Instructor, Associate of Applied Technology, ACTC, 2001
Fosterwells, Wendy, Associate Professor, MFA, Georgia Southern University, 2004
Frayl, Allan D, Associate Professor, JD, University of Kentucky, 1974
Frye, Betty E, Professor/ Librarian I, MLS, University of South Carolina, 1989
Gehringer, Rebecca N, Professor, MA, Morehead State University, 1986
George, Karen Marie, Professor, MA, Marshall University, 1979
Greene, Carol M, Professor, PhD, Indiana University of Pennsylvania, 2005
Griffith Green, Nicole, Associate Professor, MS, Morehead State University, 1988
Hall, Rallie J, Professor, MS, Morehead State University, 1993
Harmon, Benjamin W, Professor, PhD, Virginia Polytechnic, 1973
Henry, Harold Edmond, Associate Professor, AAS, Ashland Technical College, 2002
Hightower, Stephanie J, Instructor, MA, Marshall University, 2007
Hosta, Timothy J, Professor, MA, Eastern Illinois University, 1981
Howard, Warren H, Associate Professor, MA, Morehead State University, 2003
Joy, Jonathan, Instructor, MA, Marshall University, 2004
Justice, Debra, Associate Professor, MA, Marshall University, 1997
Keaton, Douglas, Assistant Professor, BS, Eastern Kentucky University, 2009
Kitchen, Janie R, Professor, PhD, Case Western Reserve University, 2011
Klinepeter, Pamela, Associate Librarian II, MLS, University of Kentucky, 2005
Koll, Travis, Instructor, Masters, California State University, Fresno, 2007
Kumar, Ramamurthy Chandra, Professor, MS, Florida Institute of Technology, 1986
Lanthorn, Charles A, Associate Professor, AAS, Ashland Technical College, 1981
Limbertis, Lois E, Assistant Professor, AAS, Ashland Technical College, 2002
Mahan, Daniel, Associate Professor, MA, Sanford University, 1984
Mains, Heather, Instructor, MSN, Walden University, 2010
Martin, Frances, Assistant Professor, AAS, Morehead State University, 1994
McAdams, Tim, Assistant Professor, AAS, Ashland Community and Technical College, 2008
McCartney, Susan, Assistant Professor, Certification, Collins Career Center, 1990
McCoughlin, William G, Associate Professor, MA, Marshall University, 1981
McCumbee, Jame, Assistant Professor, MA, Marshall University, 1995
McDavid, Crista C, Professor, MBE, Morehead State University, 1987
McGinnis, Elizabeth, Assistant Professor, BSN, Marshall University, 1988
McGonigle, John K, Associate Professor, MS, Morehead State University, 1994
Mengistu, Aschalew, Assistant Professor, PhD, University of Wales College of Medicine, 2002
Mohabian, Hossein, Professor, MA, Marshall University, 1983
Moore, Doretha, Associate Professor, MSN, Bellarmine College, 2005
Napier, Michelle E, Professor, MSN, Bellarmine College, 1990
Napora, Joseph S, Professor, MA, Miami University, 1976
Napper, Jennifer Marie, Assistant Professor, BA, Ohio University, 1995
Onion, Matthew W, Professor/ Librarian I, MLS, Indiana University, 1972
O’Banyon, Donald Ray, Professor, MS, Marshall University, 1984
Panski, Danny, Associate Professor, Certification, Manpower Development and Training Program, 1975
Poteet, Amy J, Professor, MA, Morehead State University, 1987
Rafiee, Farnoosh, Professor, MA, Marshall University, 1982
Ratliff, Terri Lynn, Instructor, BA, Marshall University, 1993
Riggs, Mark, Assistant Professor, MS, Mississippi State University, 2000
Roark, Mary L, Instructor, MA, Bellarmine University, 2007
Robinson, Natalie, Assistant Professor, MSN, Bellarmine University, 2007
Schmidt, James C, Professor, PhD, Cincinnati, 1976
Shelton, Cynthia, Associate Professor, AAS, Marshall University, 1992
Shortridge, Mary E, Associate Professor, MA, Morehead State University, 1982
Skidmore, Ashley, Associate Professor, MA, University of Kentucky, 2006
Svenson, Uma G, Professor, MA, Auburn University, 1969
Swettman, Mark R, Professor, MA, University of Kentucky, 1990
Tackett, Donald R, Associate Professor, Diploma, Ashland Technical College, 1980
Thompson, Alice C, Professor, MA, Marshall University, 1988
Thorton, Jack D, Associate Professor, AAS, Columbus State University, 1986
Tucker, Ernest M, Professor, MA, University of Louisville, 1962
Tussey, Laura, Assistant Professor, MA, Marshall University, 2000
Vanover, Wayne D, Associate Professor, BBA, Morehead State University, 1980
Waugh, Del B, Instructor, BA, Marshall University, 1994
Welsh, Molly J, Associate Professor, MBA, Bellarmine College, 1982
Big Sandy Community and Technical College

Mission Statement/Status of Accreditation
Big Sandy Community and Technical College, a member of the Kentucky Community and Technical College System, is a public, comprehensive educational institution awarding certificates, diplomas, and associate degrees. As a progressive, learning-centered institution, the College offers accessible and affordable educational, cultural, and social opportunities. Utilizing diverse methods of instructional delivery and associated services, the College provides quality learning experiences for those preparing for entry into the workforce, transferring to a baccalaureate institution, and seeking to enhance their knowledge and skills. Big Sandy Community and Technical College also delivers customized training and services responsive to the workforce needs of citizens, businesses, and industries.

Big Sandy Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Big Sandy Community and Technical College.

*Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.*

Academic Programs

**Transfer Curricula**
- Associate in Arts
- Associate in Science

**Occupational/Technical Curricula**

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

- Air Conditioning Technology (C, D, A)
- Applied Engineering Technology (C)
- Automotive Technology (C, A)
- Business Studies:
  - Business Administration Systems (C, D, A)
  - Medical Information Technology (C, D, A)
  - Office Systems Technology (C, D)
- Civil Engineering Technology (A)
- Collision Repair Technology (C, D)
- Computer Aided Drafting and Design (C, D)
- Computer and Information Technologies (C, A)
- Computerized Manufacturing and Machining (C, D, A)
- Construction Technology (C, D)
- Cosmetology (C, D)
- Criminal Justice (C, A)
- Culinary Arts (C, D)
- Dental Assisting/ Dental Hygiene (A)
- Diesel Technology (C, D)
- Emergency Medical Technician (C)
- Energy Technologies (C)
- Engineering and Electronics Technology (C, D)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Horticulture (C, D)
- Human Services (C, A)
- Interdisciplinary Early Childhood Education (C)
- Manufacturing Engineering Technology (C)
- Manufacturing Industrial Technology: Electrical Technology (C, D)
- Manufacturing Industrial Technology: Industrial Maintenance Technology (C, D)
- Masonry (C, D)
- Mining Technology (C, A)
- Motorcycle Technology (C, A)
- Nursing (A)
- Practical Nursing (C, D)
- Plumbing (C)
- Respiratory Care (C, A)
- Surgical Technology (C, D, A)
- Surveying & Mapping Technology (C, D, A)
- Truck Driver Training (C)
- Visual Communication Technology (C, D, A)
- Printing (C, D)
- Welding Technology (C, D, A)

Contact Information

**Prestonsburg Campus**
1 Bert T. Combs Drive
Prestonsburg, KY 41653
(606) 886-3863
bigsandy.kctcs.edu

**Pikeville Campus**
120 South Riverfill Drive
Pikeville, KY 41501
(606) 218-2060
bigsandy.kctcs.edu

**Mayo Campus**
513 Third Street
Paintsville, KY 41240
(606) 789-5321
bigsandy.kctcs.edu

**Hager Hill Campus**
150 Industrial Park Road
Hager Hill, KY 41222
(606) 789-5690
bigsandy.kctcs.edu

General Information

606-886-3863 or 1-888-641-4132

(Toll free - outside of Floyd, Johnson & Pike counties)

Academic Affairs (Program Information) (606)886-7342
Mary Halbert
Admissions & Records Office (606) 886-4822
Dianna Mollette
Business Office (606) 886-7350
Paula Preece
Disability Services (606)886-7359
Janie Beverley
Director of Library Services  Melissa Forsyth
Diversity  Tina Terry
Financial Aid  Rosella Pennington
Library  (606) 886-3863 Ext. 64834
Library Staff on Rotation
President's Office  (606) 886-7322
Margarita Hampton
Marketing and Communications  Randell Roberts
Security  Randell Haney
Website  Jefferson Thacker

Administration

President  Dr. George D. Edwards
Provost  Dr. Nancy B. Johnson
Vice President of Business Affairs  John H rad
Vice President of Institutional Services  Bobby McCool
Workforce Solutions  Kelli Hall

Dean of Student Support Services
Associate Dean of Academic Affairs -
General Education  Dr. Patsy Jackson
Associate Dean of Academic Affairs -
Learning Support Services  Susan Chafin
Associate Dean of Academic Affairs -
Technical Program  Kristen McKenzie
Associate Dean of Academic Affairs -
Allied Health Programs and Biology  Myra Elliott
Associate Dean of Academic Affairs -
Adjunct Faculty and Service Learning  Chris Daniel
Interim Dean of Learning Initiatives  Carla Reynolds
Dean of Finance  Michelle Meak
Associate Dean of Student Support Services -
Enrollment Management  Billie Jean Cole
Associate Dean of Student Support Services -
Admissions and Records  Jimmy Wright
Interim Director of Distance Learning  Paula Thompson
Director of Transformation Initiatives  Melinda Justice
Director of Cultural Diversity  Tina Terry
Director of Financial Aid  Denise Atkinson
Director of Human Resources  John Dove
Director of Institutional Effectiveness  John Dove
Director of Information Technology  John Dove
Director of Library Services  Melissa Forsyth
Office of Marketing and Communications  Melissa Forsyth

Director of Grants  Mazola Salmons
Manager of Advancement  Jean Dorton
Facilities Management Specialist  Emma Jeanne Howard

Faculty

Adam Kelly J, Professor, MS, Southern Connecticut University, 1993
Adams, Gilbert K, Associate Professor, AA, Morehead State University, 1992
Akhalghi, Mohammad R, Professor, PhD, University of Oregon, 1978
Allen, Collisa, Instructor, BSN, University of Phoenix, 2009
Aesem Afif, Professor, MS, University of Karachi, 1982
Baldridge, Murd, Instructor, BS, University of Kentucky, December 1968
Belford, Donald L, Associate Professor, PhD, Ball State University, 1987
Bell, Daniel E, Professor, MA, Northern Illinois University, 1986
Bennin, Hope E, Professor, MA, University of Wisconsin, 1987
Blank, Nathan, Instructor, MA, Missouri State University, 2007
Burchett, Nicole Assistant Professor, AAS, Blugrass Community & Technical College, 2003
Campbell, Eric, Assistant Professor, AAS, Big Sandy Community & Technical College, 2007
Carroll, Charlene, Professor, MBE, Morehead State University, 1996
Carroll, John, Professor, MA, Morehead State University, 1999
Castle, Lev, Instructor, MS, Morehead State University, 2010
Chaffin, Susan K, Professor, MBE, Morehead State University, 1999
Cooky, Sandra Assistant Professor, BSN, Morehead State University, 2010
Cole, Elizabeth M, Professor, MA, University of Iowa, 1989
Compton, Joseph L, Associate Professor, AAS, Big Sandy Community & Technical College, 2004
Compton - Ball, Tammy, Associate Professor, MA, University of Iowa, 1996
Com, Nancy, Assistant Professor, BSN, University of Kentucky, 1976
Dales, Heathen, Instructor, BSN, Radford University, 2001
Daniel, Christopher A, Associate Professor, ME, Morehead State University, 2006
Dempsey, Jeremy, Assistant Professor, MA, Marshall University, 2005
DeRossett, Kimberly R, Professor, BS, Eastern Kentucky University, 1984
Dixon, Eric, Associate Professor, DOD, University of Kentucky, 1993
Dixon, Michael D, Professor, MA, West Chester University of Pennsylvania, 1988
Elliott, Myra T, Professor, MS, University of Kentucky, 1983
Fields, Carmen, Instructor, AAS, Somerset Community College - Laurel Campus, 2002
Fields, Michelle, Associate Professor, MA, Marshall University, 1995
Forsyth, Melissa M, Professor/ Librarian I, MS, University of Kentucky, 1993
Fossett, Leslie, Instructor, MA, Georgetown College, 2007
Froman, Michael K, Assistant Professor, BS, Eastern Kentucky University, 1997
Garrett, Clara A, Professor, MS, Eastern Kentucky University, 1979
Gillis, Bill R, Professor, PhD, Florida State University, 1990
Goodman, Gina, Associate Professor, AS, Prestonburg Community College, 2004
Hackney, Randal Clinton, Assistant Professor, MS, Morehead State University, 2007
Hall, Cindy Justice, Instructor, MA, Morehead State University, December 2008
Hall, Joshua Instructor, BA, Alice Lloyd College, 2004
Hall, Laura, Associate Professor, MA, Morehead State University, 2004
Haney, Randell Ollis, Associate Professor, Diploma, Mayo Technical College, 1985
Harles, Irma Kay, Instructor, AAS, Prestonburg Community College, 1995
Herald, Jane, Assistant Professor, AM, Morehead State University, 1976
Herman, Douglas E, Professor, PhD, Ohio University, 1980
Heywood, Timothy G, Professor, MS, University of Idaho, 1981
Hicks, Jeffrey T, Associate Professor, MA, Morehead State University, 2000
Holbrook, Kenneth Wayne, Instructor, AAS, Big Sandy Community & Technical College, 2010
Howard, Jerry, Assistant Professor, MA, Union College, 2006
Howell, Judy K, Professor/ Librarian I, MS, University of Kentucky, 1994
Jackson, Patsy R, Professor, DNP, University of Kentucky, 1994
Jackson, Debra H, Professor, PhD, Louisiana State University, 1991
Jackson, Sandra P, Professor, MA, Bowling Green State University, 1989
Jennings, Kitty, Instructor, AME, Morehead State University, 2006
Johnson, Kameyo, Instructor, MS, Purdue University, 2002
Jones, Lisa, Instructor, MA, Morehead State University, 2009
Justice, Melinda A, Professor, MA, Morehead State University, 1998

Library Staff on Rotation
Director of Library Services
Diversity
Financial Aid
Director of Library Services
Director of Institutional Effectiveness
Director of Information Technology
Director of Library Services
Director of Human Resources
Director of Institutional Effectiveness
Director of Information Technology
Director of Library Services
Office of Marketing and Communications
Bluegrass Community and Technical College

Mission Statement/Status of Accreditation

Bluegrass Community and Technical College (BCTC) is transforming the Bluegrass Region – one student at a time, one employer at a time, one community at a time.

With students at the heart of our mission, BCTC sustains strong partnerships to provide a skilled workforce, prepare students to transfer for baccalaureate degrees, support economic vitality, and improve quality of life. We are committed to fostering excellence in teaching and learning with comprehensive and responsive programs and services, at campuses and centers across the region, and through distance learning.

BCTC provides general education and transfer programs, career and technical programs, transitional education and literacy skills development, workforce training, and continuing education. We strive to create intellectual and physical environments that promote diversity and inclusion, cultural and global awareness, critical thinking, civic responsibility, professional competence, and sustainability.

BCTC is a public college and member of the Kentucky Community and Technical College System awarding associate degrees, diplomas, and certificates.

Bluegrass Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Bluegrass Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
- Associate in Arts
- Associate in Science

Transfer Curricula/Art Related
An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. Individual Associate in Fine Arts (A) degree curricula in each group is noted by an A in parenthesis.

- Theatre (A)

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D) and Associate in Applied Science (A) degree curricula in each group are noted by C, D and A in parenthesis.

- Air Conditioning Technology (C, D, A)
- Architectural Technology (A)
- Automotive Technology (C, D, A)
- Biotechnology Laboratory Technician (C, A)
- Business Studies:
  - Medical Information Technology (C, D, A)
  - Office Systems Technology (C, D, A)
  - Business Management and Marketing (C, A)

Civil Engineering Technology (A)
Clinical Laboratory Technology (C)
Collision Repair Technology (C, D)
Computer Aided Drafting and Design (C, D, A)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Construction Technology (C, D, A)
Cosmetology (C, D)
Criminal Justice (C, A)
Dental Assisting/Dental Hygiene (D)
Dental Hygiene (A)
Dental Laboratory Technology (C, A)
Diesel Technology (C)
Education (C, A)
Energy Technologies (C)
Engineering and Electronics Technology (C, D, A)
Environmental Science Technology (A)
Environmental Technology (C)
Equine Studies (C, D, A)
Emergency Medical Technician (C)
Filmmaking Script to Screen (C)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Geographic Information Systems Technology (C)
Health Information Technology (C, A)
Human Services (C, A)
Homeland Security/Emergency Management (A)
Information Management and Design (A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
  - Electrical Technology (C, D, A)
  - Industrial Maintenance Technology (C, D, A)
Medical Assisting (C, D, A)
Nuclear Medicine and Molecular Imaging Technology (A)
Nursing (A)
Paramedic Technology (C)
Practical Nursing (C, D)
Radiography (A)
Real Estate (C)
Respiratory Care (C, A)
Security Management (C)
Surgical Technology (D, A)
Welding Technology (C, D, A)

Contact Information

Cooper Campus
470 Cooper Drive
Lexington, KY 40506-0235
(859) 246-6200
1 (866) 774-4872 (toll-free)
bluegrass.kctcs.edu

Leestown Campus
164 Opportunity Way
Lexington, KY 40511-2623
(859) 246-6200
bluegrass.kctcs.edu
Regency Campus
2659 Regency Road
Lexington, KY 40503-2922
(859) 246-6200
bluegrass.kctcs.edu

Danville Campus
59 Corporate Drive
Danville, KY 40422-9690
(859) 239-7030
bluegrass.kctcs.edu

Lawrenceburg Campus
1500 Bypass North US 127
Lawrenceburg, KY 40342-9465
(502) 839-8488
bluegrass.kctcs.edu

Winchester-Clark County Campus
2020 Rolling Hills Lane
Winchester, KY 40391
(859) 737-3098
bluegrass.kctcs.edu

Additional Sites

Downtown Adult Education Center
120W. High Street
Lexington, KY 40508
(859)253-9603 for English Speakers
(859)246-6897 for Spanish Speakers
bluegrass.kctcs.edu

Georgetown Advanced Manufacturing Center
PSC/ NA-K
1001 Cherry Blossom Way
Georgetown, Ky 40324
(502) 570-6357

Lancaster Higher Education Center
67 Public Square
Lancaster, Ky 40444
(859) 792-1513

North American Racing Academy
Thoroughbred Training Center
3380 Paris Pike
Lexington, KY 40511
(859) 293-0209

Thoroughbred Training Center
3380 Paris Pike
Lexington, KY 40511
(859) 256-3557

Administration

President/ CEO
Augusta A. Julian

Vice President, Academics
David Hellmich

Dean of Academics
Sandy Carey

Dean of Academics
Greg Feeney

Dean of Academics
Bonnie Nicholson

Dean of Student Development
and Enrollment Management
Palisa Williams-Rushin

Vice President, Information Technology Services
Ren Bates

Vice President, Workforce
and Institutional Development
Mark Manuel

Vice President, Finance and Operations
Lisa Bell

Vice President, Multiculturalism and Inclusion
Charlene Walker

Regional Campuses and Outreach
Tri Roberts

Chief Officer, Public Information and Marketing
Verna Kennedy

Chief Development Officer
Linda Epling

Faculty

Adair, Gerald M, Associate Professor, MA, Florida Atlantic University, 2000
Adkins, Michael A, Associate Professor, MS, University of Missouri, 1980
Anderson, Melissa M, Associate Professor, AS, Eastern Kentucky University, 2004
Anderson, Stephanie A, Associate Professor, BA, University of Kentucky, 1987
Anthony, Joseph G, Professor, MA, University of Long Island, 1979
Avery, Jennifer, Instructor, BSN, Eastern Kentucky University, 1995
Bailey, Mary F, Assistant Professor, AAS, Eastern Kentucky University, 2003
Baker, Lucinda, Associate Professor, MA, Ohio University, 1997
Ball, Andrew Barrett, Associate Professor, MA, University of Kentucky, 1988
Barber, Anthony, Instructor, AAS, Central Kentucky Technical College, 2003
Bartels, Cynthia E, Professor, MAT, University of Kentucky, 1984
Baxter, Martin S, Associate Professor, BSEd, University of Kentucky, 1996
Benton, Michael D, Associate Professor, MA, Bowling Green State University, 2000
Biega, Robert J, Associate Professor, MA, Eastern Kentucky University, 1998
Birrer, Michael A, Associate Professor, BS, University of Cincinnati, 1987
Birch, Timothy E, Associate Professor, BA, University of Kentucky, 1991
Birchfield, Martha J, Professor, MLS, Florida State University, 1976
Bishop, Ann K, Associate Professor, BA, Earlham College, 1967
Black, Ina Kaye, Associate Professor, MS, Eastern Kentucky University, 1997
Blair, Kimberly, Instructor, AAS, Bluegrass Community and Technical College, 2010
Blankenship, Paul D, Professor, MS, West Virginia University, 1990
Blaydes, Mary, Associate Professor, MS, University of Kentucky, 2002
Boes, Don, Associate Professor, MFA, Indiana University, 1985
Bradley, James W, Associate Professor, MS, University of South Carolina, 1999
Brandford, Arica, Instructor, BSN Purdue University, 2001
Breeding, Sharon K, Professor, MA, Morehead State University, 1983
Bromner, Nancy, Assistant Professor, MSN, University of Kentucky, 1979
Brown, Dana, Associate Professor, BS, Murray State University, 2002
Buckner, Terry, Associate Professor, MCLS, University of Kentucky, 2001
Calhoun, J. Paul C, Associate Professor, MS, Eastern Kentucky University, 1992
Carr, Sharon H, Associate Professor, MA, University of Kentucky, 1986
Chaney, Russell, Assistant Professor, BA, Midway College, 2003
Chirwa, Robert M, Associate Professor, MS, University of Kentucky, 1990
Chittenden, C David, Associate Professor, M BA, University of Kentucky, 1971
Clark, Jamie, Assistant Professor, BA, Morehead State University, 2002
Coffey, Bobby J, Associate Professor, MS, Eastern Kentucky University, 2006
Conegro, Yasemin K, Associate Professor, PhD, University of Kentucky, 2005
Coulston, Charles Hamilton, Professor, MSED, University of Kentucky, 1995
Craycraft, Kevin, Associate Professor, AAS, Central Kentucky Technical College, 2005
Cropper, Maureen Elizabeth Tobin, Assistant Professor, MCLS, Louisiana State University, 2004
Davis, Angella M, Associate Professor, MA, University of South Carolina, 2000
Davis, Mary, Assistant Professor, BA, Berea College, 1994
Davis, Robin M, Associate Professor, MS, University of Kentucky, 1981
Davis, Timothy J, Associate Professor, MFA, University of Southern Mississippi, 1997

Phone Numbers

General Information (859) 246-6200
Admissions (859) 246-6210
Adult Education (859) 246-6611
Student Billing (859) 246-6270
Advising and Assessment (859) 246-6220
Disability Support Services (859) 246-6530
Financial Aid (859) 246-6300
Human Resources (859) 246-6643
Learning Resource Center (859) 246-3430
Office of Communications (859) 246-5057
Records and Registration (859) 246-4390
Transfer Center (859) 246-4520
Workforce Solutions (859) 246-6666
Introduction
Saunier, Margaret E, Professor, PhD, University of Kentucky, 1987
Schuman, Daniel B, Associate Professor, PhD, University of Kentucky, 2002
Scott Jr, John C, Associate Professor, MA, Eastern Kentucky University, 1990
Shear, Susan Knox, Assistant Professor, MHA, University of Kentucky, 1994
Simms, Ruth A, Associate Professor, MS, Eastern Kentucky University, 1995
Singleton, Debbie Lynn, Professor, MAEd, University of Kentucky, 1977
Smoor, Richard G, Associate Professor, PhD, University of Kentucky, 1988
Snyder, William D, Associate Professor, DMD, University of Kentucky, 1993
Spencer, Janella, Professor, MSEd, University of Kentucky, 1992
Stone, Steven A, Associate Professor, MSL, University of Illinois, Urbana-Champaign, 1991
Story, John E, Associate Professor, PsyD, Forest Institute of Professional Psychology, 1989
Strobel, Norman E, Associate Professor, PhD, Cornell University, 1989
Sullivan-Davis, Deborah, Assistant Professor, PhD, University of Kentucky, 2003
Swango, Kathleen, Associate Professor, MA, Morehead State University, 1982
Taghizadeh, Rasoul, Associate Professor, MS, University of Kentucky, 1989
Taylor, Edwin D, Associate Professor, BS, Eastern Kentucky University, 2008
Tibbatts, James, Instructor, BA, University of Western Ontario, 1986
Todd, Adrienne H, Assistant Professor, MA, Eastern Kentucky University, 1997
Topley, Mureen, Instructor, BSN, Duquesne University, 1986
Tucker, Cindy, Associate Professor, MS, University of Kentucky, 1999
Turner, Paul A, Professor, MS, University of Kentucky, 2008
Unruh, Timothy J, Associate Professor, BS, University of Louisville, 1996
Wachtel, David, Professor, PhD, State University of New York at Buffalo, 1983
Walker, Robert, Associate Professor, MS, Eastern Kentucky University, 1979
Watts, Jean, Associate Professor, MEM, Duke University, 1987
Webb, Dixie, Assistant Professor, MSN, University of Kentucky, 1977
Webster-Little, Stacy, Associate Professor, MA, University of Nebraska Lincoln, 1996
Welch, Mark A, Professor, BS, Eastern Kentucky University, 1991
Wethington Jr, Charles Turner, Associate Professor, PhD, University of Kentucky, 1966
Wheeler, Yules, Associate Professor, MA, Campbellsville College, 2008
White, Steven J, Professor, PhD, University of Illinois, 1990
Whitescarver, Shirley Ann, Professor, PhD, University of Kentucky, 1987
Williams, Laura A, Associate Professor, MA, Eastern Kentucky University, 1997
Williams, Myra L, Associate Professor, MSN, University of Kentucky, 1991
Williamson, Melanie Gail, Associate Professor, MS, University of Kentucky, 2005
Willoughby, Brenda S, Professor, MS, California College for Health Sciences, 2001
Wilson, Vicki Kegley, Professor, MA, University of Kentucky, 1982
Wiseman, Jackie, Professor, MS, Eastern Kentucky University, 1988
Womack, Becky J, Professor, MA, University of Mississippi, 1975
Worth, Benjamin James, Professor, PhD, University of Kentucky, 2004
Wyatt, Nelda K, Associate Professor, EdD, University of Kentucky, 1999
Yeager, Constance, Associate Professor, BSN, University of Kentucky, 1991
York, Lee Ann, Assistant Professor, MS, University of Kentucky, 1995
Zeps, Valdis J, Associate Professor, PhD, University of Washington, 1989
Zoll, Gregory Alan, Professor, MSED, University of Kentucky, 1995
Mission Statement/Status of Accreditation

The mission of Bowling Green Technical College is to improve the employability and quality of life of south central Kentucky citizens as the primary provider of:

- Certificate, diploma, associate degree, and collegiate transfer programs
- College and workforce readiness
- Workforce education and training
- Adult education and family literacy.

Bowling Green Technical College, a member of the Kentucky Community and Technical College System, is a public, two-year degree granting institution serving the south central region of Kentucky.

Bowling Green Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Bowling Green Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
- Associate in Arts
- Associate in Science

Occupational/Technical Curricula
Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

- Air Conditioning Technology (C, D, A)
- Automotive Technology (C, D, A)
- Business Studies:
  - Business Administration Systems (C, D, A)
  - Medical Information Technology (C, D, A)
  - Office Systems Technology (C, D, A)
- Collision Repair Technology (C, D)
- Computer and Information Technologies (C, A)
- Computerized Manufacturing and Machining (C, D, A)
- Culinary Arts (C, D, A)
- Diagnostic Medical Sonography (C, A)
- Emergency Medical Technician (C)
- Engineering and Electronics Technology (C, D, A)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Interactive Digital Technology (C)
- Manufacturing Industrial Technology:
  - Electrical Technology (C, D)
  - Industrial Maintenance Technology (C, D, A)
- Medical Administrative Services (C)
- Nursing (A)
- Practical Nursing (C, D)
- Paramedic Technology (C)
- Radiography (A)
- Respiratory Care (C, A)
- Surgical Technology (D, A)
- Welding Technology (C, D)

Contact Information

Bowling Green Technical College
1845 Loop Drive
Bowling Green, KY 42101
Main Campus (270) 901-1000
bowlinggreen.kctcs.edu

Off Site Locations

Glasgow Campus
129 State Avenue
Glasgow, KY 42141
(270) 901-1200 & (270) 651-5673

Glasgow Technology Campus
500 Hilltopper Way
Glasgow, KY 42141
(270) 659-6900

Kentucky Advanced Technology Institute
1127 Morgantown Road
Bowling Green, KY 42101
(270) 901-1150

Transpark Center
221 Commonwealth Blvd
Bowling Green, KY 42101
(270) 901-1225

Franklin-Simpson Center
175 Davis Drive
Franklin, KY 42134
(270) 901-1119

General Information

Admissions
(270) 901-1094

Adult Education & Literacy
(270) 901-1013

Business Office
(270) 901-1113

Workforce Solutions
(270) 901-1033

Assessment & Testing
(270) 901-1036

Disability Services
(270) 901-1202

Financial Aid
(270) 901-1004

Human Resources
(270) 901-1115

Institutional Advancement
(270) 901-1116

Library
(270) 901-1155

Public Relations
(270) 901-1117
Records
(270) 901-1001
Transfer Information Liaison
(270) 901-1001
Veterans Affairs
(270) 901-1003
Website
(270) 901-1160

Harlan, Angela K, Associate Professor, MSN, Western Kentucky University, 2007
Gullett, M. Jeanette, Instructor, MSN, Grand Canyon University, 2011
Graves, Lauren Lane, Instructor, BSN, Western Kentucky University, 2007
Gaskins, Carmen C, Professor, MS, Western Kentucky University, 1994

Fuller, Mary M, Professor, BS, Western Kentucky University, 2000
Finley, Joseph Lynn, Assistant Professor, MS, University of Kentucky, 2002
Dockery, Richard A, Associate Professor, AS, Western Kentucky University, 1996
Doyle, Janet C, Associate Professor, BS, Western Kentucky University, 2005
Faine, John B, Assistant Professor, MS, Northern Kentucky University, 1995
Finley, Joseph Lynn, Assistant Professor, MS, University of Kentucky, 2002
Fuller, Mary M, Professor, BS, Western Kentucky University, 2000
Gaffney, Cindy E, Associate Professor, MLS, University of Western Ontario, 1983
Galloway, Angela M, Instructor, MS, University of Kentucky, 2005
Gaskins, Carmen C, Professor, MS, Western Kentucky University, 1994
Gentry, Traci, Assistant Professor, MSN, Western Kentucky University, 2011
Graves, Lauren Lane, Instructor, BSN, Western Kentucky University, 2007
Green, Michael, Assistant Professor, 9 years Teaching Experience, 19 years Occupational Experience
Gullett, M. Jeanette, Instructor, MSN, Grand Canyon University, 2011
Harlan, Angela K, Associate Professor, MSN, Western Kentucky University, 2007
Harmon, Susan B, Associate Professor, BS, Western Kentucky University, 2002
Hawks, Mark Anthony, Assistant Professor, AS, Mid-Continent University, 2008
Hatcher, Steve A, Professor, BS, Western Kentucky University, 2011
Hocker, Anna Laura, Instructor, BA, Western Kentucky University, 1983
Houchens, Charles D, Associate Professor, BS, Western Kentucky University, 2002
Hunt, Jon D, Associate Professor, AAS, Bowling Green Technical College, 2006
Hunt, Lisa A, Professor, MS, Austin Peay State University, 1999
Hunt, Michelle R, Instructor, BA, Western Kentucky University, 1989
Jones, Brian M, Assistant Professor, MS, Murray State University, 2003
Jeter, Christopher N, Instructor, BIS, Western Kentucky University
Karimian, Mana, Assistant Professor, MS, Western Kentucky University, 2003
Kenady, Kevin H, Professor, MS, Western Kentucky University, 2002
Kennedy, Barry A, Assistant Professor, MA, Western Kentucky University, 2003
Lindsay, John L, Associate Professor, BS, ITT Technical Institute - Indianapolis, 1993
Martin, Kerney Valesa, Instructor, MBA, Western Kentucky University, 2006
McClure, Michael G, Associate Professor, AS, Western Kentucky University, 1991
McKenney, Ken D, Assistant Professor, AAS, Bowling Green Technical College, 2010
Miesel, Harold E, Associate Professor, BS, Western Kentucky University, 1980
Moorman, John K, Assistant Professor, BS, Western Kentucky University, 1977
Mullins, Angela Marie, Instructor, BS, MS-Continental University, 2007
Murphy, Terrell W, Associate Professor, AS, Western Kentucky University, 1993
Norrod, Amy Paige, Instructor, BS, MS-Continental University, 2008
Otto, Kimberly D, Instructor, MA, Western Kentucky University, 2006
Papalouca, Loucas, Associate Professor, MS, Western Kentucky University, 1989
Patel, Virendrakumar Anikumar, Instructor, MA, Eastern Kentucky University, 2010
Pennycook, Donald B, Assistant Professor, MS, Western Kentucky University, 2007
Phelps, Jeffery W, Associate Professor, BS, Western Kentucky University, 2000
Potter, William R, Assistant Professor, AS, Western Kentucky University, 2003
Potts, Michael W, Professor, Ed.D, University of Louisville, 2009
Royse, Christopher L, Instructor, BS, Murray State University, 2004
Sandefur, Ryan, Associate Professor, MS, Western Kentucky University, 2004
Scott, Eugenia R, Assistant Professor, MA, Western Kentucky University, 1998
Shive, April, Assistant Professor, MSN, Western Kentucky University, 2011
Shoemake, Jennifer J, Associate Professor, MSN, Western Kentucky University, 2005
Slaughter, Lori A, Professor, MA, Western Kentucky University, 2010
Smith, Gordon Partridge, Instructor, Ph.D, The University of Mississippi, 2000
Sparks, Richard B, Associate Professor, BS, University of Kentucky, 2003
Stagner, Phillip W, Instructor, MA, 2004
Stovall, Jennifer M, Instructor, MS, Western Kentucky University, 2011
Sumner, Patti S, Professor, MA, Western Kentucky University, 1998
Tackett, Kristina, Assistant Professor, MS, Western Kentucky University, 2009
Taylor, Michael O, Associate Professor, BA, Western Kentucky University, 1972
Tichenor, Constance Jenean, Instructor, MS, Capella University, 2009
Turner, Kerry S, Assistant Professor, MA, Bowling Green Technical College, 2006
Vale, Brooke Justice, Instructor, MA, Western Kentucky University, 2003
Vale, Brooke Justice, Instructor, MA, Western Kentucky University, 2003
Ward, Teresa A, Instructor, M.S, Troy University, 1983
Wells, Sherry Lynn, Associate Professor, AAS, Bowling Green Technical College, 2004
Wendt, Leah D, Instructor, MA, California State Polytechnic University, 2008
Williams, Thomas W, Assistant Professor, MA, Western Kentucky University, 2007
Wilkins, Diane A, Associate Professor, MA, University of Kentucky, 1999
Elizabethtown Community and Technical College

Mission Statement/Status of Accreditation

Elizabethtown Community and Technical College (ECTC) is a comprehensive open access college that prepares people to live and work in a constantly changing world through dynamic teaching and learning environments.

ECTC accomplishes its mission by providing:

- Associate in Arts and Associate in Science degree programs which provide students with the opportunity to complete the first two years of a baccalaureate degree
- Associate in Applied Science degree, diploma, and certificate programs as well as courses to prepare individuals to excel in a complex workforce
- Continuing and life-long education, short-term customized training for business and industry designed to strengthen the work force and expand the life skills, knowledge and cultural enrichment of the community
- Developmental education courses to prepare individuals for success in transfer and technical courses
- Associated services that support student development and success such as academic advising, library services, learning labs, assessment, career counseling, and cultural enrichment activities, among others.

Elizabethtown Community and Technical College, a member of the Kentucky Community and Technical College System, is a public two-year degree granting institution responding to and serving the needs of our diverse communities.

Elizabethtown Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Elizabethtown Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
- Associate in Arts
- Associate in Science

Occupational/Technical Curricula
- Advanced Nursing Assistant (C)
- African American Studies (C)
- Air Conditioning Technology (C, D, A)
- Apprenticeship Studies (A)
- Automotive Technology (C, D, A)
- Business Studies
  - Business Administration Systems (C, D, A)
  - Medical Information Technology (C, D, A)
  - Office Systems Technology (C, D, A)
  - Computer Aided Drafting and Design (C, D, A)
  - Computer and Information Technologies (C, A)
  - Computerized Manufacturing and Machining (C, D, A)
  - Construction Technology (C, D, A)
  - Criminal Justice (C, A)

Culinary Arts (C, D, A)
- Diesel Technology (C, D, A)
- Education (C, A)
- Emergency Medical Technician (C)
- Engineering and Electronics Technology (C, D, A)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Global Studies (C)
- Human Services (C, A)
- Interdisciplinary Early Childhood Education (C, D, A)
- Manufacturing Industrial Technology
  - Electrical Technology (C, D, A)
  - Industrial Maintenance Technology (C, D, A)
- Nursing (A)
- Plumbing Technology (C, D, A)
- Practical Nursing (C, D)
- Quality Management Systems (C, D, A)
- Radiography (A)
- Real Estate (C)
- Respiratory Care (A)
- Welding Technology (C, D, A)

Contact Information

Elizabethtown Community and Technical College
600 College Street Road
Elizabethtown, KY 42701
(270) 769-2371
(877) 246-2322 (toll-free)
elizabethtown.kctcs.edu

Fort Knox Site
1174 Dixie Street
Fort Knox, KY 40121
Ext. 68858

Springfield Campus
160 Corporate Drive
Springfield, KY 40069
859-336-1743

General Information
(270) 769-2371
Admissions
Business Office
Workforce Solutions
Disability Services
Financial Aid
Human Resources
Library
Public Relations
Records
Transfer Information Liaison
Veterans Affairs
Website
elizabethtown.kctcs.edu

Administration
- President/CEO
  - Dr. Thelma J. White
- Interim Provost/Chief Academic Officer
  - Dr. Diane Owsley
- Chief Student Affairs Officer
  - Dr. Dale Buckles
- Chief Operations Officer
  - Keith Johnson
- Dean of Business Affairs
  - Jonathan Thompson
- Dean of Instructional and Professional Development
  - Sue French
- Dean of Institutional Effectiveness and Off Campus Programs
  - Dr. Jack Dilbeck
Mission Statement/Status of Accreditation
Gateway Community and Technical College provides high quality, affordable, accessible, and inclusive postsecondary education and training resulting in a positive contribution to the economic vitality of the region and enhanced quality of life for all citizens. Partnerships with school districts, colleges, universities, business and industry, and the community at large are part of our seamless system of entrepreneurial learning, which creates pathways to success through:

- Certificate, diploma, associate degree and transfer programs.
- Developmental, adult, and continuing education.
- Workforce and customized training.
- Support services for the enhancement of student learning and success.

Gateway Community and Technical College is a member of the Kentucky Community and Technical College System and is a public two-year degree granting institution serving the Northern Kentucky Region.

Gateway Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Gateway Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
- Associate in Arts
- Associate in Science

Occupational/Technical Curricula
- The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.
- Air Conditioning Technology (C, D)
- Automotive Technology (C, D)
- Business Administration Systems (C, D, A)
- Medical Information Technology (C, D, A)
- Collision Repair Technology (C, D)
- Computer Aided Drafting and Design (C, D)
- Computer and Information Technologies (C, A)
- Computerized Manufacturing and Machining (C, D)
- Cosmetology (C, D)
- Criminal Justice (C, A)
- Diesel Technology (C)
- Education (A)
- Emergency Medical Technician (C)
- Energy Technologies (C, A)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Health and Wellness Technology (C, A)
- Health Education (C)
- Health Information Technology (C, A)
- Human Services (A)
- Interactive Design Technology (C)
- Interdisciplinary Early Childhood Education (C, D, A)
- Manufacturing Engineering Technology (C, A)
- Manufacturing Industrial Technology:
  - Electrical Technology (C, D)
  - Industrial Maintenance Technology (C, D, A)
- Medicaid Nurse Aide (C)
- Medical Assisting (C, D, A)
- Nursing (A)
- Paramedic Technology (C)
- Plumbing Technology (C)
- Visual Communication:
  - Design and Technology (C)
  - Multimedia (C, D)
- Welding Technology (C, D)

Contact Information

Gateway Community and Technical College
Main number: (859) 441-4500
gateway.kctcs.edu

Boone Campus
500 Technology Way
Florence, KY 41042

Covington Campus
1025 Amsterdam Rd.
Covington, KY 41011

Park Hills Center
1030 Old State Rd.
Park Hills, KY 41011

Urban Center
525 Scott Boulevard
Covington, KY 41011

Edgewood Campus
790 Thomas More Parkway
Edgewood, KY 41017

General Information

Admissions (859) 442-1134
Adult Education (859) 442-1186
Advising Center (859) 442-1600
Assessment Center (859) 442-1559
Business Office (859) 442-4174
Career Services (859) 442-1149
Disability Services (859) 442-4120
Financial Aid (859) 442-1165
Human Resources (859) 442-1150
Library and Information Services (859) 442-4162
Marketing and Public Relations (859) 442-1172
Registrar (859) 442-1136
Safety and Security (859) 442-4129
Transfer Information Liaison (859) 442-1183
Urban Center (859) 442-1601
Veterans Affairs (859) 442-4111
Workforce Solutions (859) 442-1170
Website gateway.kctcs.edu
Facebook facebook.com/GatewayCTC
Administration

President
Dr. G. Edward Hughes

Executive Assistant to the President
Sharon Poore

Provost/Vice President for Academic Affairs
W. Michael Baker

Vice President for Business Affairs
and Administrative Services
Lauren Cook Kroeger

Vice President, Resource Development
and External Affairs
Laura Cook Kroeger

Vice President, Workforce Solutions & Innovation
Ingrid Washington

Vice President, Student Affairs
Dr. Angie Taylor

Vice President, Knowledge Management
and Strategic Initiatives
Dr. Patricia Goodman

Associate Provost for Academic Affairs
Marilyn Brown

Associate Provost for Academic Affairs
Dr. Teri VonHandorf

Associate Provost/Dean of Nursing and Allied Health
Dr. Ross Santell

Dean, Workforce Solutions
Dr. Anthony Clarke

Associate Dean for Retention and Multi-Cultural Affairs
Theresa Little

Division Chair, Arts, Humanities and Social Science
Dr. Susan Santos

Division Chair, Development Education and Orientation to College
Carissa Schutzman

Division Chair, Business and Management Services
Antoinette Bloom

Division Chair, Manufacturing and Trades Technologies
DeeWright

Division Chair, Transportation Technologies
Sam Collier

Division Chair, Science, Technology and Mathematics
Dr. Yohanes Honu

Registrar
Robin Wright

Special Assistant to the President
Jack Keller

Director, Admissions and Enrollment Management
Andrew Washington

Director of Adult Education/COMPASS Coordinator
Peg Russell

Director, Advising Center
Cindy Sproehnle

Director, Budget and Accounting
Ann Schultz

Director, Center for Workforce Development
Philip Accardi

Director, Disability Services
Colleen Kane

Director, Early College Initiatives
Shelby Krentz

Director, Financial Aid
Justin Cristello

Director, Grants and Contracts
Dr. Amber Decker

Director, Human Resources
Phyllis Yeager

Director, Information Services
Melissa Sears

Director, Library and Information Services
Charlene McGrath

Director, Maintenance and Operations
George Hall

Director, North Central Area Health Education Center
Evelyn Tackett

Director, Print Center
Henry Bang

Director, Marketing and Public Relations
Margaret Thomson

Director, Safety and Security
Tim Chesser

Director, Student Support Services
Leonard Thompson

Director, Urban Center

and Gateway College Access Center

Mallis Graves

Collier, Samuel E, Associate Professor, AAB, Cincinnati State Technical & Community College, 1988
Collins, Thomas W, Professor, BS, University of Cincinnati, 1977
Da Silva, Fares, Assistant Professor MA, Indiana State University, 2008
Daly, Paula A, Professor, BS, Northern Kentucky University, 1985
DeBerry, John, Assistant Professor, MA, University of Wyoming, 2003
DeBryl Ilhae, Holly Michelle, Associate Professor, PhD, University of Louisville, 2003
Donahoo, Kevin H, Associate Professor, AS, University of the State of New York, 1982
Ervin, Justin, Assistant Professor, PhD, Northern Arizona University, 2011
Fritz, Diane, Assistant Professor, MS, Medical University of Ohio, 1997
Grooms, Chad M, Assistant Professor, MBA, Morehead State University, 1998
Hanlon, John T, Associate Professor, BS, Northern Kentucky University, 1998
Harris, Vernon R, Associate Professor, BS, Northern Kentucky University, 2000
Haybarts, Ronald, Assistant Professor, BTM, DeVry University, 2009
Honu, Yohanes, Assistant Professor, PhD, Southern Illinois University, 2004
Jing, Weizhong, Assistant Professor, MS, New Jersey Institute of Technology, 1998
Jones, Kathy, Instructor, MA, Northern Kentucky University, 2010
Jones, Kenneth, Assistant Professor, 7 Years Teaching Experience, 12 Years Occupational Experience, AES Master Certification
Kane, Colleen N, Associate Professor, MEd, University of North Florida, 1980
Keith, Marilyn, Instructor, Wm. Booth of Practical Nursing, 1987
King, Michael, Instructor, MA, Northern Kentucky University, 2009
Laws, Sarah, Instructor, AAS, Gateway Community and Technical College, 2008
Lewis, James H, Associate Professor, BFA, Art Academy of Cincinnati, 1993
Lintz, Lauren, Assistant Professor/ Librarian III, Northern Kentucky University, 2007
Loman, Michael A, Instructor, 25 Years Teaching Experience, 22 Years Occupational Experience
Lybrook, Adam C, Instructor, Automotive Technician Diploma, Hibbing Community College, 2000
Mahan, Jerrell L, Assistant Professor, AAS, Northern Kentucky University, 1991
Mathew, George, Professor, PhD, University of Kentucky, 1994
Mauk, Craighton, Associate Professor, PhD, Oreg State University, 1982
Mauk, Teresa Norton, Associate Professor, MS, University of Kentucky, 1998
McGraw, Emily Charlene, Associate Professor, MS, University of Kentucky, 1986
McKenna, Kerri, Assistant Professor, EdD, Northern Kentucky University, 2011
Necely, Ron, Assistant Professor, BS, Northern Kentucky University, 2010
Needly, Rocky, Assistant Professor, MA, University of Cincinnati, 2008
Nelson, Lance, Assistant Professor, BA, Marshall University, 1987
Overt, Pamela, Assistant Professor, MSN, Northern Kentucky University, 2004
Poppel, Elizabeth, Assistant Professor, BA, College of Mount St. Joseph, 1993
Post, Lois, Instructor, BS, Thomas More College, 1983
Ramanavaje, Deepanashanta, Assistant Professor, MS, Morehead State University, 2008
Ransom, Sarah, Associate Professor, MEd, Northern Kentucky University, 2005
Read, Richard, Associate Professor, MSE, University of Cincinnati, 1970
Reynolds, Jon, Instructor, BA, Centre College, 1995
Rhine, James, Assistant Professor, MA, Ohio State University, 1984
Rich, Barbara, Assistant Professor, MBA, West Virginia University, 1997
Rickert, Patrick E., Associate Professor, MS, University of Wisconsin, 2000
Riley, Michael P, Instructor, MBA, Morehead State University, 2005
Riley, Michael K, Instructor, AAS, Morehead State University, 1993
Ritzenthaler, Nancy A, Assistant Professor, BSN, Northern Kentucky University, 2001
Rogers, Randy, Instructor, BS, West Virginia University, 1984
Ross, Deborah, Assistant Professor, MEd, Xavier University, 1987
Russell, Margaret, Instructor, MEd, Xavier University, 1990
Santos, Susan, Associate Professor, PhD, Walden University, 2004
Schilling, Judith C, Assistant Professor, MEd, Northern Kentucky University, 1987
Schultzman, Carissa Bradley, Assistant Professor, MA, Northern Kentucky University, 1995
Seber, Thomas J, Instructor, Automotive Technician Diploma, Pinellas Vocational Technical Institute, 1986
Settemoir, Beth, Instructor, ME, University of Cincinnati, 2008
Siekmann-Hall, Stacey L, Instructor, MS, University of Cincinnati, 2008
Smith, Monica M., Instructor, AAS, Cincinnati State Technical and Community College, 2009
Speier, Rose, Associate Professor, BSN, Indiana Wesleyan University, 2010
Stockslager, Robyn, Instructor, MA, University of Cincinnati, 2004
Takahara, Ilona, Instructor, MS, California State University, 2003
Thomas, Theresa, Associate Professor, Master of Design, University of Cincinnati, 2000
Tambor, Antonio, Assistant Professor, MS, Morehead State University, 2007
Warburton, Charles, Assistant Professor, MA, University of Cincinnati, 2006
Welch, Robert S, Associate Professor, BA, University of Kentucky, 1971
White, Gwendolyn Rene, Associate Professor, MBA, Morehead State University, 2007
Wright, Dee, Associate Professor, 12 Years Teaching Experience, 26 Years Occupational Experience
Mission Statement/Status of Accreditation

Hazard Community and Technical College (HCTC) is a comprehensive, public community and technical college that empowers diverse learners, building self-confidence and leadership capacity for lifelong personal success and community enhancement. A member of the Kentucky Community and Technical College System, HCTC primarily serves eastern Kentucky as a collaborative catalyst for blending honored Appalachian traditions with diverse global innovations.

Hazard Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Hazard Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

- Associate in Arts
- Associate in Science

Transfer Curricula/Art Related

An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. Individual Associate in Fine Arts (A) degree curricula in each group are noted by an A in parenthesis.

- Visual Art (A)

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

- 21st Century Life Skills (C)
- Air Conditioning Technology (C, D)
- Appalachian Studies (C)
- Automotive Technology (C, D, A)
- Business Studies
  - Business Administration Systems (C, D, A)
  - Medical Information Technology (C, D, A)
- Clinical Laboratory Technology (C)
- Collision Repair Technology (C, D)
- Computer Aided Drafting and Design (C, D)
- Computer and Information Technologies (C, A)
- Cosmetology (C, D)
- Criminal Justice (C, A)
- Diagnostic Medical Sonography (A)
- Diesel Technology (C, D)
- Fire/Rescue Science Technology (C, A)
- General Occupational/Technical Studies (A)
- Health Information Technology (C, A)
- Heavy Equipment Operation (C, D)
- Human Services (C, A)

Interactive Design and Technology (C)
- Interdisciplinary Early Childhood Education (C, D, A)
- Manufacturing Industrial Technology
  - Electrical Technology (C, D)
- Medicaid Nurse Aide (C)
- Mining Technology (C)
- Nursing (A)
- Paramedic Technology (C)
- Physical Therapist Assistant (A)
- Practical Nursing (D)
- Professional Studio Artist (C, D, A)
- Radiography (C, A)
- Surgical Technology (A)
- Surveying & Mapping Technology (C)
- Visual Communication:
  - Multimedia (C, D, A)
- Welding Technology (C, D)

Contact Information

Hazard Community & Technical College
One Community College Drive
Hazard, KY 41701
(800) 246-7521
hazard.kctcs.edu

Hazard Campus
One Community College Dr.
Hazard, KY 41701
Technical Campus
101 Vo Tech Dr.
Hazard, KY 41701

Lees College Campus
601 Jefferson Ave.
Jackson, KY 41339

Knott County Branch
238 HWY 160 (Physical)
PO Box 1498 (Mailing)
Hindman, KY 41822

Leslie County Center
108 Maple Ave. (Physical)
PO Box 1870 (Mailing)
Hyden, KY 41749

Allied Health
UKCRH Bailey-Stumbo Building
750 Morton Boulevard
Hazard, Kentucky 41701

Kentucky School of Craft
56 Education Lane
Hindman, Kentucky 41822

Kentucky School of Bluegrass and Traditional Music
108 Maple Ave.
Hyden, KY 41749

General Information

Academics (606) 487-3502
Admissions (606) 487-3062
Business Office (606) 487-3322
Continuing Education (606) 487-3068
Disability Services (606) 487-3405
Financial Aid
Human Resources
Library
Public Relations
Records
Transfer Information
Veterans Affairs
Workforce Solutions
Website

Administration
President/CEO
(606) 487-3100

Vice President of Academics Services/Provost
(606) 487-3091

Vice President of Student Services
(606) 487-3086

Chief Business Services Officer
(606) 487-3184

Chief Information Officer
(606) 487-3128

Dean of Institutional Effectiveness, Planning & Research
(606) 487-3409

Dean of Operations/ Director of Safety & Security
(606) 487-3181

Senior Director of Institutional Advancement
(606) 487-3158

Senior Director of Human Resources
(606) 487-3110

Director of Public Relations
(606) 487-3141

Facility
Adams, Jeff, Assistant Professor, MFA, Cranbrook Academy of Art, 1992
Adams, Douglas D, Associate Professor, AAS, Hazard Technical College, 2002
Adams, Mary D, Professor, AM, Morehead State University, 1979
Back, Renée Tabor, Associate Professor, MS, University of Kentucky, 1993
Back, Tony, Associate Professor, BS, Morehead State University, 1999
Barnes Jr, Donald B, Professor, MS, Oklahoma State University, 1992
Bates, Lauren Ann, Associate Professor, MSN, Eastern Kentucky University, 2009
Begley, Dan H, Professor, MBA, University of Kentucky, 1998
Blair, Linda C, Professor, AB, Eastern Kentucky University, 1963
Boothe, Jenna L, Assistant Professor, MSN, Regis University, 2006
Bowling, Randy L, Instructor, 2 year Teaching Experience, 24 years Occupational Experience
Browning, Tracy L, Professor, DPT, University of Kentucky, 2010
Branson, Cathy A, Librarian III, MSLS, University of Kentucky, 2005
Brunty, Helen F, Associate Professor, MSW, University of Kentucky, 2000
Bryant, Jeremiah, Associate Professor, MA, Morehead State University, 2000
Bryant, Randall K, Professor, MA, West Georgia College, 1988
Burch Jr, Curtis E, Assistant Professor, 27 years Teaching Experience, 41 years Occupational Experience
Bush, Carolyn, Associate Professor, MA, Eastern Kentucky University, 1996
Caldwell, Venita Carol, Professor, MA, Union College, 1980
Campbell, Deborah N, Professor, MHS, Georgia Southern University, 1991
Campbell, Jesse A, Associate Professor, BS, Eastern Kentucky University, 1975
Campbell, Robert, Librarian IV, MSLS, University of Kentucky, 2011
Caudill, Jimmy D, Associate Professor, Diploma, Hazzard Technical College, 1987
Choy, Cam, Assistant Professor, MFA, University of Kentucky, 1991
Collins, Gwendolyn, Professor, MSN, University of Kentucky, 1982
Combs, Donna R, Professor, MSN, University of Kentucky, 1986
Combs, Terry A, Associate Professor, BA, Morehead State University, 2002
Coppett, Christ N, Associate Professor, BSN, Eastern Kentucky University, 1994
Cornett, Willie, Instructor, AAS, Hazard Community and Technical College, 2009
Couch, Melissa L, Instructor, AAS, Hazard Community and Technical College, 2000
Crawford, Thomas L, Assistant Professor, MS, University of Kentucky, 1989
Currie, Paul B, Associate Professor, DVM, University of Georgia, 2000
Davison, Patrick S, Librarian II, MSLS, University of Kentucky, 1990
Dixon, James A, Associate Professor, MA, Northern Arizona University, 1983
Dunn, Timothy J, Professor, MA, University of Kentucky, 1989
Dyer, Bradley W, Associate Professor, MS, East Tennessee State University, 1999
Flannery, Medeline K, Professor, MA, Columbia University, 1986
Francis, Sam W, Associate Professor, PhD, University of Kentucky, 1998
Frazier, David L, Associate Professor, MBA, Morehead State University, 1998
Fulton, Lou V, Professor, MBE, Morehead State University, 1990
Gainer, Victor, Assistant Professor, 10 years Educational Experience
Gibson, Diane A, Instructor, MS, Louisiana Tech University, 2009
Gillett, Suzanne J, Professor, MS, Central Michigan University, 1982
Globig, Sabine A, Professor, MS, Rutgers University, 1988
Gross, Edna, Assistant Professor, MA, Union College, 2004
Hagans-Shepherd, Ludrenia Sue, Professor, MSN, Eastern Kentucky University, 2000
Handshoe, John, Assistant Professor, MA, Morehead State University, 1994
Harling, Douglas S, Associate Professor, MFA, Southern Illinois University at Carbondale, 1992
Herald, Patricia Ann, Professor, DSN, University of Alabama, 1993
Holl, Richard E, Professor, PhD, University of Kentucky, 1996
Howard, Arzella W, Assistant Professor, MSN, University of Phoenix, 2008
Howard, Cluster C, Professor, MA, Morehead State University 1983
Ingram, Danny M, Professor, AS, Eastern Kentucky University, 2001
Jackson, Jennifer L, Associate Professor, MS, Eastern Kentucky University, 1998
Johnson, Andrea L, Professor, BS, Eastern Kentucky University, 1991
Johnson, R Susan, Professor, AS, Eastern Kentucky University, 1998
Kidd Jr, Ralph E, Professor, MS, Eastern Kentucky University, 1991
Lewis, Everett C, Instructor, 22 years Occupational Experience
Lindon, Jennifer A, Professor, PhD, Mississippi State University, 2010
Lucero, Scott C, Professor, MA, University of Kentucky, 1992
Madden, James Daniel, Instructor, MA, University of the Cumbelands, 2010
Maggard, Lisa, Professor, MS, University of Wisconsin, 1987
Maloney, Alexis, Instructor, BA, Brown University, 2003
Martin, Christina R, Assistant Professor, MSN, Eastern Kentucky University, 2009
Martin, JoAnna H, Instructor, Diploma, Cumberland Valley Technical College, 1999
Mathis II, John P, Assistant Professor, MA, Eastern Kentucky State University, 2006
May, Scott R, Professor, MS, Indiana State University, 1990
Medlin, Rex, Instructor, MSN, Arkansas State University, 2007
Miller, Marcia K, Professor, MS, University of Wisconsin, 1967, MFA, Spalding University, 2003
Mobelia, Doninda C, Professor, Ed. D., University of Kentucky, 2012
Moon, Randall B, Professor, PhD, University of California at Riverside, 2000
Moore, Marcarella Brock, Associate Professor, MA, Morehead State University, 1997
Morris, Lonnie, Instructor, MA, Union College, 1980
Napier, Anna S, Professor, MSN, University of Denver, 1991
Nickel, Adam, Librarian IV, MA, University of Missouri, 2010
Neace, Thomas D, Professor, MA, Eastern Kentucky University, 1996
Nyagol, Michael O, Instructor, MA, Western Michigan University, 2008
Osburn, Norman Dean, Instructor, 29 years Teaching Experience, 25 years Occupational Experience
Parke, Larry M, Associate Professor, MBA, Morehead State University, 2003
Parsons, Clarence Keith, Instructor, 31 years Occupational Experience
Pennington, Beth Ann, Instructor, MA, Morehead State University, 2005
Petrey-Blansdau, Sandra E, Professor, MA, Eastern Kentucky University, 1982
Phipps, Sandra K, Professor, MA, Morehead State University, 1988
Plummer, Cynthia S, Professor, MS, University of Kentucky, 1995
Reed, Ronald S, Professor, MA, University of Dayton, 1985
Richie, Janie Carol, Associate Professor, MSN, University of Kentucky, 1999
Richie, Tammy Lene, Professor, MBA, Morehead State University, 1985
Riddle, Sue C, Professor, MSN, University of Kentucky, 1993
Rissler, Lynn D, Associate Professor, MS, Eastern Kentucky University, 1972
Shaffer, Germaine B, Professor, JD, University of Louisville, 1990
Sexton, Rachel Juanita, Assistant Professor, Diploma, East Kentucky Beauty College, 1998
Sipple, Savannah, Instructor, MFA, Spalding University, 2008
Smith, Beverly A., Instructor, BSN, Eastern Kentucky University, 2009
Smith, Leila Sandlin, Professor, MBE, Morehead State University, 1987
Snook, R Kathy, Associate Professor, EdD, University of Kentucky, 1984
Spencer-Barnes, Amanda G, Instructor, MA, Morehead State University, 2007
Stampfer, Vera Dawn, Instructor, DPT, University of Kentucky, 2012
Stephens, Flo, Associate Professor, MSN, University of Phoenix, 1999
Stewart, Sharon R, Professor, MS, State University College of Geneseo, 1971
Strickland, William M, Professor, MA, Morehead State University, 1981
Strong, Ellaj, Professor, Ed. D., University of Kentucky, 2011
Sutherland, Bryan, Instructor, BA, Alice Lloyd College, 2000
Terry, Homer, Professor, MS, Eastern Kentucky University, 2004
Turner, Chestina, Instructor, MA, Eastern Kentucky University, 2008
Vance, Delores S, MBE, Morehead State University, 1995
Vergne, Stephanie L, Professor, MA, Morehead State University, 2001
Walters, Patricia A, Professor, BS, Eastern Kentucky University, 1991
Wernette, Amy S, Professor, M.S, University of Michigan, 1996
W. Wittaker, Timothy, Associate Professor, BS, Midwestern State University, 2005
Williams, Jenny D, Professor, MA, University of Kentucky, 1992
Wood, Jeremy R, Professor, MS, University of Tennessee, 1993
Woods, Sherry B, Professor, MSN, University of Kentucky, 1995

hazard.kctcs.edu
Henderson Community College

Mission Statement/Status of Accreditation

In 1960, the University of Kentucky, a public land grant institution, established the Northwest Extension Campus in Henderson, Kentucky. In 1962, the Kentucky General Assembly authorized the formation of a statewide system of community colleges to be operated by the University of Kentucky (UK). The University of Kentucky Community College System (UKCCS) was established in 1964, and the Northwest Extension was renamed Henderson Community College (HCC) and became one of the seven charter institutions.

In 1997, the Kentucky Postsecondary Education Improvement Act created the Kentucky Community and Technical College System (KCTCS). This new system combined the UK Community Colleges with Kentucky Technical Colleges under the direction of the KCTCS Board of Regents.

The mission of Henderson Community College is to:

- Provide general education curriculum for the first two years of a baccalaureate program (Associate in Arts or Associate in Science Degrees).
- Provide technical programs to prepare students for immediate employment (Certificates, Diplomas, or Associate in Applied Science Degrees).
- Provide continuing education, adult education, customized training and cultural opportunities.

Institutional Goals:

To fulfill its mission, the college has adopted five institutional goals to coincide with the KCTCS goals. The goals of HCC are as follows:

- Increase Student Access and Success
- Promote Excellence in Teaching and Learning
- Foster Diversity and Global Awareness
- Enhance the Economic Development of Communities and the Commonwealth
- Promote the Recognition and Value of Henderson Community College

Henderson Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Henderson Community College.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Agricultural Technology (C, D, A)
Business Studies:
   Business Administration Systems (C, A)
   Business Management and Marketing (C)
Clinical Laboratory Technology (C, A)
Computer and Information Technologies (C, A)
Dental Assisting/Dental Hygiene (A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
   Industrial Maintenance Technology (C, A)
Medical Assisting (C, D, A)
Nursing (A)
Practical Nursing (C, D)
Welding Technology (C)

Contact Information

Henderson Community College
2660 South Green Street
Henderson KY 42420
(270) 827-1867
Toll free: 800-696-9958
Henderson.kctcs.edu

General Information

Admissions (270) 831-9610
Business Office (270) 831-9622
Center for Community Workforce and Economic Development (270) 831-9658
Continuing Education (270) 831-9658
Disability Services (270) 831-9783
Financial Aid (270) 831-9628
Human Resources (270) 831-9617
Library (270) 831-9760
Public Relations (270) 831-9805
Records (270) 831-9613
Technology Solutions Help Desk (270) 831-9616
Transfer Information Liaison (270) 831-9610
Veterans Affairs (270) 831-9685

Administration

President and CEO
Dr. Kris Williams

Dean of Academic Affairs
Dr. David Brauer

Dean of Student Affairs
Ms. Patty Mitchell

Dean of Business Affairs
Mr. Jerry Gentry

Dean for Center of Community Workforce and Economic Development
Ms. Pam Wilson

Assistant Dean for Library Services
Mr. Mike Knecht

Assistant Dean and Director of Planning, Evaluation and Research
Mr. Mike Thurman

Chief Information Systems Officer
Ms. Kim Conley

Chief Institutional Advancement
Ms. Susanne Wilson

Director of Cultural Diversity
Mr. William L. Dixon

Division of Arts & Humanities
Mr. Mike Knecht

Division of Biological Sciences
Dr. Mary Gail Wilder

Division of Physical Sciences
Ms. Rebecca Wells

Division of Social & Behavioral Sciences
Mr. Paul Kasenow
Faculty
Becker, Kara, Instructor, ME, Western Kentucky University, 2003
Bennett, Brenda, Associate Professor, MS, Western Kentucky University, 1995
Blackburn, Catherine, Professor, MFA, East Carolina University, 1993
Blanchard, Eric, Instructor, DMA, University of Cincinnati College of Conservatory of Music, 2010
Brauer, David, Professor, PhD, State University of New York, 1979
Buchanan, Marlena, Associate Professor, MSN, University of Southern Indiana, 2000
Burton, Sharon, Professor, MA, Ohio University, 1983
Caudill, Sharon, Professor, MA, Murray State University, 1970
Chandler, Shelly, Assistant Professor, MSN, Murray State University, 2010
Chappell, Michelle, Instructor, MS, Morehead State University, 2011
Cherry, Doris, Professor, MS, Western Illinois University, 1979
Corley, Maura, Professor, MS, University of Kentucky, 1968
Davis, Yvonne, Assistant Professor, MSN, University of Southern Indiana, 2004
Dean, Kim, Professor, MS, Western Kentucky University, 1986
Fritts, David, Professor, MA, Ohio University, 1984
Fuchs, Pennae, Professor, MSN, University of Texas at Austin, 1974
Furubush, Frank, Associate Professor, MS, Southern Connecticut College, 1982
Gary, William, Professor, MA, Florida State University, 1991
Griffiths, Katie, Assistant Professor, MA, Eastern Illinois University, 2007
Hawa, Randa, Professor, MS, University of Evansville, 1991
Hunt, Cathy, Professor, MS, University of Kentucky, 1980
Jones, Mary Jane, Associate Professor, MSN, University of California Los Angeles, 1979
Joy, Brian, Assistant Professor, MBA, National University, 2000
Joy, Lilia, Associate Professor, MA, Murray State University, 2003
Kasenow, Paul, Professor, MA, Kent State University, 1987
Keller, Jill, Professor, MSN, University of Louisville, 1995
Knecht, Michael, Professor, MBA, Western Kentucky University, 1999, MLS, Emporia State University, 1992
Matby, Lorie, Professor, MA, Ohio University, 1983
Mattingly, Carole, Instructor, MBA, University of Evansville, 1989, BSN, University of Evansville, 1980
McCarty, Steven, Professor, MA, Western Kentucky University, 1991
Meyer, Janet, Assistant Professor, MSN, University of Phoenix, 2009
Mihankhah, Kianpour, Professor, MS, Ball State University, 1979
Murch, Carol, Assistant Professor, MSN, Murray State University, 2010
Murray, Bridget, Associate Professor, MEd, Indiana State University, 1998
Owens, Randy, Associate Professor, BA, University of Kentucky, 1970
Patsalides, Eugenios, Professor, MA, Western Kentucky University, 1997
Pheps, Barry, Instructor, BS, Kentucky Wesleyan College, 2002
Reid, Kevin, Professor, MLS, University of Kentucky, 1993, MA, Purdue University, 1986
Sievert, Margaret, Professor, MSN, University of Evansville, 1978
Strawn, Anthony, Professor, MA, University of Evansville, 1979
Taylo,r Scott, Instructor, MS, Murray State University, 2010
Threlkeld, Lori, Assistant Professor, MS, Murray State University, 1992
Thomas, Stephen, Professor, MBA, Memphis State University, 1976
Thurman, Michael, Professor, MBA, University of Evansville, 1984
Tutt, Larry, Associate Professor, MA, Murray State University, 1981
Wells, Rebecca, Professor, MS, Eastern Kentucky University, 1985
Whitaker, Deborah, Professor, MSN, Murray State University, 2002
Wilder, Mary, Professor, PhD, Indiana University Purdue University Indianapolis, 1987
Winstead, Laura, Associate Professor, MS, Murray State University, 1996
Yates, Deborah, Associate Professor, MSN, Canyon College, 2010
Mission Statement/Status of Accreditation
Hopkinsville Community College is an inclusive, student-centered educational institution that provides accessible, innovative, and comprehensive learning opportunities within a supportive community that encourages academic excellence. The college sustains strong educational, community, military, and economic partnerships to improve quality of life in the southern Pennyrile region and Fort Campbell.

Hopkinsville Community College promotes excellence in teaching and learning by offering:

• Degree, diploma, and certificate programs and courses that enable students to:
• transfer to four-year institutions, and
• acquire the knowledge and skills for new or continued employment.
• Developmental, academic and support services that promote student success.
• Customized business and industry training.
• Continuing education and community outreach.
• Adult education.

Hopkinsville Community College is a member of the Kentucky Community and Technical College System and is a public two-year degree granting institution.

Hopkinsville Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Hopkinsville Community College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
Associate in Arts
Associate in Science

Occupational/Technical Curricula
Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Nursing Assistant (C)
Air Conditioning Technology (C)
Agricultural Technology (C, A)
Automotive Technology (C)
Business Studies
Business Administration Systems (C, A)
Medical Information Technology (C, D, A)
Office Systems Technology (C, A)
Clinical Laboratory Technician (C)
Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D)
Construction Technology (C)

Criminal Justice (C, A)
Education (C, A)
Engineering and Electronics Technology (C, D, A)
General Occupational/Technical Studies (A)
Health Science Technology (A)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
Electrical Technology (C, D)
Industrial Maintenance Technology (C, D)
Nursing (A)
Pharmacy Technology (C)
Practical Nursing (C, D)
Quality Management Systems (C, D)
Welding Technology (C)

Contact Information
Hopkinsville Community College
720 North Drive, P.O. Box 2100
Hopkinsville, KY 42241-2100
(270) 707-3700 or toll free – (866) 534-2224
hopkinsville.kctcs.edu

Fort Campbell Campus
English Army Education Center
Room 135, 202 Bastogne Avenue
Fort Campbell, KY 42223
(270) 707-3950 or toll free – (866) 317-3950

West Kentucky Regional Post-Secondary Education Center
5305 Ft. Campbell Boulevard
Hopkinsville, KY 42240

General Information
(270) 707-3700
Admissions
Pat Hinton
(270) 707-3810
Adult Education
Gary Dawson
(270) 707-3925
Advising Center
Deloria Scott
(270) 707-3820
Testing Center
Martha Metcalfe
(270) 707-3826
Business Office
Matthew Davenport
(270) 707-3729
Career and Transfer Center
Kanya Allen
(270) 707-3827
Center for Community Workforce and Economic Development
Jerry Gilliam
(270) 707-3894
Continuing Education
Carol Kirves
(270) 707-3750
Disability Services
Dr. Jason Warren
(270) 707-3801
Distance Learning Support
(270) 707-3820
Financial Aid
Janet Gunther
(270) 707-3830
Human Resources
Yvonne Glasman
(270) 707-3722
International Student Services
Dr. Jason Warren
(270) 707-3801

Library
Cynthia Atkins
(270) 707-3761

Public Relations and Marketing
Rena Young
(270) 707-3732

Records/Registrar
Melissa Stevenson
(270) 707-3809

Transfer Information Liaison
Pat Hinton
(270) 707-3813

Veterans Affairs
Cathy Alston
(270) 707-3957

Information Technology
Terry Duncan
(270) 707-3771

Diversity & Leadership-O of Student Engagement
Tracey Williams
(270) 707-3825

Fort Campbell Campus
Alisha Lee
(270) 707-3958

Administration

President/CEO
Dr. James E. Selbe

Chief Academic Affairs Officer
Dr. Kristin Wilson

Dean of Academic Affairs
Dr. Randall Wilson

Dean of Academic Affairs
Mrs. Alissa Young

Chief Student Affairs Officer
Dr. Jason Warren

Chief Business Affairs Officer
Mrs. Beverly A. Atwood

Chief of Community, Workforce and Economic Development
Mr. Jerry Gilliam

Chief of Institutional Advancement
Mrs. Yvette Eastham

Dean of Institutional Effectiveness
Dr. Lance Angell

Associate Dean of Continuing Education
Mrs. Carol Kirves

Information Technology Director
Mr. Terry Duncan

Division of Allied Health
Mrs. Peggy Bozarth

Division of Liberal Arts & Social Sciences
Mr. Ted Wilson

Division of Mathematics and Sciences
Mr. Jerry Gilliam

Division of Professional and Technical Studies
Ms. Deloria Scott

Division of Academic Support

Faculty

Akpo, Reginald C, Associate Professor, MA, Central Michigan University, 1982

Arnold, Heidi L, Assistant Professor, MA, Murray State University, 2008, MS, Murray State University, 2007

Arnold, Jason E, Professor, MS, Murray State University, 2008, MS, Southern Illinois University at Carbondale, 1997

Atkins, Cynthia F, Prof/CC Lib Svc Dir, MS, Western Kentucky University, 1986, MLS, George Peabody College, 1975

Ban, Scott Alexander, Assistant Professor, MS, University of Illinois at Urbana-Champaign, 2004

Beverly, Elizabeth A, Instructor, MS, University of Louisville, 2009

Bozarth, Peggy Irene, Professor, MSN, Murray State University, 1997

Braxton-Brown, Justin Dale, Assistant Professor, MA, Ohio University, 2002

Bridgeman, Gregory W, Associate Professor, MA, Webster University, 1984

Broadbent, John S, Associate Professor, MA, Austin Peay State University, 2002, MA, Trevecca Nazarene College, 1993

Carlisle II, Thomas T, Professor, MA, Murray State University, 1994

Carter, David E, Professor, PhD, University of Kentucky, 1993

Casey, Kenneth Stewart, Associate Professor, PhD, Vanderbilt University, 1991

Cawood, Marketa Liska, Associate Professor, MA, State University of New Jersey Rutgers, 2007

Coates, Brian L, Instructor, MA, Austin Peay State University, 2002

Darokka, Meha, Assistant Professor, MA, Marshall University, 2005, MBA, Marshall University 2003

Dougherty, Karen, Assistant Professor, M.D., University of Louisville School of Medicine, 1979

Duncan, Terry D, Professor, MBA, Murray State University, 1980, MS, Murray State University 1973

Dye, Lindee Dolliver, Instructor, BSN, Austin Peay State University, 1997

Dye, Rick B, Assistant Professor, MS, Western Kentucky University, 1989

Evans, Audrey D, Professor, EDS, Austin Peay State University, 1998

Evans, Kimmel Kirk, Associate Professor, MAS, Embry-Riddle Aeronautical University, 1996, MA, Central Michigan University, 1980, MA, Central Michigan University, 1996

Felton, Kevin E, Professor, EdD, Tennessee State University, 1986

Fleming, Jerald W, Professor, MS, Murray State University, 2001

Good, Kandi Lea, Instructor, BSN, Murray State University, 2010, BS, Kentucky State University, 1992

Gunn, Amanda Joy, Instructor, BSN, Chamberlain College of Nursing, 2010

Higdon, Terri, Assistant Professor, BSN, Union University, 1996

Holt, Stephanie, Associate Professor, MA, Eastern Kentucky University, 1994

Hoover, Donald L, Professor, MAT, Middle Tennessee State, 1967

Howell, William T, Associate Professor, MA, Appalachian State University, 1993

Hunter, James T, Professor, MS, University of Kentucky, 1984

Jackman, Sarah F, Instructor, ME, University of Texas at El Paso, 1980, MET, University of Texas at El Paso, 1992

Jernigan, Dianne H, Assistant Professor, MA, University of Kentucky, 1973

Justice, Gaye Ann, Instructor, BSN, Western Governors University, 2011

Laffoon-Jackson, Julia, Assistant Professor, MA, Western Kentucky University, 2006

Lambruno, Joyce, Assistant Professor, MSN, Murray State University, 2010

Lamprecht, Donna R, Associate Professor, MS, Florida Institute of Technology, 2002

Lancaster, Kristen Marie, Instructor, MS, Air Force Institute of Technology, 2010

Larkin, Vernell D, Professor, EdD, University of Kentucky, 2001

Lemons, Sherry L, Professor, MS, Austin Peay State University, 1994

Lutz, Roger, Associate Professor, AAS, Hopkinsville Community College, 2004, Certification, CFPIH and CFPIHT, 2001

McCulley, Michael W, Professor, MS, Murray State University, 1981

McDonald, Laura E, Instructor, MS, Nova Southeastern University, 2009

Meador, Barbara W, Associate Professor, MA, Austin Peay State University, 1978

Montgomery, Frank W, Associate Professor, EdD, Valdosta State, 1990

Nichols, Linda A, Associate Professor, Library II, MA, University of Louisville, 2006, MLS, University of Kentucky, 2000

Parteney, Jeffrey A, Associate Professor, Certificate, National Occupational Competency Testing Institute, 1999

Pendleton, Arthur D, Associate Professor, MBA, Western Kentucky University, 2003

Pniewski, Tommie W, Professor, MS, Western Kentucky University, 1998, BA, Ball State University, 1976, MS, Loyola University, 2009

Ralph, Brett E, Professor, MFA, University of Massachusetts, 1993

Ray, Ryan A, Assistant Professor, MBA, Murray State University, 1996

Richey, Shannon Leigh, Instructor, BSN, Murray State University, 2009

Riley, Patrick J, Professor, MA, University of Missouri, 1997

Rives, Anita W, Associate Professor, MBA, Murray State University, 2004

Robitaille, Kimberly Yvette, Associate Professor, MSN, University of Phoenix, 2000

Sandifer, Dana R, Professor, MSN, Murray State University, 1996

Sauer, Amanda C, Associate Professor, MA, Gannon University, 1993

Sauer, Bernd Eberhard, Professor, MFA, Minnesota State, 1993, MA, Minnesota State, 1993

Schultz, Arthur Ray, Instructor, MS, Tennessee State University, 2009

Scott, Deloria A, Associate Professor/CC Counselor, M.S, Murray State University, 1996

Sims, Derek, Assistant Professor, MBA, Murray State University, 2011, MS, Southern Illinois University, 2007

Smith, Robert William, Instructor, MA, Marian University, 2009

Stahl, Anne L, Instructor, MA, Austin Peay State University, 1983

Vice, Billy J, Professor, PhD, Ohio State University, 1972

Wilkinson, Daniel J, Professor, MM, Western Kentucky University, 1984

Williams, Sandra Kaye, Instructor, BSN, Kentucky Wesleyan College, 1984

Wilson, Randy H, Professor, PhD, University of Nebraska-Lincoln, 2006

Winton, Ted H, Professor, MA, Baylor University, 1983

Wood, Dale L, Associate Professor, MA, Murray State University, 1971

Young, Alissa L, Professor, MS, Murray State University, 1993
Mission Statement/Status of Accreditation

We open the door to quality education that promotes the economic and cultural vitality of our community, encourages all to discover and achieve their potential, and provides opportunities to turn dreams into realities.

Mission Goals

Jefferson Community and Technical College fulfills its Mission by promoting excellence in programs and services in support of educational opportunity, lifelong learning, and student achievement as expressed in the following goals:

1. Support the attainment of regional and statewide educational goals through data informed and inquiry driven strategies to increase retention rates and completion of credentials (Associate Degrees, Diplomas, and Certificates).
2. Maximize student achievement through an institutional commitment to effective teaching and support services.
3. Enhance workforce readiness and economic development of the community by providing seamless educational opportunities through agreements with adult education, secondary school systems, post-secondary institutions, community groups, and business and industry partners.
4. Provide an inclusive, accessible, and safe learning and working environment.
5. Exercise responsible stewardship of the College's human, fiscal, and physical resources.

Jefferson Community and Technical College is a member of the Kentucky Community and Technical College System offering career/technical, transfer, and transitional educational opportunities with campuses and locations in Jefferson, Shelby, Carroll, Bullitt, Gallatin, Henry, Oldham, Owen, Spencer, and Trimble Counties.

Jefferson Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Jefferson Community and Technical College. Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
- Associate in Arts
- Associate in Science

Occupational/Technical Curricula
The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

- African American Studies (C)
- Air Conditioning Technology (C, D)
- Applied Process Technologies (C, D, A)
- Apprenticeship Studies (A)
- Arts Administration (C)
- Automotive Technology (C, D, A)
- Aviation Maintenance Technology (C, A)
- Business Administration Systems (C, D, A)
- Medical Information Technology (C, D)
- Office Systems Technology (C, D, A)
- Clinical Laboratory Technology (C, A)
- Collision Repair Technician (C, D)
- Computer Assisted Design and Drafting (C, D)
- Computer and Information Technologies (C, A)
- Computerized Manufacturing and Machining (C, D)
- Construction Technology (C, D)
- Cosmetology (C, D)
- Criminal Justice (A)
- Culinary Arts (C, A)
- Diagnostic Medical Sonography (C, A)
- Digital Game and Simulation Design (C)
- Education (C, A)
- Emergency Medical Technician (C)
- Engineering and Electronics Technology (C, D, A)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Global Studies (C, A)
- Health Information Technology (C, A)
- Health Science Technology (A)
- Homeland Security/ Emergency Management (C)
- Horticulture (C, D, A)
- Human Services (C, A)
- Industrial Chemical Technology (A)
- Insurance and Risk Management (C)
- Interdisciplinary Early Childhood Education (C, A)
- Invasive Cardiology (C)
- Manufacturing Industrial Technology:
  - Electrical Technology (C, D)
  - Industrial Maintenance Technology (C)
- Mechatronics (C)
- Medical Administrative Services (C)
- Medical Assisting (C, D, A)
- Nuclear Medicine and Molecular Imaging Technology (A)
- Nursing (A)
- Occupational Therapy Assistant (A)
- Paramedic Technology (C)
- Pharmacy Technology (C, D)
- Physical Therapist Assistant (A)
- Plumbing Technology (C, D)
- Practical Nursing (C, D)
- Radiography (A)
- Real Estate (C, A)
- Respiratory Care (C, A)
- Surgical Technology (D, A)
- Truck Driver Training (C)
- Visual Communication:
  - Communication Arts Technology (C, A)
  - Multimedia (C)
  - Printing (C, D)
  - Visual Arts (C)
- Volumetric Medical Imaging (C)
- Welding Technology (C, D, A)
- Wood Manufacturing Technology (C, D)
- Zoo Animal Technician (C)
Contact Information
Jefferson Community & Technical College
109 E. Broadway
Louisville, KY 40202
(502) 213-5333
jefferson.kctcs.edu

Downtown Campus
109 East Broadway
Louisville, KY 40202
(502) 213-5333

Southwest Campus
1000 Community College Drive
Louisville, KY 40272
(502) 213-5333

Carrollton Campus
324 Main Street
Carrollton, KY 41008
(502) 732-4846 or (800) 853-3887

Jefferson Technical Campus
727 W. Chestnut Street
Louisville, KY 40203
(502) 213-5333

Shelby County Campus
1361 Frankfort Road
Shelbyville, KY 40065
(502) 633-5524

Bullitt County Campus
505 Buffalo Run Road
Shepherdsville KY 40165
(502) 634-7418
(502) 213-5333

General Information
(502) 213-5333

Admissions
Bursar's Office
Business Office
Center for Community Workforce and Economic Development
Disability Services
Financial Aid
Human Resources
Library - Downtown
Library - Jefferson Technical
Library - Southwest
Library - Carrollton
Library - Shelby County
Marketing and Communications
Records
Transfer Information Liaison
Veterans Affairs
(502) 213-4000
(502) 213-2107
(502) 213-2103
(502) 213-2223
(502) 213-2449
(502) 213-2137
(502) 213-2118
(502) 213-2154
(502) 213-4100
(502) 213-7222
(502) 732-4846
(502) 633-3618
(502) 213-2400
(502) 213-4000
(502) 213-4000
(502) 213-2139

Administration
President
Dr. Anthony Newberry
Provost and Vice President for Academic and Student Affairs
Dr. Diane Calhoun-French
Dean of Academic Affairs – Downtown Campus
Dr. Randall Davis
Dean of Academic Affairs - Southwest Campus
Dr. Katy Varner
Dean of Academic Affairs - Jefferson Technical Campus
Bob Silliman
Dean of Nursing and Allied Health
Dr. Carolyn O’Daniel
Dean of Student Affairs - Downtown Campus
Dr. Laura Smith
Dean of Student Affairs - Southwest Campus
Dr. Denise Gray Lackey
Director of Carrollton Campus
Susan Carlisle
Director of Shelby County Campus
Dr. John Weland
Interim Director of Bullitt County Campus
Donna Miller
Department of Workforce Solutions
Mary Ann Hyland-Murr
Institutional Advancement
Jo Carole Dickson
Vice President for Planning, Effectiveness, and Research
Dr. Mary Jones
Marketing and Communications
Lisa Brosky
Division of Arts and Humanities - Downtown
Marlisa Austin
Division of Arts and Humanities - Southwest
Dr. Donna Elkins
Division of Business - Downtown
Dr. Pam Besser
Division of Business – Southwest
Pete Rodski
Division of Technology and Related Sciences
Dr. Bruce Jost
Division of Natural Sciences/ Math - Downtown
Caroline Martinson
Division of Natural Sciences/ Math – Southwest
Charles Purvis
Division of Reading and Academic Success —
Downtown
Reneau Waggoner
Division of Social and Behavioral Sciences – Downtown
Charles McCombs
Division of Social and Behavioral Sciences - Southwest
Cathy W right
Division of Allied Health
Eva Ruth Oltman
Division of Nursing
Sonia Rudolph
Division Technology and Industry
Andrew Kornowski
Director of Library Services – Downtown,
Carrollton, and Technical Campuses
Sheree Williams
Director of Library Services – Southwest,
Bullitt County, and Shelby County Campuses
Larry Rees

Faculty
Ackerman, Jennifer, Assistant Professor, MA, University of Louisville, 1993
Adams, Constance, Assistant Professor, M SN, McKendree University, 2007
Adams, James, Assistant Professor, MHA, University of Phoenix, 2007
Adams, Jill, Associate Professor, MA, East Carolina University, 1998
Alderidge, Phyllis, C, Professor, PhD, Indiana University, 1990
Artzner, Kay PoinDEX, Professor, MAT, University of Louisville, 1987
Asamoah, Samuel R, Associate Professor, MBA, Pittsburg State University, 1989
Ash, Daniel W, Associate Professor, PhD, University of Louisville, 1988
Ashley, Barbara R, Professor, PhD, University of Pittsburgh, 1981
Attarzadeh, Hamid, Associate Professor, MS, University of Louisville, 1991
Austin, Marilza R, Professor, MA, Union College, 1999
Barker, John, J, Instructor, BBA, Eastern Kentucky University, 1970
Barley, Brandon, Associate Professor, MS, Virginia Tech, 2003
Baughman, James G, Professor, PhD, University of Kentucky, 1976
Beebe, Patricia, Professor, MA, University of Kentucky, 1976
Beeler, Crystal R, Instructor, AAS, Jefferson Community and Technical College, 2009
Benz, Linda, J, Professor, MS, University of Wisconsin-Madison, 1978
Besser, Mary P, Professor, PhD, University of Louisville, 1985
Betts, Autumn, Assistant Professor, M SW, Southern Baptist Theological Seminary, 1996
Bingham, Martha P, Associate Professor, MA, Murray State University, 1970
Blackburn, Leo, J, Instructor, 9 years teaching experience, 25 years occupational experience
Bloyd, Deborah, Assistant Professor, M SN, University of Louisville, 1984
Boaswell, Melanie A, Professor, MS, Florida State University, 2000
Boyd, Lisbeth, Instructor, MS, Murray State University, 2008
Brandon, Keely, Instructor, MS, Kanasawa University, 2009
Broadhead, Morgan R, Professor, MA, Princeton University, 1965
Brooks, Albert, Instructor, AAS, Jefferson Community College, 2000
Browne, Kevin, Instructor, MA, University of Louisville, 1995
Brunner, Ella R, Assistant Professor, EdD, Spalding University, 2006
Buchanan, Roberta, Instructor, MFA, Spalding University, 2004
Buckler, Michael, Associate Professor, MA, University of Louisville, 1996
Burks, Ishorn, Assistant Professor, MA, City University of New York, 1979
Burus, Justin, Instructor, MS, University of Kentucky, 2007
Bush, Sherman L, Professor, Med, University of Louisville, 1977
Butsch, Pamela M, Professor, PhD, University of Louisville, 1999
Butsch, Richard A, Professor, PhD, University of Louisville, 2005
Butcher, William J, Professor, MA, Webster University, 1975
Calhoun-French, Diane, Professor, PhD, University of Louisville, 1982
Cameron, Shauna, Instructor, MS, Bellarmine University, 2006
Cartwright, Andrea, Instructor, MA, University of Louisville, 2006
Caton, Cathy Lee, Assistant Professor, MS, Western Kentucky University, 2004
Charapka, Margie W, Professor, EdD, Spalding University, 1998
Cheatham, Cathy A, Instructor, Med, Western Kentucky University, 1979
O’Bryan, Amanda, Instructor, MS, University of Louisville, 2009
O’Daniel, Carolyn, Professor, EdD, University of Kentucky, 1987
Olsen, Bobby G, Professor, MAT, Northwest Missouri State University, 1978
Oltman, Eva R, Professor, MEd, University of Louisville, 2003
Pack, Don, Professor, EdD, University of Louisville, 1999
Parry, Daniel, Associate Professor, EdD, University of Louisville, 2000
Payton, Denise, Associate Professor, MA, University of Illinois, 2000
Peters, Jane, Associate Professor, PhD, University of Kentucky, 2005
Phillips, Greg, Instructor, Journeymen, 1986
Pillitteri, Gerald J, Assistant Professor, Electrical Journeymen, 28 years industry experience
Pitchford, Jennifer, Assistant Professor, BS, University of Evansville, 1997
Plapport, Wilson J, Assistant Professor, 17 Years Teaching Experience, 22 Years
O’cational Experience
Prather, Mark C, Associate Professor, BA, Indiana University, 1989
Prueett, Stephen R, Professor, PhD, University of Louisville, 1997
Purvis, Charles D, Professor, MS, State University of New York, 1989
Pyle, Jeffrey G, Instructor, Med, University of Louisville, 2010
Ragade, Anila R, Professor, PhD, University of Louisville, 1988
Rasras, Awad R, Associate Professor, MA, University of Kansas, 1985
Reflit, Donna J, Associate Professor, MA, Georgetown College, 1986
Regnier, Adrienne M, Associate Professor, MA, University of Illinois, 1992
Reisner, Caroline, Instructor, MS, Eastern Kentucky University, 2007
Repper, Frank, Associate Professor, MM, Eastern Kentucky University, 1983
Riedel, Donna D, Associate Professor, MS, University of Massachusetts, 1987
Riedling, Robert L, Professor, MS, University of Louisville, 1997
Riley, Cynthia M, Instructor, AAS, Jefferson Community and Technical College, 2010
Riley, William A, Professor, PsyD, Spalding University, 1993
Riley-Grimes, Angela, Instructor, MSBC, Spalding University, 2008
Robertson, Else S, Professor, MAT, Spalding University, 1983
Robertson, Peter, Assistant Professor, Med, University of Louisville, 2000
Rodgers, Claud D, Associate Professor, MA, University of Louisville, 1968
Rodski, Peter A, Professor, MS, Eastern Kentucky University, 1992
Rommel, Ralph G, Instructor, BS, Embry-Riddle Aeronautical University, 2001
Rudolph, Sonia R, Associate Professor, MSN, Spalding University, 2003
Sabin, Benita, MD, University of Louisville School of Medicine, 1982
Schmidt, Carol P, Professor, MA, University of Louisville, 1981
Schreiter, Lisa V, Associate Professor, PsyD, Spalding University, 1987
Schottler, Kara, Instructor, MA, University of Louisville, 1987
Scichilone, Bryan, Associate Professor, MA, Western Washington University, 2005
Sellers, Telly R, Professor, EdD, Spalding University, 2006
Shiffman, Betty, Professor, PhD, University of Louisville, 1994
Sistarenik Jr, John, Professor, MA, Indiana University, 1969
Sloan, Russell E, Instructor, FAA Certification, 3 Years Occupational Experience
Smithy, Pamela, Assistant Professor, MS, Quinnipiac University, 2011
Spears, Peggy A, Associate Professor, MS, Murray State University, 1989
Spears, Sandra L, Professor, MS, Western Kentucky University, 1974
Sprinkle, Amy C, Professor, MS, Eastern Kentucky University, 1986
Spurr, Sally A, Associate Professor, MS, University of Kentucky, 1982
Steeden, William A, Professor, PhD, University of Kentucky, 1999
Stevens, Becky, Professor, MAE, Western Kentucky University, 2008
Stewart, Amelia, Professor, PhD, Ohio University, 1987
Stewart, James H, Associate Professor, MS, Western Kentucky University, 1991
Stoddard, Hildaa, Professor, EdD, Indiana University, 1977
Stokes, Kevin B, Professor, MA, Washington State University, 1992
Stoller, John, Instructor, Med, Catherine Spalding College, 1969
Stone, Doris A, Associate Professor, MSN, Bellarmine University, 2004
Summers, Lisa A, Instructor, AAS, Purdue University, 1982
Swain, Martha S, Professor, MS, University of Louisville, 1991
Swarnapuri, Triprupa, Associate Professor, MS, Western Kentucky University, 2003
Tackett, Charles, Instructor, MA, Western Illinois University, 2007
Talbott, Laura, Associate Professor, BSN, University of Kentucky, 1991
Taylor, Stacy, Associate Professor, MA, University of Louisville, 1999
Terhune, Jerry D, Professor, PhD, University of Minnesota, 1976
Thorne, Byron F, Associate Professor, MS, University of Tulsa, 1997
Theobald, Susan H, Professor, MSN, Bellarmine University, 1992
Thompson, Michael, Instructor, PhD, University of Kentucky, 2000
Thompson, Vickie T, MAE, Western Kentucky University, 2006
Thorne, James G, Associate Professor, MAT, University of Louisville, 1976
Tomei Jr., Dontoce A, Instructor, MA, Eastern Illinois University, 1996
Tyler, Bonita, Instructor, MA, Western Kentucky University, 2011
Urban-Payne, Jonella, Assistant Professor, MSN, McKendree University, 2007
Varner, Katy L, Professor, EdD, Spalding University, 2000
Veigl, Victoria L, Associate Professor, MS, University of Illinois, 1980
Vogel, David M, Associate Professor, PhD, University of Louisville, 2002
Waggoner, Reneau Y, Associate Professor, MA, Western Kentucky University, 1999
Wallford, Ronald M, Professor, MA, University of Louisville, 1967
Warde, John, Associate Professor, MBA, University of Louisville, 2000
Warford, Benny F, Instructor, 10 years teaching experience, 20 years occupational experience
Warren, Frances M, Associate Professor, MA, Western Kentucky University, 1973
Washington, Janie L, Professor, Med, University of Louisville, 2000
Watso, Paul R, Professor, MA, Bowling Green State University, 1973
Watters, Keith B, Instructor, Certification in FAA Airframe and Powerplant
Webb, Linda, Associate Professor, MS, University of Louisville, 1998
Wecther, Bree, Associate Professor, MA, Eastern Illinois University, 2002
Weldon, Betty E, Professor, MA, University of Louisville, 1986
Wehate, Valerie J, Associate Professor, PhD, University of Cincinnati College of Medicine, 2001
Wisman, Michael C, Associate Professor, BS, University of Louisville, 2000
White, Deborah C, Professor, MSN, University of Kentucky, 1982
Wieland, John, Assistant Professor, PhD, Marquette University, 2001
Wilburn, Mark S, Professor, PhD, Ohio University, 1987
Wiles, Thomas S, Professor, MS, University of Louisville, 1990
Wilkerson, Andrew, Instructor, MS, University of Nebraska, 2010
Williams, Lisa, Instructor, PhD, University of Louisville, 1996
Williams, Sheree Huber, Professor, MSL, University of Kentucky, 1981
Wolff, Russell M, Assistant Professor, 20 years teaching experience, 17 years occupational experience
Wong, Edmund, Associate Professor, MA, University of South Carolina, 1991
Wood, Brandy, Instructor, MA, Spalding University, 1991
Wood, Diane, Assistant Professor, MA, University of Kentucky, 1999
Wood, Mark, Associate Professor, MS, University of Southern California, 1981
Wright, Catherine, Associate Professor, MA, Marshall University, 1988
Wright, Mark, Professor, MEng, University of Louisville, 1992
Wright, Rebda L, Professor, MS, University of Louisville, 1993
Wyatt, Mary H, Professor, MSN, University of Kentucky, 1973
Young, Eliza M, Professor, PhD, Michigan State University, 1999
Zausch, Jo Fouts, Professor, EdD, Spalding University, 1996

Correctional Sites

Green River*  
Duncan-Ponter; Annie F, Associate Professor, MA, Western Kentucky University, 2004  
Edelen, Cathy L, Associate Professor, MA, Murray State University, 1983  
Lovell, Karen, BS, University of Kentucky, 1973  
Piper, Sherry A, Professor, MA, Western Kentucky University, 1998

Eddyville (KSP)**  
Belt, Danny, Instructor, Master Electrician License  
Fowler, Lori, Instructor, BA, Eastern Kentucky University, 1994  
Money, Ricky, Assistant Professor, AA, Madisonville Community College, 2007  
Phillips, Stephen, Associate Professor, MS, Murray State University, 2003  
Renn, Robert D, Instructor, MS, University of Kentucky, 1986

LaGrange (KSP)*  
Bledsoe, Marsha C, Associate Professor, MAT, University of Louisville, 1997  
Coffman, Patricia, Assistant Professor, 13 years teaching experience, 26 years occupational experience

Luther Luckett**  
Blandford, Harold M, Associate Professor, MA, Spalding University, 1985  
Lawrey, Charles D, Associate Professor, AS, Jefferson Community and Technical College, 2006  
Little, Willis, Assistant Professor, MA University of Kentucky, 1973

PeeWee Valley (KCWI)*  
Hearin, Kathryn P, Professor, MS, Indiana University, 1988  
Ludwig, Charles W, Professor, MS, University of Louisville, 1978

West Kentucky*  
Herring, Steven M, Associate Professor, MS, Murray State University, 1999  
Kinnis, Jared, Instructor, BS, Western Kentucky University, 2005  
Mestan, Sean, Instructor, BA, Murray State University, 1983  
Sheuble, John W, Professor, MA, University of Kentucky, 1978  
Walker, Margaret, Assistant Professor, BA, Murray State University, 1992

*Note: HB 164 passed during the 2010 Kentucky General Assembly transferring management oversight and responsibility for Corrections Education programs to the Department of Corrections, effective July 1, 2010. Some faculty listed could have elected to transfer to the Department of Corrections.
Mission Statement/Status of Accreditation

Madisonville Community College, a member of the Kentucky Community and Technical College System, is a public comprehensive community college serving the western Kentucky region. It is committed to establishing and nurturing a learning-centered, outcomes-based, culturally diverse organization. The mission of Madisonville Community College is:

• To offer curricula for the first two years of a baccalaureate program which lead to the awarding of the Associate of Arts or Associate of Science degree and which are transferable to all colleges and universities, public and private, in the Commonwealth;

• To offer curricula for two-year, career oriented programs, which lead to the Associate in Applied Science degree and which prepare students for immediate technical or semi-professional employment;

• To offer curricula for technical diploma and certificate level programs which are not necessarily intended for transfer and which are designed to meet the changing demands of business and industry;

• To offer courses in developmental education, adult basic education, and workplace essential skills training, which prepare participants to be successful at the postsecondary level and in the workplace;

• To provide customized training services to Kentucky employers; and

• To provide continuing education, professional development, and personal enrichment opportunities to the public and arts appreciation and arts education opportunities for the region; all for the purpose of encouraging lifelong learning and improving the quality of life, knowledge, and skills of Kentucky workers and citizens.

Madisonville Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Madisonville Community College.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

- Advanced Integrated Technology (C, A)
- Air Conditioning Technology (C, D, A)
- Business Studies:
  - Business Administration Systems (C, D, A)
  - Medical Information Technology (C, D, A)
- Clinical Laboratory Technology (C, D, A)
- Computer and Information Technologies (C, A)
- Computerized Manufacturing and Machining (C, D, A)
- Criminal Justice (C, A)
- Emergency Medical Technician (C)
- Engineering Related – Project Lead the Way (PLTW) (C)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Human Services (C)
- Interdisciplinary Early Childhood Education (C, D, A)
- Mining Technology (C, A)
- Nursing (A)
- Occupational Therapy Assistant (A)
- Paralegal Technology (C)
- Paramedic Technology (C, A)
- Physical Therapist Assistant (A)
- Practical Nursing (C, D)
- Radiography (A)
- Respiratory Care (A)
- Surgical First Assisting (C, A)
- Surgical Technology (C, D, A)
- Welding Technology (C, D)

Contact Information

Madisonville Community College
2000 College Drive
Madisonville, KY 42431
(270) 821-2250 Fax (270) 824-1866
madisonville.kctcs.edu

Health Campus
750 N Laffoon Street
Madisonville, KY 42431
(270) 824-1751

ACE2 and Assessment Center
150 School Avenue
Madisonville, KY 42431
ACE2 (270) 824-1821 Assessment Center (270) 824-1702

Muhlenberg Campus
406 W Everly Brothers Boulevard
Central City, KY 42330
(270) 757-9881

Glema Mahr Center for the Arts
2000 College Drive
Madisonville, KY 42431
(270) 821-ARTS

General Information

(270) 821-2250
Admissions (270) 824-8643
Business Office (270) 821-1704
Workforce Solutions (270) 824-8659
Continuing Education (270) 824-8660
Disability Services (270) 824-1708
Financial Aid (270) 824-8598
Human Resources (270) 824-8649
Library (270) 824-1722
Public Relations (270) 824-8581
Records and Registrar (270) 824-8575
Veterans Affairs (270) 824-8591
Website madisonville.kctcs.edu
Faculty
Adams, Sara Lyn Baldwin, Associate Professor, Ph.D., Florida State University, 2008
Adkins, Christy S, Associate Professor, MS, Washington University, 2011
Allen, Clarissa E, Assistant Professor, MA, East Tennessee State University, 2007
Allen, E Shannon, Professor, MSN, University of Kentucky, 2001
Alisp, David C, Assistant Professor, MS, Murray State University, 2003
Atcher, Leah A, Assistant Professor, MSN, Indiana Wesleyan University, 2011
Bailey, Amanda, Librarian, MS, Murray State University, 2009
Bennett, T. R., Professor, MS, West Virginia University, 1989
Berges, Cherry L, Professor, MLS, Clarion University, 1992
Bidwell, Jeffrey L, Associate Professor, MA, Murray State University, 1999
Birdsong, Ronnie D, Associate Professor, MS, Murray State University, 2008
Burton, Misty, V, Instructor, BS, Eastern Kentucky University, 1995
Chumley, Monica D, Professor, MS, Western Kentucky University, 1992
Clayton, Donald O, Professor, MA, Murray State University, 1973 Phased Retirement
Clayton, Wendy Dail, Associate Professor, MSN, Western Kentucky University, 2008
Conrad, Carol, Professor, MS, Murray State University, 1995
Cook, Ava M, Assistant Professor, BSN, University of Louisville, 2000
Cooper, Natalie F, Professor, MS, Murray State University, 1998
Cunningham, Chester M, Professor, MBA, Murray State University, 1998
Davis, Marcella A, Professor, MA, Murray State University, 1983
Davis, Reide A, Associate Professor, BS, Western Kentucky University, 1999
Davis, Sharon D, Assistant Professor, MS, University of Kentucky, 1993
Davis, Timothy F, Associate Professor, BIS, Murray State University, 2007
Deal, Andrea L, Associate Professor, MA, Murray State University, 2005
Deal, Robert Michael, Assistant Professor, BS, Mid Continent University, 2010
Dean, Jack M, Professor, MA, Eastern Illinois University, 1981
Edens, Kellie Brooke, Instructor, BSN, Indiana Wesleyan University, 2009
Elder, Loretta J, Associate Professor, MSN, University of Southern Indiana, 2006
Florea, Jeffrey M, Associate Professor, MS, Murray State University, 2000
Florea, Katrina M, Instructor, MS, Murray State University, 1999
Fugate, Sharon J, Associate Professor, MS, Morehead State University, 1990
Gallegos, Darlena, Associate Professor, BS, Kaplan University, 2008
Garrity, Savanna C, Professor, MPA, Murray State University, 2008
Gary, Stacie L, Instructor, MBA, Murray State University, 2009
Gibson, Tonia R, Professor, MS, Murray State University, 2008
Gooch, Joel T, Professor, MA, University of Indiana, 1966
Grace, April M, Associate Professor, MA, Western Kentucky University, 2005
Hagan, Gregory D, Professor, MFA, Murray State University, 2007
Hawkins, Donovan Mark, Instructor, MAT, Murray State University, 2007
Hawkins, Judith G, Professor, MS, University of Kentucky, 1985
Hayes, Kelly A, Associate Professor, BIS, Murray State University, 2007
Hewell, Sherry D, Professor, Ed, University of Louisville, 1993
Hildebrandt, Jacob M, Assistant Professor, BS, Murray State University, 2001
Hill, Clarissa Rana, Professor, MS, Murray State University, 2007
Hofmann, M Ann, Professor, MSN, University of Evansville, 1996
Hughes, Thomas E, Instructor, BS, Murray State University, 1970
Janssen, Mary E, Professor, PhD, Indiana University, 1995
Jernigan, Dianne H, Assistant Professor, MA, University of Kentucky, 1973
Jewell, Gregory W, Professor, MA, Eastern Illinois University, 1978
Johnson, Felecia K, Professor, MA, Murray State University, 1987
Jones, Joey B, Associate Professor, BIS, Murray State University, 2006
Jones, Sara Jane, Assistant Professor, MSN, Murray State University, 2011
Joseph, Julia M, Instructor, AAS, Madisonville Community College, 1996
Lange, Paula Louise, Associate Professor, MS, Indiana University, 1996
Latham, Dawn L, Instructor, BSN, Austin Peay State University, 2009
Lear, Elyssa Gayle, Assistant Professor, MS, Western Kentucky University, 2001
Lear, Tracie D, Assistant Professor, BSN, University of Louisville, 2001
Lee, Lisa E, Associate Professor, MAE, Western Kentucky University, 1998
Lewis, Harry R, Assistant Professor, MS, Murray State University, 1986
Littlehae, Tracy, Assistant Professor, MS, Northeastern University, 1999
Lomache, Donald A, Instructor, BIS, Murray State University, 2011
Lowbridge, John, Associate Professor, PhD, The South Bank University, 1971
Luckett, Matthew S, Instructor, AAS, IIT Technical Institute, 1991
Lutz, Rebecca Faith, Assistant Professor, BSN, Indiana Wesleyan University, 2009
Martin, Timothy S, Instructor, MRE, Liberty University, 2011
McClellan, Nancy J, Assistant Professor, MA, Murray State University, 1997
Melton, Chandy D, Instructor, MA, Murray State University, 2000
Mitchell, Judith A, Instructor, BSN, Murray State University, 1999
Moore, Elizabeth A, Professor, MS, Murray State University, 1989
Norton, Ann E, Professor, PhD, University of Louisville, 2011
Nygaard, Timothy A, Professor, MPA, University of Nebraska, 1987
Oglesby, Sarah A, Professor, SCT, Murray State University, 1978
Peyton, Sarah R, Assistant Professor, MSN, Murray State University, 2011
Pooie, Mary J, Assistant Professor, MA, Ed, Western Kentucky University, 1984
Qualls, Mary Kim, Assistant Professor, MS, Belmont University, 2004
Richmond, Camille E, Associate Professor/Librarian II, MLS, LSU, Louisiana State University, 1991
Rohati, Janardan S, Associate Professor, PhD, University of Leeds, 1974
Roy Jr, Lawrence, Professor, MFA, George Mason University, 1989
Shifflett, George M, Professor, PhD, University of Virginia, 1989
Shockley, Sonya M, Assistant Professor, MAT, Webster University, 2005
Skeen, Amanda F, Instructor, MPT, University of Evansville, 2003
Siddon, Tina M, Associate Professor, AAS, Madisonville Community College, 1997
Simmons, Patricia L, Professor, MSN, University of Evansville, 1989
Simons, Kimberly Lee, Professor, MA, Murray State University, 2001
Smith, Pamela S, Professor, MS, Murray State University, 1987
Stallins, Martiza, Professor, MSN, Murray State University, 1995
Talukdar, Asem, Assistant Professor, PhD, University of Cincinnati, 2008
Taylor, Stephanie A, Associate Professor, BIS, Murray State University, 2007
Terry, Rachel E, Professor, MSN, Western Kentucky University, 2008
Vander Ploeg, Scott D, Professor, PhD, University of Kentucky, 1994
Vesper, Patricia K, Professor, MSN, University of Southern Indiana, 2001
Wang, Roger D, Professor, PhD, University of Kentucky, 1972
Welch, Jennifer R, Instructor, MA, Western Kentucky University, 2009
Werner, Mary B, Professor, PhD, Northern Illinois University, 1996
West, Marlene K, Professor, MACT, Western Kentucky University, 1976
West, Robin R, Instructor, PhD, Indiana State University, 2008
Wolfe, James Randolph, Instructor, AAS, Madisonville Community College, 1980
Woodall, Kimberly D, Instructor, AAS, Madisonville Community College, 2007
Woodall, Marsha Dianne, Associate Professor, MSN, University of Southern Indiana, 2007
Wright, Debbie L, Professor, MA, Southern Illinois University, 1988
Young, Patricia A, Professor, MA, Murray State University, 1999
Mission Statement/Status of Accreditation

Maysville Community and Technical College (MCTC) challenges learners to accomplish their educational, career, and personal development goals.

Goals of the College

1. Provide arts and science courses and associate degrees for transfer to baccalaureate institutions.
2. Offer technical degrees, diplomas, certificates, and courses for employment and career advancement.
3. Provide developmental education and adult education offerings.
4. Deliver workforce training and services to support personal enrichment, community development, and economic viability.
5. Provide academic and student support to enhance student learning.

Maysville Community and Technical College, a member of the Kentucky Community and Technical College System, is a public two-year degree granting institution responding to and serving the needs of communities in the northeastern Kentucky region.

Maysville Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Maysville Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
- Associate in Arts
- Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

- Advanced Nursing Assistant (C)
- Air Conditioning Technology (C, D)
- Automotive Technology (C, D)
- Business Studies
  - Business Administration Systems (C, A)
  - Medical Information Technology (C, D, A)
  - Office Systems Technology (C, D, A)
- Collision Repair Technology (C, D)
- Computer Aided Drafting and Design (C, D)
- Computer and Information Technologies (C, A)
- Computerized Manufacturing and Machining (C, D, A)
- Construction Technology (C, D)
- Cosmetology (C)
- Culinary Arts (C, A)
- Diesel Technology (C, D)
- Education (C)
- Emergency Medical Technician (C)
- Energy Systems (C, A)
- Engineering and Electronics Technology (C, D, A)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Horticulture (C, D)
- Interdisciplinary Early Childhood Education (C, D, A)
- Manufacturing Industrial Technology
  - Electrical Technology (C, D)
  - Industrial Maintenance Technology (C, D)
- Medical Assisting (C, D)
- Nursing (A)
- Plastics Processing (C)
- Plumbing Technology (C, D)
- Practical Nursing (C, D)
- Real Estate (C)
- Respiratory Care (A)
- Truck Driver Training (C)
- Welding Technology (C, D)

Contact Information

Maysville Campus
1755 US Hwy 68
Maysville, KY 41056
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maysville.kctcs.edu

Rowan Campus
609 Viking Drive
Morehead, KY 40351
(606) 783-1538
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Licking Valley Campus
319 Webster Avenue
Cynthiana, KY 41031
(859) 234-8626
maysville.kctcs.edu

Maysville Campus
(606) 759-7141
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Maysville
ext. 66104
Maysville
ext. 66120
Maysville
ext. 66120
Maysville
ext. 66207
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Maysville
ext. 66206
Maysville
ext. 66177
Maysville
ext. 66184
Maysville
ext. 66182
Maysville
ext. 66229
maysville.kctcs.edu
Rowan Campus

General Information
(606) 783-1538
Admissions
ext. 66362
Business Office
ext. 66315
Financial Aid
ext. 66309
Human Resources
ext. 66310
Library
ext. 66366
Records
ext. 66314
Veterans Affairs
ext. 66312
Workforce Solutions
ext. 66335
Website
masville.kctcs.edu

Licking Valley Campus

General Information
(859) 234-8626
Admissions
ext. 66405
Business Office
ext. 66406
Financial Aid
ext. 66404
Library
ext. 66417
Records
ext. 66405
Workforce Solutions
ext. 66429
Website
masville.kctcs.edu

Administration

President/CEO
Rowan Campus Chief Campus Officer
Rowan Campus Academic Coordinator
Chief Academic Officer
Chief Business Officer
Chief Officer, Workforce Solutions
Licking Valley Campus Branch Campus Director
Resource Development
Public Relations
Division of Industrial Technologies
Division of Liberal Arts and Education
Division of Math, Natural Science and Agriculture
Division of Health Science Technologies
Division of Business and Computing Technologies
Ed Story, Ph.D.
Juston Pate, Ph.D.
Bruce Florence
Ann Courtney Denham
Kathleen Mellenkamp
Angela Fultz, Ph.D.
Debbie Nolder
Dalia Hunt
Dana Calland, Ed.D.
Billie Barbour
Leslie Storie
Jessica Kern
Henry Jefferson
Sonja Eads
Ann Courtney Denham
Cara Clarke

Faculty

Abney, Darrell H, Professor, MS, University of Evansville, 1984
Appelman, Mollie S, Professor, MBE, Morehead State University, 1981
Barnett, Kenneth, Assistant Professor, BS, Morehead State University, 2004
Bell, William Mark, Associate Professor, MS, University of Baltimore, 1994
Bone, Martha D, Professor, DA, Middle Tennessee State University, 1985
Boone, Daroba, Instructor, BSU, University of Phoenix, 2009
Boyd, Tony, Associate Professor, MA, Morehead State University, 1989
Burns, Tammy B, Assistant Professor, AAS, Masville Community College, 1988
Butler, Deanna, Associate Professor, AAS, Morehead State University, 1981
Calland, Dana J, Taylor, Professor, EdD, Grambling State University, 2007
Callihan, Jeffrey C, Associate Professor, BS, Morehead State University, 2002
Carroll, Melissa L, Professor, MA, Morehead State University, 1998
Casey, Vicky L, Instructor, BSU, Midway College, 2008
Caudill, Grijett D, Associate Professor, BSN, Morehead State University, 1995
Clarke, Ginger, Instructor, BSU, Auburn University, 1990
Cloud, Stanley W, Professor, BSU, Morehead State University, 1990
Cloud, Mery Jo, Instructor, BSU, Morehead State University, 2006
Corbett, Nancy S, Professor, PhD, Indiana University of Pennsylvania, 1999
Dent, Jennifer L, Instructor, BSU, University of Kentucky, 2003
Denton, Laura C, Professor, MBA, Morehead State University, 1990
Dickison, Jeanette C, Professor, MFA, Ohio University, 1985
Druen, Joshua W, Associate Professor, MA, Morehead State University, 2006
Eads, Sonja R, Professor/Librarian I, MLS, University of Kentucky, 1985
Flora, Charlene, Instructor, BA, University of Tennessee, 2010
Frodge, Shannon C, Associate Professor, MSN, Northern Kentucky University, 2007
Fultz, Angela, Associate Professor, PhD, University of Kentucky, 1996
Garrison, Janet L, Professor, MBA, University of Kentucky, 1992
Ginn, Cindy, Instructor, AAS, Masville Community College, 1985
Graves, Robert L, Professor, MS, Morehead State University, 1992
Greene, Rhonda A, Instructor, DNM, Southwest College of Naturopathic Medicine & Health Sciences, 2008
Ham, Robert G, Associate Professor, BS, Morehead State University, 1985
Hauke, Barbara, Assistant Professor, MS, University of Cincinnati, 1989
Hardin, Casey T, Instructor, BS, Morehead State University, 2005
Hendricks, Allison, Assistant Professor, BSN, Eastern Kentucky University, 1980
Howard, Barry D, Associate Professor, AA, Morehead State University, 2007
Hunt, Darla A, Associate Professor, MSIS, Morehead State University, 2007
Hunter, Nancy D, Professor, EdS, University of Kentucky, 1999
Hyrcza, Alexander L, Associate Professor, MA, Western Kentucky University, 1990
King, John E, Associate Professor, AA, Morehead State University, 2007
Klee, John R, Professor, MHE, Morehead State University, 1977
Knierim, Merry Beth, Instructor, BSU, Northern Kentucky University, 2009
Lawler, David J, Professor, MSU, University of Kentucky, 1990
Lightner, Rebecca S, Professor, MSU, University of Kentucky, 1995
Lowery, Bethany L, Assistant Professor, BSN, Morehead State University, 2002
Maynard, Johnny, Instructor, MS, Morehead State University, 2010
McDowell, Susan E, Associate Professor, MSH, Northern Kentucky University, 2003
Mellenkamp, Kathleen M, Associate Professor, MA, Morehead State University, 1977
Miller, John S, Instructor, MS, University of Kentucky, 1988
Morris, Debra R, Associate Professor, BBA, Morehead State University, 1988
Morris, Melanie J, Assistant Professor, BSN, University of Kentucky, 1991
Muenks, Martha J, Professor, MA, University of Kentucky, 1993
Neals, Kimberly S, Professor, BSU, Eastern Kentucky University, 1997
Noble, Wendy, Assistant Professor, MA, Morehead State University, 2009
Nold, Deborah B, Professor, MSN, Morehead State University, 2005
Parker, Edward S, Associate Professor, MS, Morehead State University, 2003
Parker, Sally, Assistant Professor, BSN, College of Mt St Joseph on the Ohio, 1979
Pyle, Terry L, Professor, MA, Northern Kentucky University, 1998
Introduction

Pecco, Nicholas, Assistant Professor, BS, Morehead State University, 2005
Pemberton, Michael P., Instructor, MS, University of Missouri – Columbia, 2009
Perkins, Brandi, Associate Professor, BS, Morehead State University, 2005
Redden, Carla S., Instructor/Library IV, MLS, University of Kentucky, 2009
Reeder, Diana L., Associate Professor, AAS, Morehead State University, 1979
Sauer, Deborah L., Professor, MBE, Morehead State University, 1983
Sauer, Lena P., Instructor, MA, Morehead State University, 2001
Sears, Christopher M., Assistant Professor, PhD, University of Wisconsin-Milwaukee, 2007
Sheffer, Colette Lynn, Associate Professor, PhD, University of Cincinnati, 2001
Sharp, Mary J., Professor, MS, Morehead State University, 1994
Slone, Donna, Assistant Professor, MA, University of Kentucky, 2008
Stauble Jr, John S., Instructor, MAT, Bellarmine University, 2009
Swartz, Dennis Ray, Associate Professor, AA, Morehead State University, 2007
Tanner, Carrie L., Associate Professor, MA, Northern Kentucky University, 2009
Thornberry, Joan D., Associate Professor, MA, University of Kentucky, 1989
Thornberry, Tara C., Professor, MBA, Morehead State University, 1994
Tucker, Connie L., Associate Professor, AAS, Morehead State University, 1982
Vice, Marlene K., Assistant Professor, AA, Morehead State University, 2001
Walker, Melinda F., Instructor, MA, Morehead State University, 2004
Wallace, Tony L., Professor, BS, Morehead State University, 2007
Ward, Russell C., Professor, MA, Morehead State University, 1989
Watson, Megan, Instructor, Certified Cosmetology Instructor, Salon Professional Academy, 2010
Weiss, Justin A., Instructor, MS, Marshall University, 2009
Witten, Briana C., Assistant Professor, MA, Georgetown College, 2004
Williams, Deborah J., Assistant Professor, MSN, University of Alabama in Birmingham, 1991
Williams, James T., Instructor, DVM, University of Tennessee, 1993
Wilson, Sharon G., Professor, MS, Auburn University, 1996
Wylie, Jeff B., Professor, MA, Morehead State University, 1977

Correctional Campuses

Eastern Kentucky Branch Campus*

Cantrell, Roger Allen, Assistant Professor, Diploma, Rowan Technical College, 1990
Cloud, Chalmers L., Professor, MS, Morehead State University, 1993
Cole, Carla A., Professor, MA, Morehead State University, 1996
DeHaven, Richard D., Associate Professor, AAS, Maysville Community and Technical College, 2007
Litteral, Holli H., Professor, MA, Morehead State University, 1999
Manning, James R., Assistant Professor, Diploma, Montgomery Area Technology Center, 1984

*Note: HB 164 passed during the 2010 Kentucky General Assembly transferred management oversight and responsibility for Corrections Education programs to the Department of Corrections, effective July 1, 2010. Some faculty listed could have elected to transfer to the Department of Corrections.
Mission Statement/Status of Accreditation
To cultivate lifelong learning opportunities through career degree programs, workforce and community development, and transfer-to-baccalaureate degree programs.

Owensboro Community and Technical College, a member of the Kentucky Community and Technical College System, is a public two-year degree granting institution serving the Daviess and surrounding counties of Kentucky.

Owensboro Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Owensboro Community and Technical College.

Note: The Commission to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
- Associate in Arts
- Associate in Science

Occupational/Technical Curricula
Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Nursing Assistant (C)
Agricultural Technology (C, D, A)
Air Conditioning Technology (C, D)
Automotive Technology (C, D)
Biotechnology (A)
Broadcast Television Production (C)
Business Studies:
  - Business Administration Systems (C, D, A)
  - Medical Information Technology (C)
  - Office Systems Technology (C, A)
Collision Repair Technology (C, D)
Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Construction Technology (C, D)
Cosmetology (C, D)
Criminal Justice (A)
Culinary Arts (C, D)
Diesel Technology (C, D)
Education (C, A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C, D, A)
Engineering Related: Project Lead the Way (C)
Financial and Customer Service (C)
Fire/Rescue Science Technology (C, D, A)

General Occupational/Technical Studies (A)
Horticulture (C, A)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology: Electrical Technology (C, D, A)
Manufacturing Industrial Technology: Industrial Maintenance Technology (C, D)
Mechatronics (C)
Medicaid Nurse Aide (C)
Nursing (A)
Paramedic Technology (C, A)
Pharmacy Technology (C)
Radiography (C, A)
Surgical Technology (C, D, A)
Technical Theatre (C)
Welding Technology (C, D)

Contact Information
Owensboro Community & Technical College
4800 New Hartford Road
Owensboro, KY 42303
(270) 686-4400
Toll Free 1 (866) 755-OCTC
owensboro.kctcs.edu

OCTC Downtown Campus
1501 Frederica Street
Owensboro, KY 42301
(270) 686-4444

OCTC Southeastern Campus
1901 Southeastern Parkway
Owensboro, KY 42303
(270) 686-4488

General Information
Admissions (270) 686-4527
Business Office (270) 686-4511
Workforce Solutions (270) 686-4444
Continuing Education (270) 686-4449
Disability Services (270) 686-4528
Financial Aid (270) 686-4521
Human Resources (270) 686-4442
Library (270) 686-4590
Marketing and Communications (270) 686-4506
Records (270) 686-4539
Transfer Center Liaison (270) 686-4529
Veterans Affairs (270) 686-4631
Website (270) 686-4570

Administration
President Dr. James S. Klauber, Sr.
Vice President of Academic Affairs Scott Williams, PhD
Vice President of Business Affairs Sarah Price
Vice President of Information Technology James Hartz
Vice President of Student Affairs Kevin Beardmore
Vice President of Workforce Solutions Cynthia Fiorella
Vice President of Institutional Advancement Larry Miller
Associate Dean of Academic Affairs Stacy Edds-Ellis, PhD
Faculty

Abell, Donna Assistant Professor, MS, Florida State University, 2004
Aubry, Aubrey D, Professor, BS, Murray State University, 1984
Ash, Angela Instructor, MA, University of Louisville, 2005
Bailes, Steven R, Professor, BS, Eastern Kentucky University, 1977
Basham, Zara, Assistant Professor, Diploma, Owensboro Technical College, 2000
Boarman, Keith Assistant Professor, Murray State University, 1999
Bowlds, Barry K, Associate Professor, AAS, Western Kentucky University, 2003
Boyd, Michael, Professor, MBA, Southwest Missouri State University, 1987
Boyd, Vicki H, Professor, MA, Murray State University, 1981
Branham, Matthew, Professor, MA, Morehead State University, 2000
Brown, Kathryn, Associate Professor, MA, Western Kentucky University, 1994
Caplan, Gerald M, Associate Professor, MS, University of Illinois, 1984
Carden, Stephen D, Professor, PhD, Vanderbilt University, 2004
Ches, Karin Van Tuyl, Professor, PhD, University of Kansas, 1968
Collins, Shannon Quentin, Associate Professor, MA, Morehead State University, 2000
Crowe, Randy Keith, Associate Professor, BS, Western Kentucky University, 1999
Curris, Abuonk, Vickie L, Associate Professor, MS, Western Kentucky University, 1984
Dick, Timothy T, Professor, PhD, University of Kentucky, 2002
Dunn, Donald R, Associate Professor, MS, Murray State University, 1969
Ebelhar, Bethany Instructor, ESN, Murray State University, 2000
Ebelhar, Grace, Instructor, BS, Tennessee State University, 1930
Edwards, Lois M, Associate Professor, MAE, Western Kentucky University, 2002
Ford, Constance R, Professor, DME, Indiana University, 1983
Fornecrow, Tobi, Assistant Professor, MA, Texas State University, 2007
Gesser, Chad, Associate Professor, MA, Western Kentucky University, 1997
Gibson, Molly, Instructor, MFA, Western Kentucky University, 2008
Gish, Misty, Assistant Professor, MS, Murray State University, 2001
Glenn II, Robert J, Professor, MA, University of Nevada Las Vegas, 1985
Glenn, James H, Professor, EdD, University of Kentucky, 2003
Gore, Michael G, Associate Professor, BS, Western Kentucky University, 2009
Graham, Robert L, Associate Professor, MA, Western Kentucky University, 1964
Grimes, Laura D, Associate Professor, BS, Brescia College, 1978
Hall, Teresa Instructor
Hamilton, Cassandra Instructor, MA, Western Kentucky University, 2003
Hammonds, Gary S, Associate Professor, AAT, Institute of Electronic Technology, 1986
Head, Flora Gerald M, Assistant Professor, MS, Western Kentucky University, 1995
Hein, Monty, Assistant Professor, MFA, Southern Illinois University - Carbondale, 1988
Higdon, Amy, Assistant Professor, BSN, Western Kentucky University, 2007
Higdon, Frances Instructor
Hildbrandt, Daniel R, Associate Professor, MA, Southern Illinois University - Carbondale, 1982
Hoffman, Kathy Instructor, MS, The Catholic University of America, 1986
Holliman, Stephen F, Professor, BS, Murray State University, 1989
Hughes, Pamela, Associate Professor, AAS, Owensboro Community and Technical College, 2005
James, Walter, Instructor, Nashville Auto-Diesel College
Johnson, Connie F, Instructor, MBA, Morehead State University, 2006
Johnson, James L, Professor, MA, Western Kentucky University, 1987, M.A. University of Kentucky, 1998
Jones, Ellen B, Associate Professor, MS, Western Kentucky University, 1976
Kobal, Peter, Assistant Professor, MA, Mateo shel University, 1986
Lane, Sara B, Professor, MA, Morehead State University, 1971
Lanham, Terri H, Associate Professor, BSN, Western Kentucky University, 1996
Ledford, Julia C, Professor, PhD, Southern Illinois University - Carbondale, 1987
Lutzel, John, Assistant Professor/Librarian IV, MLS, University of Southern Mississippi, 2004
Maltby, Marc S, Professor, PhD, Ohio University, 1987
Martin, David E, Associate Professor, MS, Western Kentucky University, 2007
McDaniel, Traci, Assistant Professor, AAS, Owensboro Community and Technical College, 2005
McDonald, Grega, Professor, MSW, Western Kentucky University, 1978
McFarland, Teresa, Assistant Professor, MS, Western Kentucky University, 2004
McGee, Jennifer S, Assistant Professor, BSN, Western Kentucky University, 1996
Merner, Nadine Joyce, Associate Professor, MS, Oakland City University, 2003
Miller, Clyde A, Instructor, 20 years teaching experience, 13 years occupational experience
Mills, Joseph Leon, Assistant Professor, 8 years teaching experience, 32 years occupation experience
Morris, Edward J, Professor, Southern Illinois University, 1989
Mosley, Daniel Joe, Associate Professor, BS, Western Kentucky University, 2008
Moore, Kathleen A, Professor, MAT, Indiana University, 1975
Mundell, Donald W, Associate Professor, MS, Eastern Illinois University, 1976
Nall, Lewis, Instructor
Northen, Tonya, Assistant Professor, MFA, University of Memphis, 1999
O'Dea, Anthony, Assistant Professor, PhD, Southern Illinois University, 2001
Pagan, Frieda B, Professor, MSN, University of Evansville, 1983
Pajne, Justin, Assistant Professor, AAS, Owensboro Community and Technical College, 2005
Pajne, Shann, Assistant Professor, AAS, Owensboro Community and Technical College, 2007
Perkins, Michael W, Associate Professor, MS, University of Nebraska, 2001
Phillips, Janet S, Instructor, AAS, Madisonville Community College, 1998
Purdy, Cheryl A, Assistant Professor, BS, Kentucky Wesleyan College, 1976
Purdy, Robert, Associate Professor, MPS, Western Kentucky University, 1983
Revlett, Kimberly, Instructor, AOD, Kentucky Wesleyan College, 2000
Rice, Tammy M, Associate Professor, MA, Western Kentucky University, 1984
Rogers, Frank W, Associate Professor, MS, University of Evansville, 1991
Runyon, Carl B, Associate Professor, MA, University of Evansville, 1973
Ruth, Deborah L, Associate Professor, MA, Western Kentucky University, 1993
Sallan, Veena, Professor, PhD, University of Delhi, 1981
Schmitt, Theresa M, Associate Professor, MBA, University of Akron, 1992
Skaggs, Meredith, Instructor, MA, Western Kentucky University, 2009
Smith, Joyce E, Instructor, BSN, Western Kentucky University, 1951
Somm, Andy, Instructor, BA, Oakland City University, 2006
Skinner, Barb, Instructor, MA, Western Kentucky University, 1982
Swanson, Susan, Assistant Professor, MA, Western Kentucky University, 2007
Taylor, Eunice K, Associate Professor, MSN, Southern Illinois University, 1997
Tirri, Liana, Assistant Professor, AAS, Owensboro Community and Technical College, 2006
Tudor, Michelle G, Assistant Professor, AAS, Owensboro Community College, 2000
Walcott, Abby Uteley, Professor, MA, Western Kentucky University, 1976
Wallace, Albert F, Professor, MBA, Xavier University, 1978
Ward, Loreen, Associate Professor, MS, Western Kentucky University, 1972
Wetzel, William E, Associate Professor, PhD, Southern Illinois University - Carbondale, 1987
Williams, Scott, Associate Professor, PhD, Colorado State University, 1990
Wilson, Pamela S, Associate Professor, MA, Southern Illinois University - Edwardsville, 1995
Winkler, Paul R, Assistant Professor, MS, University of Kentucky, 1976
Wood, Vickey A, Assistant Professor, AAS, Owensboro Community and Technical College, 2003
Yacav, Joseph Professor, EdD, Auburn University, 2002
Mission Statement/Status of Accreditation
The mission of Somerset Community College is to improve the employability and quality of life of area citizens as the primary provider of:

- College and Workforce Readiness
- Transfer Education
- Workforce Education and Training
- Associated Student Support Services

Somerset Community College, a member of the Kentucky Community and Technical College System, is a public associate degree granting institution serving the south central region of Kentucky.

Somerset Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Somerset Community College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
Associate in Arts
Associate in Science

Occupational/Technical Curricula
Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

- Air Conditioning Technology (C, D)
- Automotive Technology (C, D)
- Aviation Maintenance Technology (C, D, A)

Business Studies:
- Business Administration Systems
- Medical Information Technology (C, D, A)
- Office Systems Technology (C, D, A)
- Clinical Laboratory Technology (C, A)
- Collision Repair Technology (C, D)
- Computer Aided Drafting and Design (C, D)
- Computer and Information Technologies (C, A)

- Computerized Manufacturing and Machining (C, D)
- Construction Technology (C, D)
- Cosmetology (C, D)
- Criminal Justice (C, A)
- Culinary Arts (C, D, A)
- Diesel Technology (C, D)
- Education (C, A)
- Emergency Medical Technician (C)
- Engineering and Electronics Technology (C, A)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Interdisciplinary Early Childhood Education (C, D, A)
- Locomotive Technology (C)

Manufacturing Industrial Technology:
- Electrical Technology (C, D)
- Industrial Maintenance Technology (C, D, A)
- Masonry (C, D)
- Medical Assisting (C, D)
- Nursing (A)
- Paramedic Technology (C)
- Pharmacy Technology (C, D)
- Physical Therapist Assistant (A)
- Plumbing Technology (C, D)
- Practical Nursing (C, D)
- Respiratory Care (A)
- Surgical Technology (C, A)
- Visual Communication:
  - Multimedia (C, D)
  - Printing (C, D)
- Welding Technology (C, D)

Contact Information

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Somerset, KY 42501
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SCC Laurel Campus
100 University Dr.
London, KY 40741

SCC McCreary Center
250 College St.
Whitley City, KY 42653

SCC Russell Center
848 Steve Wariner Dr.
Russell Springs, KY 42642

SCC Clinton Center
1273 KY Highway 90 W.
Albany, KY 42602

SCC Casey Center
3609 North US 127
Liberty, KY 42539

General Information

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Admissions/Records (606) 451-6630
Business Office (606) 451-6610
Community Workforce and Economic Development (606) 451-6690
Disability Services (606) 451-6706
Financial Aid (606) 451-6640
Human Resources (606) 451-6620
Library/ Learning Commons (606) 451-6710
Public Relations (606) 451-6618
Transfer Center (606) 451-6650
Veterans Affairs (606) 451-6640
Website somerset.kctcs.edu
Administration

President/CEO          Jo Marshall, PhD
Chief Technology Officer       Tony Honeycutt, EdD
Dean of Student Affairs        Roger Angevine
Dean of Learning Support       Tracy Casada
Dean of Arts & Sciences        Bruce Covar
Dean of Health Sciences        Sharon Whitehead
Associate Dean of Distance Learning/Support Linda Bourne
Associate Dean of Humanities, Fine Arts & Social Sciences Jon Burlew
Associate Dean of Career & Technical Dan Burnett
Associate Dean of Transitional Education Kim Cleberg
Associate Dean of Library & Learning Resources Margo Hamm
Associate Dean of Mathematics & Natural Sciences Clint Hayes, EdD
Chief Operations Officer      Lois Mckinther
Chief Community Workforce and Economic Development Officer David Wiles
Chief Business Affairs Officer Timothy Zimmerman, PhD
Chief Institutional Advancement Officers Cindy Clause

Faculty

Allen, Melinda, Instructor, MA, Eastern Kentucky University, 1993
Allen, Valerie, G, Professor, MS, University of Texas at Arlington, 1989
Angevine, Roger L, Professor, MS, University of Illinois, 1969
Armstrong Anthony L, Professor, MS, University of Texas at Arlington, 1984
Asher, Jason, Assistant Professor, MA, Lindsey Wilson College, 2010
Atkinson Bigelow, Johanna, Professor, MA, University of Kentucky, 1988
Bales, Brandon T, Instructor, MS, South Dakota State University, 2007
Ballard, Linda, Professor, MS, Wright State University, 1994
Barbalace, Roberta, Instructor, MS, Colorado State University, 1976
Barnes, Kely, Instructor, MS, Eastern Kentucky University, 1996
Barnes, Virgie F, Professor, MS, California State University, Los Angeles, 1989
Bartley, Frances M, Instructor, AAS, Eastern Kentucky University, 1986
Beihman, David M, Professor, MS, University of North Carolina Chapel Hill, 1996
Belevir, Joy, Professor, DNP, University of Kentucky, 2010
Bloomington, Michael S, Instructor, MA, Eastern Kentucky University, 2005
Bowers, Gayl P, Associate Professor, MS, University of Tennessee, 1998
Bradford, Kevin L, Professor, MBA, Wayland Baptist University, 2000
Bradley, Daniel A, Assistant Professor, MA, Morehead State University, 2007
Bridgman, Pamela A, Associate Professor, MS, Capitol College, 1999
Brown, Eddie, Associate Professor, AAS, Somerset Community College, 2003
Broyles, Angela W, Instructor, MS, Eastern Kentucky University, 1999
Burnell, Jonathan W, Professor, MS, Fort Hays State University, 1993
Burnett, Daniel C, Professor, MA, Union College, 2007
Burnett, Kippe B, Professor, MS, Eastern Kentucky University, 2000
Burroughs, Cindy, Assistant Professor, BFA, American Intercontinental University, 2009
Burton, Jacqueline, Instructor, MS, Claremont Graduate University, 2003
Byrd, Cynthia A, Instructor, MA, Eastern Kentucky University, 1986
Calverta, Carol L, Instructor, MBA, Eastern Kentucky University, 1993
Calder, Michael V, Associate Professor, AAS, Somerset Community College, 2000
Carothers, Franklin T, Associate Professor, MBA, Murray State University, 1992
Cash, Curtis F, Associate Professor, MA, Union College, 2007
Catron, Shanda L, Associate Professor, BS, University of Louisville, 2007
Chadwell, Cleaver, Assistant Professor, AAS, Somerset Community College, 2007
Childress, Margaret L, Instructor, MBA, Morehead State University, 2008
Clark, Jeffrey S, Assistant Professor, BSN, Eastern Kentucky University, 2000
Cleberg, Kimberly S, Associate Professor, MA, Eastern Kentucky University, 2001
Cleberg, Steven F, Professor, MFA, University of Portland, 1992
Coffey, David A, AAS, Somerset Community College, 2005
Conaway, Vicki L, Professor, MSN, University of Kentucky, 1984
Couchbauer, Brand Wilson, Associate Professor, MS, Eastern Kentucky University, 2007
Copenhaver, Jerry S, Professor, BS, Eastern Kentucky University, 2005
Craabees, Gloria L, Professor, MA, University of Kentucky, 1978
Cunningham Gary, Instructor, Ed.D, Texas A&M University, 2006
Davis, James M, Assistant Professor, M.Ed, Psy, Union College, 1996
Dean, David A, Associate Professor, AAS, Somerset Community College, 2003
Deaton, Eric D, Instructor, MS, Eastern Kentucky University, 1997
DeBord, Lenora Frances, Associate Professor, MSN, Eastern Kentucky University, 2002
Dekker, Doyle Assistant Professor, MA, California State University, 2010
Delz, Martha M, Associate Professor, MA, El Dorado College, 1977
Delz, Billy W, Associate Professor, MS, Eastern Kentucky University, 1994
Dunagan, Don F, Associate Professor, MS, University of Kentucky, 1994
Duvall, Billie Assistant Professor, BSN, Eastern Kentucky University, 2007
Eastham, Donna S, Associate Professor, MA, Eastern Kentucky University, 1994
Elam, Debra L, Instructor, AAS, Somerset Community College, 2005
Flanary, Randall, Associate Professor, BS, Eastern Kentucky University, 2011
Foster, Jame L, Instructor, MA, Eastern Kentucky University, 1996
Fouts, Cynthia L, Assistant Professor, BS, National-Louis University, 2001
Franks, Jon, Associate Professor, MA, Western Kentucky University, 1990
Fries, Wanda F, Professor, MFA, Bennington College, 1986
Gadd, Belinda P, Associate Professor, MA, Eastern Kentucky University, 2002
Gadd, Susan G, Professor, MS, University of Kentucky, 1999
Gammage, Simeon D, Instructor, AAS, Somerset Community College, 2010
Gallin, Tom, Professor, MS, Eastern Kentucky University, 2007
Golem, Michael J, Instructor, PhD, Mississippi State University, 2010
Graham, Gerald M, Associate Professor, AAS, Somerset Technical College, 2000
Gray, David D, Instructor, MS, Troy University, 1982
Gray, Marcia, Associate Professor, MS, Eastern Kentucky University, 2011
Gray, Alyx, Professor, MA, Southern Missouri State University, 1989
Gover, Glen B, Professor, MS, Eastern Kentucky University, 2003
Hamm, Mary M, Professor, MLS, University of Kentucky, 1992
Hammons, John S, Associate Professor, DPT, Shenandoah University, 2006
Harris, Jeffrey D, Associate Professor, MA, Eastern Kentucky University, 1996
Hassan, Saal N, Professor, PhD, University of Kentucky, 1987
Hayes, Clinton R, Instructor, EdD, University of the Cumberlands, 2011
Hildman, Shannon M, Instructor, BA, Lincoln Memorial University, 2008
Hodkins, Jess, Associate Professor, BA, Eastern Kentucky University, 1975
House, Debra L, Professor, MS, University of Kentucky, 1994
Howard, Buford P, Professor, PhD, University of Mississippi, 1977
Hove, Julie M, Instructor, MLS, University of Kentucky, 2010
Huffaker, Lorena S, Associate Professor, MS, Eastern Kentucky University, 2003
Huntsman, Mary Taylor, Professor, Librarian, MA, MLS, University of Kentucky, 1994
Hutchinson, Molly A, Associate Professor, BSN, University of Kentucky, 1988
Isham, Mark, Instructor, MA, Eastern Kentucky University, 1992
Jacques, Kenneth R, Professor, MBA, Ball State University, 1987
Karim, Md Jahurul, Instructor, DVM, Bangladesh Agricultural University, 1977
Kilgore, April L, Professor, PhD, University of Kentucky, 1994
Kohne, Elaine E, Instructor, MS, University of Cincinnati, 1990
Krause, Richard, Professor, MA, University of Kansas, 1969
Kruey Emily, Instructor, MLS, Clarion University, 2011
Larson, Irene, Instructor, MA, National University, 2010
Lawson, Shelley R, Instructor, BS, Union College, 2009
Lester, Danny L, Associate Professor, AAS, Somerset Technical College, 2002
Lewis, Kathy S, Professor, MS, Eastern Kentucky University, 1994
Littby, Darlene H, Associate Professor, MFA, University of Tennessee, 1994
Logan, Donnal L, Professor, MA, Eastern Kentucky University, 1997
Loveless, Marla L, Assistant Professor, BS, Morehead State University, 2011
MacDonald, Vickie A, Instructor, MA, Eastern Kentucky University, 1984
Mace, Ronald W, Instructor, MA, Morehead State University, 1984
Martin, Ruth S, Professor, MSN, Eastern Kentucky University, 1999
Martinez, George M, Assistant Professor, MS, Murray State University, 1991
Mastey, James Douglass, Associate Professor, AAS, Central Kentucky Technical College, 2001
Matka, Richard L, Professor, MA, Murray State University, 1996
McClendon, Steven S, Instructor, MA, University of the Cumberland, 2005
McFadden, Jeffrey W, Instructor, MA, Eastern Kentucky University, 1999
McFeeters, James L, Associate Professor, MS, Louisiana State University, 1991
McGlothlin, Megan B, Instructor, MBA, University of Phoenix, 2010
McPherson, Jason J, Associate Professor, MS, Eastern Kentucky University, 2009
McQueen, Travis, Associate Professor, MS, Eastern Kentucky University, 2001
McWhorter, Lois A, Professor, MBA, Eastern Kentucky University, 1988
Meade, Ronald L, Associate Professor, DPT, Shenandoah University, 2006
Meadors, James M, Associate Professor, AAS, Eastern Kentucky University, 1992
Metcalf, Virginia E, Assistant Professor, MS, Eastern Kentucky University, 2002
Mills, Angela, Instructor, AAS, Somerset Community College, 2008
Mills, Craig, Instructor, MA, Campbellsville University, 2006
Mitchell, Marcus C, Instructor, MA, Eastern Kentucky University, 2009

Introduction
Morin, Phillip D, Assistant Professor, AAT, Somerset Technical College, 2002
Morris, Amanda K, Instructor, MA, University of Kentucky, 2009
Mote, Wendy G, Assistant Professor, MSN, Eastern Kentucky University, 2008
Muse, Dana L, Professor, MS, University of Kentucky, 1998
Musick, Frederick D, Instructor, MAEd, University of Virginia-Charlottesville, 1982
Null, George Curtis, Assistant Professor, AA, Trinity Valley Community College, 1967
Omwenga, George I, Assistant Professor, PhD, University of North Texas, 2004
O’Neill, Deborah F, Instructor, BSN, University of Phoenix, 2009
Osborne, Roger, Assistant Professor, MA, University of Louisville, 2002
Owens, Jennifer, Instructor, AAS, Somerset Community College, 2008
Owens, Nancy G, Professor, MSN, Bellarmine College, 1995
Parmley, Amy D, Instructor, AAS, Somerset Community College, 2001
Patton, Glenda B, Professor, Ed.D, University of Kentucky, 2009
Perkins, Jeffrey H, Professor, MA, Eastern Kentucky University, 1993
Peterson, Betty W, Professor, MA, University of Kentucky, 1986
Phelps, David A, Associate Professor, AAS, Somerset Technical College, 2000
Price, Carol A, Instructor, BSN, Eastern Kentucky University, 1995
Ramlou, Cecilia A, Assistant Professor, PhD, Washington State University, 1996
Randall, Marci S, Instructor, MS, Eastern Kentucky University, 2011
Ratliff, Donna R, Professor, MAEd, Eastern Kentucky University, 1999
Richardson, Autumn Z, Instructor, BS, Eastern Kentucky University, 2006
Roberts, Laura F, Assistant Professor, BSN, Eastern Kentucky University, 1991
Routt, Patricia L, Instructor, AAS, Somerset Community College, 1995
Ryle, Ashley D, Instructor, MFA, West Virginia University, 2011
Scott, Susanne, Professor, BS, Western Kentucky University, 1984
Seary, Michael A, Instructor, PhD, University of Iowa, 2004
Seaton, Forrest K, Instructor, MS, University of Louisville, 1983
Shearer, Elizabeth L, Professor, MA, Western Kentucky University, 1988
Shelton, Billie J, Associate Professor, MSN, Western Kentucky University, 2008
Sherman, Gary J, Professor, MS, University of Wyoming, 1979
Simpson, William Stuart, Professor, MS, Eastern Kentucky University, 2004
Smith, Jimmy R, Associate Professor, AAS, Eastern Kentucky University, 1999
Spear, April J, Instructor, MS, Eastern Kentucky University, 2008
Spencer, Robert T, Associate Professor, MA, Eastern Kentucky University, 1993
Spring, Deanna D, Instructor, MS, University of Wisconsin, 1986
Story, John H, Instructor, MS, Western Kentucky University, 2004
Stephens, Erin, Instructor, MA, Eastern Kentucky University, 2007
Story, Joanne, Professor, MA, Eastern Kentucky University, 1969
Stringer, Barbara J, Associate Professor, MAEd, University of Kentucky, 1961
Stringer, Gail S, Professor, MS, Eastern Kentucky University, 1989
Swanner, Regina K, Professor, BS, Eastern Kentucky University, 2007
Taylor, Gary B, Assistant Professor, AAS, Somerset Technical College, 2000
Taylor, Guy L, Instructor, BS, University of Kentucky, 1981
Taylor, James H, Instructor, MA, Eastern Kentucky University, 2002
Taylor, Terry A, Assistant Professor, MS, University of North Alabama, 2005
Thomas, Janice E, Instructor, MSN, Eastern Kentucky University, 2008
Tincher, James E, Assistant Professor, AAS, Somerset Technical College, 2000
Toby, Kimberly L, Instructor, MS, University of Kentucky, 1999
Tomlinson, James R, Professor, MS, Eastern Kentucky University, 1995
Tomlinson, Nick, Associate Professor, MS, Eastern Kentucky University, 2006
Upchurch, Joni M, Instructor, AAS, Somerset Community College, 2008
Vito, Gloria L, Associate Professor, MSN, Eastern Kentucky University, 2006
Walker, Anita E, Professor, MS, University of Tennessee, 1971
Ware, Lisa N, Instructor, MA, Eastern Kentucky University, 2010
Watres, Amanda J, PhD, University of Kentucky, 2009
Watson, Karl D, Associate Professor, BS, Eastern Kentucky University, 2002
Watson, Rollin J, Associate Professor, PhD, University of Maryland, 1975
Watters, Tammy R, Assistant Professor, AAS, Somerset Community College, 2000
Webb, Karen Calvert, Professor, BS, Eastern Kentucky University, 1998
Weber, Richard A, Professor, MS, Eastern Kentucky University, 1988
Whitehead, Sharon F, Professor, MS, Stetson University, 1976
Wilson, Jennifer K, Associate Professor, MSN, Eastern Kentucky University, 2000
Wooldridge, Eric N, Assistant Professor, BS, University of Kentucky, 2001
Wright, Karen M, Instructor, MA, Eastern Kentucky University, 2004
Xia, Zhiming, Associate Professor, MS, University of Mississippi, 1999
Southeast Kentucky Community and Technical College

Mission Statement/Status of Accreditation
Founded in 1960, Southeast Kentucky Community and Technical College is a public, comprehensive community and technical college under the governance of the Kentucky Community and Technical College System (KCTCS). The college serves the southeastern Kentucky region and provides:

- Associate in Arts and Associate in Science degree programs and courses designed to prepare individuals to succeed in baccalaureate programs at senior colleges and universities;
- Associate in Applied Science degree programs, certificates programs, diploma programs and courses designed to prepare individuals to succeed in today’s technological workforce;
- Continuing education, training activities and services designed to expand life skills and knowledge of our citizens, strengthen the existing workforce, and enhance community and business development;
- Academic support and developmental education courses and experiences designed to prepare individuals for success in transfer, technical, and continuing education programs and courses; and
- Resources to promote the preservation of Appalachian culture by stimulating artistic expressions, serving as a depository for the region’s history and cultural traditions, providing a forum for the arts through cross-cultural experiences, and promoting the arts in education.

Southeast Kentucky Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Southeast Kentucky Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula
Associate in Arts
Associate in Science

Occupational/Technical Curricula
Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Academic Programs

- Air Conditioning Technology (C, D)
- Appalachian Studies (C)
- Automotive Technology (C, D)
- Business Administration Systems (C, A)
- Medical Information Technology (C, D)
- Office Systems Technology (C)
- Clinical Laboratory Technology (C, A)
- Collision Repair Technology (C, D)
- Computer Aided Drafting and Design (C, D)
- Computer and Information Technologies (C, A)
- Computerized Manufacturing and Machining (C, D)
- Construction Technology (C, D)
- Criminal Justice (C, A)
- Diesel Technology (C, D, A)
- Education (C, A)
- Emergency Medical Technician (C)
- Engineering Related – Project Lead the Way (PLTW) (C)
- Engineering and Electronics Technology (C, D)
- Funeral Service (A)
- General Occupational/Technical Studies (A)
- Heavy Equipment Operation (C, D)
- Historic Information Management (C)
- Historic Preservation Technology (C)
- Human Services (C)
- Interdisciplinary Early Childhood Education (C)
- Manufacturing Industrial Technology: Electrical Technology (C, D)
- Industrial Maintenance Technology (C, D)
- Medical Assisting (C, D)
- Mining Technology (C)
- Physical Therapist Assistant (A)
- Practical Nursing (C, D)
- Professional Craft: Pottery (C)
- Radiography (C, A)
- Respiratory Care (A)
- Surgical Technology (D)
- Surveying & Mapping Technology (C)
- Welding Technology (C, D)

Contact Information
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Middlesboro Campus
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Middlesboro, KY 40965
(606) 242-2145

Pineville Campus
10350 South US 25E
Pineville, KY 40977
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Whitesburg Campus
2 Long Avenue
Whitesburg, KY 41858
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Business Affairs: Angela Simpson (606) 589-2145, ext. 13025
Workforce Solutions: Vic Adams (606) 589-2145, ext. 50416
Disability Services: Veria Baldwin (606) 589-2145, ext. 13018
Financial Aid: Barbara Gent (606) 248-0256, ext. 50256
Human Resources: Billie Franks (606) 589-2145, ext. 13029
Library: Warren Gray (606) 589-2145, ext. 13070
Public Relations: Chris Jones (606) 589-2145, ext. 13003
Registration/Records: Karin Gibson (606) 589-2145, ext. 13017
Transfer Information Liaison: Georgia Billings (606) 248-0853, ext. 50853
Veterans Affairs: Rebecca Parrott (606) 589-2145, ext. 50256
southeast.kctcs.edu

Administrative Officers

President Dr. W. Bruce Ayers
Chief Academic Affairs Officer Dr. W. heeler Conover
Chief Business Affairs Officer Susan Crouch
Chief Student Affairs Officer Dr. Rebecca Parrott
Chief Operations Officer Larry Ward
Chief Community/Workforce Econ. Dev. Dr. Vic Adams
Chief Information Tech Officer Merrill Galloway
Chief Cultural Diversity Officer Carolyn Sundry
Director of Advancement Susan Caldwell
Director of Public Relations Chris Jones
Division of Industrial Technology Ronnie Daniels
Division of Arts & Humanities Ann Macaula
Division of Natural Sciences Patricia M Scopa
Division of Social & Behavioral Sciences Kevin Lambert
Division of Nursing and Related Technologies H. Kathy Guyen
Division of Allied Health and Related Technologies Michael S. Good

Faculty

Ahlstedt, Lisa A, Librarian I, MS, University of Tennessee, 1995
Bargo, Gienna, Assistant Professor, MSN, Eastern Kentucky University, 2008
Blanton, Scott, Associate Professor, MSN, Northern Kentucky University, 2011
Bowling, Kenneth N, Associate Professor, BS, Union College, 2003
Bowling, Roger A, Professor, MS, Eastern Kentucky University, 2000
Brooks, Lana, Instructor, BSN, Eastern Kentucky University, 2007
Buell Jr, Elijah, Professor, M BA, Morehead State University, 1980
Burnside, Patricia, Associate Professor, MA, Tusculum College, 2007
Call, Richard, Professor, MS, Ohio University, 1985
Carmack, Michael E, Associate Professor, AAS, Harlan Regional Technology Center, 1995
Chapman, Tammie, Assistant Professor, MA, Cumberland College, 1995
Clark, Darrin, Assistant Professor, MS, University of Kentucky, 1999
Cloud, Victoria, Instructor, BS, University of Kentucky, 2011
Clutts, David W, Professor, Ed.D, Liberty University, 2010
Collier, William G, Professor, MA, Eastern Kentucky University, 1992
Conklin, Peggy, Associate Professor, MA, Morehead State University, 1985
Conover, Edwin, Associate Professor, PhD, Cincinnati, 1996
Corriston, Michael S, Professor, MA, Stephen Austin State University, 1967
Cox, Donna, Associate Professor, MA, Union College, 1973
Cox, Lynn, Professor / Librarian I, MS, University of Kentucky, 1994
Cox, Robert S, Professor, MA, Marshall University, 1986
Crech, Rhonda, Associate Professor, MA, Morehead State University, 2003
Creech, Rhonda L, Professor, MA, Morehead State University, 1996
Cue La, Raman, Assistant Professor, MS, University of Iowa, 2005
Daniels, Ronnie W, Professor, BS, Eastern Kentucky University, 2000
Dixon, Jill Suzanne, Associate Professor, DPT, University of Kentucky, 2011
Dykes-Anderson, Michelle R, Associate Professor, EdD, University of Kentucky, 2011
Eldahan, Ismail A, Associate Professor, MS, American Sentinel University, 2008
Eldridge, Joel, Associate Professor, BS, Alice Lloyd College 1985, MA Union College 1993
Engle, Tina, Instructor, BSN, Chamberlain College of Nursing, 2011
Epling, Michael, Professor, MBA, Morehead State University, 1995
Fleming, April, RN, Instructor, ADN, Southeast Kentucky Community and Technical College, 2010
Forbes, Zelma M, Professor, MS, Ohio University, 1983
Garrison, Neville, Professor, MS, Eastern Kentucky University, 2000
Gibson, Dwayne, Assistant Professor, MBA, Eastern Kentucky University, 1999
Gipe, Robert H, Professor, MA, University of Massachusetts, 1988
Good, Michael S, Professor, MS, Eastern Kentucky University, 2001
Gordon, Sheila, Professor, MSW, University of Kentucky, 1995
Gray, Warren F, Librarian I, MLIS, University of Texas at Austin, 1993
Greene, Steven T, Associate Professor, AS, Southeast Kentucky Community and Technical College, 2008
Greer-Pitt, Sue, Professor, PhD, University of Kentucky, 1984
Guyen, Hazl K, Professor, MSN, Bellarmine University, 1989
Halcomb Jr, Astor, Professor, BSU, Morehead State University, 1992
Harper, Jane C, Associate Professor, BSN, Eastern Kentucky University, 2004
Helton, Melissa, Instructor, MFA, Bowling Green State University, 2006
Hensley, Evelyn M, Librarian III, MS University of Kentucky, 2006
Holbrook, Sandy, Professor, M. Ed, Western Kentucky University, 2011
Holt, Douglas G, Associate Professor, AAS, Southeast Kentucky Community and Technical College, 2003
Huff, Margie G, Associate Professor, MS, Eastern Kentucky University, 2008
Hughes, Carlton W, Professor, MA, Marshall University, 1987
Hughes, Eva, Instructor, BSN, Indiana Wesleyan University, 2011
Hutson, Joseph P, Associate Professor, MS, Eastern Kentucky University, 2004
Jackson, Terry, Instructor, BSN, University of Kentucky, 2003
Johnson, Joseph, Instructor, PhD, Clemson University, 2010
Johnson, Lori, Instructor, AA, Southeast Kentucky Community and Technical College
Jones, Lynn Y, Professor, MA, Eastern Kentucky University, 1983
Kiddwell, David T, Professor, PhD, University of Kentucky, 1993
Kurtz, Loucrecia, Instructor, BA Education Midway College, 2007
LaFollette, Larry, Librarian II, MLIS, Florida State University, 1994
Lambert, Kevin, Associate Professor, MS, University of Tennessee, 1994
Lawson, Rebecca L, CST, BA, Assistant Professor, Ashford University 2007
Macaula, Terry A, Professor, MA, Oklahoma State University, 1991
Marcum, Joseph S, Professor, MA, University of Tennessee, 1980
Mason, Verna, Instructor, MSN, Eastern Kentucky University, 2010
Mayes, Caroline, Instructor, MA, National University, 2007
McDaniel, James H, Associate Professor, PhD, Southern Illinois University at Carbondale, 1981
McDonnell, Raymond E, Associate Professor, PhD, University of Tennessee, 1997
Miles, Nancy, Associate Professor, Certificate, Mountain Empire Community College, 1976
Miller, Rebecca D, Professor, MA, Union College, 1998
Miracle, Sheila Gibbs, Professor, M. Ed, Lincoln Memorial University, 1985
Morris, Brenda, Associate Professor, MA, Eastern Kentucky University, 1977
Mullins, Jennifer, Instructor, MA, Union College, 2002
Murphy, Kevin, Professor / Librarian I, M. S. L. University of Kentucky, 1995
Newman, Kathy, Instructor, M. Ed, Lindsey Wilson College, 2004
Noe, Roger, Professor, Ed.D, University of Kentucky, 1990
Omar, Saeb, Associate Professor, PhD, Mississippi State University, 1987
Owens, Barbara, Instructor, BS Lincoln Memorial University 1972, MA Union College 1974
Pennington, Joy, Associate Professor, BSN, Chamberlain College of Nursing, 2011
Proctor, Margaret, Instructor, B.RE. Piedmont Bible College 1977, MA, College of Notre Dame of Maryland 2006
Ray, Johnny E, Associate Professor, BS, Eastern Kentucky University, 2000
Saylor, Ellen W, Professor, MSN, Bellarmine University, 1987
Schertz, Ann E, Professor, MA, Indiana University, 1986
Scopa, Elana, Assistant Professor, MS, Eastern Kentucky University, 2003
Scopa Jr, Joseph A, Professor, MFA, Pennsylvania State University, 1993
Scopa, Patricia M, Professor, MA, Eastern Kentucky University, 1995
Shepherd, June L, Professor, MS, University of Kentucky, 1982
Simpson, Ashford, Associate Professor, MA, University of Southern Mississippi, 1993
Simpson, Astor, Professor, MA, Eastern Kentucky University, 1972
Smith, Marshall, Instructor, AAS, Southeast Kentucky Community and Technical College, 2011
Steenbergen, Gary L, Professor, MS, Eastern Kentucky University, 1996
Stewart, Jenny, Instructor, BS, University of Kentucky, 1982
Sundy, Carolyn M, Professor, MEd, University of Kentucky, 1985
Thoreson, Henry, Instructor, Lincoln Technical Institute, 1972
Turner, Mary Leann, Associate Professor, BS from EKU, 1994
Vaughn, Jamie, Professor, MBA, University of Kentucky, 1981
Webb, Danny, Associate Professor, MA, Eastern Kentucky University, 1994
Webb, Scelinda, Assistant Professor, MAEd, Morehead State University, 2011
Williamson, Susan P, Associate Professor, MA, University of Louisville, 2011
Wilson, Odell D, Professor, EdD, East Tennessee State University, 1987
Wright, Wendy, Instructor, Certified Respiratory Therapist, Mayo State Vocational Technical School, 1993

42
Introduction

West Kentucky Community and Technical College

Mission Statement/Status of Accreditation

The mission of West Kentucky Community and Technical College is to provide excellence in teaching and learning, promote student success, and support economic development.

To accomplish this mission, West Kentucky Community and Technical College will provide the following:

- Academic, general education, and technical courses leading to certificates, diplomas, and associate degrees.
- A general academic curriculum of university-parallel courses meeting transfer requirements of the first two years of a baccalaureate degree.
- Technical and occupational curricula designed to meet current and future workforce needs.
- Community partnerships as an integral component in assessing and providing programs for cultural, educational, economic, and civic development.
- A comprehensive program of transitional education.
- Customized training to meet the changing needs of business and industry.
- Adult and continuing education.
- Associated services including, but not limited to, library services, cultural and enrichment opportunities, information technology resources, and student support services.

West Kentucky Community and Technical College, a member of the Kentucky Community and Technical College System, is a public, two-year degree granting institution serving western Kentucky with a tradition of accessible, affordable, and quality education and a commitment to meet the academic, workforce training, and lifelong learning needs of the community.

West Kentucky Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of West Kentucky Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution’s significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Transfer Curricula/Art Related

An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. Individual Associate in Fine Arts (A) degree curricula in each group are noted by an A in parenthesis.

Visual Art (A)

Occupational/Technical Curricula

The program listing represents broad groups of instructional programs offered by the college. Individual certificates (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

21st Century Life Skills (C)
Advanced Nursing Assistant (C)
Air Conditioning Technology (C, D)
Applied Engineering Technology (C, A)
Apprenticeship Studies (A)
Automotive Technology (C, D, A)
Business Studies:
  Accounting Technology (C, D)
  Business Administration Systems (C, D, A)
  Medical Information Technology (C, D, A)
  Office Systems Technology (C, D, A)
Clinical Laboratory Technology (C, A)
Collision Repair Technology (C, D)
Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Construction Technology (C, D)
Cosmetology (C, D)
Criminal Justice (C, A)
Culinary Arts (C, D, A)
Dental Assisting/Dental Hygiene (D)
Diesel Technology (C, D)
Diagnostic Medical Sonography (C, A)
Emergency Medical Technician (C)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Health Physics (C, A)
Health Science Technology (A)
Historic Preservation Technology (C)
Homeland Security/ Emergency Management (C, A)
Industrial Chemical Technology (A)
Interdisciplinary Early Childhood Education (C, A)
Logistics and Operations Management (C, A)
Manufacturing Industrial Technology:
  Electrical Technology (C, D, A)
  Industrial Maintenance Technology (C, D, A)
Marine Technology (C, A)
Mechtronics (C)
Natural Gas Technology (C)
Nursing (A)
Paramedic Technology (C, A)
Pharmacy Technology (C)
Physical Therapist Assistant (A)
Practical Nursing (C, D)
Radiography (A)
Respiratory Care (C, A)
Surgical First Assisting (C)
Surgical Technology (C, D, A)
Visual Communication:
  Multimedia (C, D, A)
  Printing (C, D)
  Welding Technology (C, D)
Hodges, Tamara S, Instructor, BSN, Murray State University, 1985
Holland, Virgil T, Assistant Professor, AAS, West Kentucky Community and Technical College, 2008
Holli, Patricia A., Associate Professor, MA, Murray State University, 1990
Holt, Stephen W, Assistant Professor, BS, Murray State University, 2006
Householder, Paul D, Associate Professor, AS, Murray State University, 2001
Hudson, Rocky L, Instructor, BS, University of Kentucky, 1988
Hutchinson, Shirley E, Professor, MA, Western Kentucky University, 1980
Isenberg, Paula, R, Instructor, MSN, University of Southern Indiana, 2010
Johnson, Jonathan B, Instructor, MS, Bellarmine University, 2012
Johnson, Margaret F, Assistant Professor, MSN, University of Phoenix, May 2011
Jones, Latoya A, Instructor, MS, Life University, 2001
Jones, Valerie W, Professor, MS, Murray State University, 1989
Jordan, Tracy L, Associate Professor, MA, Murray State University, 1986
Knapp, JoA, Professor, MA, Murray State University, 1990
Knuth, Marilyn B, Professor, MSN, University of Evansville, 1984
Kocher, Vicki A, Professor, MS, Murray State University, 1991
Lee, Bobby A, Professor, MS, Murray State University, 1995
Liao, Bilan, Assistant Professor, MFA, Kendall College of Art and Design, 2008
Liu, Sarah S, Associate Professor, PhD, Old Dominion University, 2006
Mahoney, Joseph D, Professor, MA, Murray State University, 1990
Martin, Patricia A, Associate Professor, MSN, Murray State University, 2000
Mazo, Teresa, Professor, EdD, University of Kentucky, 2012
McDaniel, Tracy L, Associate Professor, BS, Murray State University, 2009
McGuilton, Allison S, Assistant Professor, MS, University of Colorado at Denver, 1998
McMullen, DeAnn J, Professor, MED, Memphis State University, 1989
Miller, Jennifer D, Associate Professor, MS, Murray State University, 2009
Miller, Rhonda G, Assistant Professor, BSN, Murray State University, 1988
Milliken, Stephanie K, Professor, MS, Murray State University, 1996
Monroe, Frances J, Professor, MACT, Murray State University, 1977
Moore, John C, Associate Professor, MS, Murray State University, 2007
Morgan, Tiffany S, Professor, MA, Murray State University, 1996
Mullins, Benjamin D, Associate Professor, BS, Murray State University, 2000
Nickell, David L, Associate Professor, MA, Western Kentucky University, 1982
Norwood McGregor, Vanessa A, Assistant Professor, BSN, Murray State University, 2003
Okerson, Robert N, Associate Professor, BS, Murray State University, 1987
Owen, Tammy R, Associate Professor, EdD, University of Phoenix, 2008
Payne, Teresa B, Professor, EdD, University of Kentucky, 2001
Perry, Carolyn K, Associate Professor, MBA, Thunderbird School of Global Management, 1990
Perry, Edward D, Associate Professor, BS, Murray State University, 2001
Peterson, Miranda D, Instructor, MSN, University of Southern Indiana, 2008
Petitt, Christy L, Assistant Professor, MSN, University of Southern Indiana, 2007
Phillips, Glenda R, Professor, MAEd, Murray State University, 1990
Potter, Tammy F, Professor, MAEd, Murray State University, 1993
Prutt, Douglas L, Associate Professor, PhD, Bowling Green State University, 2000
Quinby, Beverly F, Associate Professor, BS, Mid-Continent University, 2007
Reese, Gary L, Assistant Professor, MPA, Murray State University, 1987
Robertson, Alice R, Professor, BS, Murray State University, 1996
Roff, Sally, Professor, MS, Murray State University, 2002
Russell, Kimberly G, Assistant Professor, MA, Southeast Missouri State University, 2000
Senn, Catherine E, Professor, MS, Johns Hopkins University, 1996
Shurley, Britton M, Instructor, MFA, Indiana University, 2007
Simmons, Randall R, Associate Professor, MFA, University of Cincinnati, 1995
Smith, Deborah S, Professor, MS, Murray State University, 2008
Spelbring, Legatha F, Associate Professor, MA, Indiana State University, 2002
Stephenson, Lisa G, Professor, EdD, University of Kentucky, 2012
Stavert, Michael E, Professor, MS, Murray State University, 1977
Stoffel, Claudia A, Professor, MSN, Bellarmine College, 1992
Swain, Debra, Associate Professor, BS, Murray State University, 2008
Tavares, Victor M, Instructor, PhD, Pennsylvania State University, 2009
Taylor, Jason D, Associate Professor, MS, Murray State University, 2000
Taylor, Susan D, Professor, MSN, University of Evansville, 1988
Teague, Sand E, Instructor, MA, Murray State University, 2009
Thompson, Wanda K, Associate Professor, MS, Murray State University, 2004
Thompson, Julie E, Assistant Professor, MAT, Murray State University, 1999
Thompson, Ruth P, Professor, MS, Murray State University, 1993
Thompson, Valerie V, Assistant Professor, MS, Murray State University, 2007
Todd, Nancy S, Instructor, MA, Murray State University, 1983
Toon, Nichole M, Associate Professor, BS, Murray State University, 2009
Tucker, Sandra B, Associate Professor, MAE, Western Kentucky University, 1984
Turner, Nancy K, Professor, MSN, University of Evansville, 1982
Vos, John D, Professor, MBA, Murray State University, 1989
Waddington, Corey M, Associate Professor, MAE, Austin Peay State University, 1999
Waltman, Freddie G, Associate Professor, AAS, West Kentucky Technical College, 2003
Watkins, Gerald L, Professor, MBA, Murray State University, 1984
Watkins, Kelly J, Instructor, BSN, Western Kentucky University, 1984
Westerfield, Mark A, Instructor, AAS, West Kentucky Community and Technical College, 2005
Witherspoon, Reta P, Instructor, AAS, West Kentucky Community and Technical College, 2005
Wright, Kelly R, Professor, MS, Murray State University, 1984
Wurfler, Norman F, Professor, MM, University of Cincinnati, 1985
Youngblood, Norita A, Professor, MS, Murray State University, 2004
Admission

Applying for Admission

A student enrolling at a KCTCS college for the first time must submit an application for admission. Students who are re-entering a KCTCS college after being out for one or more semesters should contact the college admissions office to confirm the process for readmission. Students may be admitted to a KCTCS college as freshmen, as students with transfer credit from other institutions, as visiting students, or as non-degree students. KCTCS colleges admit students who have graduated from high school, who have earned a high school general equivalency diploma (GED), or who are eligible to pursue a GED, or who are dually enrolled in high school and the college.

Admission and Registration Procedures

• Prospective students should contact the admission office of the college they wish to attend and request an admission application or visit the college's website to complete an online application.
• The full and proper name of the student and KCTCS student ID number must be used in registration and for all other official purposes.
• Applicants under age 25 entering a college for the first time will be required to send an official copy of their high school transcript or GED to the admission office of the college they plan to attend for specific program requirements.
• Applicants entering with transfer credit must have an official transcript from each college attended forwarded to the admission office of the college they plan to attend.
• Applicants should submit results of the American College Test® (ACT) or Scholastic Aptitude Test® (SAT). Applicants who have not taken the ACT® must complete the COMPASS® or ASSET® placement examination administered by any KCTCS college. For specific information regarding course placement, students should refer to the KCTCS Assessment and Placement Policy, which is available on the website at kctcs.edu, under “Students”, then “Academic Regulations”.
• Admission to a college does not guarantee admission to a specific program. Applicants seeking admission to an occupational/technical program at any KCTCS college should contact the admission office of the college of interest for information regarding any special requirements for program admission.
• Applicants must submit an application for admission and supporting documents prior to the first day of classes of the term or session for which the student plans to enroll. Some colleges, however, may have an earlier date. Students should check with the admission office of the college they plan to attend for registration/application deadlines.
• A student who applies for admission to a KCTCS college will receive instructions to establish access to Student Self-Service. Student Self-Service allows a student access to many services such as registration, grades, class schedule, financial aid awards, bill payment and many other services.
• All enrolled KCTCS students will be given access to a KCTCS-assigned email account. Official communication from faculty and student service personnel will be sent to this address. Students will continue to have access to this account as long as they are enrolled. After receiving the completed application and other documents, the admission office will notify the applicant of his or her admission status. It is expected that all students will submit all required credentials in order to be eligible to register for classes. In the event this is not possible, students should contact the Admissions Office of the KCTCS college they wish to attend for instructions or assistance. While provisions may be provided, students will not be permitted to register for subsequent semesters without all official required documents.

Non-Degree/Non-Credential Students

At the discretion of the institution, persons who desire instruction without wishing to earn a credential may be admitted as non-degree/non-credential students. These students are exempt from taking the assessment instrument; however, all students (including high school students) must meet individual pre-requisites such as those for entry-level English and mathematics courses.

Students may declare credential seeking status after meeting regular admission requirements. The college may review and reclassify credential-seeking status in accordance with policies established at each individual college. Non-degree/non-credential students are not eligible for Federal Financial Aid programs.

Credit earned before a student meets admission requirements will be counted toward a credential.

High School Students

The condition of graduation from high school may be waived for a student currently enrolled in high school subject to the following guidelines. All applicants shall submit:
• a KCTCS application for admission by the appropriate deadline
• the results of the ACT®, SAT® and/or ASSET® or COMPASS® in accordance with KCTCS Assessment and Placement Policy. A college may require additional information as part of the admission process.

In some cases, courses offered on the high school campus carry both high school and college credit. See your high school counselor for more information.

Second Chance Students

A student who has previously attended an accredited college or university – other than a college in the Kentucky Community and Technical College System – and who has less than an overall grade-point average of 2.0 on a 4.0 scale in all course work attempted, may be considered for admission on probation provided the applicant demonstrates both of the following:
• has not enrolled at a college or university for at least one 16-week semester, and
• can demonstrate potential for success.

Transient/Visiting Students

A student may be admitted as a transient or visiting student. A transient or visiting student must submit a form completed by the student’s home college indicating that the student is eligible to enroll in that institution. Admission as a transient or visiting student is valid only for the semester or session for which the student applies.
International Students

Some KCTCS colleges are authorized under Federal law to enroll non-immigrant students. Consult the admission office of your college for details.

Readmission after Two or More Years: Academic Bankruptcy

A student who has been readmitted after having remained out of a KCTCS College for a period of two or more years and who has completed at least 12 credit hours in college-level courses with a grade point average of 2.0 or better after readmission, may choose to have his/her previous KCTCS course work removed from the computation of the grade point average. This procedure is commonly called “academic bankruptcy.”

A student who declares academic bankruptcy will continue to receive credit for those courses in which a grade of A, B, C, D, or P was earned prior to readmission without including those grades in the GPA computation. A student who has completed a credential and re-enrolls may not apply the academic bankruptcy rule to courses taken for the credential already completed.

Previous College Work

An applicant who has previously attended an accredited college or university which awards degrees at the associate level or higher and who has an overall grade point average of at least 2.0 on a 4.0 scale in all course work attempted will be accepted for admission. For specific information on course placement, applicants should refer to the KCTCS Assessment and Placement Policy, which is available on the website at kctcs.edu, under “Students”, then “Academic Regulations”. An official transcript of all previous college work must be submitted. The Council on Postsecondary Education’s (CPE’s) general education transfer policy provides the basis for an institution’s policy on the acceptance of transfer credit. The American Association of Collegiate Registrars and Admissions Officers’ “Transfer Credit Practices of Educational Institutions” shall serve as a reference for admission of transfer students to an institution and for the acceptance of transfer credit.

KCTCS colleges shall provide academic counseling concerning the transfer of credit to transferring students. KCTCS colleges shall accept a student’s college credit earned when a course is taken both for high school credit and for college credit. Credit earned through dual credit or dual enrollment arrangement shall be treated the same as credit earned in any other college course.

Degree credit work is recognized credit hour for credit hour if taken on the semester system. Quarter hours are recognized as two-thirds (2/3) of a semester hour. Recognition of credit earned at a non-accredited college or university may be obtained by special subject examinations or may be validated upon the completion of 12 credit hours, excluding transitional courses, with a grade point average of at least 2.0.

KCTCS Assessment and Placement Policy

Students enrolling in KCTCS colleges for the purpose of earning credit toward an educational credential — certificate, diploma, or associate degree — must demonstrate through the submission of scores on specified assessment instruments that they possess the minimum academic skills essential for success. Students who do not have the appropriate test scores in a given area must successfully complete transitional education courses before enrolling in entry-level courses for that subject area. Students requiring transitional education will be placed in the appropriate course(s) during the first two terms of enrollment. Enrollment in required transitional education courses shall continue consecutively until the sequence is completed. Students will be advised to enroll in the first college-level course in the appropriate subject as soon as the transitional education sequence is complete.

This assessment and placement policy specifically applies to:

- Students who will enroll in a KCTCS college for the first time for the purpose of earning an educational credential. This includes students who intend to transfer to a university and students who are undecided on a program of study.
- Students who transfer from a non-KCTCS institution and who have not demonstrated academic skills appropriate for the educational credential they seek either through assessment results or successful completion of relevant entry-level courses.
- Students who decide to earn an educational credential subsequent to their enrollment as a non-credential seeking student and who have not demonstrated the academic skills appropriate for the educational credential they seek.

The skills for which the Assessment and Placement Policy applies are mathematics, reading, and writing. An ACT® score of at least a 19 in mathematics, 20 in reading or 18 in writing allows the student to enroll in entry-level courses for those areas. A student who scores less than 19 in mathematics, less than a 20 in reading or less than an 18 in writing is required to take an additional test and will be placed into classes according to her/his score on the second test.

Students who do not intend to seek an educational credential are exempt from taking the assessment instrument; however, all students must meet individual course pre-requisites such as those for entry-level English and mathematics courses.

The KCTCS Placement and Assessment Policy can be found at the main KCTCS web page kctcs.edu, under “Students”, then “Academic Regulations”.

*Certificate programs that require 18 credits or less are exempt from the Assessment and Placement Policy. However, applicable course pre-requisites still apply.
# Mathematics Assessment and Course Placement

<table>
<thead>
<tr>
<th>ACT</th>
<th>SAT</th>
<th>COMPASS Algebra Domain</th>
<th>ASSET</th>
<th>KYOTE¹</th>
<th>KCTCS Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 or higher</td>
<td>610 or higher</td>
<td>83-99</td>
<td>NA</td>
<td>NA</td>
<td>MAT 170, MAT 175 or any course listed below</td>
</tr>
<tr>
<td>22 or higher</td>
<td>510 or higher</td>
<td>50-99</td>
<td>El Alg 46-55</td>
<td>CA 14 or higher</td>
<td>MAT 150 or any course listed below</td>
</tr>
<tr>
<td>19-21</td>
<td>460 or higher</td>
<td>36-49</td>
<td>El Alg 41-45</td>
<td>CA 7-13 and MP 27 or higher</td>
<td>MAT 150 with MAT 100 or supplemental instruction¹; MAT 146, MAT 105; MAT 110; MAT 116; MAT 126 or any course listed below</td>
</tr>
<tr>
<td>31-35</td>
<td>39-40, Int Alg 36-38</td>
<td>CA 7-13 or MP 21 or higher</td>
<td>Intermediate Algebra or any course numbered MAT 105 through MAT 126² with supplemental instruction⁴ or any course listed below</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-35</td>
<td>34-40, Int Alg 33-38</td>
<td>CA 5-13</td>
<td>All courses numbered MAT 105 through MAT 116² with supplemental instruction⁴ or any course listed below</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-30</td>
<td>27-38, Int Alg 26-35</td>
<td>MT 055 = MP 0-11 MT 065 = CA 0-6 or MP 12-20</td>
<td>MAT 065 provided that, IF there is a concurrent pre-algebra score, it is between 42-99; or any course listed below</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMPASS Pre-algebra Domain</th>
<th>ASSET</th>
<th>KYOTE¹</th>
<th>KCTCS Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>42-99</td>
<td>N. Skills 38-55</td>
<td>CA 0-6 or MP 12-20</td>
<td>MAT 065 or any course listed below</td>
</tr>
<tr>
<td>24-41</td>
<td>N. Skills 25-37</td>
<td>MP 0-11</td>
<td>MAT 055</td>
</tr>
<tr>
<td>Less than 24</td>
<td>N. Skills 23-24</td>
<td></td>
<td>ARI 030 or Refer to Adult Basic Education</td>
</tr>
</tbody>
</table>

¹ MAT 100 offers supplementary academic support for MAT 150.

² MAT 105, MAT 110, MAT 116 do not serve as prerequisites for intermediate algebra.

³ The KYOTE College Algebra Placement Test (CA) is administered after the (Transitional) Mathematics Placement Test (MP) if the MP score is 27 or higher.

⁴ Enrollment permitted only with concurrent supplementary instruction. College designated supplemental instruction must offer supplementary academic support, such as extra class sessions, additional labs, tutoring, and increased monitoring of students, beyond that usually associated with an entry-level course.

NOTE: Colleges may seek approval from the Chancellor for use of alternate assessment instruments.
## Reading Assessment and Course Placement

<table>
<thead>
<tr>
<th>ACT 20 or higher</th>
<th>SAT Critical Reading 470</th>
<th>COMPASS 85-100</th>
<th>ASSET 44-55</th>
<th>KYOTE 20 or higher</th>
<th>KCTCS Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPASS 88-84</td>
<td>ASSET 43</td>
<td></td>
<td></td>
<td>Entry-level courses with concurrent enrollment in CMS 185, or supplemental instruction1, 2</td>
<td></td>
</tr>
<tr>
<td>COMPASS 70-82</td>
<td>ASSET 38-42</td>
<td></td>
<td></td>
<td>RDG 0302 or DRE 030 2</td>
<td></td>
</tr>
<tr>
<td>COMPASS 49-69</td>
<td>ASSET 32-37</td>
<td></td>
<td></td>
<td>RDG 020</td>
<td></td>
</tr>
<tr>
<td>COMPASS 48 and below</td>
<td>No score available</td>
<td></td>
<td></td>
<td>Refer to Adult Basic Education for Reading</td>
<td></td>
</tr>
</tbody>
</table>

1Supplemental instruction, such as extra class sessions, additional labs, tutoring, and increased monitoring of students beyond that usually associated with an entry-level course, to be developed and provided at the college.

2After the completion of this option students can move to entry level courses without additional supplemental instruction.

NOTE: Transfer students with 12 or more credit hours at the 100 level or above in general education courses with a 2.0 gpa are exempt from reading placement requirements.

## English Assessment and Course Placement

<table>
<thead>
<tr>
<th>ACT 18 or above</th>
<th>SAT Critical Reading 430 or Writing 450</th>
<th>COMPASS 74-100</th>
<th>ASSET 43-55</th>
<th>KYOTE 6 or higher</th>
<th>KCTCS Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPASS 39-73</td>
<td>ASSET 38-42</td>
<td></td>
<td></td>
<td>ENC 091</td>
<td></td>
</tr>
<tr>
<td>COMPASS 26-38</td>
<td>ASSET 33-37</td>
<td></td>
<td></td>
<td>ENC 090 or ARI 010</td>
<td></td>
</tr>
<tr>
<td>COMPASS 25 and below</td>
<td>No score available</td>
<td></td>
<td></td>
<td>Refer to Adult Basic Education for English</td>
<td></td>
</tr>
</tbody>
</table>

Note: Students may be advised to enroll in ENC 092 (Writing Laboratory), or ENG 100, or supplemental work defined by the college concurrent with their enrollment in ENG 101 if they have completed ENC 091 and need the assistance provided by the writing laboratory. Supplemental instruction includes extra class sessions, additional labs, tutoring, and increased monitoring of students beyond that usually associated with an entry-level course.
Tuition and Charges

Tuition and charges vary based on whether a student is a Kentucky resident, non-resident, or resident of a contiguous county of a contiguous state. Tuition and charges are on a per credit hour rate, including courses that are audited. For questions regarding residency status and guidelines, see Appendix A. All tuition and charges are payable in full prior to the beginning of classes for each session of the term unless prior arrangement has been made with the college business office. Consult your local college business office for college-specific required payment dates. For provisions for partial or deferred payment instructions, see the payment plan options in the section below.

Tuition and charges are assessed at the time of registration and based upon a per credit hour rate for all KCTCS colleges regardless of whether the courses are taken during the day, evening, and/or on weekends and regardless of whether the courses are taken for credit or audit purposes. The additional charge, depending upon the requirements of developing and producing the customized course or program offering (i.e., a student taking ¼ credit hour course would be assessed ¼ rate of student with same residency taking a 1 credit hour course). Charges for services are non-refundable unless specifically stated as refundable. Consult with your college business office for specifics. The tuition charges for the 2012-2013 academic year were not available at the time of publication. Tuition charges will be published at kctcs.edu as soon as they are available.

Charges for Customized Course Offerings

Some courses, including courses created specifically upon request (credit or non-credit) may have additional charges. The additional charge, depending upon the requirements of developing and producing the customized course or program offering, will vary depending upon the length and content of the course or program offerings. All tuition and charges for customized courses are payable upon registration prior to arrangements, including third party contracts, have been made with the offering college. Please contact your local college business office for specifics.

Charges for Services

Some charges for services may exist, including some individual program and/or special testing charges. General examples of these charges include, but are not limited to, the following: GED and ACT® testing, returned check charge and lost library book/video replacement charge. Charges will vary by service and are non-refundable. Contact your college business office for specifics.

Charges for Special Examination

KCTCS colleges offer students institutionally developed special examinations to demonstrate mastery of course content and receive credit toward program requirements. Special examinations are course specific and charges are separate from regular tuition charges. Special examination charges are payable in full at the time the examination is scheduled. Contact your local college business office for a listing of all charges.

Students who are enrolled in courses for which they elect to take a special examination in lieu of completing the course must officially withdraw from the course. The withdrawal date determines the status of the student’s assessment, refund, and grade for the enrollment period. All special examination credit is awarded using the test credit process. In such instances, a grade will not be awarded on the current term grade report. Please contact your college’s office of student affairs for application requirements.

Cancellation of Registration for Non-Payment of Charges

Students who have not paid their tuition and charges or arranged for a payment plan on or before the college’s required payment date are subject to having their registration cancelled for non-payment. Consult your local college business office for college-specific required payment dates.

Payment Plan Options

In addition to the payment options of cash, check, or credit card, students may choose to participate in a KCTCS flexible tuition and charge payment plan (an option for students not planning to pay in full or having made an arrangement to pay in full) prior to the college’s required payment date. To enroll in a payment plan, a student will need to contact his/her local college business office. Students have the option, depending on registration date, to enroll in one of three payment plan options listed below.

<table>
<thead>
<tr>
<th>Plans</th>
<th>Service Charge</th>
<th>Percent Down</th>
<th>Monthly Payments</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>*</td>
<td>None</td>
<td>4</td>
<td>Advance Registration Only</td>
</tr>
<tr>
<td>Option 2</td>
<td>*</td>
<td>25%</td>
<td>3</td>
<td>Through Advance Registration</td>
</tr>
<tr>
<td>Option 3</td>
<td>*</td>
<td>50%</td>
<td>2</td>
<td>Through Regular Registration</td>
</tr>
</tbody>
</table>

* Contact your local college business office for a list of charges.

Total payment of the balance of tuition and charges must be made by the required date. Contact your local college business office for specifics.
Last Day to Enter an Organized Class

The last day to enter (add) an organized class (including Saturdays and Sundays, but excluding KCTCS recognized holidays) is as follows:

- **16-week Session** - by the close of business of the 7th calendar day of the session.
- **8-week Session** - by the close of business of the 4th calendar day of the session.
- **6-week Session** - by the close of business of the 3rd calendar day of the session.
- **5-week Session** - by the close of business of the 2nd calendar day of the session.
- **4-week Session** - by the close of business of the 1st calendar day of the session.

Irregular Session - prorated according to the length of the session in proportion to the traditional 16-week session.

Please check your local college course schedule and/or with your local college registrar for specific questions concerning the last day to enter (add) an organized class and session-specific Add/Drop dates.

Students cancelled for non-payment after the last day to enter an organized class may not be reinstated for that session. If in an acute extenuating circumstance a student cancelled for non-payment is re-enrolled, a late payment charge per the "Schedule of Allowable Charges" must be assessed for that session. All tuition and charges and the late payment charge must be satisfied at the time of reinstatement.

Refunds

In order to receive a tuition refund, a student must officially withdraw within the refund period specified within this policy. Refunds for sessions different from those listed below are prorated according to the session in proportion to the traditional 16-week session. A session is defined as an enrollment period within an academic term. An academic term (fall, spring, or summer) may have a number of sessions running concurrently -- 16-, 8-, or 4-week.

KCTCS has partnered with Higher One, a financial services company focused solely on higher education, to process student refund payments. Students are required to choose from one of the following three options for receiving any refunds due them:

1) ACH transfer to a bank account of their choice
2) Refund to a OneAccount, an FDIC insured checking account offered by Higher One
3) Paper check mailed to the student address on file.

For additional information, please visit KCTCSDebitCard.com.

KCTCS Online Learn On Demand Courses

KCTCS Online Learn On Demand courses' tuition and charges are assessed at the time of registration and based upon a per credit hour rate approved for all KCTCS colleges. To receive a 100 percent tuition refund, a student must officially withdraw prior to the first day of class. No refund will be given once a KCTCS Online Learn On Demand course has started. Charges for services are non-refundable unless specifically stated as refundable. Students who drop on the first day of class or thereafter remain liable for the tuition assessed per the guidelines set forth in the Learning Contract of the KCTCS Online Learn of Demand for which they have registered.

KCTCS Colleges offer a variety of courses with different start and end dates. Please contact the business office at your local college for the guidelines for refunds.

Financial Delinquency

Any student who is delinquent in financial obligations to a college, or any division or organization of a college, shall not be allowed to register for future terms, receive transcripts, transfer credits to another institution, or graduate. Delinquent accounts are subject to KCTCS Business Procedure 7.4 Collection of Accounts Receivable and may be referred to an outside collection agency. Note: referred accounts are subject to collection charges in addition to the amount owed the college and are the responsibility of the delinquent party. The delinquency, if referred to a collection agency, is also subject to being listed with credit reporting agencies. Specific questions may be directed to your college's business office.

Professional Liability Insurance

Students who enroll in any course requiring patient/client contact must show evidence they have professional liability insurance or may purchase insurance through the college. Programs with courses requiring professional liability insurance include Bio-Medical Equipment (Madisonville only), Clinical Laboratory Technology, Culinary Arts, Dental Hygiene and Dental Assisting Technology, Diagnostic Medical Sonography, Health Information Technology, Human Services, Interdisciplinary Early Childhood Education, Massage Therapy, Medical Administrative Services, Medical Assistant, Medical Information Technology, Medication Aide/NurseAide, Nursing Assistant, Nuclear Medicine Technology, Nursing, Nursing Internship, Occupational Therapy, Office Systems Technology (medical option), Pharmacy Technology, Phlebotomy, Physical Therapist Assistant, Paramedic and Emergency Medical Technology, Radiography, Respiratory Care, Surgical Technology, and Teacher Education Program. This charge is non-refundable and is subject to change without notice. Please contact the College Business Office for details concerning the charge for Professional Liability Insurance.
Financial Aid

Overview
The colleges of the Kentucky Community and Technical College System (KCTCS) offer a complement of student financial aid, including local scholarships that are specific to an individual college or program. There is no charge to apply for student aid. Among the U.S. Department of Education Title IV programs offered are Pell Grants, Supplemental Educational Opportunity Grants (SEOG), Federal Work Study, and federally supported Federal Direct Loan Program. The colleges also participate in state supported aid programs. Detailed information regarding student financial aid can be found on KCTCS’ website.

Student Eligibility and Application
To receive student financial aid from any program in which KCTCS participates requires meeting established eligibility criteria. A listing of specific criteria can be found on KCTCS’ website. In general, you must have a demonstrated need as supported by a FAFSA and a high school diploma or a General Education Development (GED) Certificate. If you are admitted “conditionally,” you may receive student aid for one semester only before your admission file must be complete.

You can apply for student aid electronically by using the U.S. Department of Education’s Web site, www.fafsa.ed.gov or by using the paper form (FAFSA). Paper forms are available at your local college. Applying for student financial aid is free. You will need the latest income tax forms for you and your spouse or you and your parents (1040, 1040 A, 1040EZ, or 1040 Telefile). If you did not file a tax return you will need documentation of all sources of income, taxed or untaxed.

It is recommended that all records and materials used in completing the application be saved. A percentage of all applicants are randomly selected for verification. If selected for verification, documentation must be provided in order to receive aid. Applying early insures consideration of your information for maximum funding and applicants are encouraged to apply as soon AFTER January 1 as possible.

You may call a toll-free number for questions concerning the U.S. Department of Education's Title IV programs by calling the Federal Student Aid Information Center between 9 a.m. and 8 p.m. (Eastern Time) Monday through Friday: 1-800-4-FED-AID (1-800-433-3243) or 1-800-730-8913 TDD for hearing impaired.

Dual Enrollment/Consortium Agreements
In some instances, a student may take classes at different KCTCS colleges and wish the different enrollments to count toward total enrollment. In such instances, specific eligibility requirements apply. Please consult your local student financial aid office for criteria.

Federal Student Loans
KCTCS colleges participate in the Federal Direct Loan Program. You do not have to be eligible for other federal student aid to participate in this program. However, an application using the FAFSA is required. Each of KCTCS’ colleges has established local criteria for processing loans. Please contact your local college for specific information about its requirements.

State Programs
The Kentucky Higher Education Assistance Authority (KHEAA) administers a number of state supported student financial aid programs. Among those offered are: College Access Program (CAP), Kentucky Educational Excellence Scholarship (KEES) and KHEAA Early Childhood Development Scholarship. For the complete listing of aid program offerings, please see KHEAA’s website: www.kheaa.com.

Statutory Scholarships (Waivers) for Kentucky Residents
KCTCS by virtue of state statute offers a number of tuition scholarships for Kentucky residents who meet specific eligibility criteria. Included in these are scholarships for: KCTCS Faculty and Staff; Kentucky residents age 65 or older; survivors of police officers and firefighters killed in duty; dependents of disabled police officers and firefighters; teachers; foster and adopted children; veterans; and children, step-children, and/or orphans of veterans killed or disabled in action.

A more detailed overview and eligibility requirements can be found on the KCTCS website.

KCTCS and College Scholarships for Kentucky Residents
KCTCS also offers a number of tuition scholarships for Kentucky residents. These include: KCTCS Presidential Scholarship; John T. Smith Scholarship; Commonwealth Scholarship; Kentucky Colonels Better Life Scholarship; Marsha C. Johnson Tuition Scholarship; Charles E. Cranmer–Liquid Transport, Inc. Scholarship; William Foster Tichenor Nursing Scholarship; and the Robert Stephen Weimann Tuition Scholarship for Non–Traditional Harlan County Residents. For details and application information, please contact your local college’s student financial aid office.

Additionally, each year, a number of individuals, organizations and companies make funding available for scholarships to various KCTCS colleges. The amount and criteria for these awards will vary. These scholarships are advertised when available, and eligible students may apply at that time. Information is available through your local college’s student financial aid office.

College Tuition Scholarships
Each local college offers tuition scholarships. Among these scholarships are: foundation scholarships to support enrollment management; need-based; program-specific; KCTCS Employee Spouse/Dependents; and Securing Educational Excellence in Kentucky Scholarship (SEEK). Please contact your local college for specifics.
Third Party Assistance Programs

There are a wide number of outside agencies who offer educational assistance and other services to students. Included among them are Kentucky Department of Veterans Affairs, Kentucky National Guard, Kentucky Office of Vocational Rehabilitation, and Kentucky Office for the Blind. A more detailed listing and brief description of the programs they offer and contacts for each can be found on the KCTCS Website. Additionally, local social service agencies offer a variety of programs to assist students including Kentucky Works (JOBS), Temporary Assistance for Needy Families (TANF), Workforce Investment Act (WIA), and AmeriCorps.

Tax Credits

The U.S. Government grants a tax credit for eligible persons and/or their dependent attending college filing a federal tax return. The tax credits are referred to as the HOPE Scholarship and Lifetime Learning tax credit. Please contact your personal tax advisor regarding your eligibility.

Satisfactory Academic Progress

Federal regulations mandate that a student receiving Federal Student Aid under Title IV programs must maintain satisfactory academic progress in his/her course of study regardless of whether or not student aid is awarded each semester. Satisfactory Academic Progress (SAP) is measured with the following standards: Qualitative (cumulative Grade Point Average of 2.0 per semester), Quantitative (Maximum Time Frame of 150 percent of the credits for completion of their program), and Quantitative Percentage (Earned hours/Attempted must equal at least 67 percent).

Suspension Due to Poor Grades

If a student is suspended from Student Aid because his/her cumulative grade point average does not meet the minimum 2.0 grade point average (GPA) he/she may take additional classes without Student Aid (unless the student is academically suspended) to raise his/her GPA and, if successful, may be reinstated. If a student is on Academic Probation or Academic Suspension, he/she will automatically be on Student Aid Probation or Student Aid Suspension. If a student is reinstated from Academic Suspension by appeal or any means, he/she must appeal his/her Student Aid status separately to be considered for Student Aid reinstatement eligibility.

Appeal Process

Students placed on student aid suspension and having unusual circumstances (illness, death in the family, accidents, etc.) and not making satisfactory academic progress have the right to appeal. However, during the appeal process persons are responsible for their own expenses, i.e., tuition, books, supplies, etc.

Personal Financial Liability - Withdrawing or All “E”s

Students who withdraw from college before the 60 percent point in the semester or who stop attending and therefore receive all “E”s may be financially liable to repay the student aid received. Persons desiring to withdraw from college must do so according to their college’s withdrawal policy which can be found on the school’s website. A copy of the worksheet and examples used for this calculation can be requested from each KCTCS College’s Office of Student Aid.
Services for Students

Student and Academic Services
KCTCS colleges are structured to provide support that students need to achieve a rewarding and successful academic experience. Classes and laboratories are housed in modern structures on campuses designed to accommodate growth and development of college programs. Many classes are offered at off-campus facilities. All KCTCS colleges have bookstore services where students and faculty may obtain textbooks, as well as a variety of reading and instructional materials. Other services, facilities and opportunities are described below.

Counseling
KCTCS colleges provide counseling and guidance services to students. Qualified counselors are available at most KCTCS colleges and are prepared to provide individual or group career and academic counseling and testing, and to assist students in setting educational and career goals.

Placement
Assistance with employment opportunities and job placement is available at each KCTCS college. See the placement coordinator at the college to obtain details.

Testing
Many of the KCTCS colleges have been designated as testing centers for administering scholastic examinations. Examinations given at the colleges include the American College Test® (ACT), a Career Planning Program (CPP), ASSET®, COMPASS, WorkKeys® and correspondence study programs for other colleges and universities. Other examinations given at some of the KCTCS colleges include the GED (General Educational Development) Test, College-Level Examination Program® (CLEP), and ACT PEP (Proficiency Examination Program). Contact the local college Student Services Office for more information about examinations and testing schedules.

Students with Disabilities
Each college has a coordinator to assist students with accommodations necessary due to their disabilities. Students with disabilities who desire academic accommodations must provide the coordinator with current documentation of their disability including evidence of the need for academic accommodations.

Information Technology
KCTCS colleges provide computer laboratories for student utilization in accessing the Internet and other software applications required for completion of class projects and research assignments.

Learning Laboratories
Learning laboratories help students improve their basic learning skills. Students experiencing difficulties in meeting entry-level requirements for areas such as reading, writing, and mathematics; students who want to improve their current academic performance; and students who want to review previously learned skills are among those who have found the services provided by learning laboratories to be helpful. Learning laboratories may use a variety of techniques and materials to assist students such as: tutoring services, group work, and individualized instruction. Tests may be given to determine when students have reached a particular level of achievement. Materials include videos, individualized learning packets, programmed texts, sound pages, and computer-driven learning modules.

Libraries
KCTCS libraries actively support student learning, faculty teaching and research, and the intellectual and cultural lives of the communities they serve. They are an integral part of the teaching and learning process, promoting information literacy and providing information resources and services to support the educational and enrichment goals of Kentuckians. They provide information in a variety of formats with circulating print and audiovisual collections increasingly augmented by access to electronic full-text books and articles as well as other digital content. Thousands of titles in a variety of media and formats are added to the collections each year and hundreds of periodical subscriptions are maintained.

KCTCS libraries are staffed with talented, experienced professionals who provide instruction and guidance to students (both individually and in the classroom) in the effective use of traditional and electronic information resources. Working closely with other faculty members, KCTCS librarians are important catalysts for the enhancement of information literacy throughout the commonwealth. They are committed to helping students achieve competency in information literacy which becomes ever more crucial in the present age.

The KCTCS Library Catalog (opac.kctcs.edu) provides information on more than 520,000 titles owned or licensed by the libraries. Users can access it and licensed electronic resources from library web pages anywhere they have an Internet connection and at any time. Circulation and interlibrary loan services for the physical collections are available in 34 locations across the state. The KCTCS libraries participate in the Kentucky Virtual Library (KYVL), providing access to its broad array of online full-text and citation databases. The libraries share information resources extensively with each other as well as other libraries. They provide interlibrary loan services for books, articles and, in most cases, audio visual materials.

Student Housing
With the exception of Bluegrass Community and Technical College, KCTCS colleges are nonresidential colleges and no housing facilities are provided.

Ready to Work: Assistance for Low-Income Parents
Ready to Work (RTW) is a partnership between the Kentucky Community and Technical College System and the KY Cabinet for Health and Family Services. RTW is designed to promote the success of low-income parents who attend community and technical colleges in Kentucky. It can help with:

Introduction

- Counseling, advising and mentoring
- Referrals to community resources
- Job references and referrals
- Job readiness, life skills, and academic success seminars
- Work study opportunities both on and off campus

Contact your college RTW Coordinator to determine if you are eligible for RTW services.

Work and Learn

Ready to Work services have been expanded to include adult basic education students who are working toward their GEDs and high school graduates who are brushing up on some basic skills before entering college. Work and Learn services are now available to adult basic education students to help make their transition to college a smooth and successful one.

- Counseling, advocacy & mentoring
- Referrals to community resources
- Job references & referrals
- Job readiness, life skills & academic success seminars

KY Adult Education Services

If you didn't finish high school, there are free classes - at adult education centers and online - to help you prepare for successful completion of the GED test.

If you are a high school graduate and need to improve your reading, math or communication skills, you may be eligible for free adult education services in your choice of any Kentucky county, as well as online.

KCTCS Colleges serve as the adult education service providers in many Kentucky counties.

Policies and Procedures

Right to Know

KCTCS colleges support the intent of the Student Right to Know/Campus Security Act and are committed to providing a safe and secure environment for all students and employees. Several approaches may be utilized for crime prevention, such as:

- Burglar alarms
- Campus security officers
- Key control system
- Light sensors
- Local police patrol
- Motion detection system
- Building checks
- Video monitor and closed circuit cameras
- Visitor control processes.

Additionally, crime prevention efforts include the dissemination of information at student orientations, faculty in-services, and student organization meetings. Conduct that violates the intent of this Act and poses an unacceptable risk to members of the community of the KCTCS college shall result in appropriate disciplinary action as defined by policy.

Drug-Free Policy

KCTCS colleges are committed to providing a safe environment for students, faculty, and staff. The KCTCS colleges have adopted the following drug-free policy:

Being under the influence of alcohol or other drugs or the use, possession, distribution, manufacture, or sale of illegal or unauthorized drugs is prohibited and is punishable as a felony offense on campus or within 1000 yards of campus. Conduct that violates this definition, poses unacceptable risks, and disregards the health, safety and welfare of members of the KCTCS college community shall result in disciplinary action up to and including suspension or termination. The KCTCS Colleges are in compliance with the Drug-Free Workplace Act of 1988 and Drug-Free Schools and Communities Act amendment of 1989.

Sexual Harassment

KCTCS colleges are committed to providing a learning environment free from sexual harassment. All KCTCS employees and students shall avoid offensive or inappropriate behaviors. Sexual harassment - a form of sexual discrimination - includes unwelcome sexual advances, requests for sexual favors or other verbal or physical actions of a sexual nature when submission to such conduct is made explicitly or implicitly as a term or condition of the student's status in a course, program or activity; or is used as a basis for academic or other decisions affecting such student; or when such conduct has the purpose or effect of substantially interfering with the student's academic performance or creates an intimidating, hostile or offensive academic environment.

Grievance Procedures

Grievance procedures for students are found in the KCTCS Code of Student Conduct. Specific details may be obtained by visiting the KCTCS website at kctcs.edu under "Students".

Student Organizations

Business and industry demand that KCTCS graduates are able to function in global and team environments. Most programs include a specific
organized professional development component that is interfaced with student organizations. KCTCS colleges have numerous professional (e.g. Kentucky Association of Nursing – KANS) as well as career and technical student organizations (e.g., Skills USA; Health Occupations Student Organization - HOSA; Professional Business Leaders - PBL). Contact the college’s student affairs office for details and a complete list of student organizations. Following are some of the nationally recognized honor organizations and student councils available to KCTCS students.

National Vocational Technical Honor Society
The NVTHS recognizes students who have shown qualities of leadership, scholarship, skill, responsibility, and service. Each student must have the recommendation of his or her major instructor and meet the minimum criteria. Benefits of membership include: the student’s name will be included in the National Register of Vocational Technical Students of America, as well as being able to request up to three letters of recommendation written by the National NVTHS. For more information visit: www.nths.org.

Phi Theta Kappa Honor Society
Phi Theta Kappa is the international honor society of two-year colleges. Each college has its own chapter of this organization. The purpose of Phi Theta Kappa is to recognize and encourage scholarship among two-year college students. To achieve this purpose, Phi Theta Kappa and its chapters provide opportunities for the development of leadership and service, an intellectual climate for exchange of ideas and ideals, lively fellowship for student scholars, and stimulation of interest in continuing academic excellence. For more information, contact the Phi Theta Kappa advisor on each campus.

Student Government
The purpose of the student government is to provide a channel of communication whereby students can express themselves and make their views known to fellow students, faculty, and administration. The student government assists in sponsoring and regulating student activities and encourages the active participation of students in these activities. It is concerned with student involvement in all aspects of college life along with an appreciation of the privileges and responsibilities of being a college student. Members of the student government are elected representatives of the student body.

Inter-KCTCS College Student Advisory Council
The Student Advisory Council consists of a representative from each college. Members of this organization serve in an advisory capacity to Office of the Chancellor. The Advisory Council also provides the opportunity for the student body representatives to exchange ideas on topics of mutual concern.

Co-Curricular Activities
Co-curricular activities for students vary among KCTCS colleges. Many opportunities exist for participation in student government, newspaper or literary magazine publication, debating, speech contests, drama, orchestra, band, choral groups, college-sponsored radio and television programs, art shows, and intramural sports. Several KCTCS colleges have joint faculty-student activities such as art exhibits, bowling leagues, drama productions, and presentation and discussion of selected foreign and American films.

FERPA
The Family Educational Rights and Privacy Act (FERPA) of 1974, as amended, is a federal law that protects the privacy and confidentiality of personally identifiable information contained within student education records. Colleges in the Kentucky Community and Technical College System comply with FERPA’s confidentiality protections and adhere to procedures dealing with student education records and directory information recommended by the American Association of Collegiate Registrars and Admissions Officers.

In its discretion, a college or KCTCS as appropriate may provide Directory Information in accordance with the provisions of FERPA to include:

- student name
- address
- email address
- telephone number
- date and place of birth
- major field of study
- dates of attendance
- degrees and awards received
- the most recent previous educational agency or institution attended by the student
- participation in officially recognized activities and sports

Privacy and Release of Student Records
Students may withhold Directory Information by notifying designated officials at the college in writing within ten (10) calendar days from the first scheduled day of class of the fall term. All written requests for non-disclosure will be honored by the college for one (1) academic year. Requests to withhold Directory Information must be filed annually thereafter. A request for “non-disclosure” is commonly called a “privacy request”.

Student Records Maintenance
This is to serve notice to all students of the KCTCS of the rights and restrictions regarding the maintenance, inspection, and release of student records contained in the Family Educational Rights and Privacy Act of 1974 (FERPA). The colleges of KCTCS offer a wide variety of services to students. Each college requires the maintenance of records concerning students enrolled in that particular college. The following is a list of the types of records that may be maintained by the College and/or the System Office for students:

- Academic records from schools previously attended
- Scores or results on various standardized tests and interest/attitude inventories
- Degrees awarded
- Current academic work completed
- Grades and other faculty evaluations
- Applications for admissions
- Applications and other data related to financial aid
- Applications for employment
- Class rosters
- Letters of recommendation
- Academic advisor notes
- Attendance data

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- Applications for employment
- Class rosters
- Letters of recommendation
- Academic advisor notes
- Attendance data
• Biographical and identifying information (including name, social security number, sex, marital status, date of birth, residency and citizenship status, ethnic background, academic major, and military status)
• Medical data
• Current student status
• Accounts relating to charges
• Academic offenses
• Disciplinary offenses
• Counseling notes

The colleges are responsible for the maintenance of records in all categories.

In general, the records maintained by the college are available only to the student, to college personnel with legitimate educational interests, a person or company with whom the College has contracted as its agent to provide a service, to other institutions where the student is seeking financial aid, and to authorized representatives of the Comptroller General of the U.S., the Secretary of the U.S. Department of Education, or an administrative head of an education agency, in connection with an audit or evaluation of federally supported programs, and as provided by Section 164.283 of the Kentucky Revised Statutes. However, information may be released by the institution to appropriate persons in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of a student or other persons. Records may be disclosed without consent to officials of another school in which a student seeks or intends to enroll.

Records may also be furnished in compliance with a judicial order or pursuant to a subpoena or with the consent of the student.

Students may inspect and review all records pertaining to them within forty-five (45) days of making requests for the same, except for 1) records created or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting or assisting in a professional capacity in connection with the treatment of the student (except that the student may have these records reviewed by a physician or appropriate professional designated by the student), 2) financial records of the parents, 3) confidential letters and recommendations put in the files prior to January 1, 1975, and 4) confidential recommendations relating to admission, application for employment, or honors, if the student waived his or her right to review such records. Where a particular record cannot be reviewed by a student without revealing confidential information relating to other students, the records custodian will inform the student, upon request, of the contents of the record pertaining to that student.

Appeal

A student who believes that any record maintained by the college, the college district, or the KCTCS pertaining directly to that student is inaccurate, misleading, or otherwise violates the right of privacy of the student as provided by Title IV of Pub.L.90-247, as amended, and Pub.L.93-380 as amended by Senate Joint Resolution 40 (1974), may request a hearing before a panel of three persons appointed by the President of the Kentucky Community and Technical College System. The panel may direct that appropriate action be taken to correct, explain, or expunge the record(s) challenged.

Requests for hearings should be sent to the Records Custodian, Kentucky Community and Technical College System, 300 N Main St, Versailles, KY, 40383 and will be addressed in a timely manner.
Introduction

KCTCS colleges offer AA, AS, and AFA degree programs which allow students to tailor and complete a general course of study to meet their interests and to fulfill the general education requirements of the first two years of bachelor degree programs; AAS occupational/technical degree programs to meet workforce needs and which may be transferable to a bachelor degree; occupational/technical diplomas and certificates that are also aligned with workforce needs; dual credit courses for high school students; and continuing education and community service opportunities.

All students are encouraged to utilize the advising and transfer services available to complete programs of study at KCTCS, and to plan for lifelong and continuing education to support academic and career goals. Advising and transfer services are available to help facilitate students' progress and success.

Academic Advising

Academic advising is an essential element of the total educational experience and is available to every KCTCS student. Whether a student is seeking credentials exclusively from KCTCS or plans to use the education obtained at KCTCS to pursue a higher degree at another institution, academic advising is critical. Advisors strive to assist students in obtaining accurate information about academic requirements, long- and short-term educational planning, and resources available to assist students in advancing their academic and professional goals. Students with specific plans should contact an advisor at the local KCTCS college as soon as these goals are identified for the most effective advising and planning. In order to receive academic advising students should consult the local KCTCS college for information. Students can also refer to the Transfer Contacts listed on pages 59 to 61 on the KCTCS web site at: kctcs.edu Search words: Transfer Contacts to assist with transfer planning at KCTCS and a four-year university.

Although academic advisors provide assistance, students are responsible for knowing institutional policies, procedures, requirements, and seeking out assistance when needed.

General Education Certifications

Students with defined professional/career goals requiring a bachelor’s degree may choose to begin their education at a community college then transfer to any four-year college or university. The General Education Transfer Policy is in place between all public colleges and universities in Kentucky, and guarantees the transfer of general education courses as follows:

Fully General Education Certified

Students who have completed a general education program* of 33 credit hours and who are in good academic standing will be "fully general education certified". Students may then transfer these hours altogether as a block. Students must fulfill any additional general education requirements of the receiving institution that have not been satisfied through the courses in the core or through additional KCTCS college courses.

Category Certification

Students in good academic standing who have completed only some categories in the 33-credit hour component will be certified for those categories they complete. For example, a student who has completed the six-hour Arts & Humanities requirement of the AA/AS degree may be certified as having met the General Education Transfer Policy's six-hour Arts & Humanities requirement. Students with "category" certification and/or additional coursework must fulfill the remaining general education requirements for the bachelor degree program.

If you have questions about the General Education Transfer Policy, please contact your college’s Transfer Contact. Completed general education certifications are automatically printed on the official transcript. If the requirements for certification have been completed, but the appropriate certification is not printed on the transcript, contact the college registrar's office to request the appropriate certification be added to your transcript and request an additional transcript including the certification.


Transfer to Baccalaureate Institutions

All students are encouraged to complete a program of study at KCTCS and to consider transferring to a bachelor degree program to further their academic and career goals. The AA and AS degrees include a substantial amount of general education courses and are designed to accommodate transfer. KCTCS has developed a number of transfer agreements to assist students completing AA, AS, and AAS programs to transfer to bachelor degree programs. A list of these transfer agreements can be found at the KCTCS web site at: kctcs.edu Search words: Transfer Agreements.

Transfer Contacts and Services

There are a number of people available to assist students with information about planning and resources for transferring to a bachelor’s degree program. Students who are interested in transferring, or who just have questions about transferring, are encouraged to seek information as soon as possible. Each KCTCS college provides transfer services and has at least one transfer contact to assist students. Each public and private postsecondary institution in Kentucky also has staff to provide information to KCTCS students about transferring to that specific institution. Students are encouraged to talk with transfer contacts at their KCTCS college as well as transfer contacts at the college or university to which they want to transfer. A short list of public university transfer contacts is included below for quick reference. A complete list of transfer contacts at each KCTCS college and public and private colleges/universities in Kentucky is available at the KCTCS web site at: kctcs.edu Search words: Transfer Contacts.

KCTCS Transfer Contacts

Chancellor’s Office
Nicole McDonald
System Director for Transfer and Retention
300 North Main Street
Versailles, KY 40383
(859) 256-3389
nicole.mcdonald@kctcs.edu
Ashland Community and Technical College
Transfer Services
College Drive Campus - Room G101
Technology Drive Campus – Room 157

Transfer Contact
Cris McDavid
Associate Dean of Advising and Retention
Ashland Community and Technical College
1400 College Dr.
Ashland, KY 41101
(606) 326-2003
cris.mcdavid@kctcs.edu

Sheila Marcum
Admissions Advisor
1400 College
Ashland, KY 41101
606-326-2418
sheila.marcum@kctcs.edu

Jim Jagielo
Admissions Advisor
Ashland Community and Technical College
1400 College
Ashland, KY 41101
(606) 326-2028
(800) 928-4256
jjagielo@kctcs.edu

Big Sandy Community and Technical College
Transfer Services
Prestonsburg Campus- Counseling Center, Student Center Building
Pikeville Campus- Counseling Services, N 108

Transfer Contact
Jeffrey T. Hicks
Counselor
Big Sandy Community and Technical College
One Bert T. Combs Drive
Prestonsburg, KY 41653
(606) 886-3863
(888) 641-4132
jeffery.hicks@kctcs.edu

Jimmy Wright
Interim Dean of Student Affairs
Big Sandy Community and Technical College
One Bert T. Combs Drive
Prestonsburg, KY 41653
(606) 886-7347
(888) 641-4132
jimmy.wright@kctcs.edu

Bluegrass Community and Technical College
Transfer Services
BCTC Transfer Center
Cooper Campus, Room 100B Academic and Technical Building

Transfer Contact
Angel Clay
Director, Transfer Center
Bluegrass Community and Technical College
100 B A.T. Building 470 Cooper Drive
Lexington, KY 40506
(859) 246-4620

Becky Critchfield
Transfer Advisor
100 B A.T. Building
470 Cooper Drive
Lexington, KY 40506
(859) 246-4620
www.bluegrass.kctcs.edu/transfer_center.aspx

Bowling Green Technical College
Transfer Services
Transition Center
Main Campus, Building A

Transfer Contact
Denna White
Director of Admissions
Bowling Green Technical College
1845 Loop Drive
Bowling Green, KY 42101
(270) 901-1001
(800) 790-0990
denna.white@kctcs.edu

Elizabethtown Community and Technical College
Transfer Services
Counseling and Transfer Center
Main Campus, Room 106 CRPEC Building

Transfer Contact
Sharon Spratt
Director of Counseling
Elizabethtown Community and Technical College
600 College St. Rd.
Elizabethtown, KY 42701
(270) 706-8478
sharon.spratt@kctcs.edu

Gateway Community and Technical College
Transfer Services
Student Support Services
Edgewood Campus, Student Services Center Building

Transfer Contact
Mike Rosenberg
Director of Transfer Services
500 Technology Way
Florence, KY 41042
Phone: 859-442-1609
Fax: 859-815-7162
michael.rosenberg@kctcs.edu

Hazard Community and Technical College
Transfer Services
Career and College Transfer Center
Main Campus, Jolly Classroom Center Building

Transfer Contact
Renee Back
Coordinator
Career and Transfer Center
Hazard Community and Technical College
One Community College Drive
Hazard, KY 4170
606-487-3155
reneeb.back@kctcs.edu
Henderson Community College
Transfer Services
Success Center
Green Street Campus, Sullivan Technology Building

Transfer Contacts
Cary Conley
Admissions Counselor
Henderson Community College
102 Admin. Bldg., 2660 S. Green St.
Henderson, KY 42420
(270) 831-9610
cary.conley@kctcs.edu

Hopkinsville Community College
Transfer Services
Transfer Center
Main Campus, Technology Center Building

Transfer Contact
Kanya Allen
Career Services Coordinator
Technology Center Building
Career and Transfer Center, Room 216
(270) 707-3827
kanya.allen@kctcs.edu

Jefferson Community and Technical College
Transfer Services
Transfer Center
Downtown Campus - JEC Building
Southwest Campus - Community Center Building

Transfer Contact
Donna Edgar
Director of Academic Advising & Transfer
Jefferson Community and Technical College
109 E. Broadway
Louisville, KY 40202
(502) 213-2119
donna.edgar@kctcs.edu

Michelle Thompson
Jefferson Community and Technical College
Transfer Advisor
109 E. Broadway
Louisville, KY 40202
(502) 213-2285
michelle.thompson@kctcs.edu

Madisonville Community College
Transfer Services
Transfer Center
North Campus, John H. Gray Building

Transfer Contact
Lori Johnson
Advising & Transfer Center
John H. Gray Building
Madisonville, KY 42431
(270) 824-1827
(866) 227-4812
lori.johnson@kctcs.edu

Maysville Community and Technical College
Transfer Services
Transfer Center
Main Campus, Administration Building

Transfer Contact
Billie Barbour
Transfer Coordinator
Maysville Community and Technical College
1755 US 68
Maysville, KY 41056
(606) 759-7141, ext. 66182
Billie.barbour@kctcs.edu

Owensboro Community and Technical College
Transfer Services
Student Transfer and Educational Planning Center
Main Campus, Campus Center Building

Transfer Contact
Sandy Carden
Registrar
Owensboro Community and Technical College
4800 New Hartford Road
Owensboro, KY 42303
(270) 686-4536
(866) 755-6282
sandy.carden@kctcs.edu

Katie Ballard
Career Resource and Transfer Counselor
4800 New Hartford Road
Owensboro, KY 42303
(270) 686-4529
katie.ballard@kctcs.edu

Somerset Community College
Transfer Services
Transfer Center
Somerset Campus, Harold Rogers Student Commons
Laurel Campus North, Building 1

Transfer Contact
Karen McClain Wright
Director of Professional and Organizational Development
Somerset Community College
Student Commons Bldg. Room 208B, 808 Monticello Rd.
Somerset, KY 40506
(606) 451-6703
karen.wright@kctcs.edu
Laurel Campus

James Davis
Academic Advisor
Somerset Community College
100 University Drive
London, KY 40701
(606) 877 4732
james.davis@kctcs.edu

Gera Jones
Academic Advisor
Somerset Community College
100 University Drive
London, KY 40701
(606) 877 4723
gera.jones@kctcs.edu
www.somerset.kctcs.edu/GET_Transfer_FromSCC.html

Southeast Kentucky Community and Technical College
Transfer Services
Transfer Assistance Center
Cumberland Campus, Newman Hall
Middlesboro Campus, Administration Building
Whitesburg Campus, Allied Health Building
Harlan Campus, Administration Building
Transfer Contact
Ron Brunty
College Counselor
Southeast Kentucky Community and Technical College
2 Long Avenue
Whitesburg, KY 41858
(606) 589-3320
(888) 274-7322
ron.brunty@kctcs.edu

Joe Sutton
Counselor
Southeast Kentucky Community and Technical College
1300 Chichester Ave.
Middlesboro, KY 40965
606 248-0769
joe.sutton@kctcs.edu

Georgenia Billings
Counselor
Southeast Kentucky Community and Technical College
2 Long Avenue
Whitesburg, KY 41858
(606) 589-0853
georgenia.billings@kctcs.edu

Joe Sutton
Counselor
Southeast Kentucky Community and Technical College
1300 Chichester Ave.
Middlesboro, KY 40965
606 248-0769
joe.sutton@kctcs.edu

Georgenia Billings
Counselor
Southeast Kentucky Community and Technical College
2 Long Avenue
Whitesburg, KY 41858
(606) 589-0853
georgenia.billings@kctcs.edu

Morehead State University
Brad Bennington
Transfer Coordinator
(606) 783-2008
b.bennington@morehead-st.edu

Jen Crisp
Transfer Senior Enrollment Services Counselor
(606) 783-5488
j.crisp@morehead-st.edu

Murray State University
Crystal Riley
Coordinator, Transfer Center
(800) 669-7654
(270) 809-2185
transfercenter@murraystate.edu

Western Kentucky University
Marvin Daniel
Coordinator of Transfer Admissions
(800) 495-8463
TDD: (270) 745-5389
marvin.daniel@wku.edu

Credit for External Experiences
KCTCS colleges recognize that valid college-level learning experiences occur outside the traditional classroom setting. Colleges will assist students in recognizing appropriate external experiences and applying them toward a KCTCS credential. Colleges reserve the right to validate student competence through the mechanisms described in this section.
Advanced Placement Program

KRS 164.098 requires Kentucky Institutions to award credit for scores of 3 or higher on the Advanced Placement Tests. KCTCS colleges participate in the Advanced Placement Program of the College Entrance Examination Board. Interested students should have their examination results sent to the Admissions Office of their local KCTCS college.

Guidelines for Advanced Placement Credit (AP credit is under review with anticipated updates for fall 2012)

<table>
<thead>
<tr>
<th>AP Test</th>
<th>Score</th>
<th>Credit Awarded</th>
<th>Credit Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History</td>
<td>3</td>
<td>ART 105 or ART 106</td>
<td>3 credit hours</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>ART 105 and ART 106</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Biology</td>
<td>3</td>
<td>BIO 112</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>3</td>
<td>MAT 175</td>
<td>5 credit hours</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>3</td>
<td>MAT 175 and MAT 185</td>
<td>10 credit hours</td>
</tr>
<tr>
<td>Chemistry</td>
<td>3</td>
<td>CHE 170</td>
<td>3 credit hours</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>CHE 170 &amp; CHE 180</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Chinese Language and Culture</td>
<td>3</td>
<td>RAE 150</td>
<td>4 credit hours</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>RAE 150 and RAE 151</td>
<td>8 credit hours</td>
</tr>
<tr>
<td>Comparative Government and Politics</td>
<td>3</td>
<td>POL 210</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>3</td>
<td>CIS 120 &amp; CIS 149 or CS 115</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>English Literature/Composition</td>
<td>3</td>
<td>ENG 161</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>English Language/Composition</td>
<td>3</td>
<td>ENG 101</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>3</td>
<td>EST 150</td>
<td>4 credit hours</td>
</tr>
<tr>
<td>European History</td>
<td>3</td>
<td>HIS 104 and HIS 105</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>French Language</td>
<td>3</td>
<td>FRE 201</td>
<td>3 credit hours</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>FRE 201 and FRE 202</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>German Language</td>
<td>3</td>
<td>GER 201</td>
<td>3 credit hours</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>GER 201 and GER 202</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Human Geography</td>
<td>3</td>
<td>GEO 172</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Japanese Language and Culture</td>
<td>3</td>
<td>JPN 201</td>
<td>3 credit hours</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>JPN 201 and JPN 202</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Latin: Vergil</td>
<td>3</td>
<td>TRN 106***</td>
<td>3 credit hours</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>TRN 106 and 107***</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>3</td>
<td>ECO 201</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>3</td>
<td>ECO 202</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Music Theory</td>
<td>3</td>
<td>MUS 174</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Physics B*</td>
<td>3</td>
<td>PHY 201 and PHY 203</td>
<td>8 credit hours</td>
</tr>
<tr>
<td>Physics C** (mechanics)</td>
<td>3</td>
<td>PHY 231</td>
<td>4 credit hours</td>
</tr>
<tr>
<td>Physics C** (electricity and magnetism)</td>
<td>3</td>
<td>PHY 232</td>
<td>4 credit hours</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
<td>PSY 110</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Spanish Language</td>
<td>3</td>
<td>SPA 201</td>
<td>3 credit hours</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>SPA 201 and SPA 202</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Spanish Literature</td>
<td>3</td>
<td>TRN 110 (humanities)***</td>
<td>3 credits hours</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
<td>STA 220</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Studio Art 2-D</td>
<td>3</td>
<td>ART 112</td>
<td>3 credit hour</td>
</tr>
<tr>
<td>Studio Art 3-D</td>
<td>3</td>
<td>ART 113</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Studio Art - Drawing</td>
<td>3</td>
<td>ART 110</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>U.S. Government &amp; Polictics</td>
<td>3</td>
<td>POL 101</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>U.S. History</td>
<td>3</td>
<td>HIS 108 and HIS 109</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>World History</td>
<td>3</td>
<td>HIS 101</td>
<td>3 credit hours</td>
</tr>
</tbody>
</table>

*Upon presentation of documentation of appropriate laboratory experience, credit will also be given for the laboratory portions of these courses.

**Upon presentation of documentation of appropriate laboratory experience, credit will also be given for the laboratories associated with these courses, PHY 241, 242 respectively.

***KCTCS does not offer courses that are an exact equivalent for the AP subject offered. Appropriate General Education credit is awarded in these cases.
American Council on Education

Students may receive credit for learning experiences in industry, business, and government as recommended by the American Council on Education (ACE). The recommendations for awarding credit appear in The National Guide to Educational Credit for Training Programs, published by the ACE.

Articulation Agreements

Articulation agreements provide a mechanism to accept and award credit for courses that will transfer toward a credential. Articulation agreements specify the terms and conditions for courses taken at other institutions that will apply to a KCTCS credential, and/or the terms and conditions for courses taken at KCTCS that will apply to credentials or degree programs at other institutions. In either case, the award of applicable credit to the credential is subject to the specific terms of each agreement and all requirements specified in the agreement must be met before credit can be awarded. For information about articulation agreements for KCTCS credentials, contact the college Student Records Office. For information about the availability of articulation agreements that apply to credentials or degree programs at other institutions, consult the college Student Records Office, the Transfer Contacts on pages 59 to 61, or the Council on Postsecondary Education website at www.cpe.ky.gov Search words Academicinit Transfer.

Certified Professional Secretary Examination

KCTCS colleges recognize the Certified Professional Secretary Examination of the Institute for Certifying Secretaries of the Professional Secretaries International. Students who successfully pass the Certified Professional Secretary Examination may receive a maximum of 21 credit hours in specified courses. Students must first complete 12 credit hours in residence at the college in which they wish to receive credit.

Guide to Educational Credit by Exam - CPS/CAP Recommendations

<table>
<thead>
<tr>
<th>Part I – Office Systems &amp; Technology</th>
<th>Suggested KCTCS Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Concepts – 3 credits</td>
<td>OST 105 – Introduction to Information Systems (3)</td>
</tr>
<tr>
<td>Computer Information Systems – 3 credits</td>
<td>OST 240 – Software Integration (3)</td>
</tr>
<tr>
<td>Part II – Office Administration</td>
<td></td>
</tr>
<tr>
<td>Business Communications – 3 credits</td>
<td></td>
</tr>
<tr>
<td>Records Management 3 credits</td>
<td></td>
</tr>
<tr>
<td>Part III – Management</td>
<td></td>
</tr>
<tr>
<td>Management &amp; Supervision – 4 credits</td>
<td>BAS 283 – Principles of Management (3)</td>
</tr>
<tr>
<td>Human Resource Management – 3 credits</td>
<td>BAS 274 – Human Resource Management (3)</td>
</tr>
<tr>
<td>Accounting – 1 credit</td>
<td></td>
</tr>
<tr>
<td>Recommended credit total: 20</td>
<td></td>
</tr>
<tr>
<td>Total credit: 21</td>
<td></td>
</tr>
</tbody>
</table>

Child Development Associate

After successfully completing one three credit hour IEC course, a student enrolled in the IEC program who holds a current Child Development Associate (CDA) credential from the Council for Professional Recognition will be granted credit for IEC 101, IEC 102, and IEC 190. No other courses will be substituted for credit.

Commonwealth Child Care Credential

After successfully completing one three credit hour IEC course, a student enrolled in the IEC program who holds a current Commonwealth Child Care Credential (CCCC) from the State of Kentucky will be granted credit for IEC 101. No other courses will be substituted for credit.

College Level Examination Program (CLEP)

KCTCS colleges accept the General and Subject Examinations of the College Level Examination Program (CLEP). The Subject Examinations cover specific material which is common to courses in many colleges and universities. The level of proficiency to earn credit through CLEP is approximately equivalent to that required to earn a “C” in the course.
## Guidelines for CLEP General Examinations

(CLEP credit is under review with anticipated updates for fall 2012)

<table>
<thead>
<tr>
<th>CLEP Subject Examination</th>
<th>Scaled Score to Earn Credit</th>
<th>Equivalent Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foreign Languages</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Level French Language</td>
<td>50-69</td>
<td>FRE 201</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>70 or above</td>
<td>FRE 201, 202</td>
<td>6</td>
</tr>
<tr>
<td>College Level German Language</td>
<td>50-69</td>
<td>GER 201</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>70 or above</td>
<td>GER 201, 202</td>
<td>6</td>
</tr>
<tr>
<td>College Level Spanish Language</td>
<td>50-54</td>
<td>SPA 102, 201</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>55 or above</td>
<td>SPA 102, 201, 202</td>
<td>10</td>
</tr>
<tr>
<td><strong>History and Social Sciences</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Government</td>
<td>50 or above</td>
<td>POL 101</td>
<td>3</td>
</tr>
<tr>
<td>History of the United States I</td>
<td>60</td>
<td>HIS 108</td>
<td>3</td>
</tr>
<tr>
<td>History of the United States II</td>
<td>60</td>
<td>HIS 109</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Psychology</td>
<td>50</td>
<td>PSY 110</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Macroeconomics</td>
<td>50</td>
<td>ECO 202</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Microeconomics</td>
<td>50</td>
<td>ECO 201</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Sociology</td>
<td>50</td>
<td>SOC 101</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization I: Ancient Near East to 1648</td>
<td>60</td>
<td>HIS 104</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization II: 1648 to the Present</td>
<td>60</td>
<td>HIS 105</td>
<td>3</td>
</tr>
<tr>
<td><strong>Science and Mathematics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculus I</td>
<td>50</td>
<td>MA 113</td>
<td>4</td>
</tr>
<tr>
<td>General Biology</td>
<td>55-59</td>
<td>BIO 103</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>60-64</td>
<td>BIO 102, BIO 112</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>65-80</td>
<td>BIO 150, 152</td>
<td>6</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>55 or above</td>
<td>CHE 170, 180</td>
<td>6</td>
</tr>
<tr>
<td><strong>Business</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principles of Accounting</td>
<td>50</td>
<td>ACC 201, 202</td>
<td>6</td>
</tr>
</tbody>
</table>

### Industry Standard Certification Examinations

#### Computer and Information Technologies
(Pending curriculum committee revision)

A student who has completed and passed an industry standard certification examination administered by an authorized testing center may earn credit hours equivalent to the course(s) within the program of study as specified in the Information Technology curriculum. Credit will be granted only upon receipt of an official proof of certification credential stating the date passed. A copy of the credential must be filed as part of the student’s permanent record. The credential must be accepted before the expiration date of the credential or within five years of the date the credential was earned and specified on the examination, whichever comes first.

### Military Service Experience

A student may receive course credit in recognition of collegiate level credit completed through DANTES (DSST) or DSST exams, the student must have received a minimum standard score of 46. Credit will be given only upon receipt of an official DSST score report or transcript. A student may receive course credit where appropriate and equivalent courses are available for formal military training as recommended in A Guide to the Evaluation of Educational Experiences in the Armed Services (ACE Guide), published by the American Council on Education.

### National Board for Respiratory Care (NBRC) Examination

A student who has passed the NBRC entry-level examination to the Respiratory Care Program will be awarded thirty-seven to thirty-nine (37 - 39) semester hours of credit after completion of at least 15 credit hours of the general education courses in the approved curriculum. The student must also provide evidence of successful completion of the American Heart Association Basic Life Support course for health care providers.

### Special Exam: STEP or Challenge

Institutionally developed and administered exams provide an opportunity to demonstrate mastery of course content and receive credit toward program requirements. The student must be accepted for admission and enrolled in the college and apply for the exam through the Student Records Office. For more information, see "Tuition and Charges."

### KCTCS Dual Credit

KCTCS dual credit is concurrent enrollment in high school and a KCTCS college with credit awarded by both. A high school student may earn both high school and college credit (dual credit) for the same course upon completion of course requirements. College credit will be awarded for courses taken for dual credit with a KCTCS college upon the student’s completion of the course requirements, and will become part of the student’s official college transcript. The KCTCS assessment and placement and grading policies apply to dual credit courses offered by KCTCS. Additional information about dual credit should be available at the local KCTCS college.
Non-Classroom Learning Experiences

Work Based Learning Experiences

Many of the diploma and degree programs offered through the colleges have Work Based Learning included in the curriculum. Work Based Learning refers to the programs that offer academic credit for degree-related work experience during a specific semester. The experiences and credit awarded vary according to the program's requirements. These experiences must be planned and supervised by the college and the employer to ensure that the work experience contributes to the student’s education and career objective. The cornerstone of Work Based Learning is Cooperative Education. Other programs that are considered part of Work Based Learning are Internships, Practicums, and Experiential Learning. These courses afford the student a unique opportunity to integrate formal classroom training with supervised work experience.

Service Learning

Students have the opportunity to enroll in service learning programs which are designed to integrate community service with academic instruction as it focuses on critical and reflective thinking and civic responsibility. Service learning programs involve students in organized community service that addresses local needs, while developing academic skill, sense of civic responsibility, and commitment to the community.

Credit for Prior Learning

Prior Learning Assessment Portfolio students may contact any KCTCS college for information regarding applications for college credit via portfolio.

Modularized Credit Courses

Some KCTCS courses are available in a modularized credit format allowing students to register for courses that are components of the full (or “parent”) course. For example, BAS 212 may be taken as a three credit course or students may enroll in BAS 2121, BAS 2122, and BAS 2123 as separate courses which are the equivalent of BAS 212. The sum of the modular credit courses is equal to the full course. The student transcript will display the modularized credit course in the term the student earned the credit and once all components of the full course are earned, the full course will appear on the transcript. Modular Credit Courses are designated as a four digit number. The first three digits are those of the parent course. The last digit is the number of the modular credit segment/component, e.g., XXX 2021, XXX 2022, XXX 2023. When a student registers for a General Education modularized course, the student must complete all of the courses in that series to fulfill General Education category requirements, e.g., ECO 101 - 3 credits meets the Social & Behavioral Sciences category requirement. If ECO 101 has three modules, ECO 1011, 1012, and 1013, all three ECO 101 modules must be completed before the Social & Behavioral Sciences category requirement will be fulfilled. The student cannot take three modularized courses from three different courses to meet the general education category requirement, e.g., ANT 1011, ECO 1011, and PSY 1101. Some modular courses require students to complete a Learning Contract upon registration which defines the student’s responsibilities.

Grading System

The grading system uses a series of letters, to which are assigned grade-point values. The system is based neither on an absolute numerical system nor on a distribution curve, but on the following descriptions:

A: represents exceptionally high achievement. It is valued at four grade points for each credit hour in non-remedial and non-developmental courses.

B: represents high achievement. It is valued at three grade points for each credit hour in non-remedial and non-developmental courses.

C: represents satisfactory achievement. It is valued at two grade points for each credit hour in non-remedial and non-developmental courses.

D: represents the minimum achievement for credit. It is valued at one grade point for each credit hour in non-remedial and non-developmental courses.

Introduction
E: represents unsatisfactory achievement and indicates failure in the course. It is valued at zero credit hours and zero grade points in non-
remedial and non-developmental courses. Credit may be obtained by repeating the entire course.

F: represents unsatisfactory achievement in a course taken on a Pass-Fail basis. It has no value in computing the grade point average. Credit may only be obtained by repeating the entire course. This grade may be used for developmental courses.

AU (Audit): has no value in computing grade-point average. A student who has been admitted to the college may elect to enroll in a course(s) as an auditor, except in selective admissions programs. Auditing courses in a selective admissions program requires admission to the program and availability of space in the courses. W if few exceptions, any change from audit to credit by a student fully admitted to a college must be accomplished by the last date to enter a class and any change from credit to audit must be made by midterm of the semester or session in which the student is enrolled. An audited class may be taken for credit at a later date. Anyone who desires to audit a class must be admitted to the college and officially registered for the course.

I: means that part of the work of the course remains unfinished. It shall be given only when there is a reasonable possibility that a passing grade will result from completion of the work. The instructor and student will discuss the requirements for completion of course with the time limit for completion not to exceed a maximum of one year; failure to do so will result in an automatic change of grade from I to E. Each college shall maintain a record of incomplete grades recorded in courses of that college. This record, completed by the instructor at the time the I grade is reported, shall include: (1) the name and number of the student, (2) the course number and hours of credit, (3) semester or session and year of enrollment, (4) signature of the instructor, (5) a brief statement of the reason(s) for recording the incomplete grade, and (6) an adequate guide for removal of the incomplete grade. In the instructor’s absence, the division chairperson (or designee), shall forward to the college president (or designee) the appropriate letter grade to replace the incomplete grade.

W: represents a withdrawal from class without completing course requirements. A student may officially withdraw from any class up to and including the date of mid-term with a W grade. After the date of mid-
term and through the last class of the semester or session, any student may officially request to withdraw from a course and receive a W which may be given at the discretion of the instructor. Each instructor shall state on the first or second class meeting the factors to be used in determining if a student will be allowed to withdraw during the discretionary period. An instructor shall not assign a student a W for a class unless the student has officially withdrawn from that class in a manner prescribed by the college. The grade of W may be assigned by the College Appeals Board in cases involving a violation of student academic rights or for academic offenses.

P: represents a satisfactory grade in a course taken on a Pass-Fail basis. The student who receives a P in a course shall be eligible to continue into the next sequential course(s). The grade of P may be assigned by the College Appeals Board in cases involving a violation of student academic rights. It has no value in computing the grade point average. This grade may be used for developmental courses.

MP: represents Making Progress and may be assigned only for developmental courses and means that the student has made significant progress but needs and deserves more time to achieve a passing grade. The student should re-enroll in the course in order to continue advancement to the level of competence set for the course. Grades may be earned fol-
lowing re-enrollment for developmental courses. The grade of MP has no value in computing grade point average.

Pass/Fail: may be selected for a maximum of two elective courses, subject to certain restrictions, by students with at least 30 credit hours and not on academic probation. Courses with these grades can count toward graduation but are not used in calculating grade-point standing. Courses taken on a pass-fail basis shall be limited to those considered as elective in the student’s program, and such other courses or types of courses as might be specifically approved. Prerequisites for such courses may be ignored at the student’s own hazard. The student is expected to participate fully in the course and take all examinations as though the student were enrolled on a regular basis. Students may not change from a pass-fail basis nor from a regular basis to a pass-fail basis after the last date for entering an organized class. Courses offered only on a pass-fail basis, remedial or developmental, or taken by special examination, shall not be included in the maximum number of elective courses which a student may take under these provisions.

Changing Grades: A grade once reported shall not be changed except when the instructor states in writing that an error has been made. The grade change must be submitted by the end of the following semester or session or, in exceptional cases, at the discretion of the president (or designee). However, each respective College Appeals Board may change a grade to P or W in the case of a violation of student academic rights or to W in the case of an academic offense.

Grade-Point Average (GPA): The GPA on the KCTCS transcript is derived from all courses taken at KCTCS institutions. The grade-point average is the ratio of the total grade points earned to the total credit hours attempted excluding courses taken on a pass/fail basis and courses with grades of W or I. Total grade points are derived by multiplying the number of credit hours for the course by the number of grade points assigned to the grade earned: A = 4, B = 3, C = 2, D = 1, E = 0.

Reporting Final Grades: The final grades for a course shall be filed with the office of the college president (or designee) by such date as determined by the academic calendar.

Academic Probation, Academic Suspension, and Reinstatement.

Academic Probation: A student earning a cumulative grade point average below a 2.0 at the end of a term shall be placed on academic probation. A student shall be removed from academic probation by earning at least a 2.0 cumulative grade point average.

Academic Suspension (Dismissal): If a student is placed on academic probation for two consecutive terms (which is noted on the transcript as "subject to dismissal" the second time) and does not earn either a cumulative GPA or a term GPA of at least 2.0 in the third term, the student shall be academically suspended. Non-enrollment has no effect on probation status. The president (or designee) may grant an exception based upon an individual’s case. A student on academic suspension may not enroll in courses which count toward a KCTCS degree.

Reinstatement: A student who has been academically suspended may be reinstated by the president (or designee) after remaining out of the college for at least one 16-week semester and providing evidence of ability to perform at the level required. A student who has been academically suspended shall, upon reinstatement, be placed on academic probation and be subject to academic suspension if the student has failed to earn a current term GPA of 2.0 during the first term of reinstatement. Upon a second suspension, a student may be reinstated by the president (or designee) after remaining out of the college for at least two 16-week semesters and providing evidence of ability to perform at the level required.
Repeating a Course
A student may repeat a course for the purpose of improving a grade. The course must be repeated with the same grade option as the original enrollment in the course. The highest grade earned in a completed course shall constitute the official grade for the course and will be the only grade included in the cumulative GPA. Credit shall count only once for a KCTCS credential. If a student has been dropped from an occupation or technical program, course enrollment may be dependent upon readmission to the program. After a student has completed the same course twice, a division chair (or designee) in consultation with the instructor may refuse to approve a third registration in the same course, including those offered by correspondence, extension, and distance learning technology. Subject to the approval of the division chair (or designee), a student may receive approval for a substitution of comparable courses (e.g. MAT 150 may be taken as a repeat option for MA 109 and vice versa). NOTE: A parent course cannot be repeated using modules. Students who have received passing grade in a parent course are not eligible to enroll in any module of that parent course.

Final Exams
Any student with more than two exams scheduled on one day as described in the college's final exam schedule shall be entitled to have one of those exams rescheduled. The student must submit a petition for rescheduling in writing to the instructor no later than one week prior to the last class meeting.

Dean's List
The Dean's List recognizes the academic excellence of students who have earned an overall semester GPA of 3.5 or higher in courses numbered 100 or above. Honorary certificates of merit are generally awarded to students who have achieved this distinction.

Academic Bankruptcy (Readmission after Two or More Years)
A student who has been readmitted after having remained out of the KCTCS colleges for a period of two or more years, and who has completed at least 12 credit hours in college level courses with a GPA of 2.0 or better after readmission, may choose to have none of the coursework attempted in the colleges prior to the interruption included in the computation of the student's GPA. The calculation of the GPA after the student declares bankruptcy begins with the semester of readmission. A student who has elected not to count past work in the computation of his or her GPA will continue to receive credit for those courses, selected by the student, in which credit was earned with a grade of A, B, C, D, or P prior to readmission, without including those grades in the computation of the student's GPA. A student may only use the academic bankruptcy option once.

Policies Related to Graduation
Graduation Requirements
For the Associate in Arts, Associate in Science, Associate in Fine Arts, and Associate in Applied Science degrees, regardless of the time the student has attended the college, at least 25 percent of the approved curriculum credits must be completed at the KCTCS college granting the degree. For a certificate or diploma, at least 25 percent of the approved curriculum credits must be completed at the college granting the credential. In the case of degree programs offered through joint, cooperative, or consortia arrangements, the student must earn at least 25 percent of the credits from the participating institutions. Students seeking Associate in Arts, Associate in Science, Associate in Fine Arts, or Associate in Applied Science degrees or Diplomas must have a minimum cumulative GPA of 2.0 in order to be eligible for graduation. To be eligible for a certificate, a student must satisfactorily complete an approved curriculum with a grade point average of at least 2.0 in the courses required for the certificate.

In order to be eligible to receive KCTCS credentials, students must satisfactorily complete the minimum number of credits required for that credential, including the general education requirements as specified in the KCTCS Board of Regents Policies 4.11 and 4.12 and program requirements, with a cumulative grade point average of at least 2.0. In order to be eligible for:

- Associate in Arts, Associate in Science, Associate in Fine Arts, Associate in Applied Science degrees, and Associate in Applied Technology degrees, students must satisfactorily complete 60 credits, including the general education requirements as specified in the KCTCS Board of Regents Policies 4.11 and 4.12 and program requirements, with a cumulative grade point average of at least 2.0.
- Diplomas, students must satisfactorily complete a minimum of 36 hours including the general education requirements as specified by the KCTCS Board of Regents Policies 4.11 and 4.12 and program requirements, with a cumulative grade point average of at least 2.0.
- Certificates, students must satisfactorily complete an approved curriculum with a grade point average of at least 2.0 in the courses required for the certificate.
- Course substitutions may be made by the college president (or designee) on an individual basis with the advice of the appropriate division chairperson.

Specific information about the requirements for these programs is available below in the Academic Credentials Awarded section.

Graduation With Honors
Students who have completed at least 45 credit hours of work toward degree completion or 30 credit hours of work toward diploma completion in the KCTCS colleges shall be graduated "With High Distinction" if they attain a grade-point average of 3.60 or higher on all work attempted. Students who have completed at least 45 credit hours of work toward degree completion or 30 credit hours of work toward diploma completion in the KCTCS colleges shall be graduated "With Distinction" if they attain a GPA of 3.40-3.59 on all work attempted.

Multiple Associate Degrees
A student will be eligible for an additional degree when the student has completed the requirements of the second curriculum including a minimum of six credit hours relevant to the second degree and beyond the requirements for the first degree. In no case will a degree be granted for the completion of a second option in a program. The completion of a second option, however, will be recorded on the transcript.

Kentucky Community and Technical College Guarantee
KCTCS colleges offer employers of graduates the following guarantee:

The KCTCS colleges guarantee employers that graduates have demonstrated competence in the skills listed on the approved task lists that represent industry validated specifications for each occupational program. Should a former student be considered by the employer to be performing below a satisfactory level on any skill on the approved task list, the colleges agree to provide specific retraining at no charge to the employee or employer. This guarantee extends for two years from the date of graduation.

The guarantee applies to all college graduates of occupational/technical programs who are employed in their field of training. The program enhances economic development efforts by guaranteeing Kentucky's businesses and industries access to a skilled workforce.
Academic Credentials Awarded

Associate in Arts (AA) and Associate in Science (AS)

General Education

Core Requirements

<table>
<thead>
<tr>
<th></th>
<th>AA</th>
<th>AS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Communications</td>
<td>6 credit hours</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Oral Communications</td>
<td>3 credit hours</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>6 credit hours</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>3 credit hours</td>
<td>6 credit hours</td>
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Students who complete ENG 105 must take an additional 3 credit hours of General Education from any of the General Education categories.

One course must be selected from Humanities and one course from Heritage.

Quantitative Reasoning 3 credit hours 6 credit hours

Natural Sciences 3 credit hours 6 credit hours

One science course must include a laboratory experience.

Social and Behavioral Sciences 9 credit hours 6 credit hours

Two disciplines must be represented and different from those in the Arts and Humanities category.

Quantitative Reasoning OR Natural Sciences 3 credit hours

Subtotal General Education Core 33 credit hours 33 credit hours

Associate in Arts Requirements 12 credit hours

Select courses from headings in the Core Categories and/or Foreign Language. At least 6 credit hours must be selected from Arts and Humanities and/or Social and Behavioral Sciences and/or Foreign Language. Students are advised to choose hours to satisfy pre-major requirements at the institution to which they are transferring.

Associate in Science Requirements 12 credit hours

Select courses from headings in the Core Categories and/or Foreign Language. At least 6 credit hours must be selected from Quantitative Reasoning and/or Natural Sciences. Students are advised to choose hours to satisfy pre-major requirements at the institution to which they are transferring.

Electives 15 credit hours 15 credit hours

Students are advised to choose hours to satisfy pre-major requirements at the institution to which they are transferring.

Total Credit Hours 60 Credit Hours 60 Credit Hours

Degree requirements: 1) completion of minimum of 60 credit hours, 2) minimum cumulative 2.0 GPA, 3) minimum of 15 credit hours earned at the institution awarding the degree, 4) cultural studies course, and 5) demonstration of computer/digital literacy.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Associate in Fine Arts (AFA)

An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. It consists of a general education requirement of 24 credit hours, a fine arts core of 18 credit hours, and 18 additional credit hours of concentration for a 60 credit hour minimum.

General Education Component:

Written and Oral Communications 9 credit hours

Arts and Humanities 3 credit hours

The course chosen to satisfy this requirement must be from a discipline other than the discipline in the Fine Arts Core and/or concentration.

Quantitative Reasoning 3 credit hours

Natural Sciences 3 credit hours

Must include a laboratory experience for general education certification in the Natural Sciences category.

Social and Behavioral Sciences 6 credit hours

Total General Education 24 credit hours

Fine Arts Core

Sub-Total 18 credit hours

Concentration

Sub-Total 18 credit hours

Total 60 credit hours

Degree requirements: 1) completion of minimum of 60 credit hours, 2) minimum cumulative 2.0 GPA, 3) minimum of 15 credit hours earned at the institution awarding the degree, 4) cultural studies course, and 5) demonstration of computer/digital literacy.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Associate in Applied Science (AAS)

General education component 15

A student must complete a minimum of 15 credit hours to fulfill the general education requirement. General education credits must meet the following distribution:

Quantitative Reasoning 3 credit hours

Natural Sciences 3 credit hours

Social/Behavioral Sciences 3 credit hours

Heritage/Humanities 3 credit hours

Written Communication 3 credit hours

The above are minimum general education requirements; additional hours may be required in specific program curricula.

Technical and Support Component 45 - 53

General Education and Technical and Support Components must be distributed so that programs do not exceed 68 credit hours.

Total Credit Hours 60 - 68

AAS degree programs should incorporate multiple exit points, i.e. awarding certificates and diplomas, when possible.

Degree requirements: 1) minimum cumulative GPA of 2.0, (2) minimum of 25% of credit hours required for the degree must be earned at the institution awarding the degree, and (3) demonstration of computer/digital literacy.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.
Diploma

A diploma program is designed to prepare students for technical employment within a one- to two-year period (36-60 credit hours). The total number of credit hours for the diploma must not exceed those required for a degree in the same program of study. A prescribed program of technical and general education courses is designed to prepare students for a specific job title. Diploma programs provide preparation for a specific occupation, credit toward an associate degree, and continue training opportunities for certificate program graduates. The diploma program contains general education courses emphasizing the skills identified in the SCANS (Secretary's Commission on Achieving Necessary Skills) report that are critical to entry-level workforce success for persons prepared at the diploma level.

1. Diplomas will address appropriate general education competencies.
2. Diploma curricula will be approved through the KCTCS Curriculum process.
3. Diplomas will be applicable toward at least one associate degree. (Courses designated “Diploma Only” on the General Education list will not apply toward an Associate Degree)
4. General education 6-9 credit hour requirement for diplomas in areas 1-3 as follows:
   - Area 1: Written/Oral Communications, Humanities, or Heritage 3 credit hours
   - Area 2: Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning 3 credit hours
   Additional courses could be used for other areas in approved curricula for diplomas but may not meet general education transfer requirements.

   The above are minimum general education requirements; additional hours may be required in specific program curricula.

Technical & Support* 30 - 54
Total Credit Hours 36 - 60

*The Technical and Support requirements must include a work experience component of 1-12 credit hours.

Graduation requirements include (1) Minimum cumulative GPA of 2.0, (2) demonstration of computer/digital literacy, and (3) minimum of 25% of diploma requirements earned at the institution awarding the diploma.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Certificate

The primary purpose and features of certificate programs of study are to provide marketable, entry-level skills. Certificates qualify students to take external licensure, vendor-based, or skill standards examinations in the field. If standardized external exams are not available in the field of study, certificates prepare students at skill levels expected of employees in an occupation found in the local economy.

1. Certificates will address one or more general education competencies.
2. Certificate curricula will be approved through the KCTCS Curriculum process.
3. Certificates will be applicable toward at least one associate degree.

The above are minimum general education requirements; additional hours may be required in specific program curricula.

Requirements for a certificate are applicable to the requirements of a diploma or associate degree in the same or a related field of study. Requests for exceptions must include appropriate documentation to justify approval. Certificates may contain general education courses emphasizing the skills identified in the Secretary’s Commission on Achieving Necessary Skills (SCANS) report that are critical to entry-level workforce success for persons prepared at the certificate level and associated with the diploma or associate degree program. SCANS identified three foundation skills and five competencies necessary for success in the workplace.

Foundation Skills

Basic Skills: reading, writing, arithmetic and mathematics, listening, and speaking

Thinking Skills: thinking creatively, making decisions, solving problems, knowing how to learn, and reasoning

Personal Qualities: individual responsibility, self-esteem, socialability, self-management, and integrity/honesty.

Competencies

Resources: allocating time, money, materials, space, and staff;

Interpersonal Skills: working on teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds

Information: acquiring and evaluating data, organizing and maintaining files, interpreting and communicating, and using computers to process information

Systems: understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems

Technology: selecting equipment and tools, applying technology to specific tasks, and maintaining troubleshooting technologies

Total Credit Hours 12 - 30

Graduation requirements (1) minimum grade of C in each course required for the certificate and (2) minimum of 25% of certificate requirements earned at the institution awarding the degree.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Continuing Education Certificate

Students shall be awarded a continuing education certificate when they have successfully completed a continuing education course or set of courses.

Specialized Training

Adult Agriculture

Short-term adult upgrade classes in agriculture are offered at selected sites. The classes are designed to help young and adult farmers, as well as individuals employed in agribusiness, keep up with the constantly changing technology in the field of agriculture. The program provides on-the-farm and on-the-job supervision year-round with organized instructional classes conducted in the late fall and winter. Apprenticeship program registration is the responsibility of the Kentucky State Apprenticeship Council in cooperation with the United States Department of Labor, Bureau of Apprenticeship Training. Application must be made through an employer, a labor union or a joint apprenticeship committee. Verify with the KCTCS college that it provides the minimum...
144 hours per year of supplemental related instruction required of the apprenticeship program. Additional information may be obtained by calling the Kentucky Apprenticeship Council or the United States Department of Labor, Bureau of Apprenticeship Training.

Continuing Education Courses

Continuing education courses can be either credit or non-credit and are designed to meet the needs of the labor market and persons preparing to enter the workforce. They can also supplement knowledge and skills for initial employment or job advancement. They are developed to meet the lifelong learning needs of the general public by providing short-term training, retraining, or upgrading of skills for employment or job advancement.

Customized Industry Training

At the request of business and industry, Community and Economic Development Coordinators (CED) assist in the development and implementation of customized training for prospective and current employees. A specialized training agreement is developed that specifies the duties and responsibilities of the college and the company and may include the awarding of college credit. Contact the CED Coordinator at the local college.

Fire/Rescue Training

The Fire/Rescue Science Technology Program will prepare you for the challenges facing today's emergency responders. In the program you will learn the skills of fire suppression and prevention, technical rescue, hazardous materials, emergency medical care, and leadership. This program is beneficial whether you are seeking a career in emergency services (Fire, Rescue, EMS or Emergency Management) or if you are already involved in providing fire, rescue or EMS services in your community.

Students may enter the program with or without experience in emergency services. The degree, certificate, and diploma programs that are offered can help you in obtaining employment in various emergency service fields, or if you are already a firefighter, help you get that promotion you have been waiting for. Classes are offered through State Fire/Rescue Training and may be offered in various formats such as: Web courses, hybrid courses, and traditional classroom offerings. For more information regarding this program, contact your local State Fire/Rescue Training Area Office.

Fire Rescue Training for Business, Industry and Municipal Government

State Fire Rescue Training provides a full range of Emergency Services Training for Business, Industry and Municipal Government entities. Contact the Fire Rescue office serving your area for more information about the training available to your facility.

Emergency Medical Technician Certificate

Students in the Emergency Medical Technician program are instructed in the proper care of sick and injured patients. Students are trained to treat victims suffering from traumatic and medical emergencies such as broken bones, puncture wounds, cardiac, and respiratory emergencies, vehicle accidents and more. This course meets the standards set forth by the US Department of Transportation National Standard Curriculum for EMT-Basic and the Kentucky Board of Emergency Medical Services. Students that successfully complete the course and its requirements will be awarded a certificate for Emergency Medical Technician, and will be prepared to challenge the certification examination process set forth by the Kentucky Board of Emergency Medical Services.

For specific program information see page 144.

State Fire Rescue Training Coordinators and Contact Information

West Kentucky Community & Technical College (Area 1)
Charles Lott, Coordinator
P. O. Box 8227
7810 Alben Barkley Drive
Paducah, KY 42002-8227
(800#) 888-306-7901
charles.lott@kctcs.edu
Counties: Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Livingston, Marshall, McCracken

Madisonville Community College (Area 2)
Edward Schmidt, Coordinator
P. O. Box 150
2001 US 62W
Princeton, KY 42445
(800#) 888-306-7986
ed.schmidt@kctcs.edu
Counties: Caldwell, Christian, Crittenden, Hopkins, Lyon, Todd, Trigg

Owensboro Community & Technical College (Area 3)
Jimmy VanCleve, Coordinator
P. O. Box 700
1300 HWY 136E
Calhoun, KY 42327
(800#) 888-306-8015
jimmy.vancleve@kctcs.edu
Counties: Daviess, Hancock, Henderson, McLean, Muhlenberg, Ohio, Union, Webster

Bowling Green Technical College (Area 4)
William Carver, Coordinator
825 Morgantown Road
Bowling Green, KY 42101
(800#) 888-234-5760
bill.carver@kctcs.edu
Counties: Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, Warren

Elizabethtown Community & Technical College (Area 5)
Casey Hall, Coordinator
630 College Street Road
Elizabethtown, KY 42701
(800#) 888-234-7201
casey.hall@kctcs.edu
Counties: Breckinridge, Grayson, Hardin, Larue, Marion, Meade, Nelson, Washington

Jefferson Community & Technical College (Area 6)
Mike Wallingford, Coordinator
1361 Frankfort Road
Shelbyville, KY 40065
(800#) 888-306-8064
mike.wallingford@kctcs.edu
Counties: Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer, Trimble

Gateway Community & Technical College (Area 7)
Bill Birkle, Coordinator
P. O. Box 76488
90 Campbell Drive
Highland Heights, KY 41076
(800#) 888-306-8101
bill.birkle@kctcs.edu
Counties: Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, Pendleton
General Education Requirements

Competencies will be met at the level appropriate to the credential.

A general education core curriculum will enable KCTCS colleges to graduate men and women who are intellectually flexible, articulate, reflective, creative, and prepared for continuous learning. For all students, this implies some understanding of the value of higher education and the world of work and career fields related to their own abilities, interests, and needs. The general education core competencies will enable students to develop their own values, pursue goals, and contribute to the political, moral, social, and cultural enrichment of society.

General Education Competencies

Students should prepare for twenty-first century challenges by gaining:

A. Knowledge of human cultures and the physical and natural worlds through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

B. Intellectual and practical skills, including
   - inquiry and analysis
   - critical and creative thinking
   - written and oral communication
   - quantitative literacy
   - information literacy
   - teamwork and problem solving

C. Personal and social responsibility, including
   - civic knowledge and engagement (local and global)
   - intercultural knowledge and competence
   - ethical reasoning and action
   - foundations and skills for lifelong learning

D. Integrative and applied learning, including synthesis and advanced accomplishment across general and specialized skills

(For Kentucky’s Statewide General Education Student Learning Outcomes mapped to the American Association of Colleges and Universities’ (AAC&U) Liberal Education for America’s Promise (LEAP) Essential Learning Outcomes—see Appendix H).

Written Communication

Diploma  TEC 200 Technical Communications
OST 108 Editing Skills for Office Professionals
Any Writing course approved for the AAS, AA, or AS

AAS, AA, AS, AFA
ENG 101 Writing I .......................................................... 3
ENG 102 Writing II ......................................................... 3
ENG 105 Writing: An Accelerated Course ............................ 3

Oral Communications

Diploma AAS, AA, AS, AFA
COM 181 Basic Public Speaking ........................................ 3
COM 252 Intro to Interpersonal Communications .................. 3
COM 281 Communication in Small Group ................. 3
COM 287 Persuasive Speaking ........................................... 3

Quantitative Reasoning

Diploma
OST 213 Business Calculations for the Office Professional .......... 3
Any mathematics course approved for the AAS, AA, or AS

AAS
MAT 105 Business Mathematics ....................................... 3
MAT 110 Applied Mathematics ......................................... 3
MAT 116 Technical Mathematics ....................................... 3
MAT 126 Technical Algebra and Trigonometry ....................... 3

AA, AFA
MAT 146 Contemporary College Mathematics ....................... 3
Any mathematics course listed below

AS
MAT 150 College Algebra ................................................ 3
MAT 154 Trigonometry .................................................... 2
MAT 155 Trigonometry .................................................... 3
### Natural Sciences Diploma

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MAT 159</td>
<td>Analytic Geometry and Trigonometry</td>
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<tr>
<td>MAT 160</td>
<td>Precalculus</td>
<td>5</td>
</tr>
<tr>
<td>MAT 165</td>
<td>Finite Mathematics and Its Applications</td>
<td>3</td>
</tr>
<tr>
<td>MAT 170</td>
<td>Brief Calculus with Applications</td>
<td>4</td>
</tr>
<tr>
<td>MAT 174</td>
<td>Calculus I</td>
<td>3</td>
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<tr>
<td>MAT 175</td>
<td>Calculus I</td>
<td>5</td>
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<tr>
<td>MAT 184</td>
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<td>5</td>
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<tr>
<td>MAT 185</td>
<td>Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MAT 206</td>
<td>Mathematics for Elementary and Middle School Teachers II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 275</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MAT 285</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>STA 210</td>
<td>Statistics: A Force in Human Judgment</td>
<td>3</td>
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<tr>
<td>STA 220</td>
<td>Statistics</td>
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### Social and Behavioral Sciences Diploma

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<tr>
<td>AST 101</td>
<td>Frontiers of Astronomy</td>
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<tr>
<td>AST 155/BIO 155</td>
<td>Astrobiology</td>
<td>3</td>
</tr>
<tr>
<td>AST 191</td>
<td>The Solar System</td>
<td>3</td>
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<tr>
<td>AST 192</td>
<td>Stars, Galaxies, and the Universe</td>
<td>3</td>
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<tr>
<td>AST 195</td>
<td>Introductory Astronomy Laboratory*</td>
<td>1</td>
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<tr>
<td>BIO 112</td>
<td>Introduction to Biology</td>
<td>3</td>
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<tr>
<td>BIO 122</td>
<td>Introduction to Biology Laboratory*</td>
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<tr>
<td>BIO 124</td>
<td>Principles of Ecology</td>
<td>3</td>
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<tr>
<td>BIO 130</td>
<td>Aspects of Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIO 135</td>
<td>Basic Anatomy and Physiology with Laboratory*</td>
<td>4</td>
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<tr>
<td>BIO 137</td>
<td>Human Anatomy and Physiology I*</td>
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<tr>
<td>BIO 139</td>
<td>Human Anatomy and Physiology II*</td>
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<tr>
<td>BIO 140</td>
<td>Botany</td>
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<tr>
<td>BIO 141</td>
<td>Botany with Laboratory*</td>
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<tr>
<td>BIO 142</td>
<td>Zoology</td>
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<tr>
<td>BIO 143</td>
<td>Zoology with Laboratory*</td>
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<tr>
<td>BIO 150</td>
<td>Principles of Biology I</td>
<td>3</td>
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<tr>
<td>BIO 151</td>
<td>Principles of Biology Laboratory I*</td>
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<tr>
<td>BIO 152</td>
<td>Principles of Biology II</td>
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<tr>
<td>BIO 153</td>
<td>Principles of Biology Laboratory II*</td>
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<tr>
<td>BIO 155/AST 155</td>
<td>Astrobiology</td>
<td>3</td>
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<tr>
<td>BIO 209</td>
<td>Introductory Microbiology Lab*</td>
<td>3</td>
</tr>
<tr>
<td>BIO 220</td>
<td>The Genetic Perspective</td>
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<td>BIO 225</td>
<td>Medical Microbiology</td>
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<td>BIO 226</td>
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<tr>
<td>BIO 227</td>
<td>Principles of Microbiology with Laboratory*</td>
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<tr>
<td>CHE 120</td>
<td>The Joy of Chemistry</td>
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<tr>
<td>CHE 125</td>
<td>The Joy of Chemistry Laboratory*</td>
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</tr>
<tr>
<td>CHE 130</td>
<td>Introductory General and Biological Chemistry*</td>
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<tr>
<td>CHE 140</td>
<td>Introductory General Chemistry</td>
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<td>CHE 145</td>
<td>Introductory General Chemistry Laboratory*</td>
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<tr>
<td>CHE 150</td>
<td>Introduction to Organic and Biological Chemistry*</td>
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<tr>
<td>CHE 155</td>
<td>Intro. to Organic and Biological Chemistry Laboratory*</td>
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<tr>
<td>CHE 170</td>
<td>General College Chemistry I</td>
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<tr>
<td>CHE 175</td>
<td>General College Chemistry Laboratory I*</td>
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<tr>
<td>CHE 180</td>
<td>General College Chemistry II</td>
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<td>CHE 185</td>
<td>General College Chemistry Laboratory II*</td>
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<tr>
<td>CHE 220</td>
<td>Analytical Chemistry*</td>
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<td>CHE 270</td>
<td>Organic Chemistry I</td>
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<td>CHE 275</td>
<td>Organic Chemistry Laboratory I*</td>
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<tr>
<td>CHE 280</td>
<td>Organic Chemistry II</td>
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<tr>
<td>CHE 285</td>
<td>Organic Chemistry Laboratory II*</td>
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<tr>
<td>EST 150</td>
<td>Introductory Ecology*</td>
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<tr>
<td>EST 160</td>
<td>Hydrological Geology</td>
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<tr>
<td>GEO 130</td>
<td>Earth's Physical Environment</td>
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<tr>
<td>GEO 251</td>
<td>Weather and Climate</td>
<td>3</td>
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<tr>
<td>GLY 101</td>
<td>Physical Geology</td>
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<tr>
<td>GLY 102</td>
<td>Historical Geology</td>
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<tr>
<td>GLY 110</td>
<td>Environmental Geology</td>
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<tr>
<td>GLY 111</td>
<td>Laboratory for Physical Geology*</td>
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<tr>
<td>GLY 112</td>
<td>Laboratory for Historical Geology*</td>
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<tr>
<td>GLY 130</td>
<td>Dinosaurs and Disasters: A Brief History of the Vertebrae</td>
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<td>GYP 220</td>
<td>Principles of Geology*</td>
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<tr>
<td>PHY 151</td>
<td>Introductory Physics I</td>
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<tr>
<td>PHY 152</td>
<td>Introductory Physics II</td>
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<tr>
<td>PHY 160</td>
<td>Physics and Astronomy for Elementary Teachers*</td>
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<td>PHY 161</td>
<td>Introductory Physics Laboratory I*</td>
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<td>PHY 162</td>
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<tr>
<td>PHY 171</td>
<td>Applied Physics*</td>
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<tr>
<td>PHY 172</td>
<td>Physics for Health Science*</td>
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<tr>
<td>PHY 201</td>
<td>College Physics I</td>
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<td>PHY 202</td>
<td>College Physics Lab I*</td>
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<tr>
<td>PHY 204</td>
<td>College Physics Lab II*</td>
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<tr>
<td>PHY 231</td>
<td>General University Physics I</td>
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<tr>
<td>PHY 232</td>
<td>General University Physics II</td>
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<td>PHY 241</td>
<td>General University Physics I Laboratory*</td>
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<tr>
<td>PHY 242</td>
<td>General University Physics II Laboratory*</td>
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</tr>
<tr>
<td>SCI 295</td>
<td>Scientific Investigations</td>
<td>3</td>
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</tbody>
</table>

*Course satisfies the General Education requirement for a laboratory experience.

### Any Science course approved for the AAS, AA, AS, or AFA

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>AAS, AA, AS</td>
<td>Any Science course approved for the AAS, AA, AS, or AFA</td>
<td>3</td>
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</table>

### AGR 101 The Economics of Food and Agriculture

### ANT 101 Introduction to Anthropology

### ANT 130/REL 130 Introduction to Comparative Religion

### ANT 160 Cultural Diversity in the Modern World

### ANT 220 Introduction to Cultural Anthropology

### ANT 221 Native People of North America

### ANT 235 Food and Culture

### ANT 241 Origins of Old World Civilizations

### ANT 242 Origins of New World Civilizations

### COM 101 Introduction to Communications

### COM 249 Mass Media and Mass Culture

### COM 254 Intro to Intercultural Communications

### ECO 101 Contemporary Economic Issues

### ECO 150 Introduction to Global Economics

### ECO 201 Principles of Microeconomics

### ECO 202 Principles of Macroeconomics

### FAM 252 Introduction to Family Science

### FAM 253 Human Sexuality: Development, Behavior, and Attitudes

### FLK 280 Cultural Diversity in the U.S.

### GEN 140 Development of Leadership

### GEN 225 Lifelong Learning Applications

### GEO 152 Regional Geography of the World

### GEO 160 Lands and Peoples of the Non-Western World

### GEO 172 Human Geography

### GEO 210 Pollution, Hazards and Environmental Management

### GEO 222 Cities of the Worlds

### GEO 240 Geography and Gender

### HUM 135 Introduction to Native American Literature

### HUM 202 Survey of Appalachian Studies I

### HUM 203 Survey of Appalachian Studies II

### HUM 204 Appalachian Seminar

### HUM 205 Contemporary Perspectives on Peace and War

### POL 101 American Government

### POL 210 Introduction to European Politics: East and West

### POL 212 Culture and Politics in the Third World

### POL 235 World Politics

### POL 255 State Government

### PSY 110 General Psychology

### PSY 180 Human Relations

### PSY 185 Human Potential

### PSY 230 Psychosocial Aspects of Death and Dying

### PSY 223 Developmental Psychology

### PSY 297 Psychology of Aging
**Arts and Humanities**

**Heritage**
Diploma, AAS, AA, AS, AFA

- FLK 276 Introduction to Folk Studies ........................................... 3
- HIS 101 World Civilization I ...................................................... 3
- HIS 102 World Civilization II ...................................................... 3
- HIS 104A History of Europe Through the Mid-Seventeenth Century .... 3
- HIS 105A History of Europe from the Mid-Seventeenth Century to the Present ................................................ 3
- HIS 106 World Culture and Science and Technology I ....................... 3
- HIS 107 Western Culture and Science and Technology II .................. 3
- HIS 108 History of the U.S. Through 1865 ..................................... 3
- HIS 109 History of the U.S. Since 1865 .......................................... 3
- HIS 120 The World at War 1939-45 ................................................ 3
- HIS 202 History of British People to the Restoration ....................... 3
- HIS 203 History of British People since the Restoration .................... 3
- HIS 206 History of Colonial Latin America ..................................... 3
- HIS 207 History of Modern Latin America, 1810 to Present ................ 3
- HIS 240 History of Kentucky .......................................................... 3
- HIS 247 History of Islam and Middle East Peoples, 500-1250 A.D. .... 3
- HIS 248 History of Islam and Middle East Peoples, 1250 to Present .... 3
- HIS 254 History of Sub-Saharan Africa ......................................... 3
- HIS 260 African American History to 1865 ...................................... 3
- HIS 261 African American History 1865 - Present ........................... 3
- HIS 265 History of Women in America ............................................ 3
- HIS 270 Ancient Europe ................................................................... 3
- HIS 271 Medieval Europe ................................................................. 3
- HIS 295 East Asia to 1800 ............................................................... 3
- HIS 296 History of Asia I ................................................................. 3

**Humanities**
Diploma, AAS, AA, AS, AFA

- ANT 130/REL 130 Introduction to Comparative Religion ................... 3
- ART 100 Introduction to Art ............................................................. 3
- ART 104 Introduction to African Art ............................................... 3
- ART 105 Ancient Through Medieval Art History ................................ 3
- ART 106 Renaissance Through Modern Art History ........................... 3
- ART 201 Ancient Art History ............................................................ 3
- ART 202 Medieval Art History .......................................................... 3
- ART 203 Renaissance Art History ..................................................... 3
- ART 204 Modern Art History ........................................................... 3
- ENG 135 Greek and Roman Mythology in Translation ........................ 3
- ENG 161 Introduction to Literature ................................................ 3
- ENG 200 Survey of English Literature .......................................... 3
- ENG 201 Survey of English Literature .......................................... 3
- ENG 230 Introduction to Literature (Subtitle Required) .................... 3
- ENG 231 Literature and Genre (Subtitle) ........................................ 3
- ENG 232 Language and Place (Subtitle Required) ............................. 3
- ENG 233 Literature and Identities (Subtitle Required) ....................... 3
- ENG 234 Introduction to Women's Literature .................................... 3
- ENG 251 Survey of American Literature I ....................................... 3

1. A student may not receive credit for both ART 130 and REL 130.

2. May be used to fulfill either Social and Behavioral Sciences or Arts & Humanities competency, but may not be used to fulfill both general education categories.

**Foreign Languages**
AAS, AA, AS, AFA

- FRE 101 Elementary French I .......................................................... 4
- FRE 102 Elementary French II .......................................................... 4
- FRE 201 Intermediate French I ......................................................... 3
- FRE 202 Intermediate French II ......................................................... 3
- GER 101 Elementary German I .......................................................... 4
- GER 102 Elementary German II .......................................................... 4
- GER 201 Intermediate German I .......................................................... 3

1. A student may not receive credit for both ANT 130 and REL 130.

2. May be used to fulfill either Social and Behavioral Sciences or Arts & Humanities competency, but may not be used to fulfill both general education categories.
GER 202 Intermediate German II ........................................... 3
JPN 101 Beginning Japanese I ............................................. 4
JPN 102 Beginning Japanese II ........................................... 4
RAE 150 Elementary Chinese I ........................................... 4
RAE 151 Elementary Chinese II ......................................... 4
SED 101 Sign Language I .................................................. 3
SED 102 Sign Language II ................................................ 3
SED 203 Sign Language III ................................................. 3
SED 204 Sign Language IV ................................................ 3
SPA 101 Elementary Spanish I (spoken approach) ................. 4
SPA 102 Elementary Spanish II (spoken approach) ................. 4
SPA 201 Intermediate Spanish I .......................................... 3
SPA 202 Intermediate Spanish II ........................................ 3

Other Degree and/or Credential Requirements

Cultural Studies Courses

Cultural Studies is defined as a course in which the major thrust is the study of one or more non-traditional and/or underrepresented cultures that are traditionally excluded from or marginalized in mainstream American curriculum. Cultural studies courses demonstrate a cultural emphasis in their course descriptions. For completion of the AA/AS degree, students must complete at least one cultural studies course.

Social and Behavioral Sciences

ANT 130/REL 130 Introduction to Comparative Religion*
ANT 160 Cultural Diversity in the Modern World
ANT 220 Introduction to Cultural Anthropology
ANT 221 Native People of North America
ANT 235 Food and Culture
ANT 241 Origins of Old World Civilizations
ANT 242 Origins of New World Civilizations
COM 254 Introduction to Intercultural Communication
ECO 150 Introduction to Global Economics
GEO 152 Regional Geography of the World
GEO 160 Lands and Peoples of the Non-Western World
HUM 135 Introduction to Native American Literature*
HUM 202 Survey of Appalachian Studies I*
HUM 203 Survey of Appalachian Studies II*
HUM 204 Appalachian Seminar*
POL 212 Culture and Politics in the Third World
POL 235 World Politics
RAE 150 Introduction to Chinese Culture
REL 101 Introduction to Religious Studies
SOC 235 Inequality in Society
SPA 115 Hispanic Culture: (Country or Region)
WGS 200 Introduction to Women’s and Gender Studies in the Social Sciences

Heritage

HIS 101 World Civilization I
HIS 102 World Civilization II
HIS 206 History of Colonial Latin America
HIS 207 History of Modern Latin America, 1810 to Present
HIS 247 History of Islam and Middle Eastern Peoples, 500-1250
HIS 248 History of Islam and Middle Eastern Peoples, 1250 to the Present
HIS 254 History of Sub-Saharan Africa
HIS 260 African American History to 1865
HIS 261 African American History 1865 - Present
HIS 265 History of Women in America
HIS 295 East Asia to 1800
HIS 296 History of Asia II

Humanities

ART 104 Introduction to African Art
ENG 135 Greek and Roman Mythology in Translation
ENG 233 Literature and Identity
ENG 234 Introduction to Women’s Literature
ENG 264 Major Black Writers
ENG 282/ HUM 282 International Film Studies
HUM 121 Peace Studies

HUM 135 Introduction to Native American Literature*
HUM 140 Introduction to Latino Literature
HUM 150 Introduction to African Literature
HUM 202 Survey of Appalachian Studies I*
HUM 203 Survey of Appalachian Studies II*
HUM 204 Appalachian Seminar*
HUM 230 Contemporary Japanese Literature and Culture in Translation
HUM 250 Appalachian Literature Survey
HUM 251 Contemporary Appalachian Literature
MU 101 Folk and Traditional Music of the Western Continents
MUS 104 Introduction to Jazz History
MUS 208 World Music
REL 101 Introduction to Religion
REL 130 Introduction to Comparative Religion*
WGS 201 Introduction to Women’s and Gender Studies in the Arts and Humanities

Foreign Languages

FRE 101 Elementary French I
FRE 102 Elementary French II
FRE 201 Intermediate French I
FRE 202 Intermediate French II
GER 101 Elementary German I
GER 102 Elementary German II
GER 201 Intermediate German I
GER 202 Intermediate German II
JPN 101 Beginning Japanese I
JPN 102 Beginning Japanese II
RAE 150 Elementary Chinese I
RAE 151 Elementary Chinese II
SED 101 Sign Language I
SED 102 Sign Language II
SED 203 Sign Language III
SED 204 Sign Language IV
SPA 101 Elementary Spanish I
SPA 102 Elementary Spanish II (spoken approach)
SPA 201 Intermediate Spanish I
SPA 202 Intermediate Spanish II

* listed under more than one category and/or with a different prefix; may not be counted in more than one general education category.

Computer/Digital Literacy (revision pending)

Diploma IT 100 Computer Literacy ........................................ 3
CIT 105 Introduction to Computing ..................................... 3
Any Computer Literacy course approved for the AAS, AA, or AS

AAS IT 100 Computer Literacy ........................................... 3
CIS 100 Introduction to Computers .................................... 3
OST 105 Introduction to Information Systems ......................... 3
CIT 105 Introduction to Computing .................................... 3
Any Computer Literacy course approved for the AA or AS

AA, AS, AFA CIS 100 Introduction to Computers ...................... 3
OST 105 Introduction to Information Systems ......................... 3
CIT 105 Introduction to Computing .................................... 3

The computer literacy courses listed above will be retained through summer 2013 term to give curriculum committees time for courses to be re-evaluated for digital literacy content through the KCTCS course approval process. All courses must align with the new standards as defined below*. Courses that fail to meet the new standards or are not resubmitted will be removed from the list for fall 2013.

*Computer literacy, also referred to as digital literacy, is a topic both broad in its scope and deep in its detail. As a consequence of this, KCTCS has adopted current Internet and Computing Core Certification (IC3) objectives to define digital literacy, emphasizing in particular the three identified, broad categories of Computing Fundamentals, Key Applications, and Living On-line. A complete listing of the IC3 objectives may be found at http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/IC3_Certifications.html

All AA, AS, AFA, AAS, and diploma students graduating from KCTCS must demonstrate digital literacy by one of the following means within five years preceding their current admission to a KCTCS college:
1. Scoring a minimum of a 75% composite score on the computer literacy exam**, or
2. Achieving the IC3 Certification, or
3. Articulating credit from another institution which has demonstrated compliance with the above course criteria* as identified by the registrar of the receiving college in cooperation with the digital literacy faculty of the receiving college, or
4. Receiving credit for an approved KCTCS digital literacy course, or
5. Providing documentation of successful completion of other certification exams as approved by KCTCS.

Documentation of digital literacy will be placed on the student’s transcript. Students may choose to take the standardized Computer Exam** to demonstrate computer competency. Students who score a passing score on the exam will have met the requirements of computer literacy and documentation will be placed on the student’s transcript.

**Implementation fall 2012

Lower Division University Courses that Fulfill General Education Requirements

The courses listed below are offered by KCTCS colleges through agreements with the Kentucky universities that developed the courses. KCTCS honors the university course content, prerequisites, and general education status of the courses. Courses descriptions for these courses are included in the Course Description section at the end of the catalog.

ANA 209   Principles of Human Anatomy (UK)
ASL 101   American Sign Language I (EKU)
ASL 102   American Sign Language II (EKU)
ASL 201   American Sign Language III (EKU)
ASL 202   American Sign Language IV (EKU)
BIO 110   Inquiry Biology for Teachers (Morehead)
BIO 216   Biological Inquiry and Analysis (Murray)
CHE 253   Materials Science (UL)
CS 215   Introduction to Programming, Abstraction, and Problem Solving (UK)
CS 216   Introduction to Software Engineering (UK)
CS 275   Discrete Mathematics (UK)
HIS 110   Special Topics History for Study Abroad (Murray)
ITP 115   Heritage and Culture of Deaf People (EKU)
LEAD 200  Introduction to Leadership Studies (WKU)
MA 109   College Algebra (UK)
MA 110   Algebra and Trigonometry for Calculus (UK)
MA 111   Introduction to Contemporary Mathematics (UK)
MA 112   Trigonometry (UK)
MA 113   Calculus I (UK)
MA 114   Calculus II (UK)
MA 142   Calculus III (UK)
MA 211   Calculus IV (UK)
MA 241   Geometry for Middle School Teachers (UK)
MAT 201   Mathematical Concepts for Middle and Elementary School Teachers I (EKU)
MSE 201   Intro to Materials Science (UK)
MUC 175   Jazz Ensemble (UK)
MLIC 190  Instructor Consent Required Marching Band (UK)
MUP 114   Trombone I (UK)
MUP 214   Trombone II (UK)
MUS 106   Music in Film (Morehead)
MUSE 222  Music for the Elementary Teachers (Morehead)
PGY 206   Elementary Physiology (UK)
SPA 151   Spanish for Health Professionals (UK)
STA 200   Stats For Emst (UK)
STA 291   Statistical Method (UK)

Course Transitions

A significant number of courses have changed prefixes and/or course numbers. This does not change the ability of the courses to fulfill general education course requirements as long as courses were eligible at the time of enrollment. The majority of the course changes for General Education courses are available in Appendices B-E. Math course transitions that took place fall 2004 and fall 2010 are available in Appendix B. Biology course transitions are available in Appendix C. Chemistry course transitions are available in Appendix D. Art, Foreign Language, General, Music, Philosophy, Political Science, Psychology, Religion, Theatre, and Women and Gender Studies course transitions are available in Appendix E. Agricultural Technology, Biotechnology, Business Administration, Collision Repair Technology, Computer Aided Drafting, Cosmetology, Criminal Justice, Dental Assisting, Dental Hygiene, Diagnostic Medical Sonography, Education, Energy Systems, Engineering & Electronics Technology, Global Studies, Health Physics, Homeland Security/ Emergency Management, Human Services, Masonry/Minining Technology, Nuclear Medicine & Molecular Imaging, Nursing, Professional Studio Artist, Radiography, and Real Estate course transitions are available in Appendix F. Computer & Information Technologies, Computerized Manufacturing and Machining, Digital Game and Simulation Design, Industrial Safety, Industrial Technology, Medical Information Technology, and a few General Education course transitions are available in Appendix G.

Admission to Programs

Academic requirements are specified for each program and are based on the level of difficulty and the technical nature of the curriculum. Admission to some programs is limited by college resources, facilities, accreditation requirements, etc. Contact the Student Services office or program coordinator at the college for more information.

KCTCS College Codes

ASC   Ashland Community and Technical College
BGT   Bowling Green Technical College
BLC   Bluegrass Community and Technical College
BSC   Big Sandy Community and Technical College
ELC   Elizabethtown Community and Technical College
GTW   Gateway Community and Technical College
HJC   Hazard Community and Technical College
HEC   Henderson Community College
HPC   Hopkinsville Community College
JFC   Jefferson Community and Technical College
MDC   Madisonville Community College
MYC   Mayfield Community and Technical College
OWC   Owensboro Community and Technical College
SMC   Somerset Community College
SEC   Southeast Kentucky Community and Technical College
WKC   West Kentucky Community and Technical College
KCTCS Online

Kentucky Community and Technical College System’s (KCTCS) sixteen colleges deliver quality online courses and programs through two ways to learn: Learn by Term and Learn on Demand http://www.kctcs.edu/KCTCS_Online.aspx.

KCTCS colleges offer KCTCS Online Learn by Term marketed through the Kentucky Virtual Campus (KYVC) <www.kyvc.org>®. These online courses are 3-4 credits each, offered by semester, and lead to certificates, diplomas, and degrees. Online learning is an alternative for many students who cannot attend classes on campus due to scheduling conflicts, childcare, work or other commitments.

KCTCS colleges also offer module courses, 3-4 credit full courses and programs through KCTCS Online Learn on Demand. Unlike the traditional Learn by Term online courses, Learn on Demand courses start every day and offer education in “bite-sized chunks” which are courses divided into smaller modules that are only 3 to 8 weeks long and focus on specific skills. Additionally, Learn on Demand also offers 3-4 credit full courses to be completed in 15 weeks. Each course and module earns credit at KCTCS colleges same as with Learn by Term — and credits build toward degrees.

Additional information about KCTCS Online courses and programs for both Learn on Demand and Learn by Term, including student information, may be viewed at the main KCTCS Online web page http://www.kctcs.edu/KCTCS_Online.aspx. In addition to these online options, KCTCS colleges also offer Live Virtual Classes through video conferencing technologies and Interactive Television (ITV).

Online Programs

KCTCS Online Learn by Term - Semester-based Online Programs

KCTCS colleges offer KCTCS Online Learn by Term traditional, semester-based online programs including the Associate in Arts (AA), Associate in Science (AS), and Associate in Applied Science (AAS) degrees, as well as diplomas and certificates. Students must designate a KCTCS college as their Home College. The KCTCS Home College must have program approval to award the credential. Online courses are delivered by different KCTCS colleges, and the Home College accepts all system-wide online courses delivered by other KCTCS colleges. Online courses are 3-4 credits each, offered system-wide and posted at the Kentucky Virtual Campus may be applied toward the required 25 percent of the approved curriculum credits to be completed at the college granting the degree. The student’s Home College will provide student services including, but not limited to, advising, registration, library services, billing, and financial aid. Enrolled students will receive automatic e-mails providing user id and password information through the student KCTCS e-mail account.

All of the courses required for online programs can be taken fully online; however, some courses may require exams that are proctored and approved by the instructor. Instructors communicate with students through the Blackboard Learning Management System (LMS) or through KCTCS e-mail.

Students may register for KCTCS Online Learn by Term online classes offered system-wide directly at any KCTCS college. Individuals may also complete a “course inquiry” submit form through www.kyvc.org. KYVC course inquiries are submitted directly to the KCTCS Home College identified by the student. The student’s chosen Home College processes the course inquiry either through formal admission procedures or class enrollment.

Students may register for KCTCS Online Learn on Demand by using the online application and registration process described in detail on the website http://learnondemand.kctcs.edu/.

Additional information about KCTCS Online courses and programs for both Learn on Demand and Learn by Term, including student information, may be viewed at the main KCTCS Online web page http://www.kctcs.edu/KCTCS_Online.aspx.

KCTCS Online Learn by Term
Current List of Semester-based Online Programs:

Associate in Arts

- General Option

Associate in Science

- General Option

Associate in Applied Science:

- Business Administration Systems
  - All degree options are online

- Criminal Justice
  - General Option
  - Law Enforcement
  - Security and Loss Prevention

- General Occupational/Technical Studies
  - General

- Health Information Technology (Offered by Hazard Community and Technical College)
  - Health Information Technology (Practicum arranged on-site in student vicinity)

- Information Management and Design
  - Library Information Technology

- Computer & Information Technologies
  - Applications
  - Computer Science
  - Information Security
  - Internet Technologies
  - Network Administration
  - Networking Technologies
  - Programming

- Quality Management Systems
  - General Option

- Medical Information Technology (Internship and practicum arranged on-site in student vicinity)
  - Medical Administration
  - Medical Coding
  - Electronic Medical Records
  - Medical Transcription
Office Systems Technology
- Administrative
- Financial Assistant
- Medical Administrative
- Desktop Publishing

Logistics & Operation Management

Marine Technology
- Marine Logistics Operations
- Wheelhouse Management

Diplomas

Business Administration Systems
- All diplomas are online

Computer Aided Drafting & Design
- Computer Aided Drafting & Design

Medical Information Technology (Internship and practicum arranged on-site in student's vicinity)
- Medical Administrative Assistant
- Medical Records Specialist

Office Systems Technology
- Administrative Assistant
- Office Assistant
- Financial Assistant
- Desktop Publishing Specialist

Certificates

Business Administration Systems
- All certificates are online

Computer Aided Drafting and Design
- Computer Assisted Drafter
- Detailer
- Drafter Assistant

Education
- Paraeducator

Health Information Technology (Practicums are arranged onsite in student's vicinity)
- Medical Record Coding Specialist
- Release of Information Data Specialist

Historic Information Management
- Archival Management
- Museum Management
- Records Management

Human Services
- Direct Support Work

Computer and Information Technologies
- A+
- CISCO Networking Associate
- CISCO Networking Enhanced
- CIT Fundamentals
- Computer Support Technician
- Computer Tech Basic
- Computer Technician
- Information Security Specialist
- Microsoft Enterprise Administrator
- Microsoft Network Administrator
- Network Technologies Specialist
- Net+
- Programming
- Productivity Software Specialist
- Security+
- Web Programming
- Web Administration

Interdisciplinary Early Childhood Education
- Kentucky Early Childhood Administrator
- Kentucky Child Care Assistant
- Kentucky Child Care Provider
- School Age Child Care

Nursing
- Medicaid NurseAide
- Advanced Nursing Assistant

Quality Management Systems
- Quality Leader
- Quality Monitor
- Quality Specialist I
- Quality Support

Logistics & Operations Management
- Logistics Management

Marine Technology
- Marine Industry
- Marine Technology Business

Medical Information Technology
- Electronic Health Records Specialist
- Hospital Admissions Clerk
- Medical Coding

Medical Receptionist
- Medical Transcriptionist
- Medical Unit Coordinator

Office Systems Technology
- Medical Admissions Clerk
- Medical Administrative
- Medical Coding
- Medical Transcriptionist
- Medical Unit Coordinator

KCTCS Online Learn on Demand Programs

KCTCS Online Learn on Demand programs are higher education on your terms. It offers accredited, affordable college programs designed to fit the busy, working student's schedule.

KCTCS Online Learn on Demand offers both full courses called "parent" courses and bite-size classes (called "modules"). Modules classes are about 3-5 weeks long and are called "modules". Learn on Demand full course offerings are 15-weeks long and include all modules required in a
full course. This flexibility allows you to start on a schedule you choose. Students may register for KCTCS Online Learn on Demand by using the online application and registration process described in detail on the website http://learnondemand.kctcs.edu/.

Learn on Demand gives you unparalleled flexibility and control of your education because you can begin a new module or full course whenever you’re ready. Unlike other online colleges with fixed course schedules, we offer the first truly on-demand education where you’re free to work at your own pace and earn credit for prior knowledge. We also offer virtual student services 24/7 through the Go KCTCS! Student Service Center.

Degree

Associate in Arts

Associate in Science

Business Administration
  • Human Resources Management
  • Management

Computer and Information Technologies
  • Information Security
  • Network Administration

Nursing
  • Associate Degree Nursing (ADN)

Integrated Engineering Technology

Diploma

Business Administration Systems
  • Organizational Leadership
  • Small Business Management

Integrated Engineering Technology

Certificate

Computer and Information Technologies
  • A+
  • CIT Fundamentals
  • Computer Tech Basic
  • Computer Technician
  • Information Security Specialist
  • Microsoft Network Administrator
  • Net+
  • Security+

Business Administration
  • Advanced Business Administration

Human Resource Management
  • Leadership
  • Management
  • Small Business Management
  • Team Leadership

Nursing
  • Medicaid Nurse Aide (MNA)

Integrated Engineering Technology
  • Mechanical Engineering Technology
  • Electrical Engineering Technology

Learn on Demand College Readiness Program

College Readiness courses help students build reading, writing, and math skills for success in college level classes. Enrollment in these courses is based on a student’s College Readiness placement test results so students will only be enrolled in modules that they need.

Mathematics

Writing

Reading
## Academic Curricula

### Associate in Applied Science (A.A.S.) Curricula

#### 21st Century Life Skills Certificate

21st Century Life Skills - 3201073019  
(Offered at HZC, WKW)

The 21st Century Life Skills Certificate is designed to prepare students with the necessary skills for career, college, and life. These skills include critical thinking, communication, reading, technology usage, global awareness, problem solving, self-directional learning, career basics, leadership, and civic engagement. Students will experience active learning components that lend themselves to overall well-grounded skills necessary to function more effectively as members of an increasingly interconnected world.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEN 125</td>
<td>Applied Meta-Thinking</td>
<td>3</td>
</tr>
<tr>
<td>GEN 175</td>
<td>Career and Life Skills Development</td>
<td>3</td>
</tr>
<tr>
<td>GEN 225</td>
<td>Lifelong Learning Applications</td>
<td>3</td>
</tr>
<tr>
<td>GEN 101</td>
<td>Introduction to College Course OR</td>
<td></td>
</tr>
<tr>
<td>GEN 100</td>
<td>Strategies For Academic Success</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>Cross Cultural Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total:** 16-18

#### Advanced Integrated Technology

The Advanced Integrated Technology (AIT) program is a program of study that employs the principle of technology integration within three highly sought degree areas: Multi-skilled Technician, Power Plant Technician, and Medical Equipment & Instrumentation. Within each degree area, a systems approach is employed that is in line with the expectations of current day employers. In addition to these three degree areas, certificates are also available. The AIT program offers both online coursework and flexible lab hours.

The AIT, Multi-Skilled Technician track graduate will have acquired a high level of mechanical and electrical skill sets that can provide them with opportunities to work in today’s technically advanced industrial settings (both in manufacturing and value-added 2nd tier support roles). These skill sets include robotics and PLC programming, drive configuration, advanced electric motor control, hydraulics/pneumatics, and mechanical drive systems used in modern industry. The curriculum addresses mechanical and electrical theory and its application in today’s industrial environment. Critical thinking objectives are also incorporated that will expose the student to problem solving strategies and techniques for troubleshooting the latest generation of high tech equipment.

The Power Plant Technician track is designed for entry level positions in the Power Plant Industry as a multi-skilled technician. These industries include, but are not limited to positions in fossil fuel, hydro, nuclear, and alternative energy power plants. Also included are any industries where steam and electricity is generated. Imbedded within the curriculum is an Edison Electrical Institute Exam prep course to help graduates better prepare for the power plant entrance exam.

The Medical Equipment and Instrumentation track trains in-demand technicians to repair, maintain, and manage a wide variety of medical devices, equipment, and systems employed throughout various healthcare sectors. Such technologies include but are not limited to: electrocardiographs, electroencephalographs, both noninvasive and invasive blood pressure monitors, defibrillators, electrocardiographic units, video endoscopy systems, medical lasers, dialysis machines, mechanical ventilators, anesthesia machines, automated clinical laboratory analyzers, and diagnostic imaging equipment. Graduates of this program can obtain employment with a wide variety of employers such as hospitals, clinics, home health companies, independent service organizations, and medical equipment manufacturers.

Students enrolled in the Advanced Integrated Technology Programs are required to achieve a minimum grade of “C” in technical courses.

#### Track: AIT: Multi-skilled Technician - 150499701

(Offered at MDC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR 100</td>
<td>Refrigeration Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ACR 101</td>
<td>Refrigeration Fundamentals Lab</td>
<td>2</td>
</tr>
<tr>
<td>IMT 100</td>
<td>Welding for Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>IMT 101</td>
<td>Welding for Maintenance Lab</td>
<td>2</td>
</tr>
<tr>
<td>CHM 122</td>
<td>Fundamentals of Machine Tools</td>
<td>4</td>
</tr>
<tr>
<td>AIT 200</td>
<td>Integrated Process Control</td>
<td>4</td>
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**Total:** 30

---

**Required General Education:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAT 126</td>
<td>Technical Algebra and Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MAT 150</td>
<td>College Algebra OR</td>
<td>(3)</td>
</tr>
<tr>
<td>PHY 171</td>
<td>Applied Physics</td>
<td>4</td>
</tr>
<tr>
<td>ENG 101</td>
<td>Writing</td>
<td>3</td>
</tr>
<tr>
<td>Social/Behavioral Sciences course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Heritage/Humanities course</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Subtotal:** 16

**Technical Core:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIT 100</td>
<td>Power Generation &amp; Utilization</td>
<td>4</td>
</tr>
<tr>
<td>AIT 110</td>
<td>Power Distribution Systems</td>
<td>3</td>
</tr>
<tr>
<td>AIT 120</td>
<td>Equipment Installation</td>
<td>3</td>
</tr>
<tr>
<td>AIT 130</td>
<td>Measurement and Instrumentation OR</td>
<td>4</td>
</tr>
<tr>
<td>BMT 140</td>
<td>Biomedical Instrumentation and Biophysical Measurements</td>
<td>4</td>
</tr>
<tr>
<td>AIT 140</td>
<td>Industrial Controls I OR</td>
<td>4</td>
</tr>
<tr>
<td>BMT 120</td>
<td>Essentials of Analog and Digital Electronics for BMET’s Level I</td>
<td>4</td>
</tr>
<tr>
<td>AIT 150</td>
<td>Essentials of Analog and Digital Electronics for BMET’s Level II</td>
<td>4</td>
</tr>
<tr>
<td>BMT 130</td>
<td>Essentials of Analog and Digital Electronics for BMET’s Level II</td>
<td>4</td>
</tr>
<tr>
<td>AIT 160</td>
<td>Workplace Safety OR</td>
<td>1</td>
</tr>
<tr>
<td>BMT 100</td>
<td>Hazardous Risks Encountered by BMET’s and Methods of Prevention</td>
<td>(1)</td>
</tr>
<tr>
<td>AIT 210</td>
<td>Equipment Maintenance OR</td>
<td>4</td>
</tr>
<tr>
<td>BMT 215</td>
<td>Principles and Practices of Medical Equipment Maintenance and Management</td>
<td>(4)</td>
</tr>
<tr>
<td>CIS 100</td>
<td>Introduction to Computers</td>
<td>3</td>
</tr>
</tbody>
</table>

**Subtotal:** 30
The African American Studies Certificate Program provides an interdisciplinary approach to identify and engage the historical and contemporary issues confronting Africans and African Americans. Core courses include African American history, literature, and music. Additional courses in communication, humanities, and social sciences complete the program.

**Certificate**

**African American Studies - 0501013019**

(Offered at ECTC, JFC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 101</td>
<td>3</td>
</tr>
<tr>
<td>HUM 120</td>
<td>3</td>
</tr>
<tr>
<td>HIS 260</td>
<td>3</td>
</tr>
<tr>
<td>HIS 261</td>
<td>3</td>
</tr>
<tr>
<td>MUS 207</td>
<td>3</td>
</tr>
<tr>
<td>ENG 264</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>24</strong></td>
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*American Studies Electives (Required: 6 credits)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>COM 299</td>
<td>3</td>
</tr>
<tr>
<td>ANT 160</td>
<td>3</td>
</tr>
<tr>
<td>FLK 280</td>
<td>3</td>
</tr>
<tr>
<td>SOC 236</td>
<td>3</td>
</tr>
<tr>
<td>MUS 104</td>
<td>3</td>
</tr>
<tr>
<td>HUM 150</td>
<td>3</td>
</tr>
<tr>
<td>REL 101</td>
<td>3</td>
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<td>REL 130</td>
<td>3</td>
</tr>
<tr>
<td>ART 104</td>
<td>3</td>
</tr>
<tr>
<td>TA 299</td>
<td>3</td>
</tr>
</tbody>
</table>

**Agricultural Technology**

The Agricultural Technology program prepares students for occupations in a wide variety of jobs in agriculture (both production and value-added) with a range of skills and knowledge. The curriculum addresses concepts in theory, skills, and techniques that are required by the agriculture industry. It will use hands-on strategies, which require an integrated practicum across a variety of settings. Graduates will seek job opportunities in the agriculture industry on commercial farms and businesses related to the agriculture industry.

**Associate in Applied Science**

**Agriculture Technology - 103017019**

(Offered at HEC, HPC, OWC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR 140</td>
<td>3</td>
</tr>
<tr>
<td>AGR 150</td>
<td>3</td>
</tr>
<tr>
<td>AGR 180</td>
<td>2</td>
</tr>
<tr>
<td>AGR 125</td>
<td>3</td>
</tr>
<tr>
<td>AGR 190</td>
<td>2</td>
</tr>
<tr>
<td>AGR 200</td>
<td>2</td>
</tr>
<tr>
<td>AGR 230</td>
<td>3</td>
</tr>
<tr>
<td>AGR 250</td>
<td>3</td>
</tr>
<tr>
<td>AGR 260</td>
<td>3</td>
</tr>
<tr>
<td>AGR 270</td>
<td>3</td>
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<tr>
<td>AGR 280</td>
<td>3</td>
</tr>
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<td>AGR 290</td>
<td>3</td>
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<td>AGR 300</td>
<td>3</td>
</tr>
<tr>
<td>AGR 310</td>
<td>3</td>
</tr>
<tr>
<td>ASC 106</td>
<td>(3)</td>
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### Technical Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AGR 101</td>
<td>The Economics of Food and Agriculture</td>
<td>3</td>
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</tbody>
</table>

#### Subtotal Credits
6

### Certificate

**Agricultural Technician - 103013009**

(Offered at ASC, HEC, HPC, OWC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AGR 140</td>
<td>Issues in Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>AGR 150</td>
<td>Agricultural Power</td>
<td>3</td>
</tr>
<tr>
<td><strong>CIS 100</strong></td>
<td>Introduction to Computers</td>
<td>3</td>
</tr>
<tr>
<td>AGR 230</td>
<td>Career Development in Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>AGR 180</td>
<td>Agricultural Internship I</td>
<td>2</td>
</tr>
<tr>
<td>AGR 125</td>
<td>Introduction to Fertilizers and Soils</td>
<td>3</td>
</tr>
<tr>
<td>AGR 190</td>
<td>Agricultural Internship II</td>
<td>2</td>
</tr>
<tr>
<td>AGR 170</td>
<td>Introduction to Equipment, Machines, and Engines</td>
<td>3</td>
</tr>
<tr>
<td>AGR 130</td>
<td>Field Applications in Agriculture</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Total Credits
24

---

### Air Conditioning Technology

**Air Conditioning Technology - 4702017019**

(Offered at BGT, BLC, BSC, MDC)

#### General Education:

- Quantitative Reasoning: 3 credit hours
- Natural Sciences: 3 credit hours
- Social/Behavioral Sciences: 3 credit hours
- Written Communication: 3 credit hours
- Oral Communications: 3 credit hours

#### Subtotal Credits
18

#### Technical Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR 100</td>
<td>Refrigeration Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ACR 101</td>
<td>Refrigeration Fundamentals Lab</td>
<td>2</td>
</tr>
<tr>
<td>ACR 102</td>
<td>HVAC Electricity AND</td>
<td>3</td>
</tr>
<tr>
<td>ACR 103</td>
<td>HVAC Electricity Lab OR</td>
<td>2</td>
</tr>
<tr>
<td>ACR 130</td>
<td>Electrical Components</td>
<td>3</td>
</tr>
<tr>
<td>ACR 131</td>
<td>Electrical Components Lab</td>
<td>2</td>
</tr>
<tr>
<td>ACR 170</td>
<td>Heat Load/Duct Design</td>
<td>3</td>
</tr>
<tr>
<td>ACR 250</td>
<td>Cooling and Dehumidification</td>
<td>3</td>
</tr>
<tr>
<td>ACR 251</td>
<td>Cooling and Dehumidification Lab</td>
<td>2</td>
</tr>
<tr>
<td>ACR 260</td>
<td>Heating and Humidification</td>
<td>3</td>
</tr>
<tr>
<td>ACR 261</td>
<td>Heating and Humidification Lab</td>
<td>3</td>
</tr>
<tr>
<td>ACR 270</td>
<td>Heat Pump Application</td>
<td>2</td>
</tr>
<tr>
<td>ACR 271</td>
<td>Heat Pump Application</td>
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</tr>
<tr>
<td>Electives**</td>
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<td>9-11</td>
</tr>
</tbody>
</table>

#### Subtotal Credits
42-48

#### Total Credits
60-66

---

### Diploma

**Agricultural Technology - 103014019**

(Offered at HEC, OWC)

#### General Education Courses:

- Written Communication, Oral Communications, or Humanities/Heritage: 3 credit hours

#### Subtotal Credits
6

#### Technical Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR 101</td>
<td>The Economics of Food and Agriculture</td>
<td>3</td>
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</tbody>
</table>

#### Total Credits
36

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### Certificate

**Agricultural Technician - 103013009**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

#### General Education:

- Written Communication, Oral Communications, or Humanities/Heritage: 3 credit hours
- Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning: 3 credit hours

#### Subtotal Credits
6

#### Technical Courses:

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACR 100</td>
<td>Refrigeration Fundamentals</td>
<td>3</td>
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<td>ACR 101</td>
<td>Refrigeration Fundamentals Lab</td>
<td>2</td>
</tr>
<tr>
<td>ACR 102</td>
<td>HVAC Electricity AND</td>
<td>3</td>
</tr>
<tr>
<td>ACR 103</td>
<td>HVAC Electricity Lab OR</td>
<td>2</td>
</tr>
<tr>
<td>ACR 130</td>
<td>Electrical Components</td>
<td>3</td>
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</table>

#### Total Credits
24

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### Diploma

**Heating, Ventilation, and Air Conditioning Mechanic - 4702014009**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

#### General Education:

- Written Communication, Oral Communications, or Humanities/Heritage: 3 credit hours
- Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning: 3 credit hours

#### Subtotal Credits
6

#### Technical Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
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#### Total Credits
24

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### Certificate

**Agricultural Technician - 103013009**

(Offered at ASC, HEC, HPC, OWC)

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<tr>
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<td>Issues in Agriculture</td>
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</tr>
<tr>
<td>AGR 150</td>
<td>Agricultural Power</td>
<td>3</td>
</tr>
<tr>
<td><strong>CIS 100</strong></td>
<td>Introduction to Computers</td>
<td>3</td>
</tr>
<tr>
<td>AGR 230</td>
<td>Career Development in Agriculture</td>
<td>3</td>
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<tr>
<td>AGR 180</td>
<td>Agricultural Internship I</td>
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<tr>
<td>AGR 125</td>
<td>Introduction to Fertilizers and Soils</td>
<td>3</td>
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<tr>
<td>AGR 190</td>
<td>Agricultural Internship II</td>
<td>2</td>
</tr>
<tr>
<td>AGR 170</td>
<td>Introduction to Equipment, Machines, and Engines</td>
<td>3</td>
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<td>Field Applications in Agriculture</td>
<td>2</td>
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#### Total Credits
24

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### Certificate

**Agricultural Technician - 103013009**

(Offered at ASC, HEC, HPC, OWC)

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<th>Course Title</th>
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<td>Introduction to Computers</td>
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<td>AGR 230</td>
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<td>3</td>
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<td>AGR 190</td>
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<tr>
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<td>Introduction to Equipment, Machines, and Engines</td>
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#### Total Credits
24

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### Diploma

**Agricultural Technician - 103013009**

(Offered at ASC, HEC, HPC, OWC)

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AGR 140</td>
<td>Issues in Agriculture</td>
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<td>AGR 150</td>
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<td>Introduction to Computers</td>
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<tr>
<td>AGR 190</td>
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<tr>
<td>AGR 170</td>
<td>Introduction to Equipment, Machines, and Engines</td>
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<td>AGR 130</td>
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<td>2</td>
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#### Total Credits
24
### Certificates

**Environmental Control System Servicer - 4702013039**  
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

<table>
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<th>Course Title</th>
<th>Credits</th>
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<td>3</td>
</tr>
<tr>
<td>ACR 101</td>
<td>Refrigeration Fundamentals Lab</td>
<td>2</td>
</tr>
<tr>
<td>ACR 102</td>
<td>HVAC Electricity AND</td>
<td>3</td>
</tr>
<tr>
<td>ACR 103</td>
<td>HVAC Electricity Lab OR</td>
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**Comparable Electrical Course** .................................. (4-5)

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACR 130</td>
<td>Electrical Components</td>
<td>3</td>
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<tr>
<td>ACR 131</td>
<td>Electrical Components Lab</td>
<td>2</td>
</tr>
<tr>
<td>ACR 250</td>
<td>Cooling and Dehumidification</td>
<td>3</td>
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<tr>
<td>ACR 251</td>
<td>Cooling and Dehumidification Lab</td>
<td>2</td>
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<tr>
<td>ACR 260</td>
<td>Heating and Humidification</td>
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<td>ACR 261</td>
<td>Heating and Humidification Lab</td>
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**Total Credits** 47-54

**Environmental System Repair Helper - 4702013049**  
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

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<tbody>
<tr>
<td>ACR 100</td>
<td>Refrigeration Fundamentals</td>
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<td>2</td>
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<tr>
<td>ACR 102</td>
<td>HVAC Electricity AND</td>
<td>3</td>
</tr>
<tr>
<td>ACR 103</td>
<td>HVAC Electricity Lab OR</td>
<td>2</td>
</tr>
<tr>
<td>ACR 130</td>
<td>Electrical Components</td>
<td>3</td>
</tr>
<tr>
<td>ACR 131</td>
<td>Electrical Components Lab</td>
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<tr>
<td>ACR 250</td>
<td>Cooling and Dehumidification</td>
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<tr>
<td>ACR 251</td>
<td>Cooling and Dehumidification Lab</td>
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**Comparable Electrical Course** .................................. (4-5)

<table>
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<tbody>
<tr>
<td>ACR 271</td>
<td>Heat Pump Application</td>
<td>3</td>
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<tr>
<td>ACR 280</td>
<td>Journeyman Preparation</td>
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**Total Credits** 25-26

**Domestic Air Conditioner and Furnace Installer - 4702013029**  
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ACR 100</td>
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<td>HVAC Electricity Lab OR</td>
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**Comparable Electrical Course** .................................. (4-5)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ACR 130</td>
<td>Electrical Components</td>
<td>3</td>
</tr>
<tr>
<td>ACR 131</td>
<td>Electrical Components Lab</td>
<td>2</td>
</tr>
<tr>
<td>ACR 250</td>
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<td>2</td>
</tr>
<tr>
<td>ACR 260</td>
<td>Heating and Humidification</td>
<td>3</td>
</tr>
<tr>
<td>ACR 261</td>
<td>Heating and Humidification Lab</td>
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<td>ACR 271</td>
<td>Heat Pump Application</td>
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**Total Credits** 36-37

**Refrigeration Mechanic - 4702013059**  
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

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<tbody>
<tr>
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**Comparable Electrical Course** .................................. (4-5)

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<tbody>
<tr>
<td>ACR 130</td>
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<td>3</td>
</tr>
<tr>
<td>ACR 131</td>
<td>Electrical Components Lab</td>
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</tr>
<tr>
<td>ACR 200</td>
<td>Commercial Refrigeration</td>
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<td>ACR 201</td>
<td>Commercial Refrigeration Lab</td>
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<td>ACR 210</td>
<td>Ice Machines</td>
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<td>ACR 250</td>
<td>Cooling and Dehumidification</td>
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<tr>
<td>ACR 251</td>
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**Total Credits** 27-28

### Appalachian Studies

The Appalachian Studies certificate will provide students a wide variety of academic directions to follow. The key components for each track, Humanities 202, 203, and 204, will form the core for the Appalachian Studies certificate and will provide a basic overview of all aspects of Appalachian studies. Given this core, students can then select a more focused aspect of Appalachian culture to study.

**Certificate**

**Appalachian Studies - 0501223069**  
(Offered at ASC, HZC, SEC)

<table>
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<th>Course Title</th>
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<tr>
<td>HUM 202</td>
<td>Survey of Appalachian Studies I</td>
<td>3</td>
</tr>
<tr>
<td>HUM 203</td>
<td>Survey of Appalachian Studies II</td>
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<tr>
<td>HUM 204</td>
<td>Appalachian Seminar</td>
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**Subtotal** 9

**Communication Track - 050122301**  
(Offered at ASC, HZC, SEC)

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<tr>
<td>COM 254</td>
<td>Introduction to Intercultural Communication OR</td>
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**Elective approved by Appalachian Studies Committee or its designee** .................................. (3)

**Total** 12

**Creative Writing Track - 050122302**  
(Offered at ASC, HZC, SEC)

<table>
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<tr>
<td>ENG 207</td>
<td>Beginning Workshop in Imaginative Writing OR</td>
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**Elective approved by Appalachian Studies Committee or its designee** .................................. (3)

**Total** 12

**Music Track - 050122303**  
(Offered at ASC, SEC)

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<tr>
<td>MU 101</td>
<td>Folk and Traditional Music of the Western Continents</td>
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**Total** 12

**Science Track - 050122304**  
(Offered at ASC, SEC)

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<td>BIO 120</td>
<td>Human Ecology OR</td>
<td>3</td>
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**Elective approved by Appalachian Studies Committee or its designee** .................................. (3)

**GLY 101**  Physical Geology ....................................... 3

**GLY 111**  Laboratory for Physical Geology ....................... 1

**Total** 16

---

82
Applied Engineering Technology

The Applied Engineering Technology curriculum (AET) introduces students to basic experimental engineering principles and concepts by applying contemporary skills and knowledge in a variety of employment positions based on industry needs. It builds leadership, management, communication skills, and professional ethics, which serve as a foundation for future development and career success. The program contains core technical courses and advanced courses in each track to address the employment needs of a global market. The degree consists of seven Associate in Applied Science degree tracks: 1) Automated Manufacturing, which emphasizes rapid manufacturing and computer numerical control programming; 2) Electromechanical, which is a multi-disciplinary program combining information technology and electro-mechanical systems (maintenance, electricity, computers, hydraulics/ pneumatics, machining or fabrication, diagnostics and repair, etc.); 3) Mechatronics Systems, which is a multi-disciplinary program emphasizing cross-functional knowledge skills in both mechanical and electrical systems; 4) Electronics Engineering, which emphasizes advanced concepts in electronics as it applies to electronic control circuitry and high frequency applications in the digital and microwave communication industry, particularly those driven by military and government contracts; 5) PLC Programmer, which introduces advanced concepts in PLC programming including networking of PLC’s and the writing, debugging, documenting and implementing of PLC programs utilizing both ladder logic and more advanced languages such as Ladder List, Structured Text, etc.; 6) Instrumentation, which emphasizes process monitoring, control and industrial automation using analog and digital control systems for chemical and manufacturing industries; and 7) Alternative Energy, which emphasizes the practical study and implementation of solar, wind, geo-thermal, and bio-fuel technologies.

Associate in Applied Science

Applied Engineering Technology - 1504997029

General Education (required for all tracks):

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<tr>
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<tr>
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<td>Technical Algebra and Trigonometry OR</td>
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<td>MAT 150</td>
<td>OR higher level Quantitative Reasoning course</td>
</tr>
<tr>
<td>PHY 171</td>
<td>Applied Physics OR higher level Physics course</td>
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<tr>
<td>Social/ Behavioral Sciences</td>
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<tr>
<td>Heritage/ Humanities</td>
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Technical Core (required for all tracks):

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<tbody>
<tr>
<td>CIS 100</td>
<td>Introduction to Computers OR demonstrated competency</td>
</tr>
<tr>
<td>AET 110</td>
<td>Introduction to Circuit Analysis OR Electrical course approved by Program Coordinator</td>
</tr>
<tr>
<td>AET 140</td>
<td>Industrial Equipment Maintenance</td>
</tr>
<tr>
<td>BRX 120</td>
<td>Basic Blueprint Reading</td>
</tr>
<tr>
<td>CAD 100</td>
<td>Introduction to Computer Aided Design</td>
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<tr>
<td>COM 252</td>
<td>Interpersonal Communications OR</td>
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<td>COM 181</td>
<td>Basic Public Speaking</td>
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Automated Manufacturing Track - 150499703

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<tr>
<td>CMM 110</td>
<td>Fundamentals of Machine Tool – A</td>
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<tr>
<td>CMM 130</td>
<td>Manual Programming</td>
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<tr>
<td>CMM 132</td>
<td>CAD/ CAM/ CNC</td>
</tr>
<tr>
<td>CMM 240</td>
<td>Introduction to 3-D Programming</td>
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Electromechanical Systems Track - 150499704

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<tr>
<td>AET 160</td>
<td>Industrial Controls Electronics</td>
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<tr>
<td>EET 268</td>
<td>Rotating Machinery Electrical Motor Controls I</td>
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<tr>
<td>EET 269</td>
<td>Rotating Machinery Electrical Motor Controls I Lab</td>
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<tr>
<td>EET 276</td>
<td>Programmable Logic Controllers</td>
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<tr>
<td>EET 277</td>
<td>Programmable Logic Controllers Lab</td>
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<tr>
<td>ISM 210</td>
<td>Fundamentals of Process Control</td>
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Mechatronic Systems Track - 150499705

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<tr>
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<td>Programmable Logic Controllers Lab</td>
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<td>Mechatronic Systems Electrical Components</td>
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<td>MS 120</td>
<td>Mechatronic Systems Mechanical Components</td>
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<td>MS 130</td>
<td>Mechatronic Systems Hydraulic/ Pneumatic Components</td>
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<td>MS 150</td>
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Electronics Engineering Track - 150499706

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<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET 150</td>
<td>Advanced Circuit Analysis</td>
</tr>
<tr>
<td>AET 160</td>
<td>Industrial Controls Electronics</td>
</tr>
<tr>
<td>AET 170</td>
<td>Digital Circuits and Concepts</td>
</tr>
<tr>
<td>AET 200</td>
<td>Integrated Circuits</td>
</tr>
<tr>
<td>AET 220</td>
<td>Modulation Techniques and Applications</td>
</tr>
<tr>
<td><strong>Track Subtotal</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

PLC Programmer Track - 150499707

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AET 190</td>
<td>Industrial Computer Programming Concepts</td>
</tr>
<tr>
<td>AET 250</td>
<td>PLC Networking</td>
</tr>
<tr>
<td>AET 260</td>
<td>Robotics and Programmable Controllers</td>
</tr>
<tr>
<td>AET 270</td>
<td>Advanced PLC Programming</td>
</tr>
<tr>
<td>EET 276</td>
<td>Programmable Logic Controllers</td>
</tr>
<tr>
<td>EET 277</td>
<td>Programmable Logic Controllers Lab</td>
</tr>
<tr>
<td><strong>Track Subtotal</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

Introduction
# Applied Process Technologies

Prepares the graduate for entry-level operations in the power plant, line- man, chemical, petro-chemical, refining, and general industries. Teaches students about automated and semi-automated systems used in various industries. Prepares students in the safe start-up, operation and shut-down of various system components and units. Offers a choice of AAS degree with chemical/refinery operator, power plant operator, and line- man technology, as well as certificate tracks.

Students selecting the certificate options must test at the MAT 126 ready level. Progression in the program is contingent upon achievement of a grade of "C" or higher in the Math, Physics, Chemistry and technical courses and maintenance of a 2.0 cumulative grade point average or better on a 4.0 scale.

## Associate in Applied Science

### Applied Process Technologies - 4103017029

*(Offered at ASC, JFC)*

<table>
<thead>
<tr>
<th>General Education Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 116 Technical Algebra &amp; Trigonometry (Recommended) OR...</td>
</tr>
<tr>
<td>CHE 130 Introductory General &amp; Biological Chemistry OR</td>
</tr>
<tr>
<td>CHE 140/145 Introduction to General Chemistry with Lab</td>
</tr>
<tr>
<td>ENG 101 Writing</td>
</tr>
<tr>
<td>ECO 101 Contemporary Economic Issues (Recommended)</td>
</tr>
<tr>
<td>COM 252 Introduction to Interpersonal Communication</td>
</tr>
</tbody>
</table>

### Technical Core Courses

| Computer/ Digital Literacy Course | 3 |
| Applied Physics (Recommended) OR | 6 |
| Applied Physics | (4) |
| SFA 101 OSHA, Health, and Environmental Safety | 3 |
| APT 102 Process Fundamentals | 4 |
| APT 104 Rotating & Reciprocating Equipment | 3 |
| APT 106 Process Chemistry | 2 |
| APT 108 Stationary Equipment | 2 |
| APT 202 Federally Mandated Training | 3 |
| APT 204 Safety Skills Training | 1 |
| APT 251 Application of Process Operations OR | 2 |
| EES 101 Basic Electronics | (2-3) |

### Applied Process Technologies - 4103017011

*(Offered at ASC, JFC)*

<table>
<thead>
<tr>
<th>Chemical/Refinery Operator Track - 410301701</th>
</tr>
</thead>
<tbody>
<tr>
<td>APT 142 Instrumentation</td>
</tr>
<tr>
<td>APT 144 Process Operations</td>
</tr>
<tr>
<td>APT 146 Process Applications</td>
</tr>
<tr>
<td>APT 148 Process Operations Safety</td>
</tr>
</tbody>
</table>

### Power Plant Operator Track - 410301702

*(Offered at ASC, JFC)*

| APT 142 Instrumentation | 4 |
|-------------------------|
| APT 154 Power Plant Practice | 6 |
| APT 156 Power Plant Protection | 2 |

## Instrumentation Track - 150499708

*(Offered at WKC)*

| AET 150 Advanced Circuit Analysis | 4 |
| AET 170 Digital Circuits and Concepts | 4 |
| AET 200 Integrated Circuits | 4 |
| ISM 102 Fundamentals of Instrumentation | 4 |
| ISM 210 Fundamentals of Process Control | 4 |

**Track Subtotal** | 20

### Alternative Energy Track - 150499709

*(Offered at WKC)*

| AET 102 Introduction to Energy, Environment and Society | 4 |
| AET 110 Introduction to Circuit Analysis OR Electrical course approved by Program Coordinator | 4 |
| AET 114 Solar and Wind Energy Generation | 4 |
| CHE 140 Introductory General Chemistry | 3 |
| CHE 145 Introductory General Chemistry Lab | 1 |

**Track Subtotal** | 20

### CAD/CAM Technician - 1504993049

*(Offered at WKC)*

| BRX 120 Basic Blueprint Reading | 3 |
| CAD 100 Advanced 3D Modeling | 3 |
| CAD 201 Advanced 3D Modeling | 4 |
| ISX 101 Introduction to Industrial Safety OR Safety course approved by Program Coordinator | 3 |
| MAT 126 Technical Algebra and Trigonometry OR MAT 150 OR higher level Mathematics course | 3 |

**Total** | 18-20

### Robotics Sensor Technician - 1504993039

*(Offered at WKC)*

| AET 110 Introduction to Circuit Analysis OR Electrical course approved by Program Coordinator | 4 |
| AET 130 Industrial Sensors | 3 |
| AET 260 Robotics and Programmable Controllers | 4 |
| ISX 101 Introduction to Industrial Safety OR Safety course approved by Program Coordinator | 3 |
| MAT 126 Technical Algebra and Trigonometry OR MAT 150 OR higher level Mathematics course | 3 |

**Total** | 17

### Certificate

**Alternative Energy - 1504993099**

*(Offered at WKC)*

| AET 102 Introduction to Energy, Environment and Society | 4 |
| AET 110 Introduction to Circuit Analysis OR Electrical course approved by Program Coordinator | 4 |
| AET 114 Solar and Wind Energy Generation | 4 |
| MAT 126 Technical Algebra and Trigonometry OR MAT 150 OR higher level Mathematics course | 3 |

**Total** | 18-20

---

*Note: All courses marked with "(Recommended) OR" must be approved by the Program Coordinator. See course catalog for more information.*
### Architectural Technology

The Architectural Technology program provides instruction in the concepts and skills required for careers in architectural and related professional practices. Electives in the curriculum allow students to customize their education to fit their interests. Given the wide range of topics covered in the curriculum, graduates are prepared to find employment in architectural and related professional offices including positions in construction estimating, civil engineering, structural engineering, mechanical/electrical systems, construction management, computer-aided drafting, building code enforcement, specification writing, urban planning, historic preservation, contracting, sub-contracting, and building material sales and marketing.

#### Associate in Applied Science

Architectural Technology - 1513037019  
(Offered at BLC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACH 100</td>
<td>Computer/Digital Literacy</td>
<td>0-3</td>
</tr>
<tr>
<td>ACH 110</td>
<td>Construction Documents I</td>
<td>3</td>
</tr>
<tr>
<td>ACH 120</td>
<td>Theory and History of Architecture</td>
<td>3</td>
</tr>
<tr>
<td>ACH 150</td>
<td>Construction Documents II</td>
<td>3</td>
</tr>
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</table>

### Certificate

Chemical/Refinery Operator - 4103013039  
(Offered at ASC, JFC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFA 101</td>
<td>OSHA, Health and Environmental Safety</td>
<td>3</td>
</tr>
<tr>
<td>COM 252</td>
<td>Introduction to Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>CHE 130</td>
<td>Introductory General &amp; Biological Chemistry OR</td>
<td>4</td>
</tr>
<tr>
<td>CHE 140,145</td>
<td>Introduction to General Chemistry with Lab</td>
<td>4</td>
</tr>
<tr>
<td>APT 102</td>
<td>Process Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>APT 104</td>
<td>Rotating &amp; Reciprocating Equipment</td>
<td>3</td>
</tr>
<tr>
<td>APT 108</td>
<td>Stationary Equipment</td>
<td>2</td>
</tr>
<tr>
<td>APT 142</td>
<td>Instrumentation</td>
<td>4</td>
</tr>
<tr>
<td>APT 144</td>
<td>Process Operations</td>
<td>4</td>
</tr>
<tr>
<td>APT 146</td>
<td>Process Applications</td>
<td>2</td>
</tr>
<tr>
<td>EES 101</td>
<td>Basic Electronics</td>
<td>2</td>
</tr>
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</table>

**Total** 31

### Electrical Power System Technology - 4103017039

(Available at ASC, JFC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFA 101</td>
<td>OSHA, Health and Environmental Safety</td>
<td>3</td>
</tr>
<tr>
<td>APT 146</td>
<td>Process Operations</td>
<td>4</td>
</tr>
<tr>
<td>APT 150</td>
<td>Power Plant Practice</td>
<td>6</td>
</tr>
<tr>
<td>APT 156</td>
<td>Power Plant Protection</td>
<td>2</td>
</tr>
<tr>
<td>EES 101</td>
<td>Basic Electronics</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total** 33

### Lineman Technology Track - 410301703

(Offered at ASC, JFC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>APT 158</td>
<td>Lineman Technology I</td>
<td>3</td>
</tr>
<tr>
<td>APT 159</td>
<td>Lineman Technology I Lab</td>
<td>3</td>
</tr>
<tr>
<td>APT 159</td>
<td>Lineman Technology II</td>
<td>3</td>
</tr>
<tr>
<td>APT 159</td>
<td>Lineman Technology II Lab</td>
<td>4</td>
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</table>

**Subtotal** 17

### Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APT 299</td>
<td>Co-op</td>
<td>(1-6)</td>
</tr>
<tr>
<td>QMS 101</td>
<td>Introduction to Quality Systems</td>
<td>(3)</td>
</tr>
<tr>
<td>EX 196</td>
<td>Experiential Education</td>
<td>(1-6)</td>
</tr>
</tbody>
</table>

**Total Electives** 65-68

### Associate in Applied Science

Apprenticeship Studies - 4799997010  
(Offered at ASC, JFC, WKC)

**Required:**

- Quantitative Reasoning: 3
- Social/Behavioral Sciences: 3
- Oral Communications: 3
- Other Natural Sciences course with consent of program coordinator: (3)

**Total Credits** 42-45

**Technical Core:**

- Computer/Digital Literacy course OR demonstrated competency: 0-3
- Apprenticeship Credit*: 42

**Subtotal** 45

**Total Credits** 60-64

*Apprenticeship credit requirement can be met by a combination of apprenticeship credit (APS 201: 20-40 credit hours) and other technical courses as approved by the program coordinator.

### Apprenticeship Studies

This program is designed to complement specialized study in a national or state approved apprentice curriculum (e.g. 2000 hours per year on the job in a supervised work environment and 144 hours per year of related classroom instruction). Prerequisite: Completion of national/ state certified apprenticeship program.
Arts Administration

The Certificate in Arts Administration prepares students for entry-level management and service positions in local arts institutions, such as museums, cultural centers, orchestras, opera, and galleries. This certificate will provide students new to the arts administration field, and individuals already working in the arts, with the needed training and appropriate experience to work in a variety of arts and cultural institutions. Students participating in the Arts Administration Certificate will take core courses in Arts Administration plus a series of English, business, and communication courses and choose an arts emphasis in studio art, art history, music, music technology, or theatre.

Certificate
Arts Administration - 5007043019
(Offered at JFC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAD 100</td>
<td>Introduction to Arts Administration</td>
<td>3</td>
</tr>
<tr>
<td>AAD 200</td>
<td>Fundamentals of Arts Administration</td>
<td>3</td>
</tr>
<tr>
<td>BAS 160</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BAS 282</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>COM 181</td>
<td>Basic Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101</td>
<td>Writing I</td>
<td>3</td>
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<tr>
<td>ENG 102</td>
<td>Writing II</td>
<td>3</td>
</tr>
<tr>
<td>Subtotal</td>
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</tr>
</tbody>
</table>

Automotive Technology

Instruction in systems such as engines, fuel, on-board computers, transmissions, steering, suspension, and brakes is the basis for this program.

The Automotive Technician track provides knowledge of the various systems used to develop skills in troubleshooting, performing preventative maintenance, servicing and repairing automobiles. The program, which is designed to be completed in two years, prepares graduates for entry-level service technician jobs in the auto repair industry. The student may be provided a work-study experience alternating between periods of work on-site and work in a classroom-laboratory setting.

The Parts/Service Writer track provides knowledge of the various systems and components and how they relate. This knowledge enables the student to more accurately interpret their customers’ automotive complaints, identify and sell automotive parts, and provide efficient customer service within the automotive service and repair industry. The student may take the ASE exams in these areas when they have completed the requirements for these tests.

Note: Hours Exception (69-72 for the A.A.S. and 61-64 for the Diploma) approved by the KCTCS Board of Regents in March 2011.
## Associate in Applied Science

**Automotive Technology - 4706047019**  
*(Offered at BGT, BLC, BSC, ELC, HZC, JFC, WKC)*

### General Education:
- Quantitative Reasoning: 3 credits
- Natural Sciences: 3 credits
- Social/Behavioral Sciences: 3 credits
- Heritage/Humanities: 3 credits
- Written Communication: 3 credits

### Technical Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADX 120</td>
<td>Basic Automotive Electricity Lab</td>
<td>2</td>
</tr>
<tr>
<td>ADX 151</td>
<td>Engine Repair Lab</td>
<td>2</td>
</tr>
<tr>
<td>ADX 171</td>
<td>Climate Control</td>
<td>1</td>
</tr>
<tr>
<td>ADX 261</td>
<td>Electrical Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 111</td>
<td>Brake Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 131</td>
<td>Manual Transmissions Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 140</td>
<td>Basic Fuel and Ignition Systems</td>
<td>2</td>
</tr>
<tr>
<td>AUT 143</td>
<td>Emission Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 161</td>
<td>Suspension and Steering Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 181</td>
<td>Automatic Transmission Transaxle Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 241</td>
<td>Computer Control Systems and Diagnosis Lab</td>
<td>2</td>
</tr>
</tbody>
</table>

### Total Technical Core Credits: 33-36 credits

### General Education Total Credit Hours: 15

### Total Credits: 61-64

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**Automotive Technician Track - 470604701**  
*(Offered at BGT, BLC, BSC, ELC, HZC, JFC, WKC)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADX 121</td>
<td>Basic Automotive Electricity Lab</td>
<td>2</td>
</tr>
<tr>
<td>ADX 151</td>
<td>Engine Repair Lab</td>
<td>2</td>
</tr>
<tr>
<td>ADX 171</td>
<td>Climate Control</td>
<td>1</td>
</tr>
<tr>
<td>ADX 261</td>
<td>Electrical Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 111</td>
<td>Brake Systems Lab</td>
<td>1</td>
</tr>
<tr>
<td>AUT 181</td>
<td>Automatic Transmission Transaxle Lab</td>
<td>1</td>
</tr>
<tr>
<td>AUT 241</td>
<td>Computer Control Systems and Diagnosis Lab</td>
<td>1</td>
</tr>
</tbody>
</table>

### Total Credits: 49-52 credits

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**Automotive Parts/Service Writer Track - 4706044029**  
*(Offered at JFC)*

### General Education:
- Area 1: Written Communication, Oral Communications, or Humanities/Heritage: 3 credits
- Area 2: Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning: 3 credits

### Technical or Support Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISX 100</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>TQX 110</td>
<td>Total Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>BSE 100</td>
<td>Introduction to Business and Economics</td>
<td>1</td>
</tr>
<tr>
<td>ACT 101</td>
<td>Fundamentals of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>TEC 100</td>
<td>Communication for Business and Industry OR</td>
<td>3</td>
</tr>
<tr>
<td>CMS 152</td>
<td>Writing for Business and Industry</td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Technical or Support Courses: 32 credits

### Total Credits: 61-64

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**Diploma**

**Automotive Technician - 4706044019**  
*(Offered at ASC, BGT, BLC, ELC, GTW, HZC, JFC, MYC, OWC, SEC, SMC, WKC)*

### General Education:
- Area 1: Written Communication, Oral Communications, Humanities/Heritage: 3 credits
- Area 2: Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning: 3 credits

### Total General Education Credit Hours: 6 credits

---

**Technical Core**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADX 120</td>
<td>Basic Automotive Electricity</td>
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<tr>
<td>ADX 121</td>
<td>Basic Automotive Electricity Lab</td>
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</tr>
<tr>
<td>ADX 150</td>
<td>Engine Repair</td>
<td>3</td>
</tr>
<tr>
<td>ADX 151</td>
<td>Engine Repair Lab</td>
<td>2</td>
</tr>
<tr>
<td>ADX 170</td>
<td>Climate Control</td>
<td>3</td>
</tr>
<tr>
<td>ADX 171</td>
<td>Climate Control Lab</td>
<td>1</td>
</tr>
<tr>
<td>ADX 260</td>
<td>Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>ADX 261</td>
<td>Electrical Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 110</td>
<td>Brake Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUT 111</td>
<td>Brake Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 130</td>
<td>Manual Transmissions</td>
<td>3</td>
</tr>
<tr>
<td>AUT 131</td>
<td>Manual Transmissions Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 140</td>
<td>Basic Fuel and Ignition Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUT 141</td>
<td>Basic Fuel and Ignition Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 142</td>
<td>Emission Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUT 143</td>
<td>Emission Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 160</td>
<td>Suspension and Steering</td>
<td>3</td>
</tr>
<tr>
<td>AUT 161</td>
<td>Suspension and Steering Lab</td>
<td>2</td>
</tr>
<tr>
<td>AUT 180</td>
<td>Automatic Transmission Transaxle</td>
<td>3</td>
</tr>
<tr>
<td>AUT 240</td>
<td>Computer Control Systems and Diagnosis</td>
<td>3</td>
</tr>
<tr>
<td>AUT 241</td>
<td>Computer Control Systems and Diagnosis Lab</td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Technical Core Credits: 55-58 credits

### Total Credits: 53-56 credits

---

**Automotive Parts/Service Writer - 4706044029**  
*(Offered at JFC)*

### Technical or Support Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISX 100</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>TQX 110</td>
<td>Total Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>BSE 100</td>
<td>Introduction to Business and Economics</td>
<td>1</td>
</tr>
<tr>
<td>ACT 101</td>
<td>Fundamentals of Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>

### Any approved work experience component: 1 credit

### Subtotal Credits: 55-58 credits

### Total Credits: 61-64
## Automotive Electrical System Technology

- **ADX 120 Basic Automotive Electricity** .......................... 3
- **ADX 121 Basic Automotive Electricity Lab** .......................... 2
- **ADX 260 Electrical Systems** ........................................ 3
- **ADX 261 Electrical Systems Lab** ...................................... 2

**Total Credits** 4

## Automotive Electrician - 4706043039

- **ADX 120 Basic Automotive Electricity AND** ....................... 3
- **ADX 121 Basic Automotive Electricity Lab** .......................... 2
- **ADX 260 Electrical Systems** ........................................ 3
- **ADX 261 Electrical Systems Lab** ...................................... 2

**Total Credits** 10

## Automation Transmission/Transaxle Technician - 4706043079

- **AUT 180 Automatic Transmission/Transaxle** ..................... 3
- **AUT 181 Automatic Transmission/Transaxle Lab** .................. 2

**Total Credits** 5

## Brake Repairer- 4706043069

- **AUT 110 Brake Systems** .................................................. 3
- **AUT 111 Brake Systems Lab** .............................................. 2

**Total Credits** 5

## Engine Repairer - 4706043089

- **AUT 130 Manual Transmissions** ....................................... 3
- **AUT 131 Manual Transmissions Lab** .................................... 2

**Total Credits** 5

## Front End Mechanic - 4706043099

- **AUT 160 Suspension and Steering** .................................... 3
- **AUT 161 Suspension and Steering Lab** ............................... 2

**Total Credits** 5

## Tune-up Mechanic - 4706043109

- **AUT 140 Basic Fuel and Ignition Systems** ......................... 3
- **AUT 141 Basic Fuel and Ignition Systems Lab** ..................... 2
- **AUT 142 Emissions Systems** ........................................... 3

**Total Credits** 3

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### Aviation Maintenance Technology

Expertise in the inspection, repair, service and overhaul of aircraft and engines is the goal of this program certified by the Federal Aviation Agency (FAA). Interpreting specifications from service and technical manuals, using testing procedures and equipment, diagnosing problems and making necessary repairs are the skills taught in aircraft maintenance. To work in the aircraft industry, the FAA must certify students completing this program.

Students enrolled in the Aviation Maintenance Technology program must achieve a minimum grade of "C" in each course.

Computer literacy must be demonstrated either by competency exam or by completing a computer literacy course.

Note: Hours Exception (75-76 for the A.S. and 66-67 for the diploma approved by the KCTCS Board of Regents in June 2011.)

## Associate in Applied Science

### Aviation Maintenance Technology - 4706087019

- **AMT 101 Mathematics** .................................................. 1
- **AMT 102 Theory of Flight** ............................................. 1
- **AMT 103 Cleaning and Corrosion Control** ......................... 1
- **AMT 104 Basic Electricity** ............................................. 1
- **AMT 105 Fluid Lines & Fittings** ..................................... 1
- **AMT 106 Aircraft Drawing & Blueprint Reading** .................. 1
- **AMT 107 Physics** ....................................................... 1
- **AMT 108 Ground Handling & Service** ............................... 1
- **AMT 109 Maintenance Publications** .................................. 1
- **AMT 110 Mechanic Privileges & Limitations** ....................... 1
- **AMT 111 Maintenance Forms & Records** .............................. 1
- **AMT 112 Materials & Processes** ..................................... 1
- **AMT 113 Wood Structure** ............................................. 1
- **AMT 114 Aircraft Welding** ............................................ 1
- **AMT 115 Sheet Metal Structures** .................................... 1
- **AMT 116 Aircraft Covering** .......................................... 1
- **AMT 117 Aircraft Finishes** ........................................... 1
- **AMT 118 Assembly & Rigging** ....................................... 1
- **AMT 119 Aircraft Inspection** ......................................... 1
- **AMT 120 Hydraulic & Pneumatic Power Systems** ................. 1
- **AMT 121 Aircraft Landing Gear Systems** ............................. 1
- **AMT 122 Aircraft Electrical Systems** ............................... 1
- **AMT 123 Communication & Navigation Systems** .................. 1
- **AMT 124 Aircraft Fuel Systems** ..................................... 1
- **AMT 125 Cabin Atmospheric Control Systems** .................... 1
- **AMT 126 Ice & Rain Control Systems** ............................... 1
- **AMT 127 Fire Protection Systems** ................................... 1
- **AMT 128 Position & Warning Systems** ............................. 1

**Total Credits** 47
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<td>Turbine Engines</td>
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<td>AMT 243</td>
<td>Reciprocating Engine Theory &amp; Operation</td>
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NOTE: Computer/Digital literacy must be demonstrated by competency exam or by completing a computer/digital literacy course prior to admission to the AMT course.

*AMT 101 - Theory of Flight is not required at JCTC.

## Certificates

**Airframe Maintenance Technician - 4706083029**

(Offered at JFC)

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<td>Cabin Atmospheric Control Systems</td>
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*AMT 101 - Theory of Flight is not required at JCTC.

**Power Plant Maintenance Technician - 4706083019**

(Offered at JFC)

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*AMT 101 - Theory of Flight is not required at JCTC.

**Associate in Applied Science**

**Aviation Maintenance Technology - 4706087029**

(Offered at SMC)

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<td>ATE 102</td>
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<td>ATE 202</td>
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<td>ATE 204</td>
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<td>ATE 242</td>
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NOTE: Computer/digital literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.
Diploma

Airframe and Power Plant Maintenance Technician - 4706084049

(Offered at SMC)

General Education: 6 credit hour requirement for diploma

Area 1 =
- Written Communication, Oral Communications, or Humanities/Heritage .............................................. 3
- Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning .................................................. 3
- Subtotal ......................................................................................................................................................... 6

ATE 100 Aviation Math ................................................................................................................................. 1
ATE 102 Introduction to Aviation Maintenance Technology I .................................................................... 3
ATE 104 Introduction to Aviation Maintenance Technology II .................................................................. 3
ATE 106 Introduction to Aviation Maintenance Technology III .................................................................. 3
ATE 108 Introduction to Aviation Maintenance Technology IV .................................................................. 3
ATE 202 Aircraft Structures I ..................................................................................................................... 3
ATE 204 Aircraft Structures II .................................................................................................................... 3
ATE 206 Aircraft Structures III ................................................................................................................... 3
ATE 208 Aircraft Structures IV ................................................................................................................... 3
ATE 222 Aircraft Systems I .......................................................................................................................... 3
ATE 224 Aircraft Systems II .......................................................................................................................... 3
ATE 226 Aircraft Systems III ........................................................................................................................ 3
ATE 228 Aircraft Systems IV ........................................................................................................................ 3
ATE 242 Aircraft Powerplants I .................................................................................................................... 3
ATE 244 Aircraft Powerplants II ................................................................................................................... 3
ATE 246 Aircraft Powerplants III ................................................................................................................... 3
ATE 248 Aircraft Powerplants IV ................................................................................................................... 3
ATE 252 Aircraft Powerplant Systems I .......................................................................................................... 3
ATE 254 Aircraft Powerplant Systems II ....................................................................................................... 3
ATE 256 Aircraft Powerplant Systems III ...................................................................................................... 3
ATE 258 Aircraft Powerplant Systems IV ...................................................................................................... 3

Total Credits ............................................................................................................................................... 37

NOTE: Computer literacy must be demonstrated either by competency exam or by completing a computer literacy course.

Certificates

Airframe Maintenance Technician - 4706083069

(Offered at SMC)

ATE 100 Aviation Math ................................................................................................................................. 1
ATE 102 Introduction to Aviation Maintenance Technology I .................................................................... 3
ATE 104 Introduction to Aviation Maintenance Technology II .................................................................. 3
ATE 106 Introduction to Aviation Maintenance Technology III .................................................................. 3
ATE 108 Introduction to Aviation Maintenance Technology IV .................................................................. 3
ATE 202 Aircraft Structures I ..................................................................................................................... 3
ATE 204 Aircraft Structures II .................................................................................................................... 3
ATE 206 Aircraft Structures III ................................................................................................................... 3
ATE 208 Aircraft Structures IV ................................................................................................................... 3
ATE 222 Aircraft Systems I .......................................................................................................................... 3
ATE 224 Aircraft Systems II .......................................................................................................................... 3
ATE 226 Aircraft Systems III ........................................................................................................................ 3
ATE 228 Aircraft Systems IV ........................................................................................................................ 3
ATE 228 Aircraft Systems IV ........................................................................................................................ 3
ATE 228 Aircraft Systems IV ........................................................................................................................ 3
ATE 228 Aircraft Systems IV ........................................................................................................................ 3
ATE 228 Aircraft Systems IV ........................................................................................................................ 3

Total Credits ............................................................................................................................................... 37

NOTE: Computer literacy must be demonstrated either by competency exam or by completing a computer literacy course.

Power Plant Maintenance Technician - 4706083079

(Offered at SMC)

ATE 100 Aviation Math ................................................................................................................................. 1
ATE 102 Introduction to Aviation Maintenance Technology I .................................................................... 3
ATE 104 Introduction to Aviation Maintenance Technology II .................................................................. 3
ATE 106 Introduction to Aviation Maintenance Technology III .................................................................. 3
ATE 108 Introduction to Aviation Maintenance Technology IV .................................................................. 3
ATE 108 Aircraft Powerplants I .................................................................................................................... 3
ATE 108 Aircraft Powerplants II ................................................................................................................... 3
ATE 108 Aircraft Powerplants III ................................................................................................................... 3
ATE 108 Aircraft Powerplants IV ................................................................................................................... 3
ATE 122 Aircraft Systems I .......................................................................................................................... 3
ATE 124 Aircraft Systems II .......................................................................................................................... 3
ATE 126 Aircraft Systems III ........................................................................................................................ 3
ATE 128 Aircraft Systems IV ........................................................................................................................ 3

Total Credits ............................................................................................................................................... 37

NOTE: Computer literacy must be demonstrated either by competency exam or by completing a computer literacy course.

Biotechnology

The biotechnology program provides students with the necessary skills and knowledge for entry into a biotechnology career. Graduates will be well versed in the theories and principles of biological systems, field and laboratory techniques, and good manufacturing principles of the biotechnology industry. The industry provides a wide array of job opportunities, including bio-manufacturing and laboratory technicians, quality assurance technicians, and regulatory personnel.

Associate in Applied Science

Biotechnology - 4101017019

(Offered at OWC)

ENG 101 Writing I ......................................................................................................................................... 3
COM 181 Basic Public Speaking .................................................................................................................. 3
MAT 150 College Algebra ............................................................................................................................. 3
PHI 110 Medical Ethics .................................................................................................................................. 3

Social/Behavioral Sciences .......................................................................................................................... 3

Subtotal ......................................................................................................................................................... 15

CTH 155 Introduction to Computers ............................................................................................................. 3
BIO 143 Principles of Biology I AND ................................. (3)
BIO 151 Principles of Biology I Lab .................................. (2)
BIO 141 Principles of Biology II AND ................................. (3)
BIO 153 Principles of Biology II Lab .................................. (2)
BIO 227 Principles of Microbiology with Laboratory .......... 5
BO 224 Introduction to Molecular and Cell Biology .......... 4
BTN 101 Introduction to Biotechnology ............................. 1
AGR 250 Introduction to Plants/Crop Production ............... 3
CHE 170 General College Chemistry I ................................. 3
CHE 173 General College Chemistry I Workshop .............. 1
CHE 175 General College Chemistry I Lab .......................... 1
CHE 180 General College Chemistry II .............................. 3
CHE 183 General College Chemistry II Workshop .............. 1
CHE 185 General College Chemistry II Lab .......................... 1
BTN 201 Biotechnology Techniques I ................................. 4
BTN 202 Biotechnology Techniques II ................................. 4
BTN 220 Immunological Methods ...................................... 4
Elecive ......................................................................................................................................................... 3

Subtotal ......................................................................................................................................................... 49-51

Total Credits ............................................................................................................................................... 64-66
Biotechnology Laboratory Technician

The Biotechnology Laboratory Technician AAS program provides the basic knowledge and laboratory skills needed to prepare for entry level jobs in university, government, pharmaceutical or industrial biotechnology laboratories. Graduates of the program will be able to seek employment in biotechnology laboratories such as biomanufacturing, quality control, quality assurance, research and development, and regulatory bioscience.

The program has been designed to develop skills in basic analysis of biological molecules (DNA and proteins), use of bioreactors, recombinant DNA technology, generation of cell cultures, immunological method applications, regulatory compliance (GMPs and GLPs), accurate documentation, and laboratory safety skills. The Basic Biotechnician Certificate introduces hands-on laboratory training needed for entry-level employment in a biotechnological laboratory. The Advanced Biotechnician Certificate provides practical laboratory skills to supplement theoretical knowledge to improve employability in the biotechnology industry. Some courses are dual credit and college credit can be earned while students are enrolled in secondary school.

Associate in Applied Science

Biotechnology Laboratory Technician - 4101017029

(Offered at BLC)

Required General Education Courses

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<tr>
<td>ENG 102</td>
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<td>MAT 110</td>
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<tr>
<td>MAT 115</td>
<td>Applied Mathematics</td>
<td>3</td>
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<tr>
<td>CHE 140</td>
<td>Introductory General Chemistry</td>
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<td>Introductory General Chemistry Laboratory</td>
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<td>CHE 275</td>
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<td>CHE 285</td>
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<tr>
<td>EST 150</td>
<td>Introductory Ecology</td>
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<tr>
<td>EST 159</td>
<td>Hydrological Geology</td>
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</tr>
<tr>
<td>EST 220</td>
<td>Pollution of Aquatic Ecosystems</td>
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<td>EST 230</td>
<td>Aquatic Chemistry Laboratory</td>
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</tr>
<tr>
<td>EST 240</td>
<td>Sources and Effects of Air Pollution</td>
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<tr>
<td>EST 260</td>
<td>Environmental Analysis Laboratory</td>
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<td>EST 270</td>
<td>Environmental Law and Regulation</td>
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<tr>
<td>STA 200</td>
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<tr>
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Total: 16-17

Required Technical Core Courses

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<td>BTN 201</td>
<td>Biotechnology Techniques I</td>
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<td>BTN 202</td>
<td>Biotechnology Techniques II</td>
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</tr>
<tr>
<td>BTN 210</td>
<td>Cell Culture and Function</td>
<td>4</td>
</tr>
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<td>BTN 220</td>
<td>Immunological Methods</td>
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</tr>
<tr>
<td>MA 109</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MA 110</td>
<td>Contemporary Mathematics</td>
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<tr>
<td>MA 111</td>
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</tr>
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<td>MA 112</td>
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<tr>
<td>MA 123</td>
<td>Calculus III</td>
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<td>MA 201</td>
<td>Math for Elementary Teachers</td>
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<tr>
<td>MA 209</td>
<td>Calculus IV</td>
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<td>PHY 151</td>
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<td>PHY 152</td>
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<td>PHY 161</td>
<td>Introductory Physics Lab I</td>
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<tr>
<td>PHY 162</td>
<td>Introductory Physics Lab II</td>
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<td>PHY 172</td>
<td>Physics for Health Sciences</td>
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<td>PHY 201</td>
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<td>PHY 202</td>
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<td>PHY 203</td>
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<td>PHY 204</td>
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<td>PHY 231</td>
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<td>PHY 232</td>
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<td>PHY 241</td>
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<td>PHY 242</td>
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Total: 21-24

Electives

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<td>BIO 113</td>
<td>Introduction to Biology Lab</td>
<td>1</td>
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<tr>
<td>BIO 120</td>
<td>Human Ecology</td>
<td>3</td>
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<tr>
<td>BIO 121</td>
<td>Basic Anatomy and Physiology Lab</td>
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<td>BIO 137</td>
<td>Human Anatomy and Physiology I</td>
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<tr>
<td>BIO 139</td>
<td>Human Anatomy and Physiology II</td>
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<td>BIO 150</td>
<td>Principles of Biology I</td>
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<td>Principles of Biology Lab I</td>
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Total: 53-59

Technical Support Courses

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<tr>
<td>CHE 120</td>
<td>Principles of Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>CHE 125</td>
<td>The Joy of Chemistry</td>
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<tr>
<td>CHE 140</td>
<td>The Joy of Chemistry Lab</td>
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<tr>
<td>CHE 145</td>
<td>Introductory General Chemistry</td>
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<tr>
<td>CHE 170</td>
<td>General College Chemistry I</td>
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<tr>
<td>CHE 175</td>
<td>General College Chemistry I Workshop</td>
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<tr>
<td>CHE 180</td>
<td>General College Chemistry I</td>
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<tr>
<td>CHE 183</td>
<td>General College Chemistry II Workshop</td>
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<tr>
<td>CHE 185</td>
<td>General College Chemistry Laboratory II</td>
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<td>CHE 220</td>
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<td>CHE 270</td>
<td>Organic Chemistry I</td>
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<td>CHE 275</td>
<td>Organic Chemistry Laboratory I</td>
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<td>CHE 285</td>
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<td>EST 150</td>
<td>Introductory Ecology</td>
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<td>EST 160</td>
<td>Hydrological Geology</td>
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<tr>
<td>EST 220</td>
<td>Pollution of Aquatic Ecosystems</td>
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<td>EST 230</td>
<td>Aquatic Chemistry Laboratory</td>
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<td>EST 240</td>
<td>Sources and Effects of Air Pollution</td>
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<td>EST 260</td>
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<tr>
<td>EST 270</td>
<td>Environmental Law and Regulation</td>
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<td>General College Chemistry Workshop</td>
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<td>EST 150</td>
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<td>Sources and Effects of Air Pollution</td>
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<td>EST 260</td>
<td>Environmental Analysis Laboratory</td>
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<td>Environmental Law and Regulation</td>
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<td>CHE 173</td>
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<td>CHE 175</td>
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<td>EST 240</td>
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<td>EST 260</td>
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Total: 16-17

Certificate

Basic Biotechnician Certificate - 4101013020

(Offered at BLC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BTN 101</td>
<td>Introduction to Biotechnology</td>
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<td>BTN 201</td>
<td>Biotechnology Techniques I</td>
<td>4</td>
</tr>
<tr>
<td>BTN 202</td>
<td>Biotechnology Techniques II</td>
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</tr>
<tr>
<td>MAT 110</td>
<td>Applied Mathematics or higher</td>
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<tr>
<td>STA 198</td>
<td>Science</td>
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Total: 16-17

3 One semester of college biology with lab, or college chemistry with lab, or course approved by the program coordinator.
Advanced Biotechnician Certificate - 4101013030

Table:

<table>
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<th>Course Title</th>
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<td>BTN 101</td>
<td>Introduction to Biotechnology</td>
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<tr>
<td>BTN 201</td>
<td>Biotechnology Techniques I</td>
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<tr>
<td>BTN 202</td>
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<tr>
<td>BTN 110</td>
<td>Nucleic Acids</td>
<td>4</td>
</tr>
<tr>
<td>BTN 210</td>
<td>Cell Culture and Function OR</td>
<td>4</td>
</tr>
<tr>
<td>BTN 220</td>
<td>Immunological Methods OR</td>
<td></td>
</tr>
<tr>
<td>COE 199</td>
<td>Cooperative Education OR</td>
<td>1-3</td>
</tr>
<tr>
<td>BIO 295</td>
<td>Independent Investigation in Biology OR</td>
<td>1-3</td>
</tr>
<tr>
<td>BIO 299</td>
<td>Selected Topics in Biology OR</td>
<td>1-3</td>
</tr>
<tr>
<td>CHE 295</td>
<td>Selected Topics in Chemistry Laboratory OR</td>
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<tr>
<td>CHE 299</td>
<td>Laboratory Research in Chemistry OR</td>
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<tr>
<td>EST 299</td>
<td>Selected Topics in Environmental Science</td>
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<tr>
<td></td>
<td>Technology</td>
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Note: Prerequisites for the Advanced Biotechnician Certificate
- At least one semester of college level chemistry
- At least one semester of college level biology
- Or consent of program coordinator

Recommended Prerequisites for the Advanced Biotechnician Certificate
- Earned Associates Degree or higher in a science discipline.
- Microbiology with laboratory.
- Genetics within the past 10 years.

Broadcast Television Production

The Broadcast Television Production Certificate program provides students with hands-on introduction to the practice of video production and a comprehensive understanding of professional broadcasting in the United States. The students will be required to read, write, and reflect about concepts such as the role of the media in our society, history of broadcasting in the United States, and different job positions available in the field of broadcasting. Students will also learn all aspects of the television production process from conception to the completed program. Students will develop skills in a range of areas including script preparation, camera operation, directing, lighting, and editing. In addition to an understanding of the elements of television production, graduates will have a greater understanding of the collaborative process through creative problem solving, and critical thinking. Students will need to achieve a "C" or better in each class to remain in the program.

Certificate

Broadcast Television Production - 1001053189

(Offered at OWC)

Table:

<table>
<thead>
<tr>
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<th>Course Title</th>
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<td>CMS 105</td>
<td>Multi-Media Production I</td>
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<tr>
<td>CMS 141</td>
<td>Communications Practicum</td>
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<tr>
<td>CMS 155</td>
<td>Introduction to Broadcasting</td>
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<td>CMS 266</td>
<td>Basic Television Production</td>
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<td>COM 249</td>
<td>Mass Media and Mass Culture</td>
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Business Studies

Three programs are offered under the broader heading of Business Studies. They are Business Administration Systems, Medical Information Technology, and Office Systems Technology.

Business Administration Systems


The curriculum is designed for those who seek entry level jobs as well as for currently employed individuals wishing to enhance their skills. A student specializes by choosing from the following Tracks, Diplomas and Certificates.

- The Accounting Track/ Diploma/ Certificate leads to careers in accounting including bookkeeper, accounting clerk, cost payroll clerk and any positions using microcomputer-based systems.
- The Finance Track/ Certificate leads to careers in the financial services industry, government lending agencies, and credit companies.
- The Hospitality Management Track/ Certificate prepares students for careers directing specific aspects of hospitality operations and for overall hospitality management.
- The Human Resource Management Track/ Certificate prepares students for entry-level positions in the human resource field and related occupations.
- The Management Track/ Certificate prepares the students with broad-based management knowledge and skills which lead to a variety of positions in organizations.
- The Office Systems Track/ Diploma/ Certificate prepares the student with a broad base of knowledge and skills needed for a variety of positions in an office.
- The Real Estate Management Track/ Certificates leads to a career in real estate which may include sales, finance, counseling, development, marketing analysis, valuation, and/or property management.
- The Telecommunication Systems Management Track/ Certificate leads to careers in the management and operation of television, radio, teleconferencing facilities, and information systems.
- The Turf Grass / Landscaping Management Track/ Certificate prepares the student for careers turf grass management and landscaping operations.
Other Diplomas and Certificates

The Organization Leadership Diploma curriculum is designed to prepare students to manage a department or to become team leaders in team-based or self-managed organizations.

The Small Business Management Diplomas/Certificate curricula are designed to prepare students for the position of entrepreneur and business owner and offers the prospective business owner the fundamentals of starting and operating a business.

The Accounting Recordkeeping Specialist Certificate prepares students for entry level employment as a bookkeeper.

The Basic and Advanced Business Administration Certificates are designed to be building blocks to complete the Associate in Applied Science Degree, Business Administration Core courses.

The Business Transfer Certificate is designed to provide the business transfer student an exit point by offering business preparation courses that will transfer to a four year institution.

The Entrepreneurship Certificate is focused on providing foundational business knowledge necessary to turn a project, idea, product or service into a business venture. Certificate graduates will learn how to prepare a business plan, identify avenues of enterprise and capital, gain product development knowledge, learn methods of marketing their idea or business, gain knowledge on financial statements and gain personal and organizational leadership qualities that will provide business tools to new or current entrepreneurs.

The Financial Perspectives Certificate prepares the student for entry level positions in accounting, financial services and small business management.

The Industrial Supervisor Certificate prepares students in the field of industrial front-line supervision.

The General Business Certificate prepares the students for a variety positions in supervision, management and general business.

The Leadership Certificate enables the student to qualify for leadership positions, work effectively in teams, lead problem solving work groups, understand the conflict resolution processes and plan effectively.

The Operations Management Certificate provides students with the knowledge and skills needed to successfully function as first-line supervisors in an operations environment whether in distribution, services, or manufacturing. Also it increases the understanding of the operations function for non-operations students who will be working in a distribution, services or manufacturing organization.

The Payroll Accounting Specialist Certificate prepares the student for entry level work in payroll processing.

The Quality Management Certificate prepares the student to analyze and implement systems for continuous improvement of functions and processes in production or service organizations.

The Sales Certificate prepares the student for a career in sales.

The Supervisory Management Certificate prepares the students in the field of front-line supervision.

The Team Leadership Certificate leads to a career in team leadership, supervision and/or management in a variety of different organizations. Modules are available.

Associate in Applied Science

Business Administration Systems - 5202017129

(Offered at ASC, BGT, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

General Education:

<table>
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<tr>
<td>ENG 101</td>
<td>Writing</td>
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<tr>
<td>COM 181</td>
<td>Basic Public Speaking OR</td>
<td>3</td>
</tr>
<tr>
<td>COM 252</td>
<td>Introduction to Interpersonal Communication</td>
<td>(3)</td>
</tr>
<tr>
<td>ECO 101</td>
<td>Contemporary Economic Issues OR</td>
<td>3</td>
</tr>
<tr>
<td>ECO 201</td>
<td>Principles of Microeconomics OR</td>
<td>(3)</td>
</tr>
<tr>
<td>ECO 202</td>
<td>Principles of Macroeconomics</td>
<td>(3)</td>
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<tr>
<td>MAT 105</td>
<td>Business Mathematics OR</td>
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<tr>
<td>MAT 110</td>
<td>Applied Mathematics OR Higher Quantitative Reasoning</td>
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Subtotal: 18

Technical Courses:

<table>
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<tr>
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<td>Financial Accounting Topics</td>
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<tr>
<td>ACT 281</td>
<td>Individual Taxation</td>
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<tr>
<td>ACT 286</td>
<td>Financial Accounting Topics</td>
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Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

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<thead>
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<th>Course</th>
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<td>Payroll Accounting</td>
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<tr>
<td>ACT 277</td>
<td>Managerial Accounting Topics</td>
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<tr>
<td>BAS 212</td>
<td>Introduction to Financial Management</td>
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<tr>
<td>ACT 290</td>
<td>Selected Topics in Accounting (Topic)</td>
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<tr>
<td>ACT 295</td>
<td>Corporate and Partnership Taxation</td>
<td>3</td>
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<tr>
<td>BAS 120</td>
<td>Personal Finance</td>
<td>3</td>
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<tr>
<td>CIS 230</td>
<td>Advanced Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>COE 199</td>
<td>Cooperative Education: (Business Administration) OR</td>
<td>1-3</td>
</tr>
<tr>
<td>BAS 280</td>
<td>Business Internship</td>
<td>(1-3)</td>
</tr>
</tbody>
</table>

Subtotal: 15

Total Credits: 61-64

Business Administration Systems Tracks

Accounting Track - 520201701

(Offered at ASC, BGT, BSC, ELC, GTW, HEC, HPC, MDC, MYC, OWC, SEC, SMC, WKC)

Available Completely Online

Required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT 279</td>
<td>Computerized Accounting Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACT 281</td>
<td>Individual Taxation</td>
<td>3</td>
</tr>
<tr>
<td>ACT 286</td>
<td>Financial Accounting Topics</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT 196</td>
<td>Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACT 277</td>
<td>Managerial Accounting Topics</td>
<td>3</td>
</tr>
<tr>
<td>BAS 212</td>
<td>Introduction to Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>ACT 290</td>
<td>Selected Topics in Accounting (Topic)</td>
<td>1-3</td>
</tr>
<tr>
<td>ACT 295</td>
<td>Corporate and Partnership Taxation</td>
<td>3</td>
</tr>
<tr>
<td>BAS 120</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>CIS 230</td>
<td>Advanced Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>COE 199</td>
<td>Cooperative Education: (Business Administration) OR</td>
<td>1-3</td>
</tr>
<tr>
<td>BAS 280</td>
<td>Business Internship</td>
<td>(1-3)</td>
</tr>
</tbody>
</table>

Subtotal: 15

Total Credits: 61-64
Finance Track - 520201714  
(Offered at ASC, HPC, SEC, SMC, WKC)

**Required:**
- BAS 293 Principles of Finance ............................................... 3
- BAS 212 Introduction to Financial Management ......................... 3

**Choose 9 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.**
- BAS 120 Personal Finance ..................................................... 3
- BAS 294 Money and Financial Institutions ............................. 3
- BAS 295 International Finance .............................................. 3
- BAS 299 Selected Topics in Management: (Track Topic) ............... 3
- BAS 280 Business Internship OR ........................................... 1-4
- COE 199 Cooperative Education ........................................... (1-4)

**Subtotal** ..................................................................... 15

**Total Credit Hours** ..................................................... 61-66

Hospitality Management Track - 520201703  
(Offered at BSC, SMC, WKC)

**Required:**
- HOS 100 Introduction to Hospitality ....................................... 3
- CUL 100 Culinary Arts Profession ........................................... 2
- HOS 282 Tourism Marketing .................................................. 2

**Choose 9 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses (HOS, CUL, & BAS) as approved by the Business Administration Systems Program Coordinator.**
- BAS 200 Small Business Management ..................................... 3
- BAS 274 Human Resource Management ................................ 3
- BAS 290 Management, Ethics & Society ................................ 3
- COE 199 Cooperative Education: Business Administration OR ... 1-3
- BAS 280 Business Internship ............................................... (1-3)
- CUL 200 Sanitation & Safety ................................................. 2
- CUL 105 Applied Fundamental of the Culinary Arts Profession ... 2
- CUL 280 Cost & Control ....................................................... 2
- HOS 160 Security for the Hospitality Industry .......................... 3
- HOS 200 Cultural Heritage Tourism ....................................... 3
- HOS 210 Front Office Management ......................................... 3
- HOS 220 Housekeeping & Maintenance Management .............. 3
- CUL 270 Human Relations Management .................................. 3

**Subtotal Credits** .......................................................... 17

**Total** .............................................................................. 63-66

Human Resource Management Track - 520201715  
(Offered at ELC, HEC, MDC, WKC)  
Available Completely Online

**Required:**
- BAS 274 Human Resource Management ................................ 3
- BAS 287 Supervisory Management ......................................... 3
- ACT 196 Payroll Accounting .................................................. 3

**Choose 9 hours (not duplicated from the core) from the following Approved Technical Courses:**
- BAS 280 Business Internship OR .......................................... 1-4
- COE 199 Cooperative Education ........................................... (1-4)
- BAS 284 Applied Management Skills .................................... 3
- BAS 288 Person & Organizational Leadership ......................... 3
- BAS 290 Management, Ethics & Society ................................ 3
- BAS 299 Selected Topics in Management: (Track Topic) ............ 1-3
- ISX 100 Industrial Safety ..................................................... 3
- OST 275 Office Management .............................................. 3
- QMS 101 Introduction to Quality Systems ............................ 3
- QMS 202 Performance Management ..................................... 3
- PSY 180 Human Relations .................................................. 3

**Subtotal** ..................................................................... 18

**Total Credits** ............................................................... 64-67

Management Track - 520201708  
(Offered at ASC, BSC, BGT, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWI, SEC, SMC, WKC)  
Available Completely Online

**Required:**
- BAS 212 Introduction to Financial Management OR .................. 3
- QMS 101 Introduction to Quality Systems OR ......................... 3
- BAS 284 Applied Management Skills ..................................... 3

*Must be a General Education Quantitative Reasoning that is different from core Quantitative Reasoning selection.

**Choose 11-12 hours (not duplicated from the core) from the following Management and/or Technical Courses with no more than 3 hours selected from Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.**

**Management Courses**
- ACT 277 Managerial Accounting Topics ................................ 3
- BAS 170 Entrepreneurship ................................................... 3
- BAS 200 Small Business Management .................................... 3
- BAS 212 Introduction to Financial Management ........................ 3
- BAS 289 Operations Management .......................................... 3
- BAS 290 Management, Ethics & Society ................................ 3
- BAS 256 International Business ............................................. 2
- BAS 260 Professional Development and Protocol ..................... 2
- BAS 274 Human Resource Management ............................... 3
- BAS 295 Money and Financial Institutions ............................. 3
- BAS 299 Selected Topics in Management: (Track Topic) ......... 1-3
- QMS 101 Introduction to Quality Systems ............................ 3
- QMS 202 Performance Management ..................................... 3

**Technical Courses**
- BAS 120 Personal Finance ................................................... 3
- CIS 150 Doing Business on the Internet .................................. 1
- CIS 151 Introduction to Electronic Commerce ......................... 1
- CIS 230 Advanced Microcomputer Applications .................... 3
- ENG 203 Business Writing OR ............................................. 3
- OST 235 Business Communications Technology .................. 3
- COE 199 Cooperative Education: (Business Administration) .... 1-4
- BAS 280 Business Internship ............................................... (1-4)
- ECO 150 Introduction to Global Economics .......................... 3
- ECO 201 Principles of Microeconomics OR ......................... 3
- ECO 202 Principles of Microeconomics ................................ 3
- IT 132 Web Page Development ............................................ 3
- IT 237 Help Desk ............................................................... 3
- OST 110 Document Formatting and Word Processing ............. 3
- QMS 101 Introduction to Quality Systems ............................ 3
- QMS 201 Customer Service Improvement Skills .................... 3

**Subtotal** ..................................................................... 17-18

**Total Credit** ................................................................. 63-67

Office Systems Track - 520201705  
(Offered at BSC, GTW, HEC, HPC, MDC, MYC, SMC)  
Available Completely Online

**Required:**
- OST 110 Document Formatting and Word Processing ............. 3
- OST 210 Advanced Word Processing Applications ................. 3
- OST 215 Office Procedures .................................................. 3
- OST 220 Administrative Office Simulations ............................ 3
Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Office Systems Program Coordinator.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>OST</td>
<td>Transcription and Office Technology</td>
<td>3</td>
</tr>
<tr>
<td>OST</td>
<td>Records and Database Management</td>
<td>3</td>
</tr>
<tr>
<td>OST</td>
<td>Introduction to Office Systems (Topic)</td>
<td>1-3</td>
</tr>
<tr>
<td>OST</td>
<td>Business Communications Technology</td>
<td>3</td>
</tr>
<tr>
<td>OST</td>
<td>Office Systems Technology Internship OR</td>
<td>1-3</td>
</tr>
<tr>
<td>COE</td>
<td>Cooperative Education: (Business Technology) OR</td>
<td>(1-3)</td>
</tr>
<tr>
<td>BAS</td>
<td>Business Internship</td>
<td>(1-3)</td>
</tr>
</tbody>
</table>

Subtotal: 18

Total Credits: 64-67

Real Estate Management Track - 520201706

*(Offered at ASC, BSC, ELC, WKC)*

Required:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>REA</td>
<td>Real Estate Principles I</td>
<td>3</td>
</tr>
<tr>
<td>REA</td>
<td>Appraising</td>
<td>1</td>
</tr>
<tr>
<td>REA</td>
<td>Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>REA</td>
<td>Real Estate Law</td>
<td>3</td>
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</table>

Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Real Estate Program Coordinator.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>REA</td>
<td>Real Estate Marketing</td>
<td>3</td>
</tr>
<tr>
<td>REA</td>
<td>Construction and Blueprints</td>
<td>3</td>
</tr>
<tr>
<td>REA</td>
<td>Real Estate Principles II</td>
<td>3</td>
</tr>
<tr>
<td>REA</td>
<td>Property Management</td>
<td>3</td>
</tr>
<tr>
<td>REA</td>
<td>Real Estate Investments I</td>
<td>3</td>
</tr>
<tr>
<td>REA</td>
<td>Commercial and Industrial Property</td>
<td>3</td>
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<tr>
<td>REA</td>
<td>Land Planning and Development</td>
<td>3</td>
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<tr>
<td>REA</td>
<td>Farm Brokerage</td>
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<tr>
<td>REA</td>
<td>Real Estate Investments II</td>
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</tr>
<tr>
<td>REA</td>
<td>Real Estate Brokerage Management</td>
<td>3</td>
</tr>
<tr>
<td>COE</td>
<td>Cooperative Education: (Business Administration)</td>
<td>1-4</td>
</tr>
<tr>
<td>BAS</td>
<td>Business Internship</td>
<td>(1-4)</td>
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</tbody>
</table>

Subtotal: 18

Total Credits: 64-67

Telecommunication Systems Management Track - 520201709

*(Offered at ASC, BSC, ELC, WKC)*

Required:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CMS</td>
<td>Multimedia Production and Applications I</td>
<td>3</td>
</tr>
<tr>
<td>CMS</td>
<td>Multimedia Production and Applications II</td>
<td>3</td>
</tr>
<tr>
<td>CMS</td>
<td>Media Advertising</td>
<td>3</td>
</tr>
<tr>
<td>COM</td>
<td>Mass Media/ Mass Culture</td>
<td>3</td>
</tr>
<tr>
<td>JAT</td>
<td>Introduction to Communication Media</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose 3-4 hours (not duplicated from the core) from the following Courses. Students may select other courses (JAT, COM, or CMS) as approved by the Business Administration Program Coordinator.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CIS</td>
<td>Doing Business on the Internet</td>
<td>1</td>
</tr>
<tr>
<td>CIS</td>
<td>Introduction to Electronic Commerce</td>
<td>1</td>
</tr>
<tr>
<td>CIS</td>
<td>Introduction to Web Page Design</td>
<td>1</td>
</tr>
<tr>
<td>CIS</td>
<td>Intermediate Web Page Design OR</td>
<td>2</td>
</tr>
<tr>
<td>BAS</td>
<td>Applied Management Skills</td>
<td>3</td>
</tr>
<tr>
<td>BAS</td>
<td>Supervisory Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS</td>
<td>Selected Topics in Management: (Track Topic)</td>
<td>1-3</td>
</tr>
<tr>
<td>OST</td>
<td>Business Communications Technology OR</td>
<td>3</td>
</tr>
<tr>
<td>ENG</td>
<td>Business Writing OR</td>
<td>(3)</td>
</tr>
<tr>
<td>JOU</td>
<td>Writing for Mass Media</td>
<td>(3)</td>
</tr>
<tr>
<td>COE</td>
<td>Cooperative Education: (Business Administration)</td>
<td>1-4</td>
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<tr>
<td>BAS</td>
<td>Business Internship</td>
<td>(1-4)</td>
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</table>

Subtotal: 18-19

Total Credits: 64-68

Turf Grass/Landscaping Management Track - 520201707

*(Offered at OWC)*

Required:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TGM</td>
<td>Turf Grass for Golf and Landscaping</td>
<td>3</td>
</tr>
<tr>
<td>AGR</td>
<td>Introduction to Soils &amp; Fertilizers</td>
<td>3</td>
</tr>
<tr>
<td>TGM</td>
<td>Turf Grass Science</td>
<td>3</td>
</tr>
<tr>
<td>AGR</td>
<td>Issues in Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>AGR</td>
<td>Agriculture Seminar</td>
<td>3</td>
</tr>
<tr>
<td>AGR</td>
<td>Introduction to Equipment, Machines, &amp; Engines</td>
<td>3</td>
</tr>
<tr>
<td>HRT</td>
<td>Herbaceous Plant Identification</td>
<td>4</td>
</tr>
<tr>
<td>HRT</td>
<td>Woody Plant Identification</td>
<td>4</td>
</tr>
<tr>
<td>HRT</td>
<td>Turf Management</td>
<td>3</td>
</tr>
<tr>
<td>COE</td>
<td>Cooperative Education OR</td>
<td>3</td>
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<tr>
<td>BAS</td>
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<td>(3)</td>
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</table>

Subtotal: 17

Total Credits: 66-66

Diplomas

Accounting - 5202014049

General Education:

**Area 1** =

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG</td>
<td>Writing I</td>
<td>3</td>
</tr>
<tr>
<td>ENG</td>
<td>Writing II OR</td>
<td>3</td>
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<tr>
<td>ENG</td>
<td>Business Writing OR</td>
<td>(3)</td>
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</table>

*Total Credits: 12*

**Area 2** =

Quantitative Reasoning course                                      | 3     |

*Total Credits: 3*

Total Credits: 15

Required Technical:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT</td>
<td>Computer/ Digital Literacy</td>
<td>0-3</td>
</tr>
<tr>
<td>ACC</td>
<td>Productivity Software</td>
<td>3</td>
</tr>
<tr>
<td>ACC</td>
<td>Financial Accounting OR</td>
<td>3</td>
</tr>
<tr>
<td>ACT</td>
<td>Fundamentals of Accounting I LAND</td>
<td>(3)</td>
</tr>
<tr>
<td>ACT</td>
<td>Fundamentals of Accounting II</td>
<td>(3)</td>
</tr>
<tr>
<td>ACT</td>
<td>Computerized Accounting Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

*Total Credits: 30*

Related Courses (Choose 9 credit hours from the following list with Program Coordinator Approval)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BAS</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>BAS</td>
<td>Introduction to Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BAS</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>COE</td>
<td>Cooperative Education</td>
<td>1-6</td>
</tr>
<tr>
<td>BAS</td>
<td>Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS</td>
<td>Professional Development and Protocol</td>
<td>2</td>
</tr>
<tr>
<td>BAS</td>
<td>Business Internship</td>
<td>1-3</td>
</tr>
</tbody>
</table>

*Total Credits: 39-45*

*No course can be used to fulfill more than one requirement.*
### General Education:

**Area 1 =**
- ENG 101  Writing I OR .................................................. 3
- COM 181  Basic Public Speaking OR ................................. (3)
- COM 252  Introduction to Interpersonal Communication .... (3)

**Area 2 =**
- BAS 288  Principles of M acroeconomics ......................... (3)
- BAS 101  Fundamentals of Accounting I AND ................. (3)
- ACT 102  Fundamentals of Accounting II ....................... (3)

**Required Technical Subtotal** 21-24

**Choose 11-12 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.**

**Required Technical:**
- BAS 102  Fundamentals of Accounting II ........................ (3)
- BAS 282  Principles of Marketing ................................. (3)
- BAS 290  Management, Ethics & Society ....................... (3)
- OSTE 257  Office Management ....................................... (3)
- ACC 202  Management Accounting ............................... (3)
- ECO 203  Microeconomics ........................................... (3)
- OSTE 235  Business Communications Technology .......... (3)
- QMS 101  Introduction to Quality Systems .................... (3)

**Approved Technical Courses** 11-12

**Total Credits** 38-42

---

### Small Business Management - 5202014039

(Offered ASC, BGT, BSC, ELC, HZC, JFC, MDC, SMC, WKC) **Available Completely Online**

**General Education:**

**Area 1 =**
- ENG 101  Writing I OR .................................................. 3
- COM 181  Basic Public Speaking OR ................................. (3)
- COM 252  Introduction to Interpersonal Communication .... (3)

**Area 2 =**
- ECO 101  Contemporary Economics OR .......................... (3)
- ECOT 201  Principles of Microeconomics OR ................ (3)
- ECOT 202  Principles of M acroeconomics ..................... (3)

**Required Technical Subtotal** 6

**Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Office Systems Program Coordinator.**

**Required Technical:**
- BAS 283  Principles of Management ............................. (3)
- BAS 284  Applied Management Skills ........................... (3)
- BAS 287  Supervisory Management .............................. (3)

**Total Credits** 39-42

---

### Organizational Leadership - 5202014029

(Offered at ASC, BGT, BSC, ELC, HZC, JFC, MDC, SMC, WKC) **Available Completely Online**

**General Education:**

**Area 1 =**
- ENG 101  Writing I OR .................................................. 3
- COM 181  Basic Public Speaking OR ................................. (3)
- COM 252  Introduction to Interpersonal Communication .... (3)

**Area 2 =**
- ECO 101  Contemporary Economics OR .......................... (3)
- ECOT 201  Principles of Microeconomics OR ................ (3)
- ECOT 202  Principles of M acroeconomics ..................... (3)

**Required Technical Subtotal** 6

**Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.**

**Required Technical:**
- BAS 283  Principles of Management ............................. (3)
- BAS 284  Applied Management Skills ........................... (3)
- BAS 287  Supervisory Management .............................. (3)

**Total Credits** 24-27

---

### Office Systems - 5202014019

(Offered at BSC, GTW, MDC, SMC)

**General Education:**

**Area 1 =**
- ENG 101  Writing I OR .................................................. 3
- COM 181  Basic Public Speaking OR ................................. (3)
- COM 252  Introduction to Interpersonal Communication .... (3)

**Area 2 =**
- OSTE 213  Business Calculations for the Office Professional OR 3
- ECO 101  Contemporary Economics ............................... (3)
- ECO 201  Principles of Microeconomics ...................... (3)
- ECO 202  Principles of M acroeconomics ..................... (3)

**General Education Subtotal** 6

**Required Technical:**
- CIS 100  Introduction to Computers OR ........................ 3
- OSTE 105  Introduction to Information Systems .............. (3)
- ACC 201  Financial Accounting OR .............................. (3)
- ACT 101  Fundamentals of Accounting I AND ................ (3)
- ACT 102  Fundamentals of Accounting II ....................... (3)

**Required Technical Subtotal** 27-30

**Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.**

**Required Technical:**
- OSTE 150  Transcription and Office Technology .............. 3
- OSTE 160  Records and Database Management .................. 3
- OSTE 216  Selected Topics in Office Systems: (Topic) .... 1-3
- OSTE 235  Business Communications Technology .......... 3
- OSTE 295  Business Systems Technology ...................... 3
- COE 199  Cooperative Education: (Business Administration) (1-3)
- BAS 280  Business Internship ....................................... 3
- OSTE 275  Office Management ....................................... 3

**Total Credits** 39-42
ACT 196 Payroll Accounting .................................................... 3
ACC 202 Managerial Accounting ............................................. 3
CIS 130 Microcomputer Applications & Development OR……… 3
CIS 230 Advanced Computer Applications OR………………… (3)
OST 240 Software Integration ................................................ 3
QMS 101 Introduction to Quality Systems .................................. 3

Total Credits 36-39

*Not allowed as an Approved Technical Course if course has been taken as a required course.

Certificates

Accounting - 5202013119
(Offered at BGT, BSC, ELC, GTW, HEC, HPC, HZC, MDC, MYC, OWC, SEC, SMC, WKC)

Total Credits 18-21

*Not allowed as an Approved Technical Course if course has been taken as a required course.

Basic Business Administration - 5202013139
(Offered at ASC, BGT, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

Total Credits 15-18

Business Transfer - 5202013149
(Offered at ASC, BGT, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

Total Credits 15

Entrepreneurship - 5202013379
(Offered at BGT, GTW, MDC, OWC, SEC)

Total Credits 12-15

Finance - 5202013329
(Offered at ASC, SEC, SMC)

Total Credits 15

Financial Perspectives - 5202013159
(Offered at ASC, BGT, ELC, GTW, HPC, HZC, MDC, MYC, OWC, SEC, SMC, WKC)

Total Credits 9-12
### General Business - 5202013169
*(Offered at ASC, BGT, BSC, ELC, GTW, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)*

**Available Completely Online**

<table>
<thead>
<tr>
<th>Required:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BAS 160</strong> Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td><strong>CIS 100</strong> Introduction to Computers OR</td>
<td>3</td>
</tr>
<tr>
<td><strong>OST 105</strong> Introduction to Information Systems</td>
<td>3</td>
</tr>
<tr>
<td><strong>ACT 101</strong> Fundamentals of Accounting*</td>
<td>3</td>
</tr>
<tr>
<td><strong>ECO 101</strong> Contemporary Economic Issues OR</td>
<td>3</td>
</tr>
<tr>
<td><strong>ECO 201</strong> Principles of Microeconomics OR</td>
<td>3</td>
</tr>
<tr>
<td><strong>ECO 202</strong> Principles of Macroeconomics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits** 12

* ACC 201 may be substituted

### Hospitality Management - 5202013179
*(Offered at BSC, SEC, SMC, WKC)*

**Required:**
- **HOS 100** Introduction to Hospitality
- **CUL 100** Culinary Arts Profession
- **HOS 282** Tourism Marketing

Choose 9 hours from the following Technical Courses.
Students may select other courses (HOS or CUL) as approved by the Business Administration Systems Program Coordinator.

<table>
<thead>
<tr>
<th>Required:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BAS 200</strong> Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>BAS 274</strong> Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>COE 199</strong> Cooperative Education: Business Administration OR</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>BAS 280</strong> Business Internship OR</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>BAS 290</strong> Management, Ethics &amp; Society</td>
<td>2</td>
</tr>
<tr>
<td><strong>CUL 200</strong> Sanitation &amp; Safety</td>
<td>2</td>
</tr>
<tr>
<td><strong>CUL 210</strong> Applied Fundamentals of the Culinary Arts Profession</td>
<td>2</td>
</tr>
<tr>
<td><strong>HOS 160</strong> Security for the Hospitality Industry</td>
<td>3</td>
</tr>
<tr>
<td><strong>HOS 200</strong> Cultural Heritage Tourism</td>
<td>3</td>
</tr>
<tr>
<td><strong>HOS 210</strong> Front Office Operations &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>HOS 220</strong> Housekeeping &amp; Maintenance Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>CUL 270</strong> Human Relations Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits** 17

### Human Resource Management - 5202013359
*(Offered at BSC, ELC, GTW, HEC, MDC, MYC, SEC, WKC)*

**Required:**
- **BAS 274** Human Resource Management
- **BAS 287** Supervisory Management
- **ACT 196** Payroll Accounting

Choose 9 hours from the following Technical Courses.
Students may select other courses as approved by the Business Administration Systems Program Coordinator.

<table>
<thead>
<tr>
<th>Required:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BAS 280</strong> Business Internship OR</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>COE 199</strong> Cooperative Education</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>ISX 101</strong> Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td><strong>BAS 284</strong> Applied Management Skills</td>
<td>3</td>
</tr>
<tr>
<td><strong>BAS 288</strong> Person &amp; Organizational Leadership</td>
<td>3</td>
</tr>
<tr>
<td><strong>BAS 290</strong> Management, Ethics &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td><strong>BAS 299</strong> Selected Topics in Management: (TrackTopic)</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>OST 275</strong> Office Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>QMS 101</strong> Introduction to Quality Systems</td>
<td>3</td>
</tr>
<tr>
<td><strong>QMS 202</strong> Performance Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>PSY 180</strong> Human Relations</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits** 18

### General Education:

| ENG 101 | Writing I | 3 |
| MAT 150 | College Algebra | 3 |
| COM 181 | Basic Public Speaking OR | 3 |
| COM 252 | Interpersonal Communications OR | 3 |
| PSY 110 | General Psychology | 3 |

### Required Technical:

| BAS 287 | Supervisory Management | 3 |
| INDT 120 | Industrial Safety | 3 |
| INDT 233 | Statistical Process Control | 3 |
| BAS 274 | Human Resource Management | 3 |
| **CIS 100** | Introduction to Computers OR | 3 |
| **OST 105** | Introduction to Information Systems | 3 |

Choose 6 hours from the approved Technical Courses:

<table>
<thead>
<tr>
<th>Required:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BAS 160</strong></td>
<td>Introduction to Business</td>
</tr>
<tr>
<td><strong>INDT 220</strong></td>
<td>Introduction to Industrial Psychology</td>
</tr>
<tr>
<td><strong>ENV 101</strong></td>
<td>Fundamentals of Environment Science</td>
</tr>
<tr>
<td><strong>ENV 131</strong></td>
<td>Environment Management</td>
</tr>
<tr>
<td><strong>INDT 250</strong></td>
<td>Team Dynamics &amp; Problem - Solving</td>
</tr>
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</table>

**Total Credits** 30

### Leadership - 5202013199
*(Offered at ASC, BGT, BSC, ELC, GTW, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)*

**Available Completely Online**

**Required:**
- **BAS 288** Personal and Organizational Leadership
- **BAS 160** Introduction to Business
- **ECO 101** Contemporary Economic Issues OR
- **ECO 201** Principles of Microeconomics OR
- **ECO 202** Principles of Macroeconomics
- **COM 181** Basic Public Speaking OR
- **COM 252** Introduction to Interpersonal Communication

**Total Credits** 12

### Management - 5202013209
*(Offered at ASC, BGT, BSC, ELC, GTW, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)*

**Available Completely Online**

**Required:**
- **BAS 283** Principles of Management
- **BAS 212** Introduction to Financial Management OR
- **QMS 101** Introduction to Quality Systems OR
- **BAS 284** Applied Management Skills

Choose 6 hours from the following Technical Courses.
Students may select other courses as approved by the Business Administration Systems Program Coordinator.

<table>
<thead>
<tr>
<th>Required:</th>
<th></th>
</tr>
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<tbody>
<tr>
<td><strong>ACT 277</strong></td>
<td>Managerial Accounting Topics</td>
</tr>
<tr>
<td><strong>BAS 200</strong></td>
<td>Small Business Management</td>
</tr>
<tr>
<td><strong>BAS 256</strong></td>
<td>International Business</td>
</tr>
<tr>
<td><strong>BAS 260</strong></td>
<td>Professional Development &amp; Protocol</td>
</tr>
<tr>
<td><strong>BAS 274</strong></td>
<td>Human Resource Management</td>
</tr>
<tr>
<td><strong>BAS 285</strong></td>
<td>Problems in Marketing &amp; Management</td>
</tr>
<tr>
<td><strong>BAS 287</strong></td>
<td>Supervisory Management</td>
</tr>
<tr>
<td><strong>BAS 288</strong></td>
<td>Person &amp; Organizational Leadership</td>
</tr>
<tr>
<td><strong>BAS 289</strong></td>
<td>Operations Management</td>
</tr>
<tr>
<td><strong>BAS 290</strong></td>
<td>Management, Ethics &amp; Society</td>
</tr>
<tr>
<td><strong>BAS 291</strong></td>
<td>Retail Management</td>
</tr>
<tr>
<td><strong>BAS 299</strong></td>
<td>Selected Topics in Management: (TrackTopic)</td>
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</tbody>
</table>
Office Systems - 5202013219
(Offered at BSC, GTW, HEC, HZC, MDC, SEC, SMC)

Required:
OST 275 Office Management .................................................. 3
QMS 101 Introduction to Quality Systems .................................. 3
QMS 202 Performance Management ...................................... 3
Total Credit Hours 15

Choose 6 hours from the following Technical Courses.
Students may select other courses as approved by the Business Administration Systems Program Coordinator.

OST 190 Transcription and Office Technology ......................... 3
OST 160 Records and Database Management ..................... 3
OST 216 Selected Topics in Office Systems (Topic) .......... 1-3
OST 225 Business Communications Technology ...................... 3
OST 295 Office Systems Technology Internship OR (1-3)
COE 199 Cooperative Education: (Business/Technology) OR (1-3)
BAS 280 Business Internship .................................................. 3
OST 275 Office Management .................................................. 3
Total Credits 18

Operations Management - 5202013369
(Offered at GTW, HPC, MYC, SEC, WKC)

Required:
BAS 160 Introduction to Business .................................................. 3
BAS 287 Supervisory Management OR ....................................... 3
BAS 288 Personal & Organizational Leadership OR ............. (3)
QMS 101 Introduction to Quality Systems (Topic) .......... (3)
BAS 289 Operations Management OR .............................................. 3
MFG 256 Production Management .............................................. (3)
COM 181 Basic Public Speaking OR ........................................... 3
COM 252 Introduction to Interpersonal Skills ....................... (3)
Total Credits 12

Payroll Accounting Specialist - 5202013439
(Offered at ASC, BGT, BSC, SEC, MDC, MYC, OWC, WKC)

Required:
ACC 201 Financial Accounting OR .............................................. 3
ACT 101 Fundamentals of Accounting I AND ......................... (3)
ACT 102 Fundamentals of Accounting II ...................................... (3)
ACT 196 Payroll Accounting .................................................. 3
ACT 279 Computerized Accounting Systems .................. 3
Total Credits 9-12

Pre-Licensing Real Estate - 5202013239
(Offered at ASC, BGT, ELC, MDC, MYC, OWC, SEC, SMC, WKC)

Required:
REA 100 Real Estate Principles I .................................................. 3
Choose 3 hours from the following Technical Courses.
Students may select other courses as approved by the Business Administration Systems Program Coordinator.

REA 120 Real Estate Marketing .................................................. 3
REA 200 Real Estate Principles II .................................................. 3
REA 225 Real Estate Finance .................................................. 3
REA 230 Real Estate Law .................................................. 3
Total Credits 6

Quality Management - 5202013229
(Offered at BSC, OWC, SEC, SMC)

Required:
QMS 101 Introduction to Quality Systems .................................. 3
QMS 240 Statistics for Quality I .................................................. 3
QMS 201 Customer Service Improvement Skills .................... 3
QMS 202 Performance Management ...................................... 3
MAT 150 College Algebra .................................................. 3
Total Credits 15

Residential Real Estate - 5202013249
(Offered at BSC, ELC, MDC, MYC, OWC, SMC, WKC)

Required:
REA 100 Real Estate Principles I .................................................. 3
REA 120 Real Estate Marketing .................................................. 3
Choose 6 hours from the following Approved Technical Courses.

REA 121 Appraising ............................................................ 3
REA 122 Construction and Blueprints ...................................... 3
REA 200 Real Estate Principles II .................................................. 3
REA 201 Property Management .................................................. 3
REA 225 Real Estate Finance .................................................. 3
REA 230 Real Estate Law .................................................. 3
Total Credits 12

Sales - 5202013259
(Offered at BSC, GTY, MC, OWC, SEC, SMC, WKC)

Required:
BAS 155 Personal Selling .................................................. 3
COM 181 Basic Public Speaking OR ........................................... 3
COM 252 Introduction to Interpersonal Communication ........... (3)
Choose 6 hours from the following Technical Courses.
Students may select other courses as approved by the Business Administration Systems Program Coordinator.

BAS 291 Retail Management .................................................. 3
IT 132 Web Page Development .................................................. 3
QMS 201 Customer Service Improvement Skills .................... 3
BAS 260 Professional Development and Protocol ................... 2
COE 199 Cooperative Education OR .............................................. 1-3
BAS 280 Business Internship .................................................. (1-3)
Total Credits 12

Small Business Management - 5202013269
(Offered at ASC, BGT, ELC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)
Available Completely Online

Required:
BAS 160 Introduction to Business OR .................................................. 3
BAS 170 Entrepreneurship .................................................. 3
BAS 200 Small Business Management ...................................... 3
BAS 212 Introduction to Financial Management OR ............. 3
QMS 101 Introduction to Quality Systems OR ......................... 3
Choose 3 hours from the following General Education Courses.

BAS 282 Principles of Marketing .................................................. 3
ACC 201 Financial Accounting OR .............................................. 3
ACT 177 Entrepreneurial Accounting OR ...................................... (3)
ACT 101 Fundamentals of Accounting I AND ......................... (3)
ACT 102 Fundamentals of Accounting II ...................................... (3)
Total Credits 15-18
Supervisory Management - 5202013279

(Offered at ASC, BGT, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OW, SEC, SMC, WKC)

Available Completely Online

Required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 100</td>
<td>Introduction to Computers/Networks</td>
<td>3</td>
</tr>
<tr>
<td>OST 225</td>
<td>Business Communication Technology</td>
<td>3</td>
</tr>
<tr>
<td>BAS 160</td>
<td>Business Administration &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS 287</td>
<td>Business Administration &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS 274</td>
<td>Business Communication Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose 6 hours from the following Technical Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS 283</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS 288</td>
<td>Personal &amp; Organizational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>BAS 290</td>
<td>Management, Ethics &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>OST 275</td>
<td>Office Management</td>
<td>3</td>
</tr>
<tr>
<td>QMS 101</td>
<td>Quality Management Systems</td>
<td>3</td>
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</tbody>
</table>

Total Credits 21

Team Leadership - 5202013309

(Offered at BGT, BSC, ELC, JFC, MDC, MYC, OW, SEC, WKC)

Available Completely Online

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OST 105</td>
<td>Introduction to Information Systems OR</td>
<td>3</td>
</tr>
<tr>
<td>CIS 100</td>
<td>Introduction to Computer Systems OR</td>
<td>(3)</td>
</tr>
<tr>
<td>OST 235</td>
<td>Business Communication Technology OR</td>
<td>3</td>
</tr>
<tr>
<td>COM 181</td>
<td>Basic Public Speaking OR</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 252</td>
<td>Interpersonal Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>BAS 287</td>
<td>Business Administration &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS 288</td>
<td>Personal &amp; Organizational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>BAS 290</td>
<td>Management, Ethics &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>QMS 101</td>
<td>Quality Management Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 18

Medical Information Technology

Medical Information Technology graduates prepare medical records and reports, maintain paper and electronic files, order supplies, perform accounting procedures, work with medical insurance and coding, and receive patients in a variety of health care settings. Some of the degree tracks include Medical Administrative Assistant, Medical Insurance Cod-er, and Electronic Medical Records. Students enrolled in the degree or diploma programs are required to do an internship or capstone course upon achievement of a grade of “C” or better in each course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Associate in Applied Science

Medical Information Technology - 5107167019

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, MDC, MYC, SEC, SMC, WKC)

General Education:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 105</td>
<td>Math for Business OR</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Applied Mathematics OR</td>
<td>(3)</td>
</tr>
<tr>
<td>MAT 150</td>
<td>College Algebra OR</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 101</td>
<td>Basic Anatomy and Physiology with Laboratory**</td>
<td>4</td>
</tr>
<tr>
<td>BIO 135</td>
<td>Oral Communications</td>
<td>3</td>
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<tr>
<td></td>
<td>Heritage/ Humanities</td>
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<td></td>
<td>Social/ Behavioral Sciences</td>
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Subtotal 19

**Students can fulfill the Biology requirement with both BIO 137 and BIO 138.

Technical Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>OST 110</td>
<td>Document Formatting and Word Processing</td>
<td>3</td>
</tr>
<tr>
<td>MIT 230</td>
<td>Medical Information Management</td>
<td>3</td>
</tr>
<tr>
<td>OST 240</td>
<td>Software Integration</td>
<td>3</td>
</tr>
<tr>
<td>MIT 103</td>
<td>Medical Office Terminology OR</td>
<td>(3)</td>
</tr>
<tr>
<td>AHS 115</td>
<td>Medical Terminology OR</td>
<td>(3)</td>
</tr>
<tr>
<td>CLA 131</td>
<td>Medical Terminology from Greek and Latin</td>
<td>(3)</td>
</tr>
<tr>
<td>MIT 104</td>
<td>Medical Insurance</td>
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<tr>
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<tr>
<td>MIT 217</td>
<td>Medical Office Procedures</td>
<td>3</td>
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<tr>
<td>MIT 227</td>
<td>Medical Office Software</td>
<td>3</td>
</tr>
<tr>
<td>MIT 228</td>
<td>Electronic Medical Records</td>
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<tr>
<td>MIT 295</td>
<td>Medical Information Technology Capstone</td>
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<td></td>
<td><strong>Medical Administrative Track - 510716705</strong></td>
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<tr>
<td></td>
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<tr>
<td></td>
<td><em>(Available Completely Online)</em></td>
<td></td>
</tr>
<tr>
<td>ACT 101</td>
<td>Fundamentals of Accounting 1 OR</td>
<td>3</td>
</tr>
<tr>
<td>ACC 201</td>
<td>Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>MIT 204</td>
<td>Medical Coding</td>
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<tr>
<td>MIT 205</td>
<td>Advanced Medical Coding</td>
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<tr>
<td>OST 235</td>
<td>Business Communications Technology</td>
<td>3</td>
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<tr>
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<td><strong>Subtotal</strong></td>
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<td><strong>Total</strong></td>
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<td><strong>Medical Coding Track - 510716706</strong></td>
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<tr>
<td></td>
<td><em>(Available Completely Online)</em></td>
<td></td>
</tr>
<tr>
<td>ACT 101</td>
<td>Fundamentals of Accounting 1 OR</td>
<td>3</td>
</tr>
<tr>
<td>ACC 201</td>
<td>Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>MIT 204</td>
<td>Medical Coding</td>
<td>3</td>
</tr>
<tr>
<td>MIT 205</td>
<td>Advanced Medical Coding</td>
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<tr>
<td>MIT 206</td>
<td>Business Communication Technology</td>
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<td>Course Approved by Program Coordinator</td>
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<td></td>
<td><strong>Subtotal</strong></td>
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<td><strong>Total</strong></td>
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<tr>
<td></td>
<td><strong>Electronic Medical Records Track - 510716707</strong></td>
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<td><em>(Offered at ASC, BLC, BSC, ELC, HPC, HZC, MDC, MYC, SMC, WKC)</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>(Available Completely Online)</em></td>
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</tr>
<tr>
<td>ACT 101</td>
<td>Fundamentals of Accounting 1 OR</td>
<td>3</td>
</tr>
<tr>
<td>ACC 201</td>
<td>Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>OST 210</td>
<td>Introduction to Word Processing Application</td>
<td>3</td>
</tr>
<tr>
<td>IT 170</td>
<td>Introduction to Database Design</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Courses Approved by Program Coordinator</td>
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<tr>
<td></td>
<td><strong>Subtotal</strong></td>
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<td><strong>Total</strong></td>
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<td></td>
<td><strong>Medical Office Management Track – 510716709</strong></td>
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<td><em>(Offered at ASC, BLC, BSC, ELC, HPC, MDC, MYC, WKC)</em></td>
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<tr>
<td></td>
<td><em>(Available Completely Online)</em></td>
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</tr>
<tr>
<td>ACT 101</td>
<td>Fundamentals of Accounting 1 OR</td>
<td>3</td>
</tr>
<tr>
<td>ACC 201</td>
<td>Financial Accounting I</td>
<td>3</td>
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<tr>
<td>OST 225</td>
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<tr>
<td>BAS 160</td>
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<td></td>
<td><em>(Available Completely Online)</em></td>
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<td>MIT 206</td>
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<td>OST 210</td>
<td>Advanced Word Processing Application</td>
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<td>OST 235</td>
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### Diplomas

**Medical Administrative Assistant - 5107164019**

*(Offered at ASC, BGT, BLC, BSC, ELC, HZC, JFC, MDC, MYC, SMC, WKC)*

*(Available Completely Online)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 135</td>
<td>Basic Anatomy and Physiology with Laboratory**</td>
<td>4</td>
</tr>
<tr>
<td>OST 108</td>
<td>Editing Skills for Office Professionals OR</td>
<td>3</td>
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<td>ENG 101</td>
<td>Writing I</td>
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### Technical or Support Courses

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<tr>
<td>OST 213</td>
<td>Business Calculation for Office Professionals OR</td>
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<tr>
<td>MAT 105</td>
<td>Business Mathematics OR</td>
<td>3</td>
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<td><strong>Higher Quantitative Reasoning course</strong></td>
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<td>MIT 230</td>
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<td>MIT 210</td>
<td>Advanced Word Processing Application</td>
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<td>MIT 240</td>
<td>Software Integration</td>
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<td>MIT 103</td>
<td>Medical Office Terminology OR</td>
<td>3</td>
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<tr>
<td>AHS 115</td>
<td>Medical Terminology OR</td>
<td>3</td>
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<tr>
<td>CLA 131</td>
<td>Medical Terminology from Greek &amp; Latin</td>
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<tr>
<td>MIT 295</td>
<td>Medical Information Technology Capstone</td>
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<tr>
<td>MIT 104</td>
<td>Medical Insurance</td>
<td>3</td>
</tr>
<tr>
<td>MIT 217</td>
<td>Medical Office Procedures</td>
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<tr>
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<td>Medical Office Software</td>
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<td>MIT 228</td>
<td>Computer/ Digital Literacy</td>
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**Medical Records Specialist - 5107164069**

*(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, SMC, WKC)*

*(Available Completely Online)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td><strong>Students can fulfill the Biology requirement with both BIO 137 and BIO 139.</strong></td>
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### Technical or Support Courses

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<th>Credits</th>
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<td>OST 235</td>
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<td>AHS 115</td>
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<td>Medical Terminology from Greek &amp; Latin</td>
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<td>Medical Information Technology Capstone</td>
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<td>MIT 104</td>
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<td>MIT 217</td>
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Certificates

#### Medical Unit Coordinator - 5107163019
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, MDC, MYC, OWC, SEC, SMC, WKC)

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<td>OST 108</td>
<td>Editing Skills for Office Professionals OR</td>
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<td>ENG 101</td>
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**Total**: 31

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#### Hospital Admissions Specialist - 5107163029
(Offered at ASC, BGT, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

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<td>MIT 103</td>
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**Total**: 30

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#### Medical Receptionist - 5107163049
(Offered at ASC, BGT, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

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**Total**: 18

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#### Medical Coding - 5107163079
(Offered by ASC, BGT, BLC, BSC, HPC, MDC, MYC, WKC)

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<tr>
<td>BIO 135</td>
<td>Basic Anatomy and Physiology with Laboratory**</td>
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<td>AHS 115</td>
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<td>(3)</td>
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<td>CLA 131</td>
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**Total**: 19

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#### Medical Transcriptionist - 5107163089
(Offered by BGT, BLC, BSC, MDC, MYC, WKC)

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<th>Credits</th>
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<td>ENG 101</td>
<td>Writing I</td>
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<td>OST 110</td>
<td>Document Formatting and Word Processing</td>
<td>3</td>
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<tr>
<td>MIT 103</td>
<td>Medical Office Terminology OR</td>
<td>3</td>
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<td>AHS 115</td>
<td>Medical Terminology OR</td>
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<td>CLA 131</td>
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<tr>
<td>MIT 106</td>
<td>Introduction to Medical Transcription</td>
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<td>MIT 206</td>
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**Total**: 24

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#### Electronic Health Records Specialist - 5107163069
(Offered by ASC, HPC)

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<th>Credits</th>
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<td>Medical Insurance</td>
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<tr>
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<td>Computer/Digital Literacy</td>
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**Total**: 30

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### Office Systems Technology

The Office Systems Technology program is an integrated curriculum which prepares graduates at the certificate, diploma, and associate degree level. The Office Systems Technology program prepares students to work in an office environment of people, process, and technologies. Job titles may include Administrative Assistant, Office Assistant, Office Manager, and Financial Assistant. These personnel use a variety of office technology and computer-based applications (word processing, electronic mail, desktop publishing, graphics, database, and spreadsheet). They support and help facilitate accurate communication and information exchange to internal and external customers on a timely basis. Technical courses combined with general education courses prepare students for today’s workforce and provide a basis for lifelong learning, a necessity for the workforce of the future. Students select an area of specialty from the following tracks: financial assistant, administrative, desktop publishing, and legal. Program graduates are employed in professional office, education, government, businesses, and industries. Graduates may choose to sit for the Certified Professional Secretary Examination or Certified Administrative Professional Examination or Microsoft Office Specialist Certifications.

Students entering this program will need to have basic computer skills and keyboarding skills. (Refer to Technical Standards for Office Systems Technology Program).
Associate in Applied Science
Office Systems Technology – 5204027039

(Offered at ASC, BGT, BLC, EIC, HPC, HPC, JFC, MYC, OWC, SEC, SMW, WKC)

<table>
<thead>
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<th>Course Title</th>
<th>Credit Hours</th>
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<td>ENG 101</td>
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<tr>
<td>MAT 105</td>
<td>Business Mathematics OR</td>
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</tr>
<tr>
<td>MAT 110</td>
<td>Applied Mathematics OR</td>
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General Education:
- Higher Level Quantitative Reasoning Course: 3
- Heritage Humanities: 3
- Oral Communications Course: 3
- Natural Sciences Course: 3-4
- Social/Behavioral Sciences Course**: 3

Choose three courses (9 credit hours) from the following list:

- OST 225 Introduction to Desktop Publishing: 3
- OST 220 Administrative Office Simulation: 3
- MAT 100 Business Calculations for the Office Professional: 3
- BAS 120 Personal Finance: 3
- OEC 199 Office Systems Technology Internship: 3

Technical Core Credit Hours: 18-19

**Association of Collegiate Business Schools and Programs (ACBSP) accredited colleges must require Economics.

Administrative Track - 520402701

(Offered at ASC, BGT, BLC, EIC, HPC, JFC, MYC, OWC, SEC, SMW, WKC)

<table>
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<th>Course Title</th>
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<td>OST 220</td>
<td>Administrative Office Simulation</td>
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</table>

Choose three courses (9 credit hours) from the following list:

- BAS 256 Introduction to Business: 3
- ENG 102 Writing II: 3
- BAS 120 Personal Finance: 3
- OST 150 Introduction to Business Graphics: 3
- OEC 199 Office Systems Technology Internship: 3

Total Administrative Track Credit Hours: 18

Total Credit Hours OST AAS: 52-53

Desktop Publishing Track - 520402704

(Offered at BLC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<td>OST 215</td>
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<td>OST 225</td>
<td>Introduction to Desktop Publishing</td>
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<td>OST 250</td>
<td>Advanced Desktop Publishing</td>
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Choose three courses (8-9 hours) from the following list:

- BAS 160 Introduction to Business: 3
- ENG 102 Writing II: 3
- BAS 120 Personal Finance: 3

Total Desktop Publishing Track Credit Hours: 20-21

Total Credit Hours OST AAS: 62-64

Financial Assistant Track - 520402703

(Offered at BLC, WKC)

<table>
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<th>Credit Hours</th>
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<td>ACT 279</td>
<td>Computerized Accounting Systems</td>
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Choose three courses (9 hours) from the following list:

- OST 112 Financial Management: 3
- BAS 160 Introduction to Business: 3
- OST 225 Introduction to Desktop Publishing: 3
- BAS 120 Personal Finance: 3
- OST 213 Business Calculations for the Office Professional: 3
- OST 272 Presentation Graphics: 3
- ENG 102 Writing II: 3
- OST 295 Office Systems Technology Internship: 3

Total Financial Assistant Track Credit Hours: 18

Total Credit Hours OST AAS: 52-53

Legal Administrative Track - 520402705

(Offered at BLC, WKC)

<table>
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<th>Credit Hours</th>
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<td>ACT 101</td>
<td>Fundamentals of Accounting I OR</td>
<td>3</td>
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<tr>
<td>BAS 267</td>
<td>Introduction to Business Law</td>
<td>3</td>
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<tr>
<td>OST 109</td>
<td>Legal Terminology</td>
<td>3</td>
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<tr>
<td>OST 221</td>
<td>Legal Office Simulations</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Legal Administrative Assistant Track Credit Hours: 18

Total Credit Hours OST AAS: 60-61

Diplomas

Administrative Assistant - 5204024019

(Offered at ASC, BGT, BLC, EIC, HPC, JFC, MYC, OWC, SEC, SMW, WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ENG 101</td>
<td>Writing I</td>
<td>3</td>
</tr>
<tr>
<td>OST 213</td>
<td>Business Calculations for the Office Professional</td>
<td>3</td>
</tr>
<tr>
<td>MAT 105</td>
<td>Higher Level Quantitative Reasoning Course**</td>
<td>3</td>
</tr>
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</table>

Total General Education: 6

Technical Courses:
- OST 105 Introduction to Information Systems: 3
- ACT 101 Fundamentals of Accounting I OR: 3
- OST 110 Document Formatting and Word Processing: 3
- OST 160 Records and Database Management: 3
- BAS 120 Personal Finance: 3
- OST 255 Business Communications Technology: 3
- OST 240 Software Integration: 3

Choose three courses (8-9 hours) from the following list:

- BAS 160 Introduction to Business: 3
- ENG 102 Writing II: 3
- BAS 120 Personal Finance: 3

Total Diplomas: 60-61
Desktop Publishing Specialist - 5204024029

(Offered at BLC)

Available Completely Online

General Education

OST 108 Editing Skills for the Office Professional OR 3
ENG 101 Writing I 3
OST 213 Business Calculations for the Office Professional OR 3
MAT 105 Business Mathematics OR 3
Higher Level Quantitative Reasoning Course 3

Total General Education 6

Technical Courses

OST 105 Introduction to Information Systems 3
OST 110 Document Formatting and Word Processing 3
OST 130 Typography 3
OST 160 Records and Database Management 3
OST 210 Advanced Word Processing Applications 3
OST 215 Office Procedures 3
OST 225 Introduction to Desktop Publishing 3
OST 235 Business Communication Technology 3
OST 240 Software Integration 3
OST 250 Advanced Desktop Publishing 3
OST 255 Introduction to Business Graphics 3
OST 272 Presentation Graphics 3
OST 295 Office Systems Technology Internship OR 3
COE 199 Cooperative Education 2-3

Total Technical Hours 38-39

Total Credit Hours 44-45

Financial Assistant - 5204024049

(Offered at BGT, BLC, BSC, ELC, JFC, SMC, WKC)

Available Completely Online

General Education

OST 108 Editing Skills for the Office Professional OR 3
ENG 101 Writing I 3
OST 213 Business Calculations for the Office Professional OR 3
MAT 105 Business Mathematics OR 3
Higher Level Quantitative Reasoning Course 3

Total General Education 6

Technical Courses

OST 105 Introduction to Information Systems 3
ACT 101 Fundamentals of Accounting I OR 3
OST 160 Records and Database Management 3
OST 210 Advanced Computer Accounting 3
OST 220 Administrative Office Simulation OR 3
OST 295 Office Systems Technology Internship OR 3
COE 199 Cooperative Education 2-3

Total Technical Hours 38-39

Total Credit Hours 44-45

Legal Office Assistant - 5204024059

(Offered at BLC, WKC)

General Education

OST 108 Editing Skills for the Office Professional OR 3
ENG 101 Writing I 3
OST 213 Business Calculations for the Office Professional OR 3
Higher Level Quantitative Reasoning Course 3

Total General Education 6

Technical Courses

OST 105 Introduction to Information Systems 3
ACT 101 Fundamentals of Accounting I OR 3
OST 150 Transcription and Office Technology 3
OST 160 Records and Database Management 3
OST 215 Office Procedures 3
OST 250 Advanced Desktop Publishing 3
OST 295 Office Systems Technology Internship OR 3
COE 199 Cooperative Education 3

Total Technical Hours 33

Total Credit Hours 39

Office Assistant - 5204024039

(Offered at ASC, BGT, BLC, BSC, ELC, JFC, MYC, SEC, SMC, WKC)

Available Completely Online

General Education

OST 108 Editing Skills for the Office Professional OR 3
ENG 101 Writing I 3
OST 213 Business Calculations for the Office Professional OR 3
MAT 105 Business Mathematics OR 3
Higher Level Quantitative Reasoning Course 3

Total General Education 6

Technical Courses

OST 105 Introduction to Information Systems 3
OST 110 Document Formatting and Word Processing 3
OST 160 Records and Database Management 3
OST 210 Advanced Word Processing Applications 3
OST 215 Office Procedures 3
OST 235 Business Communication Technology 3
OST 240 Software Integration 3

Choose three courses (9 hours) from the following:

BAS 160 Introduction to Business 3
ENG 102 Writing II 3
BAS 255 Introduction to Business Graphics 3
BAS 120  Personal Finance ......................................................... 3
OST 255  Introduction to Business Graphics ............................... 3
OST 150  Transcription and Office Technology ............................... 3
OST 108  Editing Skills for the Office Professional ............................. 3
OST 272  Presentation Graphics ................................................. 3
OST 250  Advanced Desktop Publishing ....................................... 3
OST 295  Office Systems Technology Internship OR.......................... 3
COE 199  Cooperative Education ................................................ (3)

Total Technical Hours 30

Total Credit Hours 36

Certificates

Administrative - 5204023039
(Offered at ASC, BGT, BLC, HPC, JFC, MYC, OWC, SEC, SMC, WKC)
Available Completely Online
OST 108  Editing Skills for the Office Professional OR ..................... 3
ENG 101  Writing I .................................................................. (3)
OST 105  Introduction to Information Systems ................................. 3
OST 213  Business Calculations for the Office Professional OR .......... 3
MAT 105  Business Mathematics OR ............................................ 3
OST 110  Document Formatting and Word Processing ....................... 3
OST 215  Office Procedures ....................................................... 3
OST 240  Software Integration ..................................................... 3
OST 235  Business Communications Technology ............................ 3
OST 160  Records and Database Management ................................. 3
ACT 101  Fundamentals of Accounting I OR ................................... 3
OST 150  Transcription and Office Technology ............................... 3

Total Credit Hours 30

Basic Business Presentation - 5204023119
(Offered at BLC, SEC, SMC, WKC)
Available Completely Online
OST 105  Introduction to Information Systems ................................. 3
OST 108  Editing Skills for the Office Professional OR ..................... 3
ENG 101  Writing I .................................................................. (3)
OST 225  Introduction to Desktop Publishing .................................. 3
OST 255  Introduction to Business Graphics .................................... 3
OST 272  Presentation Graphics ................................................... 3

Total Credit Hours 15

Data Entry Operator - 5204023079
(Offered at ASC, BGT, BLC, BSC, ELC, HPC, JFC, MYC, OWC, SEC, SMC, WKC)
Available Completely Online
OST 105  Introduction to Information Systems ................................. 3
OST 110  Document Formatting and Word Processing ....................... 3

Total Credit Hours 6

Desktop Publishing - 5204023099
(Offered at BLC, BSC, SEC, SMC, WKC)
Available Completely Online
ENG 101  Writing I OR .............................................................. 3
OST 108  Editing Skills for the Office Professional OR ..................... 3
OST 213  Business Calculations for the Office Professional OR .......... 3
MAT 105  Business Mathematics OR ............................................ 3
OST 105  Introduction to Information Systems ................................. 3
OST 110  Document Formatting and Word Processing ....................... 3
OST 225  Introduction to Desktop Publishing .................................. 3
OST 255  Introduction to Business Graphics .................................... 3
OST 272  Presentation Graphics ................................................... 3

Total Credit Hours 27

Financial Assistant Clerk - 5204023129
(Offered at BGT, BLC, BSC, HPC, JFC, OWC, SEC, SMC, WKC)
Available Completely Online
OST 105  Introduction to Information Systems ................................. 3
ACT 101  Fundamentals of Accounting I OR ................................... 3
OST 213  Business Calculations for the Office Professional OR .......... 3
ENG 101  Writing I .................................................................. (3)
OST 110  Document Formatting and Word Processing ....................... 3
OST 213  Business Calculations for the Office Professional OR .......... 3
MAT 105  Business Mathematics OR ............................................ 3

Total Credit Hours 18

Financial Assistant Trainee - 5204023139
(Offered at BGT, BLC, BSC, HPC, JFC, OWC, SEC, SMC, WKC)
Available Completely Online
OST 105  Introduction to Information Systems ................................. 3
ACT 101  Fundamentals of Accounting I OR ................................... 3
OST 110  Document Formatting and Word Processing ....................... 3
OST 213  Business Calculations for the Office Professional OR .......... 3
MAT 105  Business Mathematics OR ............................................ 3

Total Credit Hours 12

Financial Record Keeper - 5204023069
(Offered at BGT, BLC, BSC, JFC, OWC, SEC, SMC, WKC)
Available Completely Online
OST 105  Introduction to Information Systems ................................. 3

Total Credit Hours 21

Integrated Office Skills - 5204023059
(Offered at ASC, BGT, BLC, BSC, ELC, HPC, JFC, OWC, SEC, SMC, WKC)
Available Completely Online
ENG 108  Editing Skills for the Office Professional OR ..................... 3
OST 105  Introduction to Information Systems ................................. 3
OST 108  Editing Skills for the Office Professional OR ..................... 3
OST 213  Business Calculations for the Office Professional OR .......... 3
OST 210  Advanced Word Processing Applications .......................... 3
OST 240  Software Integration ..................................................... 3

Total Credit Hours 21

Legal Receptionist - 5204023149
(Offered at BLC, MYC, SEC, WKC)
Available Completely Online
OST 105  Introduction to Information Systems ................................. 3
ENG 108  Editing Skills for the Office Professional OR ..................... 3
ENG 101  Writing I .................................................................. (3)
OST 110  Document Formatting and Word Processing ....................... 3

Total Credit Hours 3
### Receptionist - 5204023089
*(Offered at ASC, BGT, BLC, BSC, ELC, HPC, JFC, MYC, OWC, SEC, SMC, WKC)*

Available Completely Online

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<tr>
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<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>OST 105</td>
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<tr>
<td>OST 108</td>
<td>Editing Skills for the Office Professional OR</td>
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</tr>
<tr>
<td>ENG 101</td>
<td>Legal Terminology</td>
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<tr>
<td>ENG 102</td>
<td>Legal Terminology</td>
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<tr>
<td>ENG 150</td>
<td>Legal Terminology</td>
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<td>OST 110</td>
<td>Records and Database Management</td>
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### Business Management and Marketing

The Business Management and Marketing program prepares students for a variety of careers in business. A core curriculum provides students with a foundation of knowledge applicable to any business career. The curriculum is designed for those who seek entry-level jobs, as well as for currently employed individuals wishing to enhance their skills. A student specializes by choosing from one of the following tracks: The Management Track prepares the student with a broad-based management knowledge and skills, which lead to a variety of positions in organizations. The Marketing and Retailing Track leads to employment in sales, merchandise management, buying department supervising or retail management. The Real Estate Management Track leads to a career in real estate, which may include sales, finance, counseling, development, market analysis, valuation, and/or property management. The Equine Management Track provides the knowledge and skills students need to take advantage of various employment opportunities within the horse industry. All students must complete the computer/digital literacy requirement as defined by KCTCS before graduating.

### Associate in Applied Science

#### Business Management and Marketing Core - 5202017139
*(Offered at BLC)*

<table>
<thead>
<tr>
<th>General Education</th>
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<tbody>
<tr>
<td>COM 181</td>
<td>Basic Public Speaking OR</td>
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<tr>
<td>COM 252</td>
<td>Introduction to Interpersonal Communications</td>
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<tr>
<td>ENG 101</td>
<td>Writing I</td>
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<tr>
<td>ENG 102</td>
<td>Writing II</td>
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<tr>
<td>ENG 203</td>
<td>Business Writing</td>
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<td>Principles of Microeconomics</td>
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<td>College Algebra or Higher*</td>
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<td>Heritage/Humanities*</td>
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<td>Natural Sciences Course*</td>
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*Satisfies General Education requirement for AAS degree*

#### Technical Core

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<tr>
<td>MGT 101</td>
<td>Quality Management Principles</td>
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</tr>
<tr>
<td>MGT 160</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT 240</td>
<td>Business Ethics and Self Management</td>
<td>3</td>
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<tr>
<td>MKT 282</td>
<td>Principles of Marketing</td>
<td>3</td>
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<td>MGT 283</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>ACC 201</td>
<td>Financial Accounting</td>
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<tr>
<td>ACC 202</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>CIT 130</td>
<td>Productivity Software OR</td>
<td>3</td>
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<tr>
<td>IMD 210</td>
<td>Integrated Information Processing OR</td>
<td>(3)</td>
</tr>
<tr>
<td>OST 240</td>
<td>Software Integration OR</td>
<td>(3)</td>
</tr>
<tr>
<td>MA 123</td>
<td>Elementary Calculus</td>
<td>3</td>
</tr>
<tr>
<td>STA 291</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSY 110</td>
<td>General Psychology OR</td>
<td></td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology</td>
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**Core Subtotal** | **48** |

### Management Track - 520201711
*(Offered at BLC)*

**Required:**

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<th>Course Code</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>MGT 200</td>
<td>Small Business Management OR</td>
<td>3</td>
</tr>
<tr>
<td>MGT 256</td>
<td>Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 274</td>
<td>Human Resource Management OR</td>
<td>3</td>
</tr>
<tr>
<td>MGT 287</td>
<td>Supervisory Management</td>
<td>3</td>
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<tr>
<td>MGT 284</td>
<td>Applied Management Skills</td>
<td>3</td>
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<tr>
<td>MGT 267</td>
<td>Introduction to Business Law</td>
<td>3</td>
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<tr>
<td><strong>Choose a total of 6 hours from the following:</strong></td>
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<tr>
<td>MGT 120</td>
<td>Personal Finance</td>
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<tr>
<td>MGT 200</td>
<td>Small Business Management OR</td>
<td>3</td>
</tr>
<tr>
<td>MGT 256</td>
<td>Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 258</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 274</td>
<td>Human Resource Management OR</td>
<td>3</td>
</tr>
<tr>
<td>MGT 287</td>
<td>Supervisory Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 288</td>
<td>Self Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 155</td>
<td>Personal Selling</td>
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<tr>
<td>MKT 290</td>
<td>Advertising and Promotion</td>
<td>3</td>
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<tr>
<td>MKT 291</td>
<td>Retail Management</td>
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<tr>
<td>MKT 293</td>
<td>Buying and Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>MKT 295</td>
<td>Selected Topics in Management: (Track Topic)</td>
<td>1-3</td>
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<td>MKT 299</td>
<td>Selected Topics in Marketing: (Track Topic)</td>
<td>1-3</td>
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<tr>
<td>IMD 275</td>
<td>Workplace Management</td>
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<td>COE 199</td>
<td>Cooperative Education: Business Technology</td>
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<td>ECO 202</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
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<tr>
<td>REA 100</td>
<td>Real Estate Principles I</td>
<td>3</td>
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<tr>
<td>REA 120</td>
<td>Real Estate Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MA 123</td>
<td>Elementary Calculus</td>
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<td>STA 291</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSY 110</td>
<td>General Psychology OR</td>
<td></td>
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<td>SOC 101</td>
<td>Introduction to Sociology</td>
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</table>

**Total** | **66-67** |

### Marketing and Retailing Track - 520201712
*(Offered at BLC)*

**Required:**

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<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>MKT 155</td>
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<td>MKT 290</td>
<td>Advertising and Promotion</td>
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<td>MKT 291</td>
<td>Retail Management</td>
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<td>MKT 293</td>
<td>Buying and Merchandising</td>
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<td>MGT 267</td>
<td>Introduction to Business Law</td>
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<td><strong>Choose 3 hours from the following:</strong></td>
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<td>MGT 120</td>
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<td>3</td>
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<tr>
<td>MGT 200</td>
<td>Small Business Management OR</td>
<td>3</td>
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<tr>
<td>MGT 256</td>
<td>Operations Management</td>
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<td>MGT 258</td>
<td>Project Management</td>
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<td>MGT 274</td>
<td>Human Resource Management OR</td>
<td>3</td>
</tr>
<tr>
<td>MGT 287</td>
<td>Supervisory Management</td>
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<tr>
<td>MGT 288</td>
<td>Self Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 295</td>
<td>Selected Topics in Management: (Track Topic)</td>
<td>1-3</td>
</tr>
<tr>
<td>IMD 275</td>
<td>Workplace Management</td>
<td>3</td>
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<tr>
<td>COE 199</td>
<td>Cooperative Education: Business Management</td>
<td>1-4</td>
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<td>Principles of Macroeconomics</td>
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**Total** | **66-67** |

### Real Estate Management Track - 520201713
*(Offered at BLC)*

**Required:**

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<th>Course Title</th>
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<td>REA 100</td>
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<tr>
<td>REA 121</td>
<td>Appraising</td>
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<td>REA 225</td>
<td>Real Estate Finance</td>
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<tr>
<td>REA 230</td>
<td>Real Estate Law</td>
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<th>Course</th>
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<td>Productivity Software</td>
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<tr>
<td>ACC 201</td>
<td>Financial Accounting</td>
<td>3</td>
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<tr>
<td>ECO 201</td>
<td>Principles of Microeconomics</td>
<td>3</td>
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<tr>
<td>ACC 201</td>
<td>Financial Accounting</td>
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<tr>
<td>CIT 130</td>
<td>Productivity Software</td>
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<tr>
<td>PSY 110</td>
<td>General Psychology</td>
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Total: 6

Choose 6 hours from the following:

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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<td>CIT 130</td>
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<tr>
<td>ACC 201</td>
<td>Financial Accounting</td>
<td>3</td>
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<tr>
<td>ECO 201</td>
<td>Principles of Microeconomics</td>
<td>3</td>
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<tr>
<td>ACC 201</td>
<td>Financial Accounting</td>
<td>3</td>
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<tr>
<td>CIT 130</td>
<td>Productivity Software</td>
<td>3</td>
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<td>PSY 110</td>
<td>General Psychology</td>
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Total: 6

Choose two (2) from the following:

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<td>ACH 290</td>
<td>Building Codes I</td>
<td>3</td>
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<tr>
<td>ACH 291</td>
<td>Construction Management</td>
<td>3</td>
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<tr>
<td>ACH 292</td>
<td>Building Codes II</td>
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<td>ACH 293</td>
<td>Construction Management</td>
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<td>ACH 294</td>
<td>Specification Writing</td>
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Total: 6

Choose 9 hours from the following:

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<td>ACH 285</td>
<td>Computer-Aided Drafting I</td>
<td>3</td>
</tr>
<tr>
<td>ACH 290</td>
<td>Building Codes I</td>
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<tr>
<td>ACH 291</td>
<td>Construction Management</td>
<td>3</td>
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<td>ACH 292</td>
<td>Building Codes II</td>
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<td>ACH 293</td>
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<td>ACH 294</td>
<td>Specification Writing</td>
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Total: 6

Total: 66

Total: 66

Total: 12

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**Certificates**

Equine Management - 5202013399

(Offered at BLC, HEC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EQM 100</td>
<td>Introduction to Equine Studies</td>
<td>3</td>
</tr>
<tr>
<td>EQM 120</td>
<td>Introduction to Commercial Breeding Practices</td>
<td>3</td>
</tr>
<tr>
<td>EQM 140</td>
<td>Equine Business Management</td>
<td>3</td>
</tr>
<tr>
<td>EQM 240</td>
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<tr>
<td>EQM 242</td>
<td>Equine Law</td>
<td>3</td>
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<tr>
<td>EQM 246</td>
<td>Current Trends in the Equine Industry</td>
<td>1</td>
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<tr>
<td>PSY 110</td>
<td>General Psychology</td>
<td>3</td>
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<tr>
<td>MGT 101</td>
<td>Quality Management Principles</td>
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Total: 24

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Real Estate Pre-Brokerage Management - 5202013409

(Offered at BLC)

<table>
<thead>
<tr>
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<th>Title</th>
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<tbody>
<tr>
<td>REA 100</td>
<td>Real Estate Principles I</td>
<td>3</td>
</tr>
<tr>
<td>REA 220</td>
<td>Brokerage Management</td>
<td>3</td>
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<tr>
<td>REA 230</td>
<td>Real Estate Law</td>
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Total: 9

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<tr>
<td>REA 120</td>
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<td>3</td>
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<tr>
<td>REA 121</td>
<td>Appraising</td>
<td>3</td>
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<td>REA 122</td>
<td>Construction and Blueprints</td>
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<tr>
<td>REA 201</td>
<td>Property Management</td>
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<td>REA 202</td>
<td>Real Estate Investments</td>
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<td>REA 225</td>
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Total: 9

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Equine Management Track - 520201710

(Offered at BLC)

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<tr>
<td>EQM 100</td>
<td>Introduction to Equine Studies</td>
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</tr>
<tr>
<td>EQM 120</td>
<td>Introduction to Commercial Breeding Practices</td>
<td>3</td>
</tr>
<tr>
<td>EQM 140</td>
<td>Equine Business Management</td>
<td>3</td>
</tr>
<tr>
<td>EQM 240</td>
<td>Equine Business Management</td>
<td>2</td>
</tr>
<tr>
<td>EQM 242</td>
<td>Equine Law</td>
<td>3</td>
</tr>
<tr>
<td>EQM 246</td>
<td>Current Trends in the Equine Industry</td>
<td>1</td>
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<tr>
<td>PSY 110</td>
<td>General Psychology</td>
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<tr>
<td>MGT 101</td>
<td>Quality Management Principles</td>
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Total: 66

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Real Estate Pre-Licensing - 5215013029

(Offered at BLC)

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</thead>
<tbody>
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<td>REA 100</td>
<td>Real Estate Principles I</td>
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<tr>
<td>REA 120</td>
<td>Real Estate Marketing</td>
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Total: 6

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Choose two (2) from the following:

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<th>Hours</th>
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<tr>
<td>REA 120</td>
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<td>3</td>
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<tr>
<td>REA 220</td>
<td>Brokerage Management</td>
<td>3</td>
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<tr>
<td>REA 225</td>
<td>Real Estate Finance</td>
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<td>REA 230</td>
<td>Real Estate Law</td>
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Total: 6

Total: 6

Total: 12

---

Civil Engineering Technology

The Civil Engineering Technology program is an Associates of Applied Science program designed to offer students the training necessary to establish careers in civil engineering technology fields. Career options include materials testing, commercial, residential and highway surveying, highway construction management, construction management, construction estimation, construction documentation, construction site design and waste water management.

The Civil Engineering Technology Program will focus on the field tasks and hands on aspects of construction.

---

Associate in Applied Science

Civil Engineering Technology - 1502017019

(Offered at BLC, BSC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>ENG 101</td>
<td>Writing I*</td>
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<tr>
<td>ENG 102</td>
<td>Writing II*</td>
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<tr>
<td>CAD 100</td>
<td>Introduction to Computer Aided Design OR</td>
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<tr>
<td>ACH 185</td>
<td>Computer Aided Drafting I</td>
<td>3</td>
</tr>
<tr>
<td>MA 109</td>
<td>College Algebra*</td>
<td>3</td>
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<tr>
<td>PHY 211</td>
<td>General Physics*</td>
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<td>HER 107</td>
<td>Social/Behavioral Sciences Course*</td>
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Total: 40

Total: 67

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Additional General Education Requirements

Choose 6 hours

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<tr>
<td>PSY 110</td>
<td>General Psychology</td>
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<tr>
<td>ECO 201</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ACC 201</td>
<td>Financial Accounting</td>
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<tr>
<td>CIT 130</td>
<td>Productivity Software</td>
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Total: 6

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Technical Electives**

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<th>Course</th>
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<tr>
<td>ACH 100</td>
<td>Construction Documents I</td>
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<tr>
<td>ACH 150</td>
<td>Construction Documents II</td>
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<tr>
<td>ACH 161</td>
<td>Building Materials and Construction II</td>
<td>3</td>
</tr>
<tr>
<td>ACH 285</td>
<td>Computer Aided Drafting II</td>
<td>3</td>
</tr>
<tr>
<td>ACH 290</td>
<td>Building Codes I</td>
<td>3</td>
</tr>
<tr>
<td>ACH 291</td>
<td>Construction Management</td>
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<tr>
<td>ACH 292</td>
<td>Building Codes II</td>
<td>3</td>
</tr>
<tr>
<td>ACH 294</td>
<td>Specification Writing</td>
<td>3</td>
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Total: 3
Clinical Laboratory Technician

The Clinical Laboratory Technician (CLT) program provides students with the opportunity to acquire the necessary skills to work under the supervision of a registered clinical scientist or pathologist in a clinical laboratory, hospital, or other health agency.

The CLT student learns to collect specimens from the patient and perform laboratory tests in all areas of the clinical laboratory to include immunohematology, clinical chemistry, hematology, microbiology, and urinalysis.

Students enrolled in the CLT program must achieve a minimum grade of "C" in each of the clinical laboratory technician courses.

Upon completion of the program, the graduate is eligible for the national certification examination as a clinical laboratory technician.

The following Associate Degree Clinical Laboratory Technician Programs are fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Address and telephone number of NAACLS are: NAACLS, 5600 North River Road, Suite 720, Rosemont, Illinois 60018 Telephone: 773.714.8880 Fax: 773.714.8886 (Website): http://www.naacs.org (E-mail): info@naaclos.org

Henderson Community College, Madisonville Community College, Somerset Community College, Southeast Kentucky Community and Technical College, and (West Kentucky Community and Technical College - Accreditation Pending).

All program graduates take the national board exam called the Board of Registry of the American Society of Clinical Pathology, after having met their academic and laboratory educational requirements. If successful, graduates may then use the initials "MLT (ASCP)" indicating proficiency in laboratory medicine.

Associate in Applied Science

Clinical Laboratory Technician - 5110047029
(Offered at HEC, JFC, MDC, SEC, SMC, WKC)

General Education Courses:

- ENG 101 Writing I ........................................................................... 3
- MAT 110 Applied Mathematics OR ................................................. 3
- CHE 130 Introductory General and Biological Chemistry OR .......... 4
- PSY 110 General Psychology .......................................................... 3
- COM 181 Basic Public Speaking OR ............................................... 3
- COM 252 Introduction to Interpersonal Communication ...................... 3

Subtotal 18-19

Support Courses:

- BIO 135 Basic Anatomy & Physiology with Laboratory* ................. 4
- BIO 225 Medical Microbiology ...................................................... 4
- CLT 111 Urinalysis ........................................................................ 2
- MAT 125 Serology ......................................................................... 2
- CLT 215 Hematology I AND ......................................................... 3
- CLT 216 Hematology II OR ........................................................... 3
- CLT 217 Fundamentals of Hematology AND ......................... (3)
- CLT 218 Clinical Hematology ......................................................... 4
- CLT 225 Immunohematology I AND ............................................. 2
- CLT 226 Immunohematology II OR ............................................. 2
- CLT 227 Immunohematology ........................................................ 4

Subtotal (6-8)

Core Courses:

- CLT 205 Clinical Microbiology I AND .......................................... 3
- CLT 206 Clinical Microbiology II ................................................... 2
- CLT 207 Clinical Chemistry I AND .............................................. 3
- CLT 208 Clinical Chemistry II ........................................................ 2
- CLT 209 Introduction to Clinical Laboratory AND ....................... 3
- CLT 216 Introductory Clinical Hematology .................................... 4
- CLT 218 Applied Laboratory .......................................................... 3
- CLT 225 Clinical Hematology ........................................................ 2
- CLT 226 Advanced Clinical Chemistry ......................................... 3
- CLT 227 Practicum I .................................................................... 5
- CLT 228 Practicum II ................................................................. 2

Subtotal 22

Total Credit Hours - Track II 64-68

Electives

- CLT 130 Applied Laboratory ......................................................... 3

Diploma

Certified Medical Laboratory Assistant - 5110044029
(Offered at MDC)

General Education Courses:

Course from Area I:

- ENG 101 Writing I ........................................................................... 3

Course from Area II:

- MAT 110 Applied Mathematics OR ................................................. 3

Subtotal 6

Support Courses:

- BIO 135 Basic Anatomy & Physiology with Laboratory* ................. 4
- BIO 225 Medical Microbiology ...................................................... 4
- CLT 111 Urinalysis ........................................................................ 2
- CLT 205 Clinical Microbiology I AND .......................................... 3
- CLT 206 Clinical Microbiology II ................................................... 2

Subtotal (6-8)

*BO 135 & BO 139 may be substituted for BO 135.
### Technical Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHB 151</td>
<td>Phlebotomy AND</td>
<td>1</td>
</tr>
<tr>
<td>PHB 152</td>
<td>Phlebotomy Clinical Experience AND</td>
<td>1</td>
</tr>
<tr>
<td>CLT 101</td>
<td>Introduction to the Clinical Laboratory</td>
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</tr>
<tr>
<td>PHB 170</td>
<td>Applied Phlebotomy AND</td>
<td>(3)</td>
</tr>
<tr>
<td>PHB 171</td>
<td>Phlebotomy Clinical Experience</td>
<td>(1)</td>
</tr>
<tr>
<td>CLT 111</td>
<td>Urinalysis</td>
<td>2</td>
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<tr>
<td>CLT 125</td>
<td>Serology</td>
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<td>CLT 217</td>
<td>Fundamentals of Hematology OR</td>
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<td>CLT 219</td>
<td>Hematology</td>
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<tr>
<td>CLT 237</td>
<td>Introduction to Clinical Chemistry OR</td>
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<td>CLT 275</td>
<td>Clinical Experience</td>
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<td>CLT 280</td>
<td>Practicum</td>
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<td>MIT 217</td>
<td>Medical Office Procedures OR</td>
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<tr>
<td>MAI 150</td>
<td>Medical Assisting Administrative Procedures</td>
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**Subtotal:** 22-29

**Total:** 34-43

### Certificates

**Physician's Office Laboratory - 5110043029**

*(Offered at BLC, HEC, HZC, JFC, MDC, SEC, SMC, WKC)*

<table>
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<tr>
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<th>Course Description</th>
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<td>Phlebotomy Clinical Experience AND</td>
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<td>PHB 170</td>
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<td>PHB 171</td>
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<td>Serology</td>
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**Total:** 8-9

**Phlebotomist - 5110043019**

*(Offered at BLC, HZC, JFC)*

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<tr>
<td>PHB 155</td>
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**Total:** 8-9

**Phlebotomy for the Health Care Worker - 5110043039**

*(Offered at BLC, HEC, HPC, HZC, JFC, MDC, OWC, SEC, SMC, WKC)*

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<td>PHB 152</td>
<td>Phlebotomy Clinical Experience AND</td>
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<td>CLT 101</td>
<td>Introduction to the Clinical Laboratory</td>
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<td>PHB 170</td>
<td>Applied Phlebotomy AND</td>
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**Total:** 4-5

**Advanced Phlebotomy Technician - 5110043049**

*(Offered at HZC, SEC.)*

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<td>Phlebotomy AND</td>
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</tr>
<tr>
<td>PHB 152</td>
<td>Phlebotomy Clinical Experience AND</td>
<td>1</td>
</tr>
<tr>
<td>PHB 155</td>
<td>Phlebotomy Clinical AND</td>
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</tr>
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<td>Introduction to the Clinical Laboratory</td>
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</tr>
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<td>PHB 151</td>
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<td>(1)</td>
</tr>
<tr>
<td>PHB 153</td>
<td>Advanced Topics in Phlebotomy AND</td>
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<td>PHB 170</td>
<td>Applied Phlebotomy AND</td>
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<td>Phlebotomy Clinical Experience AND</td>
<td>(1)</td>
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<tr>
<td>PHB 155</td>
<td>Phlebotomy Clinical</td>
<td>(2)</td>
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**Total:** 6-8

### Collision Repair Technology

**From repairing small dents to rebuilding the bodies of wrecked or damaged vehicles, this program maintains the current commercial standards. Students are taught the types of materials used in filler compunds, the colors and chemical make-up of paints used to refinish, welding and cutting procedures, design and installation of trim, cost estimating and preparation for finish work. All are skills applied in actual jobs performed in shop assignments.**

Progression in the Collision Repair Technology program is contingent upon achievement of a grade of "C" or better in each course and maintenance of a 2.0 cumulative grade point average.

**Diploma**

**Collision Repair Technician - 4706034019**

*(Offered at BGT, BLC, BSC, GTW, HZC, JFC, MYC, OWC, SEC, SMC, WKC)*

**General Education Courses**

<table>
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<tr>
<th>Area</th>
<th>Course Description</th>
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<tbody>
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<td>Written Communication, Oral Communications, or Humanites/Heritage</td>
<td>3</td>
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<tr>
<td>2</td>
<td>Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning</td>
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**Subtotal:** 6

**Technical Courses**

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<thead>
<tr>
<th>Code</th>
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<tr>
<td>CRT 130</td>
<td>Non-Structural Analysis and Damage Repair</td>
<td>6</td>
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<tr>
<td>CRT 131</td>
<td>Non-Structural Analysis and Damage Repair Lab</td>
<td>6</td>
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<tr>
<td>CRT 150</td>
<td>Painting and Refinishing</td>
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<td>CRT 151</td>
<td>Painting and Refinishing Lab</td>
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<td>CRT 230</td>
<td>Structural Analysis and Damage Repair</td>
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<td>Structural Analysis and Damage Repair Lab</td>
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**Subtotal:** 50-53

**Total Credits:** 56-59

**Recommended Program Electives**

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<tr>
<td>CRT 298</td>
<td>Advanced Practicum OR</td>
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<tr>
<td>CRT 299</td>
<td>Advanced Cooperative Education</td>
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</table>

**Certificates**

**Automotive Painter - 4706033049**

*(Offered at BGT, BLC, BSC, GTW, HZC, JFC, MYC, OWC, SEC, SMC, WKC)*

**Technical Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRT 100</td>
<td>Introduction to Collision Repair</td>
<td>2</td>
</tr>
<tr>
<td>CRT 130</td>
<td>Non-Structural Analysis and Damage Repair</td>
<td>6</td>
</tr>
<tr>
<td>CRT 131</td>
<td>Non-Structural Analysis and Damage Repair Lab</td>
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</tr>
<tr>
<td>CRT 150</td>
<td>Painting and Refinishing</td>
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<tr>
<td>CRT 151</td>
<td>Painting and Refinishing Lab</td>
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</tr>
<tr>
<td>CRT 231</td>
<td>Structural Analysis and Damage Repair Lab</td>
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**Total Credits:** 38
General Education:

**Required:**
- CRT 100 Introduction to Collision Repair ........................................ 2
- CRT 150 Painting and Refinishing ................................................. 6
- CRT 151 Painting and Refinishing Lab ........................................ 6

**Total Credits:** 14

**Collision Repair Helper - 4706033059**

*Offered at BGT, BLC, BSC, GTW, HZC, JFC, MYC, OWC, SEC, SMC, WKC*

**Required:**
- CRT 100 Introduction to Collision Repair ........................................ 2
- CRT 130 Non-Structural Analysis and Damage Repair ......................... 6
- CRT 150 Painting and Refinishing ................................................. 6
- CRT 151 Painting and Refinishing Lab ........................................... 6

**Total Credits:** 14

**Collision Repairer - 4706033109**

*Offered at BGT, BLC, BSC, GTW, OWC, SEC*

**Required:**
- CRT 100 Introduction to Collision Repair ........................................ 2
- CRT 130 Non-Structural Analysis and Damage Repair ......................... 6
- CRT 150 Painting and Refinishing ................................................. 6
- CRT 151 Painting and Refinishing Lab ........................................... 6
- CRT 230 Structural Analysis and Damage Repair ............................ 6
- CRT 231 Structural Analysis and Damage Repair Lab ......................... 6
- CRT 250 Mechanical and Electrical Components ................................ 6
- CRT 251 Mechanical and Electrical Components Lab ....................... 6

**Total Credits:** 50

---

**Computer Aided Drafting and Design**

A computer aided drafter and designer is a technical specialist with broad-based skills for architectural, civil, mechanical, and manufacturing fields. In this program, the students are taught manual drafting techniques and 2D and 3D CAD. Specific skills taught include but are not limited to, lettering, geometric construction, orthographic projections, dimensioning and tolerancing, and related technical processes. These skills are required to transform specifications and instructions of architects, designers, and engineers into complete and precise drawings. The drafter is a skilled technician with a thorough understanding of the graphic language and is an indispensable contributor to the engineering design team.

Progression in the Computer Aided Drafting and Design program is contingent upon achievement of a grade of "C" or greater in each technical and mathematics course with maintenance of a 2.0 cumulative grade point average or above (on a 4 scale).

---

**Associate in Applied Science**

**Computer Aided Drafting and Design - 1513017029**

*Offered at BLC, BSC, ELC*

**General Education:**

<table>
<thead>
<tr>
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<tr>
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<tr>
<td>Quantitative Reasoning (MAT 105 excluded) ....................... 3</td>
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<td>Natural Sciences ................................................... 3</td>
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**Total Credits:** 18

**Technical Core:**

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<tr>
<td>CAD 102 Drafting Fundamentals ........................................ 4</td>
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<td>CAD 112 Engineering Graphics ......................................... 4</td>
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<td>CAD 130 Descriptive Geometry ........................................ 4</td>
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<td>CAD 200 Intermediate Computer Aided Design ....................... 4</td>
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<td>CAD 201 Parametric Modeling ........................................... 4</td>
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**Total Credits:** 29-26

**Technical Electives:**

Choose 19 credits from the technical electives list .............. 19

**Diploma**

**Computer Aided Drafting and Design - 1513014049**

*Offered at ASC, BLC, BSC, ELC, GTW, HZC, HPC, JFC, MYC, OWC, SEC, SMC, WKC*

Available Completely Online

**General Education:**

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<td>Area 2: Quantitative Reasoning (MAT 105 excluded) ....................... 3</td>
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**Total Credits:** 6

**Technical Core:**

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<tr>
<td>CAD 102 Drafting Fundamentals ........................................ 4</td>
<td></td>
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<tr>
<td>CAD 112 Engineering Graphics ......................................... 4</td>
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<tr>
<td>CAD 130 Descriptive Geometry ........................................ 4</td>
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<tr>
<td>CAD 200 Intermediate Computer Aided Design ....................... 4</td>
<td></td>
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<tr>
<td>CAD 201 Parametric Modeling ........................................... 4</td>
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**Total Credits:** 29-26

**Technical Electives:**

Choose 19 credits from the technical electives list .............. 19

**Total Credits:** 48-51
Technical Electives (This list is not all inclusive, other courses may be taken as approved by the program coordinator such as courses with prefix ACH, BRX, CAR, SMT, and PLW)

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<thead>
<tr>
<th>Course</th>
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<td>CAD 108</td>
<td>Introduction to Surveying</td>
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<tr>
<td>CAD 120</td>
<td>Introduction to Architecture</td>
<td>4</td>
</tr>
<tr>
<td>CAD 150</td>
<td>Programming in CAD</td>
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</tr>
<tr>
<td>CAD 212</td>
<td>Industrial Drafting Processes</td>
<td>4</td>
</tr>
<tr>
<td>CAD 222</td>
<td>Mechanical Design</td>
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<tr>
<td>CAD 220</td>
<td>Architectural Design</td>
<td>4</td>
</tr>
<tr>
<td>CAD 230</td>
<td>Construction Techniques</td>
<td>4</td>
</tr>
<tr>
<td>CAD 240</td>
<td>Advanced Dimensioning and Measurement</td>
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<td>CAD 252</td>
<td>Commercial Detailing</td>
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<td>CAD 262</td>
<td>Working Drawings</td>
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<td>CAD 292</td>
<td>Industrial Applications</td>
<td>4</td>
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<td>CAD 293</td>
<td>Special Problems</td>
<td>1-4</td>
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<td>CAD 298</td>
<td>Praxium</td>
<td>1-3</td>
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<td>CAD 299</td>
<td>Cooperative Experience</td>
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Certificates

Computer Assisted Drafter - 1513013059
(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
Available Completely Online

General Education:
- Written Communication, Oral Communications, or Humanities/Heritage: 3
- Quantitative Reasoning (MAT 105 excluded): 3
Subtotal: 6

Technical Core:
- Computer/Digital Literacy course OR demonstrated competency: 0-3
- CAD 100: Introduction to Computer Aided Design: 3
- CAD 102: Drafting Fundamentals: 4
- CAD 112: Engineering Graphics: 4
- CAD 130: Descriptive Geometry: 4
- CAD 200: Intermediate Computer Aided Design: 4
Subtotal: 24-30

Total Credits: 30-36

Detailer - 1513013089
(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
Available Completely Online

General Education:
- Written Communication, Oral Communications, or Humanities/Heritage: 3
- Quantitative Reasoning (MAT 105 excluded): 3
Subtotal: 6

Technical Core:
- Computer/Digital Literacy course OR demonstrated competency: 0-3
- CAD 100: Introduction to Computer Aided Design: 3
- CAD 102: Drafting Fundamentals: 4
- CAD 112: Engineering Graphics: 4
- CAD 130: Descriptive Geometry: 4
- CAD 200: Intermediate Computer Aided Design: 4
Subtotal: 19-22

Total Credits: 25-28

Civil Drafter - 1513013049
(Offered at ASC, BLC, BSC, HZC, OWC, SEC, WKC)

General Education:
- Written Communication, Oral Communications, or Humanities/Heritage: 3
Subtotal: 3

Technical Core:
- Computer/Digital Literacy course OR demonstrated competency: 0-3
- CAD 100: Introduction to Computer Aided Design: 3
- CAD 102: Drafting Fundamentals: 4
- CAD 112: Engineering Graphics: 4
- CAD 130: Descriptive Geometry: 4
Subtotal: 15-18

Surveying Core:
Choose 9-12 hours from the following courses:
- CAD 108: Introduction to Surveying: 3
- SMT 110: Principles of Surveying: 3
- SMT 130: Land Surveying Graphics: 3
- SMT 160: Construction Surveying: 3
- SMT 210: Advanced Surveying Measurement: 3
- SMT 220: Surveying Lab: 3
- SMT 230: Land Boundary Location: 3
- SMT 250: Mine Surveying: 3
Subtotal: 9-12

Total Credits: 27-33

Computer and Information Technologies

With tracks in Applications, Internet Technologies, Network Technologies, Programming and Computer Science

This program includes tracks in Applications, Information Security, Internet Technologies, Network Administration, Network Technologies, and Programming, with a core of courses common to all. The core includes a general education component essential to a collegiate education and a technical component giving students an introduction to information systems, computer applications, program development, system maintenance, networking, security, Internet technologies, database design, and collaborative system development. In addition to core courses, students take specialty courses for their selected track.

The Applications track emphasizes several aspects of application software. It includes such productivity applications as word processing, spreadsheets, database management, presentation, geographic information systems, website development/maintenance, and help desk tracking.
systems. Completion of this track will prepare students to work with computer-based systems in business and industry.

Business Software Specialist - Designed to train students to operate a wide variety of software packages and to assist businesses in developing and maintaining databases, producing financial statements, and developing applications using various software packages.

Computer Support - Provides an in-depth knowledge of application software, computer system configurations, Help Desk Tools/Software, end-user documentation, user training, and other user support skills.

Geographic Information Systems - Provides students with practical GIS skills and a solid foundation for geographical manipulation through developing and implementing GIS applications.

Software Support - Provides an in-depth knowledge of application software, computer system configurations, and data driven websites.

The Information Security track will provide a solid background in information security. Fundamentals of information security, offensive and defensive techniques, and security topics such as operating system security, network security design, or other security topics are covered. This track will help prepare students for entry-level positions of network security auditing and penetration testing, firewall configuration, and computer crime investigation.

The Internet Technologies track prepares students to design, program, and maintain Internet-based services. With specializations in web programming and web server administration, this track will help prepare students for positions developing and maintaining interactive web sites.

The Network Administration track provides the concepts and skills needed to design, set-up, maintain and expand network and telecommunications systems. The curriculum provides specific training in Cisco, and/or Microsoft network systems. Upon completion of the track, the graduate will be qualified to take industry designed and recognized certification examinations. Employment opportunities include entry-level positions in installation and administration of local and wide area networks in medium to large businesses and organizations, and computer network administration positions in small businesses.

The Network Technologies track provides the concepts and skills needed to set up, maintain, and expand networked computer systems. This track requires sequences in Microsoft Windows, Cisco, and UNIX/Linux as well as courses providing deeper insight into Internet protocols and network security. Employment opportunities include entry-level positions in installation and administration of local area networks in medium to large organizations and as computer network administrators in small business.

The Programming track prepares students to design, develop, and maintain computer programs written in current and emerging programming languages. With tracks in Information Systems and Software Development, students successfully completing this track are prepared for entry-level positions in computer programming.

Information Systems - This track is designed with an emphasis on programming for a business environment. Students completing the Information Systems track study basic business concepts, one programming language at an advanced level, and two programming languages at an introductory level.

Software Development - This track emphasizes computer software development. Students completing the Software Development track study a minimum of two computer programming languages at an advanced level and additional programming language(s) at an introductory level. Flexibility within this track allows students to focus on a specific area of software development by means of the programming languages they choose to study (object-oriented programming, database programming, game development, etc.).

The Computer Science track prepares students interested in an advanced study of computer programming. The curriculum couples the study of programming with computer science concepts such as computational complexity, advanced data structures, and proof techniques. The curriculum may also be used to prepare students for entry into bachelor-level programs in computer science.

- Students graduating with a degree or certificate in Computer & Information Technologies may only use a course with a grade of "C" or higher (or a "Pass" for Pass/Fail courses) to fulfill a core or track graduation requirement.
- The Computer & Information Technologies department does not accept non-Gen Ed courses older than 5 years from returning or transfer students without consent from the local program coordinator.
- Students may not use one course to fulfill multiple requirements.

Computer Technician Certificate

The Computer Technician Certificate offers students the opportunity to earn a credential demonstrating computer technician competencies. This certificate consists of the core skills that students need to achieve the industry A+ and Security+ certifications. In addition, this certificate will provide a way for professionals currently in the industry to update their technician skills and for new students to show progress in the CIT program.

CIT Fundamentals Certificate

The CIT Fundamentals Certificate offers students the opportunity to earn a credential demonstrating basic competency in the area of computers. The certificate consists of a natural progression of classes that are required for the Associate in Applied Science degree in Computer & Information Technologies. It gives those who are unable, or do not need, to complete a degree a way of demonstrating their level of computer proficiency.

Productivity Software Specialist Certificate

The Productivity Software Specialist Certificate offers students the opportunity to earn a credential demonstrating productivity software competencies. This certificate consists of the core skills that students need to effectively use various productivity software products. In addition, this certificate will provide a way for professionals currently in the industry to update their productivity software skills and for new students to show progress in the CIT program.

Computer Tech Basic Certificate

The Computer Tech Basic Certificate offers students the opportunity to earn a credential demonstrating basic competency in the area of computer information technology. The certificate consists of a natural progression of classes that are required for the Associate in Applied Science degree in Computer & Information Technologies. It gives those who are unable, or do not need, to complete a degree a way of demonstrating their level of computer proficiency. The Computer Tech Basic Certificate prepares students for the CompTIA A+ and Net+ certification exams which are recognized by the computer industry around the world.

Computer Support Technician Certificate

The Computer Support Technician Certificate offers students the opportunity to earn a credential demonstrating computer support technician competencies. The certificate consists of the core skills that students need for computer and end-user support. In addition, this certificate will provide a way for professionals currently in the industry to update...
their computer support technician skills and for new students to show progress in the CIT program.

**Information Security Specialist Certificate**

The Information Security Specialist Certificate offers students the opportunity to earn a credential demonstrating the fundamentals of information security. This certificate consists of the core skills that students need to effectively build and maintain information security systems. In addition, this certificate will provide a way for professionals currently in the industry to update their information security skills and for new students to show progress in the CIT program.

**Microsoft Network Administrator Certificate**

The Microsoft Network Administrator Certificate offers students the opportunity to earn a credential demonstrating network technology competencies. This certificate consists of the core skills that students need to effectively plan, build, and maintain computer networks. In addition, this certificate will provide a way for professionals currently in the industry to update and upgrade their computer networking skills and for new students to show progress in the CIT program.

**CISCO Networking Enhanced Certificate**

The CISCO Networking Enhanced Certificate offers students the opportunity to earn a credential demonstrating the fundamentals of computer networking. This certificate consists of the core skills that students need to effectively build and maintain computer networks. In addition, this certificate will provide a way for professionals currently in the industry to update their computer networking skills and for new students to show progress in the CIT program. The CISCO Networking Associate Certificate prepares students for the CCNA and Net+ exams which are recognized by the computer industry around the world.

**A+ Certificate**

The A+ Certificate offers students the opportunity to earn a credential demonstrating basic competency in the area of computer hardware and software. The certificate consists of one course that prepares students for the CompTIA A+ certification exams which are recognized by the computer industry around the world. It gives those who are unable, or do not need, to complete a degree a way of demonstrating their level of proficiency.

**Microsoft Enterprise Administrator Certificate**

The Microsoft Enterprise Administrator certificate offers students the opportunity to earn a credential demonstrating skills in the administration and design of Microsoft enterprise networks. This certificate consists of the core skills that students need to effectively plan, build, and maintain a Microsoft network. In addition, this certificate will provide a way for professionals currently in the industry to update their Microsoft network administrator skills.

**Programing Certificate**

The Software Developer Certificate offers students the opportunity to earn a credential demonstrating programming competencies. This certificate consists of the core skills that students need to effectively develop programs using multiple computer languages. In addition, this certificate will provide a way for professionals currently in the industry to update their programming skills and for new students to show progress in the CIT program.

**Web Programming Certificate**

The Web Programming Certificate offers students the opportunity to earn a credential demonstrating web programming competencies. This certificate consists of the core skills that students need to effectively develop websites using web programming. In addition, this certificate will provide a way for professionals currently in the industry to update their web programming skills and for new students to show progress in the CIT program.

**Web Administration Certificate**

The Web Administration Certificate offers the opportunity to earn a credential demonstrating web administration competencies. This certificate consists of the core skills that students need to effectively maintain websites through network and web server administration. In addition, this certificate will provide a way for professionals currently in the industry to update their web administration skills and for new students to show progress in the CIT program.
## Associate in Applied Science

### Computer and Information Technologies - 1101017089
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

### General Education

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<td>3</td>
</tr>
<tr>
<td>MAT 150</td>
<td>College Algebra</td>
<td>3</td>
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<tr>
<td></td>
<td>Social/Behavioral Sciences Course</td>
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<td>Heritage/Humanities Course</td>
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### General Education for Computer Science Track

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### Core Requirements

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<td>CIT 111</td>
<td>Computer Hardware and Software</td>
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<td>CIT 120</td>
<td>Computational Thinking</td>
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<td>CIT 150</td>
<td>Internet Technologies</td>
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<td>CIT 170</td>
<td>Database Design Fundamentals</td>
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<td>CIT 180</td>
<td>Security Fundamentals</td>
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### Applications Track - 110101711
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<td>Completion of Applications Track Course</td>
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<td>Geographic Information Systems</td>
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### Business Software Specialist

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<td>CIT 236</td>
<td>Advanced Data Organization</td>
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<td>CIT 171</td>
<td>SQL I</td>
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### Computer Support

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<tr>
<td>CIT 232</td>
<td>Help Desk Operations</td>
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<tr>
<td>CIT 234</td>
<td>Advanced Productivity Software</td>
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<tr>
<td>CIT 236</td>
<td>Advanced Data Organization</td>
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<td>CIT 225</td>
<td>GIS Software Tools</td>
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<td>CIT 229</td>
<td>Selected Topics in GIS</td>
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<td>CIT 253</td>
<td>Data-Driven Web Pages Topic</td>
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### Software Support

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<td>Advanced Productivity Software</td>
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<tr>
<td>CIT 236</td>
<td>Advanced Data Organization</td>
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<td>CIT 253</td>
<td>Data-Driven Web Pages Topic</td>
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</tr>
<tr>
<td>ENG 102</td>
<td>Writing II OR</td>
<td>3</td>
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### Computer Science Track - 110101714
(Offered at ASC, BLC, BSC, HPC, HZC, MYC, WKC)

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<td></td>
<td>(One course in the sequence is taken as part of the core)</td>
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<td><strong>24</strong></td>
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<td><strong>TOTAL</strong></td>
<td><strong>68</strong></td>
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### Information Security Track - 110101712
(Offered at ASC, BLC, BSC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CIT 182</td>
<td>Perimeter Defense</td>
<td>3</td>
</tr>
<tr>
<td>CIT 184</td>
<td>Attacks and Exploits</td>
<td>3</td>
</tr>
<tr>
<td>CIT 217</td>
<td>UNIX/Linux Administration</td>
<td>3</td>
</tr>
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<tr>
<td></td>
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<tr>
<td></td>
<td>Approved Technical Course(s)</td>
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<td><strong>TOTAL</strong></td>
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### Internet Technologies Track - 110101710
(Offered at ASC, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
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<th>Units</th>
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<tr>
<td>CIT 155</td>
<td>Web page Development</td>
<td>3</td>
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<tr>
<td>CIT 157</td>
<td>Web Site Design and Production</td>
<td>3</td>
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<tr>
<td>CIT 253</td>
<td>Data Drive Web Pages Topic</td>
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<td>CIT 257</td>
<td>Applied Internet Technologies OR</td>
<td>3</td>
</tr>
<tr>
<td>CIT 258</td>
<td>Internet Technologies Seminar</td>
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### Web Programming Specialization Sequence:

- Approved Level I Web Programming Language | 3
- Approved Level II Web Programming Language | 3

### Web Administration Specialization Sequence:

- Internet Protocols | 3
- Web Server Administration | 3
- MS Active Directory Services AND | 3
- MS Client/Server Config | 3
- MS Network Infrastructure AND | (3)
- OR | 3
- UNI X/Linux Network Infrastructure | (3)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>CIT 219</td>
<td>Internet Protocols</td>
<td>3</td>
</tr>
<tr>
<td>CIT 255</td>
<td>Web Server Administration</td>
<td>3</td>
</tr>
<tr>
<td>CIT 261</td>
<td>MS Active Directory Services AND</td>
<td>3</td>
</tr>
<tr>
<td>CIT 213</td>
<td>MS Client/Server Config</td>
<td>3</td>
</tr>
<tr>
<td>CIT 262</td>
<td>MS Network Infrastructure AND</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td>3</td>
</tr>
<tr>
<td>CIT 217</td>
<td>UNIX/Linux Network Infrastructure AND</td>
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</tr>
<tr>
<td>CIT 218</td>
<td>UNIX/Linux Network Infrastructure AND</td>
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<p>|          | <strong>Subtotal</strong>                               | <strong>12</strong>|</p>
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<td>CIT 171 SQL I</td>
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<tr>
<td>CIT 130 Productivity Software</td>
<td>3</td>
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<tr>
<td>CIT 164 Introduction to Routing and Switching</td>
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<td>CIT 212 Accessing the WAN</td>
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<tr>
<td>CIT 211 LAN Switching and Wireless</td>
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<td>CIT 214 Server Infrastructure Admin</td>
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<tr>
<td>CIT 261 MS Active Directory Services</td>
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<tr>
<td>CIT 288 Network Hardware Installation and Troubleshooting</td>
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<tr>
<td>CIT 260 Network Security</td>
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<tr>
<td>CIT 266 MS Enterprise Administration</td>
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<tr>
<td>CIT 265 MS Applications Servers</td>
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<td>CIT 288 Network Security</td>
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<tr>
<td>CIT 285 Windows OS Security</td>
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<td>CIT 286 UNIX/Linux OS Security</td>
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<td>CIT 287 Cisco OS Security</td>
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<td>CIT 218 UN*X/Linux Net Infrastructure</td>
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<td>CIT 260 Network Hardware Installation and Troubleshooting</td>
<td>3</td>
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<td>CIT 261 MS Active Directory Services</td>
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<td>CIT 262 MS Network Infrastructure</td>
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<td>CIT 219 Internet Protocols</td>
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### Approved Level II Network Technology Specialization Sequences

**Microsoft Windows Course Sequence II**
- Any 6 credit hours of course work from the Microsoft Windows Network Specialization Course list.*

**UNIX/Linux Course Sequence II**
- Choose two:
  - CIT 286 UNIX/Linux OS Security
  - CIT 255 Web Server Administration
  - CIT 145 Perl I

**Cisco Course Sequence II**
- CIT 211 LAN Switching and Wireless AND
- CIT 212 Accessing the WAN

---

### Approved Level III Network Technology Specialization Sequences

**Internet Servers Administration Course Sequence**
- CIT 255 Web Server Administration AND
- CIT 265 MS Applications Servers

**Microsoft Windows Course Sequence III**
- Any 6 credit hours of course work from the Microsoft Windows Network Course list.* 6

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### Approved Microsoft Windows Network Courses

**CIT 213** MS Client/Server Config
- MS Active Directory Services
- MS Network Infrastructure
- MS Server Administration
- MS Applications Servers
- MS Enterprise Administration

**Approved Security Sequence Courses**
- CIT 182 Perimeter Defense and Countermeasures
- CIT 184 Attacks and Exploits
- CIT 284 Computer Forensics
- CIT 285 Windows O S Security
- CIT 286 UNIX/Linux O S Security

---

### Approved Level I Programming Language Courses

**CIT 140** JavaScript I
- PHP I
- C++ I
- Perl I
- Programming I: Language
- Visual Basic I
- SQL I

**Approved Level II Programming Language Courses**
- CIT 241 PHP II
- CIT 247 Programming II: Language
- CIT 248 Visual Basic II
- CIT 249 Java II
- CIT 271 SQL II

**Approved Level III Programming Language Courses**
- CIT 276 3D Game Development: Language
- CIT 277 Programming III: Language
- CIT 278 Visual Basic III

**Approved Level I Web Programming Language Courses**
- CIT 141 PHP I
- CIT 148 Visual Basic I
- CIT 149 Java I

---

### Approved Level II Web Programming Language Courses

**CIT 241** PHP II
- Visual Basic II
- Java II

---

### Approved Computer Science Sequences:

**Approved CIT Technical Courses**
- Additional CIT Course(s) EXCEPT CIT 103 1-3

---

### Certificates

**Computer Technician - 1101013289**
- (Offered at ASC, BGT, BLC, ELC, GTW, HECH, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)
- CIT 105 Introduction to Computing
- CIT 111 Computer Hardware and Software
- CIT 160 Intro to Networking Concepts OR
- CIT 161 Network Fundamentals OR
- CIT 162 Home and Small Office Networks
- CIT 180 Security Fundamentals
- Total 14

**CIT Fundamentals - 1101013309**
- (Offered at ASC, BGT, BLC, ELC, GTW, HECH, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)
- CIT 105 Introduction to Computing
- CIT 111 Computer Hardware and Software
- CIT 120 Computational Thinking
- CIT 150 Internet Technologies
- CIT 170 Database Design Fundamentals
- CIT 180 Security Fundamentals
- CIT 160 Intro to Networking Concepts OR
- CIT 161 Network Fundamentals OR
- CIT 162 Home and Small Office Networks
- Approved Level I Programming Language
- Total 26

**Productivity Software Specialist - 1101013299**
- (Offered at ASC, BLC, ELC, GTW, HECH, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)
- CIT 105 Introduction to Computing
- CIT 130 Productivity Software
- CIT 234 Advanced Productivity Software
- CIT 236 Adv Data Organization Software
- Total 12

**Computer Tech Basic - 1101013319**
- (Offered at ASC, BLC, ELC, GTW, HECH, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)
- CIT 105 Introduction to Computing
- CIT 111 Computer Hardware and Software
- Level I Network Course
- Total 11

**Computer Support Technician - 1101013329**
- (Offered at ASC, BLC, ELC, GTW, HECH, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)
- CIT 130 Productivity Software
- CIT 111 Computer Hardware and Software
- CIT 232 Help Desk Operations
- CIT 234 Advanced Productivity Software
- CIT 236 Advanced Data Organization Software
- Total 16
### CIT 160 Intro to Networking Concepts
(Offered at ASC, BLC, BSC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)
- **Level I Network Course**
- Security Fundamentals
- 3
- Security Fundamentals
- 3
- Attacks and Exploits
- 3
- Approved Security/Security Elective Courses
- 6
- Total
- 19

### Microsoft Network Administrator - 1101013349
(Offered at ASC, BGT, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)
- **Level I Network Course**
- 4
- MS Client/Server Config
- 3
- Server Infrastructure Admin OR
- 3
- MS Network Infrastructure
- (3)
- MSA 
- 3
- Server Admin
- 3
- Approved CIT Technical Course
- 3
- Total
- 19

### CISCO Networking Associate - 1101013359
(Offered at ASC, BGT, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, SEC, WKC)
- **Network Fundamentals**
- 4
- Home and Small Office Networks
- 3
- Network AssociateTrack Course Sequence
- 12
- Total
- 16

### Network Technologies Specialist - 1101013369
(Offered at ASC, BGT, BLC, BSC, ELC, HEC, HPC, HZC, MDC, MYC, OWC, SEC, WKC)
- **Internet Protocols**
- 3
- Network Security
- 3
- Approved Level I and Level II Network Technology/Microsoft
- Windows Course Sequence OR
- 12
- Approved Level I and Level II Network Technology/Cisco
- OR
- Approved Level I and Level II Network Technology/UNIX/Linux
- Course Sequence
- (12)
- Approved Level I, II, or III Network Technologies
- 4-6
- Total
- 22-24

### CISCO Networking Enhanced - 1101013379
(Offered at ASC, BGT, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, SEC, WKC)
- **Network Fundamentals**
- 4
- Home and Small Office Networks
- 3
- Network AssociateTrack Course Sequence
- 12
- Approved CIT Technical Courses
- 8-9
- Total
- 24-25

### A+ - 1101013389
(Offered at ASC, BGT, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)
- **Computer Hardware and Software**
- 4
- Total
- 4

### Net+ - 1101013399
(Offered at ASC, BLC, BSC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)
- **Intro to Networking Concepts**
- 3
- Total
- 3

---

**Note:** Students may not use one course to fulfill multiple requirements.

Students may choose CIT 280 or COE 199 for a maximum of 3 credit hours.
Computerized Manufacturing and Machining

Work activities in machine shop involve applying knowledge of machine capabilities, the properties of materials, and shop practices to set-up and operate various machines. The skills needed to position work pieces, adjust machines, and verify the accuracy of machine functions and finish products are taught by classroom instruction, demonstration, and hands-on experience.

Students enrolled in the Computerized Manufacturing & Machining program must achieve a minimum grade of “C” in each technical course.

Associate in Applied Science

Computerized Manufacturing & Machining - 4805037019
(Offered at BGT, BLC, BSC, ELC, MDC, MYC, OWC, WKC)

General Education:

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<tr>
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<td>Technical Mathematics OR</td>
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<td>MAT 126</td>
<td>Technical Algebra and Trigonometry or Higher</td>
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Technical:

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<td>CMM 132</td>
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<td>CMM 2404</td>
<td>Advanced Programming Setup Practices</td>
<td>(6)</td>
</tr>
<tr>
<td>BRX 110</td>
<td>Basic Blueprint Reading for Machinist AND</td>
<td>2</td>
</tr>
<tr>
<td>BRX 210</td>
<td>Mechanical Blueprint Reading for Machinist OR</td>
<td>2</td>
</tr>
<tr>
<td>BRX 112</td>
<td>Blueprint Reading for Machinist</td>
<td>(4)</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal:</strong></td>
<td><strong>49-52</strong></td>
</tr>
</tbody>
</table>

Total Credits: 56-59

Computer/ Digital Literacy* .................................. 0-3

Diploma

CNC Machinist - 4805034069
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

General Education:

<table>
<thead>
<tr>
<th>Area 1:</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Written Communication, Oral Communications, or Heritage/ Humanities</td>
<td>3</td>
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</table>

<table>
<thead>
<tr>
<th>Area 2:</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Technical Mathematics OR</td>
<td>3</td>
</tr>
<tr>
<td>Technical Algebra and Trigonometry or Higher</td>
<td>(3)</td>
</tr>
<tr>
<td><strong>Subtotal:</strong></td>
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</tr>
<tr>
<td>Electives (Co-op or Practicum)</td>
<td>1</td>
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<tr>
<td><strong>Subtotal:</strong></td>
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</table>

Machinist - 4805034079
(Offered at ASC, BLC, BSC, ELC, GTW, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

General Education:

<table>
<thead>
<tr>
<th>Area 1:</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Written Communication, Oral Communications, or Heritage/ Humanities</td>
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</table>

<table>
<thead>
<tr>
<th>Area 2:</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Mathematics OR</td>
<td>3</td>
</tr>
<tr>
<td>Technical Algebra and Trigonometry or Higher</td>
<td>(3)</td>
</tr>
<tr>
<td><strong>Subtotal:</strong></td>
<td><strong>6</strong></td>
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<tr>
<td>Electives (Co-op or Practicum)</td>
<td>1</td>
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<td><strong>Subtotal:</strong></td>
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</table>

*Computer/ Digital literacy must be demonstrated either by competency exam or by completing a computer/ digital literacy course.
Technical:

- MAT 116 Technical Mathematics ............................................... 3
- CMM 112 Fundamentals of Machine Tools B OR 4
- CMM 114 Fundamentals of Machine Tools ................................ (7)
- CMM 118 Metrology/Control Charts ........................................... 2
- CMM 120 Applied Machining AND .............................................. 3
- CMM 122 Applied Machining II OR ............................................. 3
- CMM 124 Applied Machining .................................................... (6)
- CMM 130 Manual Programming OR ......................................... 3
- CMM 134 Manual Programming/CAD/CAM/CNC OR ....................... (6)
- CMM 138 Intro to Programming & CNC Machines ........................ (6)
- CMM 210 Industrial Machining AND ........................................... 3
- CMM 212 Industrial Machining II OR ......................................... 3
- CMM 214 Industrial Machining ................................................... 3
- CMM 220 Advanced Industrial Machining AND .......................... 4
- CMM 222 Advanced Industrial Machining II OR ............................ 2
- CMM 224 Advanced Machining .................................................. (6)
- BRX 110 Basic Blueprint Reading for Machinist OR ........................ 2
- BRX 210 Mechanical Blueprint Reading for Machinist OR ............ 2
- BRX 112 Blueprint Reading for Machinist ................................... (4)

Subtotal: 34-40

Total Credits: 41-47

Certificates

Exploratory Machining I - 4805033199
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

- CMM 110 Fundamentals of Machine Tools A AND ........................ 3
- CMM 112 Fundamentals of Machine Tools BAND .......................... 4
- CMM 114 Fundamentals of Machine Tools AND ......................... (7)
- CMM 130 Manual Programming OR ......................................... 3
- CMM 134 Manual Programming/CAD/CAM/CNC OR ........................ (6)
- CMM 138 Intro to Programming & CNC Machines ........................ (6)
- CMM 2301 Intro to Conversational Programming AND ................... 3
- CMM 2302 Conversational Editing and Subroutines OR .................. 3
- CMM 2303 Conversational Programming OR ................................ 3
- CMM 234 CNC Machines and Coding Practices ............................ 6
- BRX 110 Basic Blueprint Reading for Machinist OR ........................ 2
- BRX 112 Blueprint Reading for Machinist ................................... 4

Total Credits 12

Machine Tool Operator I - 4805033109
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

- CMM 110 Fundamentals of Machine Tools A AND ........................ 3
- CMM 112 Fundamentals of Machine Tools BOR ............................ 4
- CMM 114 Fundamentals of Machine Tools ................................ (7)
- CMM 130 Manual Programming OR ......................................... 3
- CMM 134 Manual Programming/CAD/CAM/CNC OR ........................ (6)
- CMM 138 Intro to Programming & CNC Machines ........................ (6)
- BRX 110 Basic Blueprint Reading for Machinist OR ........................ 2
- BRX 112 Blueprint Reading for Machinist ................................... 4
- MAT 116 Technical Mathematics ................................................ 3

Total Credits: 15-20

Machine Tool Operator II - 4805033119
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

- CMM 110 Fundamentals of Machine Tools A AND ........................ 3
- CMM 112 Fundamentals of Machine Tools B OR ............................ 4
- CMM 114 Fundamentals of Machine Tools ................................ (7)
- CMM 118 Metrology/Control Charts ........................................... 2
- CMM 120 Applied Machining AND .............................................. 3
- CMM 122 Applied Machining II OR ............................................. 3
- CMM 124 Applied Machining .................................................... (6)
- CMM 130 Manual Programming OR ......................................... 3
- CMM 134 Manual Programming/CAD/CAM/CNC OR ....................... (6)
- CMM 138 Intro to Programming & CNC Machines ........................ (6)
- BRX 110 Basic Blueprint Reading for Machinist OR ........................ 2
- BRX 112 Blueprint Reading for Machinist ................................... 4
- MAT 116 Technical Mathematics ................................................ 3
- MAT 126 Technical Algebra and Trigonometry or Higher ............... (3)

Total Credits: 23-31

CNC Operator - 4805033129
(Offered at BLC, HPC, JFC, MDC, SEC, SMC, WKC)

- CMM 110 Fundamentals of Machine Tools A AND ........................ 3
- CMM 112 Fundamentals of Machine Tools B ................................ (4)
- CMM 114 Fundamentals of Machine Tools ................................ (7)
- CMM 118 Metrology/Control Charts ........................................... 2
- CMM 130 Manual Programming AND ......................................... 3
- CMM 132 CAD/CAM/CNC OR ..................................................... 3
- CMM 134 Manual Programming/CAD/CAM/CNC OR ........................ (6)
- CMM 138 Intro to Programming & CNC Machines ........................ (6)
- CMM 150 Shop Theory Or ......................................................... 2
- CMM 151 Machinery’s Handbook/Metallurgy OR ............................ 3
- CMM 152 Jig, Fixtures and Gaging OR ........................................... 3
- CMM 153 Mold Theory ............................................................... 3
- CMM 154 Die Theory ................................................................. 3
- CMM 130 Manual Programming .................................................. 3
- CMM 132 CAD/CAM/CNC .......................................................... 3
- CMM 138 Intro to Programming & CNC Machines ........................ (6)
- BRX 110 Basic Blueprint Reading for Machinist OR ........................ 2
- BRX 210 Mechanical Blueprint Reading ....................................... 2
- MAT 116 Technical Mathematics ................................................ 3
- WLD 151 Basic Welding A OR .................................................... 2
- IEX 295 Special Problems III ..................................................... (3)

Total Credits: 26-31

Tool & Die Apprentice - 4805033130
(Offered at BLC, JFC, MDC, SEC)

- CMM 150 Shop Theory Or ......................................................... 2
- CMM 151 Machinery’s Handbook/Metallurgy OR ............................ 3
- CMM 152 Jig, Fixtures and Gaging OR ........................................... 3
- CMM 153 Mold Theory ............................................................... 3
- CMM 154 Die Theory ................................................................. 3
- CMM 130 Manual Programming .................................................. 3
- CMM 132 CAD/CAM/CNC .......................................................... 3
- CMM 138 Intro to Programming & CNC Machines ........................ (6)
- BRX 110 Basic Blueprint Reading for Machinist OR ........................ 2
- BRX 210 Mechanical Blueprint Reading ....................................... 2
- MAT 116 Technical Mathematics ................................................ 3
- WLD 151 Basic Welding A OR .................................................... 2
- Computer/Digital Literacy* OR ................................................ (0-3)

Total Credits: 29-34

CNC Machining & Waterjet Technology - 4805033189
(Offered at BLC, SEC)

- CMM 138 Intro to Programming and CNC Machines ..................... 6
- CMM 234 CNC Machines & Coding Practices ............................... 6
- CMM 244 Advance Programming/Setup Practices ......................... 6

Total Credits: 18

* Computer/Digital literacy must be demonstrated either by competency exam or by completing a computer/ digital literacy course.
# Construction Technology

The Construction Technology program is designed to prepare students for entry level positions in the construction industry. Residential and light commercial construction applications are taught. This program includes instructional units in blueprint reading, building site layout procedures, foundation systems, light framing construction methods, exterior and interior finish systems, concrete forming systems and construction safety. Units of instruction are designed to include lecture and practical experience in the lab or on-site projects. This program also offers an excellent prerequisite for students that plan to pursue a career in areas such as construction management, civil engineering or architectural design.

Progression in the Construction Technology Program is contingent upon achievement of a grade of "C" or better in each technical and mathematics course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

## Associate in Applied Science

**Construction Technology - 4602017029**  
(Offered at BLC, ELC)

### General Education Requirements:

<table>
<thead>
<tr>
<th>Area</th>
<th>Minimum Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>Business Mathematics OR higher level Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>Social/ Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Heritage/ Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Oral Communications</td>
<td>3</td>
</tr>
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### Technical Requirements:

<table>
<thead>
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<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRX 220</td>
<td>Intro to Construction Lab</td>
<td>1</td>
</tr>
<tr>
<td>CAR 126</td>
<td>Intro to Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 127</td>
<td>Intro to Construction Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 140</td>
<td>Surveying &amp; Foundations</td>
<td>2</td>
</tr>
<tr>
<td>CAR 141</td>
<td>Surveying &amp; Foundations Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 190</td>
<td>Light Frame Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 191</td>
<td>Light Frame Const. I-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 196</td>
<td>Light Frame Const. II-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 197</td>
<td>Light Frame Const. II-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 200</td>
<td>Light Frame Const. III-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 201</td>
<td>Light Frame Const. III-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 298</td>
<td>Practicum in Construction OR</td>
<td>2</td>
</tr>
<tr>
<td>CAR 299</td>
<td>Co-op in Construction</td>
<td>2</td>
</tr>
<tr>
<td>ISX 100</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
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<td><strong>10</strong></td>
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</tbody>
</table>

Note: Computer/ Digital Literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

### Technical Electives *(This list is not all inclusive. Other courses [technical or general education] may be taken as approved by Construction Technology instructor.)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BRX 100</td>
<td>Basic Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>CAR 151</td>
<td>Construction Formwork - Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 198</td>
<td>Special Topics in Construction</td>
<td>2</td>
</tr>
<tr>
<td>CAR 240</td>
<td>Light Frame Const. IV-Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 241</td>
<td>Light Frame Const. IV-Lab</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total: 58 credit hours**

### Diploma

**Construction Diploma - 4602014019**  
(Offered at ASC, BLC, BSC, ELC, JFC, MYC, OWC, SEC, SMC, WKC)

### General Education Requirements:

<table>
<thead>
<tr>
<th>Area</th>
<th>Minimum Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Area 1: Written Communication, Oral Communications, Or Humanities/ Heritage</td>
<td>3</td>
</tr>
<tr>
<td>Area 2: Social/ Behavioral Sciences, Natural Sciences, or Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>6</strong></td>
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</table>

Note: WPP200 or EFM 100 may be taken for 3 credit hours of Social Interaction to meet the Diploma General Education requirements.

### Technical Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BRX 220</td>
<td>Blueprint Reading For Construction</td>
<td>3</td>
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<tr>
<td>CAR 126</td>
<td>Intro to Construction</td>
<td>3</td>
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<tr>
<td>CAR 127</td>
<td>Intro to Construction Lab</td>
<td>1</td>
</tr>
<tr>
<td>CAR 140</td>
<td>Surveying &amp; Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CAR 141</td>
<td>Surveying &amp; Foundations Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 190</td>
<td>Light Frame Construction I</td>
<td>3</td>
</tr>
<tr>
<td>CAR 191</td>
<td>Light Frame Const. I-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 196</td>
<td>Light Frame Const. II-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 197</td>
<td>Light Frame Const. II-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 200</td>
<td>Light Frame Const. III-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 201</td>
<td>Light Frame Const. III-Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 298</td>
<td>Practicum in Construction OR</td>
<td>2</td>
</tr>
<tr>
<td>CAR 299</td>
<td>Co-op in Construction</td>
<td>2</td>
</tr>
<tr>
<td>ISX 100</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

Note: Computer/Digital Literacy course must be demonstrated either by competency exam or by completing a computer/digital literacy course.

### Technical Electives *(This list is not all inclusive. Other courses [technical or general education] may be taken as approved by Construction Technology instructor.)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRX 100</td>
<td>Basic Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>CAR 150</td>
<td>Construction Formwork</td>
<td>3</td>
</tr>
<tr>
<td>CAR 151</td>
<td>Construction Formwork - Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 198</td>
<td>Special Topics in Construction</td>
<td>2</td>
</tr>
<tr>
<td>CAR 240</td>
<td>Light Frame Const. IV-Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 241</td>
<td>Light Frame Const. IV-Lab</td>
<td>2</td>
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</tbody>
</table>

**Total: 42-45 credit hours**

### Finish Carpenter - 4602014029

(Offered at JFC)

### General Education Requirements *(6-9 credit hours)*

<table>
<thead>
<tr>
<th>Area</th>
<th>Minimum Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 1: Written Communication, Oral Communications, Or Humanities/ Heritage</td>
<td>3</td>
</tr>
<tr>
<td>Area 2: Social/ Behavioral Sciences, Natural Sciences, or Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Note: WPP200 or EFM 100 may be taken for 3 credit hours of Social Interaction to meet the Diploma General Education requirements.

### Technical Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRX 120</td>
<td>Basic Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>CAR 151</td>
<td>Construction Formwork</td>
<td>3</td>
</tr>
<tr>
<td>CAR 198</td>
<td>Special Topics in Construction</td>
<td>2</td>
</tr>
<tr>
<td>CAR 240</td>
<td>Light Frame Const. IV-Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 241</td>
<td>Light Frame Const. IV-Lab</td>
<td>2</td>
</tr>
<tr>
<td>INF 105</td>
<td>Introduction to Painting</td>
<td>2</td>
</tr>
<tr>
<td>INF 111</td>
<td>Advanced Painting</td>
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<tr>
<td>INF 115</td>
<td>Introduction to Wall covering</td>
<td>2</td>
</tr>
<tr>
<td>INF 121</td>
<td>Advanced Wall Covering</td>
<td>2</td>
</tr>
<tr>
<td>INF 125</td>
<td>Introduction to Drywall</td>
<td>2</td>
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<tr>
<td>INF 131</td>
<td>Advanced Drywall</td>
<td>2</td>
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<tr>
<td>INF 205</td>
<td>Introduction to Acoustical Carpentry</td>
<td>3</td>
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</table>

**Total: 48-51 credit hours**

Note: Computer/Digital Literacy course must be demonstrated either by competency exam or by completing a computer/digital literacy course.
**Residential Carpenter - 462013059**

(Offered at ASC, BLC, BSC, ELC, HPC, JFC, MYC, OW, SEC, WMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BRX 220 Blueprint Reading for Construction</td>
<td>3</td>
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<tr>
<td>CAR 126 Intro to Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 127 Intro to Construction Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 140 Surveying &amp; Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CAR 141 Surveying &amp; Foundations Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 190 Light Frame Construction I – Floors and Walls</td>
<td>3</td>
</tr>
<tr>
<td>CAR 191 Light Frame Construction I – Floors and Walls (Lab)</td>
<td>2</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

**Residential Roofer - 462013069**

(Offered at ASC, BLC, BSC, ELC, HPC, JFC, MYC, OW, SEC, WMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BRX 220 Blueprint Reading for Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 126 Intro to Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 127 Intro to Construction Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 196 Light Frame Construction II – Ceilings and Roofs</td>
<td>3</td>
</tr>
<tr>
<td>CAR 197 Light Frame Construction II – Ceilings and Roofs (Lab)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

**Residential Site Layout Assistant - 462013079**

(Offered at ASC, BLC, BSC, ELC, HPC, JFC, MYC, OW, SEC, WMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR 126 Intro to Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 127 Intro to Construction Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 140 Surveying &amp; Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CAR 141 Surveying &amp; Foundations Lab</td>
<td>2</td>
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<tr>
<td>Electives *Suggested Technical Electives</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</tbody>
</table>

**Certificates**

**Carpenter Helper - 462013109**

(Offered at ASC, BLC, BSC, ELC, HPC, JFC, MYC, OW, SEC, WMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BRX 220 Blueprint Reading for Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 126 Intro to Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 127 Intro to Construction Lab</td>
<td>3</td>
</tr>
<tr>
<td>CAR 140 Surveying &amp; Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CAR 141 Surveying &amp; Foundations Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 190 Light Frame Construction I – Floors and Walls</td>
<td>3</td>
</tr>
<tr>
<td>CAR 191 Light Frame Construction I – Floors and Walls (Lab)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**Construction Forms Helper - 462013029**

(Offered at ASC, BLC, BSC, ELC, HPC, JFC, MYC, OW, SEC, WMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRX 220 Blueprint Reading for Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 126 Intro to Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 127 Intro to Construction Lab</td>
<td>1</td>
</tr>
<tr>
<td>CAR 150 Construction Formwork</td>
<td>3</td>
</tr>
<tr>
<td>CAR 151 Construction Formwork – Lab</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

**Suggested Technical Electives**

(This list is not all inclusive. Other courses [technical or general education] may be taken as approved by Construction Technology Program Coordinator.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRX 120 Basic Blueprint Reading</td>
<td>(3)</td>
</tr>
<tr>
<td>ISX 100 Industrial Safety</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 140 Construction Surveying and Foundation Systems</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 141 Construction Surveying and Foundation Systems-Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 150 Construction Formwork</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 151 Construction Formwork – Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 190 Light Frame Construction I – Floors and Walls</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 191 Light Frame Construction I – Floors and Walls (Lab)</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 196 Light Frame Construction II – Ceilings and Roofs</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 197 Light Frame Construction II – Ceilings and Roofs-Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 198 Special Topics in Construction</td>
<td>(1 – 6)</td>
</tr>
<tr>
<td>CAR 200 Light Frame Construction III – Exterior and Interior Finish</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 201 Light Frame Construction III – Exterior and Interior Finish-Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 240 Light Frame Construction IV – Cabinetry and Trim</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 241 Light Frame Construction IV – Cabinetry and Trim-Carpentry Techniques-Lab</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>41</strong></td>
</tr>
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</table>

**Suggested General Education Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>TEC 200 Technical Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 181 Basic Public Speaking</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 252 Intro to Interpersonal Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>MAT 105 Business Mathematics</td>
<td>(3)</td>
</tr>
<tr>
<td>MAT 110 Applied Mathematics</td>
<td>(3)</td>
</tr>
<tr>
<td>MAT 116 Technical Mathematics</td>
<td>(3)</td>
</tr>
<tr>
<td>PHX 150 Introductory Physics</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Note: TEC 200, PHX 150, EFM 100 and WPP 200 may be used to fill diploma/general education requirements only.

**Residential Carpenter - 462013059**

(Offered at ASC, BLC, BSC, ELC, HPC, JFC, MYC, OW, SEC, WMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRX 220 Blueprint Reading for Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 126 Intro to Construction</td>
<td>3</td>
</tr>
<tr>
<td>CAR 127 Intro to Construction Lab</td>
<td>1</td>
</tr>
<tr>
<td>CAR 140 Surveying &amp; Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CAR 141 Surveying &amp; Foundations Lab</td>
<td>2</td>
</tr>
<tr>
<td>CAR 190 Light Frame Construction I – Floors and Walls</td>
<td>3</td>
</tr>
<tr>
<td>CAR 191 Light Frame Construction I – Floors and Walls (Lab)</td>
<td>2</td>
</tr>
<tr>
<td>CAR 196 Light Frame Construction II – Ceilings and Roofs</td>
<td>3</td>
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<tr>
<td>CAR 197 Light Frame Construction II – Ceilings and Roofs (Lab)</td>
<td>2</td>
</tr>
<tr>
<td>CAR 201 Light Frame Construction III – Exterior and Interior Finish</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 240 Light Frame Construction IV – Cabinetry and Trim</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 241 Light Frame Construction IV – Cabinetry and Trim-Carpentry Techniques-Lab</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>

**Suggested Technical Electives**

(This list is not all inclusive. Other courses [technical or general education] may be taken as approved by Construction Technology Program Coordinator.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRX 120 Basic Blueprint Reading</td>
<td>(3)</td>
</tr>
<tr>
<td>ISX 100 Industrial Safety</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 150 Construction Formwork</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 151 Construction Formwork – Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 190 Light Frame Construction I – Floors and Walls</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 191 Light Frame Construction I – Floors and Walls (Lab)</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 196 Light Frame Construction II – Ceilings and Roofs</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 197 Light Frame Construction II – Ceilings and Roofs-Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 198 Special Topics in Construction</td>
<td>(1 – 6)</td>
</tr>
<tr>
<td>CAR 200 Light Frame Construction III – Exterior and Interior Finish</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 201 Light Frame Construction III – Exterior and Interior Finish-Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>CAR 240 Light Frame Construction IV – Cabinetry and Trim</td>
<td>(3)</td>
</tr>
<tr>
<td>CAR 241 Light Frame Construction IV – Cabinetry and Trim-Carpentry Techniques-Lab</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>

**Suggested General Education Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEC 200 Technical Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 181 Basic Public Speaking</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 252 Intro to Interpersonal Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>MAT 105 Business Mathematics</td>
<td>(3)</td>
</tr>
<tr>
<td>MAT 110 Applied Mathematics</td>
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</tr>
<tr>
<td>MAT 116 Technical Mathematics</td>
<td>(3)</td>
</tr>
<tr>
<td>PHX 150 Introductory Physics</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Note: TEC 200, PHX 150, EFM 100 and WPP 200 may be used to fill diploma/general education requirements only.
Cosmetology

Knowledge of the theories of hair, skin, and nail care is coupled with practice of the various techniques used in salons.

Any person enrolling in a cosmetology program shall meet KCTCS admission requirements and complete an application for enrollment provided by the Board of Hairdressers and Cosmetologists. As required by the Board of Hairdressers and Cosmetologists, the applicant shall furnish proof that he or she has completed two (2) years of high school or its equivalent. The required proof shall be one of the following:

A transcript of subjects and grades showing the applicant has completed grades nine (9) and ten (10); G. E. D. test indicating a minimum grade of thirty-nine (39);

A notarized statement from the high school principal, counselor, or superintendent, stating that in their opinion the applicant has an educational equivalency of completing tenth grade. Said statement shall be on school stationary.

If the student has graduated from high school or completed the G. E. D. test for four (4) years high school, his or her diploma may be presented.

Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first cosmetology course.

Progression in the Cosmetology program is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

After successful completion of the prescribed 1800 hours of instruction and the six-month apprenticeship, program graduates are eligible to take the examination administered by the Kentucky Board of Hairdressers and Cosmetology to become licensed cosmetologists.

After successful completion of the prescribed 1000 hours of instruction, program graduates are eligible to take the examination administered by the Kentucky Board of Hairdressers and Cosmetology to become licensed nail technicians.

After successful completion of the prescribed 600 hours of instruction, program graduates are eligible to take the examination administered by the Kentucky Board of Hairdressers and Cosmetology to become licensed estheticians.

Diploma

Cosmetologist - 1204014019

(Offered at ASC, BLC, BSC, GTZC, JFC, OWC, SMC, WKC)

General Education:

Area 1 = Written Communication, Oral Communications, or Humanities/Heritage

Area 2 = Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning

Subtotal

NOTE: Documentation of computer/digital literacy as defined by KCTCS is required prior to enrolling in the first cosmetology course.

Technical Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COS 114</td>
<td>Cosmetology I</td>
</tr>
<tr>
<td>COS 116</td>
<td>Cosmetology II</td>
</tr>
<tr>
<td>COS 218</td>
<td>Cosmetology III</td>
</tr>
<tr>
<td>COS 220</td>
<td>Cosmetology IV</td>
</tr>
</tbody>
</table>

Subtotal

Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COS 135</td>
<td>Individual Requirements I</td>
</tr>
<tr>
<td>COS 235</td>
<td>Individual Requirements II</td>
</tr>
</tbody>
</table>

Total Credits

122
Certificates

Cosmetologist - 1204013039
(Offered at ASC, BLC, BSC, GTW, HZC, JFC, MYC, OWC, SMC, WKC)

- COS 114 Cosmetology I ................................................. 14
- COS 116 Cosmetology II ............................................... 14
- COS 218 Cosmetology III ............................................. 14
- COS 220 Cosmetology IV ............................................. 12

Total Credits 54

Electives
- COS 135 Individual Requirements I .................................. 1-8
- COS 235 Individual Requirements II .................................. 1-8

Apprentice Cosmetology Instructor - 1204013019
(Offered at ASC, BLC, BSC, GTW, HZC, JFC, MYC, OWC, SMC, WKC)

- COS 210 Student Teaching .............................................. 13
- COS 212 Student Teaching II .......................................... 13
- COS 214 Student Teaching III ......................................... 13

Total Credits 39

Electives
- COS 135 Individual Requirements I .................................. 1-8
- COS 235 Individual Requirements II .................................. 1-8

Nail Technician - 1204013029
(Offered at ASC, BLC, HZC, JFC, MYC, OWC, SMC, WKC)

- COS 150 Basic Nail Tech .................................................. 13
- COS 152 Applied Nail Technology ...................................... 13

Total Credits 26

Electives
- COS 135 Individual Requirements I .................................. 1-8
- COS 235 Individual Requirements II .................................. 1-8

Esthetician - 1204093019
(Offered at BLC, WKC)

- COS 105 Esthetician .......................................................... 17
- COS 205 Esthetician II ..................................................... 12
- COS 275 Esthetician III .................................................... 13

Total Credits 42

Electives
- COS 135 Individual Requirements I .................................. 1-8
- COS 235 Individual Requirements II .................................. 1-8

Criminal Justice

The Criminal Justice Program prepares the student for entry level work in the fields of law enforcement, corrections, court systems, loss safety and prevention, and other related occupations. The Criminal Justice Program provides the student with a foundation of theory, principles, and techniques employed by the criminal justice agencies. Graduates who complete an AAS Criminal Justice Degree may seek jobs in the criminal justice field.

Progression in the Criminal Justice program is contingent upon the achievement of a grade of "C" or better in each CRJ course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Graduation of an AAS Criminal Justice Degree or program certificate(s) is contingent on the completion of the approved post exit exam as identified by the Criminal Justice KCTCS Curriculum Committee. Failure to complete the identified and approved post exit exam will result in the failure to complete required Criminal Justice Program requirements (as identified by the Criminal Justice KCTCS Curriculum Committee), and graduation of the AAS Criminal Justice Degree or program certificate(s) will not be issued to the student.

Associate in Applied Science

Criminal Justice - 4301037039
(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, OWC, SEC, SMC, WKC)

Available Completely Online

General Education:
- ENG 101 Writing I ......................................................... 3
- ENG 102 Writing II ......................................................... 3
- COM 181 Basic Public Speaking OR ................................. 3
- COM 252 Introduction to Interpersonal Communication (3)
- PSY 110 General Psychology ........................................... 3
- POL 101 American Government OR ................................. 3
- POL 255 State Government ............................................. 3
- SOC 101 Introduction to Sociology .................................... 3

Elective Courses ......................................................... 6

Subtotal: 33

Technical Core Requirements

- CRJ 100 Introduction to Criminal Justice ............................ 3
- CRJ 210 Principles of Asset Protection .............................. 3
- CRJ 203 Community Corrections/Offender & Reentry ............ 3
- CRJ 205 Delinquency and the Juvenile Justice System .......... 3
- CRJ 210 Physical Security Technology and Systems ............ 3
- CRJ 211 Liability and Legal Issues .................................. 3
- CRJ 215 Introduction to Law Enforcement .......................... 3
- CRJ 218 Police Supervision ........................................... 3
- CRJ 220 Introduction to Computer Forensics ...................... 3
- CRJ 222 Prison and Jail Administration ............................ 3
- CRJ 230 Criminal Justice Courtroom Procedures ............... 3
- CRJ 231 Legal Aspects of Corrections .............................. 3
- CRJ 240 Introduction to Corporate and Industrial Security .... 3
- CRJ 245 Introduction to Business and Financial Fraud ......... 3
- CRJ 273 Introduction to Criminology ............................... 3
- CRJ 279 Terrorism and Political Violence ......................... 3

Subtotal: 26

Elective Courses (Choose 9 credit hours from the following courses)

123
### Law Enforcement Track - 430103702

**(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, OWC, SEC, SMC, WKC)**

**Available Completelly Online**

<table>
<thead>
<tr>
<th>Required Course</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 215</td>
<td>Introduction to Law Enforcement</td>
</tr>
<tr>
<td>CRJ 208</td>
<td>Introduction to Criminology</td>
</tr>
<tr>
<td>CRJ 208</td>
<td>Delinquency and the Juvenile Justice System</td>
</tr>
<tr>
<td>CRJ 210</td>
<td>Prison and Jail Administration</td>
</tr>
<tr>
<td>CRJ 230</td>
<td>Criminal Justice Courtroom Procedures</td>
</tr>
<tr>
<td>CRJ 277</td>
<td>Introduction to Criminology</td>
</tr>
<tr>
<td>CRJ 290</td>
<td>Internship in Criminal Justice</td>
</tr>
<tr>
<td>CRJ 299</td>
<td>Selected Topics in Criminal Justice</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>60-63</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Track Elective</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 240</td>
<td>Introduction to Corporate and Industrial Security</td>
</tr>
<tr>
<td>CRJ 245</td>
<td>Introduction to Business and Financial Fraud</td>
</tr>
<tr>
<td>CRJ 290</td>
<td>Internship in Criminal Justice</td>
</tr>
<tr>
<td>CRJ 299</td>
<td>Selected Topics in Criminal Justice</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>60-63</strong></td>
</tr>
</tbody>
</table>

NOTE: CRJ 107 Introduction to Firearms I may be used as a technical elective only. Course will not substitute for track elective.

### Corrections Track - 430103703

**(Offered at ASC, BLC, ELC, GTW, HPC, HZC, JFC, MDC, OWC, SEC, SMC)**

<table>
<thead>
<tr>
<th>Required</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 102</td>
<td>Introduction to Corrections</td>
</tr>
<tr>
<td>CRJ 208</td>
<td>Delinquency and the Juvenile Justice System</td>
</tr>
<tr>
<td>CRJ 203</td>
<td>Community Corrections/Probation &amp; Parole</td>
</tr>
<tr>
<td>CRJ 220</td>
<td>Introduction to Computer Forensics</td>
</tr>
<tr>
<td>CRJ 222</td>
<td>Community Corrections</td>
</tr>
<tr>
<td>CRJ 231</td>
<td>Legal Aspects of Corrections</td>
</tr>
<tr>
<td>CRJ 277</td>
<td>Introduction to Criminology</td>
</tr>
<tr>
<td>CRJ 290</td>
<td>Internship in Criminal Justice</td>
</tr>
<tr>
<td>CRJ 299</td>
<td>Selected Topics in Criminal Justice</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>60-63</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Track Elective</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 102</td>
<td>Introduction to Corrections</td>
</tr>
<tr>
<td>CRJ 203</td>
<td>Community Corrections/Probation &amp; Parole</td>
</tr>
<tr>
<td>CRJ 208</td>
<td>Delinquency and the Juvenile Justice System</td>
</tr>
<tr>
<td>CRJ 222</td>
<td>Prison and Jail Administration</td>
</tr>
<tr>
<td>CRJ 231</td>
<td>Legal Aspects of Corrections</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>60-63</strong></td>
</tr>
</tbody>
</table>

### Security and Loss Prevention Track - 430103704

**(Offered at ASC, BLC, ELC, GTW, HPC, HZC, JFC, MDC, OWC, SEC, SMC, WKC)**

**Available Completelly Online**

<table>
<thead>
<tr>
<th>Required course</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 110</td>
<td>Principles of Asset Protection</td>
</tr>
<tr>
<td>CRJ 210</td>
<td>Physical Security Technology and Systems</td>
</tr>
<tr>
<td>CRJ 211</td>
<td>Liability and Legal Issues</td>
</tr>
<tr>
<td>CRJ 220</td>
<td>Introduction to Computer Forensics</td>
</tr>
<tr>
<td>CRJ 240</td>
<td>Introduction to Corporate Security</td>
</tr>
<tr>
<td>CRJ 245</td>
<td>Introduction to Business and Financial Fraud</td>
</tr>
<tr>
<td>CRJ 290</td>
<td>Internship in Criminal Justice</td>
</tr>
<tr>
<td>CRJ 299</td>
<td>Selected Topics in Criminal Justice</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>60-63</strong></td>
</tr>
</tbody>
</table>

### Certificates

#### Computer Forensics - 4301033019

**(Offered ASC, BLC, BSC, ELC, GTW, HPC, HZC, MDC, OWC, SEC, SMC, WKC)**

<table>
<thead>
<tr>
<th>Required</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 100</td>
<td>Introduction to Criminal Justice</td>
</tr>
<tr>
<td>CRJ 204</td>
<td>Criminal Investigations</td>
</tr>
<tr>
<td>CRJ 220</td>
<td>Introduction to Computer Forensics</td>
</tr>
<tr>
<td>IT 105</td>
<td>Computer Maintenance Essentials</td>
</tr>
<tr>
<td>IT 205</td>
<td>Advanced Computer Maintenance</td>
</tr>
<tr>
<td>CIS 130</td>
<td>Microcomputer Applications</td>
</tr>
<tr>
<td>Total:</td>
<td><strong>18-21</strong></td>
</tr>
</tbody>
</table>

#### Criminal Justice Core - 4301033029

**(Offered ASC, BLC, ELC, GTW, HPC, SEC, SMC, WKC)**

<table>
<thead>
<tr>
<th>Required</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 100</td>
<td>Introduction to Criminal Justice</td>
</tr>
<tr>
<td>CRJ 202</td>
<td>Issues and Ethics in Criminal Justice</td>
</tr>
<tr>
<td>CRJ 204</td>
<td>Criminal Investigations</td>
</tr>
<tr>
<td>CRJ 216</td>
<td>Criminal Law</td>
</tr>
<tr>
<td>CRJ 217</td>
<td>Criminal Procedures</td>
</tr>
<tr>
<td>Total:</td>
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</tbody>
</table>

#### Corrections - 4301033039

**(Offered ASC, BLC, ELC, GTW, HPC, SEC, SMC)**

<table>
<thead>
<tr>
<th>Required</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 102</td>
<td>Introduction to Corrections</td>
</tr>
<tr>
<td>CRJ 203</td>
<td>Community Corrections/Probation &amp; Parole</td>
</tr>
<tr>
<td>CRJ 208</td>
<td>Delinquency and the Juvenile Justice System</td>
</tr>
<tr>
<td>CRJ 222</td>
<td>Prison and Jail Administration</td>
</tr>
<tr>
<td>CRJ 231</td>
<td>Legal Aspects of Corrections</td>
</tr>
<tr>
<td>Total:</td>
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</tr>
</tbody>
</table>

#### Law Enforcement - 4301033049

**(Offered ASC, BLC, ELC, GTW, HPC, SEC, SMC)**

<table>
<thead>
<tr>
<th>Required</th>
<th>Subtotal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 215</td>
<td>Introduction to Law Enforcement</td>
</tr>
<tr>
<td>CRJ 218</td>
<td>Police Supervision</td>
</tr>
<tr>
<td>CRJ 204</td>
<td>Criminal Investigations (OR)</td>
</tr>
<tr>
<td>CRJ 221</td>
<td>Liability and Legal Issues</td>
</tr>
<tr>
<td>CRJ 208</td>
<td>Delinquency and Juvenile Justice System</td>
</tr>
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</table>

#### Security and Loss Prevention - 4301033059

**(Offered ASC, BLC, ELC, HPC, SEC, SMC)**

<table>
<thead>
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<tbody>
<tr>
<td>CRJ 110</td>
<td>Principles of Asset Protection</td>
</tr>
<tr>
<td>CRJ 210</td>
<td>Physical Security Technology &amp; Systems</td>
</tr>
<tr>
<td>CRJ 211</td>
<td>Liability and Legal Issues</td>
</tr>
<tr>
<td>CRJ 240</td>
<td>Introduction to Corporate Security</td>
</tr>
<tr>
<td>CRJ 220</td>
<td>Introduction to Computer Forensics</td>
</tr>
<tr>
<td>Total:</td>
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</tbody>
</table>
Culinary Arts

The KCTCS Culinary Arts program is designed to prepare students for careers in the Culinary Arts, Food and Beverage Management, Restaurant Management, Catering, Institutional Food Service, and as Professional Chefs. Course work covers a broad spectrum: the preparation of basic and specialized foods, catering and special event planning, international cuisine, baking and pastry arts, nutrition, sanitation, management techniques and functions, cost control, purchasing and culinary fundamentals. Students work in commercial kitchen/laboratory and dining room through the course of study. The program uses the teaching philosophy of the American Culinary Federation, The Academy of Chefs, the National Restaurant Association Education Foundation, and the American Personal Chef Association. The program competencies are those of the American Culinary Federation.

Progression in the Culinary Arts program is contingent upon achievement of a grade of "C" or better in each CUL and NFS courses.

Associate in Applied Science

Culinary Arts - 1205037029
(Offered at ASC, BGT, JFC, MYC, SMC, WKC)

General Education
Quantitative Reasoning .............................................. 3
Natural Sciences ......................................................... 3
Social/Behavioral Sciences ........................................... 3
Heritage/Humanities .................................................... 3
Written Communication ............................................... 3
Oral Communications .................................................. 3
Required General Education Hours 18

Culinary Arts Technical Core
CUL 100 Introduction to Culinary Arts OR ........................................ (2)
CUL 105 Applied Introduction to Culinary Arts ................................... (2)
CUL 111 Garde Manger .................................................... 4
CUL 200 Sanitation and Safety ............................................. 4
CUL 211 Basic Food Production ........................................... 4
CUL 215 Basic Baking ..................................................... 4
CUL 230 Basic Nutrition OR ................................................ 3
NFS 101 Human Nutrition and Wellness ................................. (3)
CUL 240 Meats, Seafood, and Poultry .................................... 4
CUL 270 Human Relations Management ................................... 3
CUL 280 Cost and Control .................................................. 4
CUL 285 Front of the House OR ............................................ 3
CUL 290 Front of the House/Catering ..................................... (4)
Computers/Technical Core Hours .................................. 32-36

*Computer/ Technical Core must be demonstrated either by competency exam or by completing a computer/technical core course.

Culinary Arts Degree Track - 120503702
(Offered at ASC, BGT, JFC, MYC, SMC, WKC)

General Education ..................................................... 18
Technical Core ......................................................... 32-36
CUL 220 Advanced Baking and Pastry Arts ................................. 4
CUL 260 International Cuisine ............................................ 4
CUL 298 Culinary Arts Practicum Experience OR ...................... 2-3
CUL 299 Culinary Arts Cooperative Education Experience ........... (2-3)
Total Hours 60-65

Food and Beverage Management Degree Track - 120503703
(Offered at ASC, BGT, JFC, MYC, SMC, WKC)

General Education ..................................................... 18
Technical Core ......................................................... 32-36
BAS 160 Introduction to Business ............................................ 3
BAS 170 Entrepreneurship OR ............................................ 3

Catering and Personal Chef Degree Track - 120503701
(Offered at ASC, BGT, JFC, MYC, SMC, WKC)

General Education ..................................................... 18
Technical Core ......................................................... 32-36
CUL 220 Advanced Baking and Pastry Arts ................................. 4
BAS 170 Entrepreneurship OR ............................................ 3
BAS 283 Principles of Management ...................................... (3)
BAS 282 Principles of Marketing ........................................ 3
CUL 298 Culinary Arts Practicum Experience OR ...................... 2-3
CUL 299 Culinary Arts Cooperative Education Experience ........... (2-3)
Total Hours 61-66

Diplomas

Culinary Arts - 1205034029
(Offered at ASC, BGT, BSC, ELC, MYC, SMC, WKC)

General Education*
Area 1 = Written/Oral Communications, Humanities, or Heritage .... 3
Area 2 = Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning ........................................ 3
Subtotal 6

Technical or Support Courses
Technical Core ......................................................... 32-36
CUL 220 Advanced Baking and Pastry Arts ................................. 4
CUL 260 International Cuisine ............................................ 4
CUL 298 Culinary Arts Practicum Experience OR ...................... 2-3
CUL 299 Culinary Arts Cooperative Education Experience ........... (2-3)
Technical/ Support Total 42-47

Total Hours for Culinary Arts Diploma 48-53

Food and Beverage Management - 1205034039
(Offered at ASC, BGT, BSC, ELC, MYC, SMC, WKC)

General Education*
Area 1 = Written/Oral Communications, Humanities, or Heritage .... 3
Area 2 = Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning ........................................ 3
Subtotal 6

Technical or Support Courses
Technical Core ......................................................... 32-36
BAS 160 Introduction to Business ............................................ 3
BAS 170 Entrepreneurship OR ............................................ 3
BAS 283 Principles of Management ...................................... (3)
BAS 282 Principles of Marketing ........................................ 3
CUL 298 Culinary Arts Practicum Experience OR ...................... 2-3
CUL 299 Culinary Arts Cooperative Education Experience ........... (2-3)
Technical/ Support Total 43-48

Total Hours 49-54
Catering and Personal Chef - 1205034019  
(Offered at ASC, BGT, BSC, ELC, MYC, SMC, WKC)

**General Education**

* If a diploma is sought, two of the three following courses may be used for the six (6) hours general education. These courses will not count toward the AAS degree:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
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<tbody>
<tr>
<td>WPP 700</td>
<td>Workplace Principles (Area 2) OR</td>
<td>3</td>
</tr>
<tr>
<td>EFM 100</td>
<td>Personal Financial Management (Area 2)</td>
<td>(3)</td>
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<tr>
<td>TEC 200</td>
<td>Technical Communications (Area 1)</td>
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**Technical or Support Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CUL 220</td>
<td>Advanced Baking and Pastry Arts</td>
<td>4</td>
</tr>
<tr>
<td>BAS 170</td>
<td>Entrepreneurship AND</td>
<td>3</td>
</tr>
<tr>
<td>CUL 295</td>
<td>Doing Business as a Personal Chef OR</td>
<td>3</td>
</tr>
<tr>
<td>BAS 160</td>
<td>Introduction to Business AND</td>
<td>(3)</td>
</tr>
<tr>
<td>BAS 283</td>
<td>Principles of Management</td>
<td>(3)</td>
</tr>
<tr>
<td>CUL 298</td>
<td>Practicum Experience OR</td>
<td>2-3</td>
</tr>
<tr>
<td>CUL 299</td>
<td>Cooperative Education (2-3)</td>
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</table>

Technical Support Total: 44-49

**Total Hours** 50-55

**Certificates**

**Fundamentals of Culinary Arts - 1205033029**  
(Offered at ASC, BGT, BSC, ELC, JFC, MYC, OWC, SMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 100</td>
<td>Introduction to Culinary Arts OR</td>
<td></td>
</tr>
<tr>
<td>CUL 105</td>
<td>Applied Introduction to Culinary Arts</td>
<td>(2)</td>
</tr>
<tr>
<td>CUL 111</td>
<td>Garde Manger</td>
<td>4</td>
</tr>
<tr>
<td>CUL 200</td>
<td>Sanitation and Safety</td>
<td>2</td>
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<tr>
<td>CUL 211</td>
<td>Basic Food Production</td>
<td>4</td>
</tr>
<tr>
<td>CUL 215</td>
<td>Basic Baking</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Hours 16

**Catering - 1205033059**  
(Offered at ASC, BGT, BSC, ELC, JFC, MYC, OWC, SMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 105</td>
<td>Applied Introduction to Culinary Arts</td>
<td>2</td>
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<tr>
<td>CUL 111</td>
<td>Garde Manger</td>
<td>4</td>
</tr>
<tr>
<td>CUL 200</td>
<td>Sanitation and Safety</td>
<td>2</td>
</tr>
<tr>
<td>CUL 215</td>
<td>Basic Baking</td>
<td>4</td>
</tr>
<tr>
<td>CUL 290</td>
<td>Front of the House/ Catering</td>
<td>4</td>
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</table>

Total Hours 16

**Advanced Catering - 1205033079**  
(Offered at ASC, BGT, BSC, ELC, JFC, MYC, OWC, SMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 211</td>
<td>Basic Food Production</td>
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<tr>
<td>CUL 220</td>
<td>Advanced Baking and Pastry Arts</td>
<td>4</td>
</tr>
<tr>
<td>CUL 240</td>
<td>Meats, Seafood, Poultry</td>
<td>4</td>
</tr>
<tr>
<td>CUL 260</td>
<td>International Cuisine</td>
<td>4</td>
</tr>
<tr>
<td>CUL 270</td>
<td>Human Relations Management</td>
<td>3</td>
</tr>
<tr>
<td>CUL 280</td>
<td>Cost and Control</td>
<td></td>
</tr>
<tr>
<td>BAS 170</td>
<td>Entrepreneurship OR</td>
<td>3</td>
</tr>
<tr>
<td>BAS 160</td>
<td>Introduction to Business AND</td>
<td>(3)</td>
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<tr>
<td>BAS 283</td>
<td>Principles of Management</td>
<td>(3)</td>
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</table>

Total Hours 41-44

**Culinary Arts - 1205033049**  
(Offered at ASC, BGT, ELC, MYC, OWC, SMC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 100</td>
<td>Introduction to Culinary Arts OR</td>
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</tr>
<tr>
<td>CUL 105</td>
<td>Applied Fundamentals of the Culinary Arts Profession</td>
<td>(2)</td>
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<tr>
<td>CUL 200</td>
<td>Sanitation and Safety</td>
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</tr>
<tr>
<td>CUL 211</td>
<td>Basic Food Production</td>
<td>4</td>
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<tr>
<td>CUL 215</td>
<td>Basic Baking</td>
<td>4</td>
</tr>
<tr>
<td>CUL 298</td>
<td>Food and Beverage Management - 1205033089</td>
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</table>

Total Hours 31-34

**Advanced Food and Beverage Management - 1205033089**  
(Offered at ASC, BGT, BSC, ELC, JFC, MYC, OWC, SMC, WKC)

<table>
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<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CUL 100</td>
<td>Introduction to Culinary Arts OR</td>
<td></td>
</tr>
<tr>
<td>CUL 105</td>
<td>Applied Fundamentals of the Culinary Arts Profession</td>
<td>(2)</td>
</tr>
<tr>
<td>CUL 111</td>
<td>Garde Manger</td>
<td>4</td>
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<tr>
<td>CUL 200</td>
<td>Sanitation and Safety</td>
<td>2</td>
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<tr>
<td>CUL 211</td>
<td>Basic Food Production</td>
<td>4</td>
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<td>CUL 215</td>
<td>Basic Baking</td>
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<td>CUL 298</td>
<td>Culinary Arts Practical Experience OR</td>
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Total Hours 43-45

**Culinary Arts Professional Development - 1205033099**  
(Offered at BGT, SMC)

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<th>Hours</th>
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<tbody>
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<td>Introduction to Culinary Arts OR</td>
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<tr>
<td>CUL 105</td>
<td>Applied Introduction to Culinary Arts</td>
<td>(2)</td>
</tr>
<tr>
<td>BAS 160</td>
<td>Entrepreneurship OR</td>
<td></td>
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<tr>
<td>CUL 200</td>
<td>Sanitation and Safety</td>
<td>2</td>
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<tr>
<td>CUL 215</td>
<td>Basic Baking</td>
<td>4</td>
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<tr>
<td>CUL 220</td>
<td>Advanced Baking</td>
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Total Hours 12

*Prerequisites apply

**Baking - 1205033109**

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<td>(2)</td>
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<tr>
<td>CUL 200</td>
<td>Sanitation and Safety</td>
<td>2</td>
</tr>
<tr>
<td>CUL 215</td>
<td>Basic Baking</td>
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Total Hours 12
### Dental Hygiene

This program prepares students to function as dental hygienists on a dental auxiliary team under the general supervision of a dentist. The curriculum includes courses in general education and in dental hygiene as required by the Commission on Dental Accreditation and Kentucky state dental practice act. The program provides comprehensive educational experiences through lectures, clinical and related study in order that students may apply scientific knowledge in the performance of dental hygiene procedures. Students enrolled in the Dental Hygiene program must achieve a minimum grade of "C" in each Dental Hygiene and approved science course. Documentation of computer/digital literacy as defined by KCTCS and Cardiopulmonary resuscitation (CPR) are required prior to admission to DHP courses.

**Associate in Applied Science**

**Dental Hygiene - 5106027019**

(Offered at BLC)

<table>
<thead>
<tr>
<th>General Education Core</th>
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<tbody>
<tr>
<td>BIO 137 Human Anatomy &amp; Physiology I*</td>
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<tr>
<td>BIO 139 Human Anatomy &amp; Physiology II*</td>
<td>4</td>
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<tr>
<td>BIO 226 Principles of Microbiology</td>
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<tr>
<td>PSY 110 General Psychology</td>
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<tr>
<td>SOC 101 Introduction to Sociology</td>
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**Recommended Electives (Not Required)**

<table>
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<th>Course</th>
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<tr>
<td>DHP 121 Dental Hygiene I**</td>
<td>4</td>
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<tr>
<td>DHP 122 Dental Nutrition</td>
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<tr>
<td>DHP 130 Dental Hygiene II</td>
<td>3</td>
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<tr>
<td>DHP 131 Oral Biology I</td>
<td>3</td>
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<tr>
<td>DHP 135 Dental Radiology</td>
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<tr>
<td>DHP 136 Periodontics I</td>
<td>2</td>
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<tr>
<td>DHP 220 Dental Hygiene III</td>
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<td>DHP 222 Special Needs Patients</td>
<td>3</td>
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<tr>
<td>DHP 224 Dental Materials</td>
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<td>DHP 226 Periodontics II</td>
<td>2</td>
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<tr>
<td>DHP 230 Dental Hygiene IV</td>
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<tr>
<td>DHP 256 Principles of Practice</td>
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<tr>
<td>DHP 258 Community Dental Health</td>
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</table>

**Total Program Credits**

68

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### Dental Assisting/Dental Hygiene Integrated Program

The Dental Assisting/Dental Hygiene Integrated Program is a program that prepares graduates to function as dental auxiliaries.

The Dental Assisting Program prepares the student to function effectively as an integral member of the dental health team and to perform chairside assisting and related office and laboratory procedures under the direction and supervision of a dentist. The curriculum includes content areas in general studies, biomedical sciences, dental sciences, clinical sciences, radiography, and clinical experience. Students must achieve a minimum grade of "C" in each Dental Assisting (DAS) course, Dental Assisting/Hygiene (DAH) course, and approved science courses. Upon completion of the program, students are eligible to take the Dental Assisting National Board Examination to become a Certified Dental Assistant.

The Dental Hygiene Program prepares the student to function as a dental hygienist on a dental auxiliary team under the supervision of a dentist. The curriculum includes content areas in general studies, biomedical sciences, dental sciences, clinical sciences, radiography, periodontology, and dental hygiene clinical experience. The program provides comprehensive educational experiences through lectures, clinical, and related study in order that graduates may apply scientific knowledge in the performance of dental hygiene procedures. Students must achieve a minimum grade of "C" in each Dental Hygiene (DHG) course, Dental Assisting/Hygiene (DAH) course, and approved science courses. Upon completion, graduates are eligible to apply to take the Dental Hygiene National Board Examination. As the only licensed dental auxiliaries, dental hygienists may be employed in dental offices, clinics, dental schools, public health and government agencies.

The Dental Assisting/Dental Hygiene Integrated Program is accredited by the Commission on Dental Accreditation, a specialized accrediting agency of the American Dental Association.

**Associate in Applied Science**

**Dental Hygiene - 5106027040**

(Offered in West Consortium – Credential granted by Henderson CC but also taught at West KY CTC)

(Offered in East Consortium – Credential granted by Big Sandy CTC but also taught at Bluegrass CTC and Somerset CC)

### General Education Classes

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>ENG 101 Writing I</td>
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<tr>
<td>ENG 102 Writing II</td>
<td>3</td>
</tr>
<tr>
<td>BIO 137 Human Anatomy &amp; Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 139 Human Anatomy &amp; Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>BIO 226 Medical Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 110 General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 101 Introductory Sociology</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110 Applied Mathematics OR</td>
<td>3</td>
</tr>
<tr>
<td>MAT 150 College Algebra and Functions</td>
<td>3</td>
</tr>
<tr>
<td>Oral Communications</td>
<td>3</td>
</tr>
<tr>
<td>Heritage/ Humanities</td>
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**Subtotal**

33

### Integrated Classes

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>DAH 101 Infection Control and Medical Emergencies</td>
<td>2</td>
</tr>
<tr>
<td>DAH 121 Dental Sciences</td>
<td>3</td>
</tr>
<tr>
<td>DAH 124 Materials in Dentistry</td>
<td>2</td>
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</table>
Program Related Classes

Dental Hygiene Only Classes:
- DHG 120 Pre-Clinical Dental Hygiene ........................................... 3
- DHG 130 Clinical Dental Hygiene I ............................................. 3
- DHG 152 Pharmacology ............................................................. 2
- DHG 194 Dental Nutrition ........................................................... 2
- DHG 196 Periodontology ............................................................ 1
- DHG 220 Clinical Dental Hygiene II ............................................ 4
- DHG 230 Clinical Dental Hygiene III .......................................... 3
- DHG 238 Community Dental Health Issues .................................. 2

Subtotal 13

Elective
- DHG 221 Local Anesthesia and Nitrous Oxide Sedation .................. 2

Diploma

Dental Assisting - 5106024019

(Offered in West Consortium – Credential granted by West KY CTC but also taught at Elizabethtown CTC and Henderson CC)
(Offered in East Consortium – Credential granted by Bluegrass CTC but also taught at Big Sandy CTC and Somerset CC)

General Education Classes:

Program Related Classes

BIO 135 Basic Anatomy & Physiology with Laboratory OR ............... 4
BIO 137 Human Anatomy & Physiology I AND .............................. (4)
BIO 191 Human Anatomy & Physiology II ..................................... (4)
Three credits from Written Communication, Oral Communications, or Heritage/ Humanities .............................................. 3
PSY 110 General Psychology ......................................................... (3)

*Required at Bluegrass CTC, recommended at West Kentucky CTC

Subtotal 7-14

Integrated Classes

DAH 101 Infection Control and Medical Emergencies ...................... 2
DAH 121 Dental Sciences .............................................................. 3
DAH 124 Materials in Dentistry .................................................... 2
DAH 131 Oral Pathology ............................................................... 3
DAH 135 Oral Radiology ............................................................... 2
DAH 235 Practice Management ..................................................... 1

Subtotal 13

Dental Assisting Only Classes

DAS 120 Dental Assisting I ........................................................... 6
DAS 130 Seminar I ........................................................................ 2
DAS 220 Dental Assisting II ......................................................... 9
DAS 230 Seminar II .................................................................... 1

Subtotal 18

Total Credit Hours 39-45

Dental Laboratory Technology

This program prepares individuals to fabricate dental prosthetic appliances that replace or repair natural teeth to help patients eat, chew, talk, and smile as well as, or better than, they did before. Dental technicians work collaboratively with dentists by following a written work authorization that details the type of prosthesis needed. Dental technicians do not have direct contact with the patient but instead use stone models made from impressions of the patient’s teeth and surrounding soft tissues.

The curriculum includes courses in general education and in dental laboratory technology as required by the Commission on Dental Accreditation. The curriculum includes lectures and extensive laboratory experiences to enhance the students’ learning.

The dental laboratory technician has many employment options including commercial dental laboratories, dental offices that have their own laboratories, dental sales and manufacturing firms. Graduates may also choose to own a laboratory, state laws permitting, or seek a teaching position at a dental laboratory education program.

Dental Laboratory Technology students completing the first year of the curriculum will earn a Certificate in Dental Laboratory Technology which prepares students for employment as entry-level dental technicians.

Dental Laboratory Technology students completing two years of the curriculum will earn an Associate Degree in Applied Science which will prepare graduates for employment as technicians and graduates are eligible to take the National Board for Certification Recognized Graduate Examination and the Certified Dental Technician exam.

Applicants are accepted into the Program each fall according to the Guidelines for Admission to the Dental Laboratory Technology Program. This is a selective admissions process with approximately twenty students accepted each year. Students must maintain technical standards and a minimum GPA of at least a 2.0 (on a 4.0 scale) in the curriculum in order to progress from one semester to the next.

The Dental Laboratory Technology program is accredited by the Commission on Dental Accreditation of the American Dental Association.

For more information, visit the Dental Laboratory Technology program website at bluegrass.kctcs.edu.

Associate in Applied Science

Dental Laboratory Technology - 5106037019

(Offered at BLC)
Certificate

Dental Laboratory Technology - 5106033019

(Offers at BLC)

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<td>DLT 142</td>
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<td>DLT 151</td>
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Diagnostic Medical Sonography

Diagnostic Medical Sonography is a highly skilled profession which uses specialized equipment to create images of structures inside the human body used by physicians to make medical diagnoses. Graduates of the program are qualified to provide patient services using diagnostic techniques under the supervision of a licensed physician.

This program contains four tracks, the general/vascular track, the general track, the vascular track and the cardiac track. The general/vascular track prepares the graduate to be a general sonographer who is qualified to perform vascular ultrasound. Sonographers have extensive, direct patient contact that may include performing some invasive procedures. The general track prepares the graduate to perform sonograms on the abdominal, small parts and OB/GYN applications. The vascular track prepares the graduate to perform sonograms on the cardiovascular, peripheral arterial, peripheral venous and abdominal vascular applications. The cardiac track prepares the graduate to perform cardiovascular sonograms.

Sectional anatomy, ultrasonic instrumentation and imaging are the major components in this program. Skills are developed through clinical experiences using diagnostic imaging equipment.

An advanced track (certificate) in vascular sonography is offered for candidates who are currently employed and registry eligible in Diagnostic Medical Sonography.

The student is exposed to and expected to acquire skills, attitudes, and habits that are generally common to all professionals in the medical field. Graduates will be prepared for a professional career in the opted sonography field.

CPR requirement must be successfully completed prior to enrolling in the first sonography course and must be kept current throughout the program. Documentation of successful completion of a minimum 75 hour nursing assistant course or its equivalent and computer/digital literacy competency as defined by KCTCS are required prior to enrolling in the first sonography course.

Progression in the Diagnostic Medical Sonography program is contingent upon achievement of a grade of "C" or better in each Sonography course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale). Transportation to the community agencies is the responsibility of each student.

Associate in Applied Science

Diagnostic Medical Sonography - 5109107019

(Offers at HZC, JFC, WKC)

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<td>PHY 152</td>
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<td>PHY 171</td>
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General/Vascular Track - 510910701

(Offers at HZC, WKC)

A total of 17 credit hours must be completed from the following clinical courses: 17

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<td>Clinical Education I</td>
<td>(3-4)</td>
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<tr>
<td>DMS 230</td>
<td>Clinical Education II</td>
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<td>DMS 240</td>
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General Track - 510910703

(Offers at BGT, JFC)

A total of 17 credit hours must be completed from the following clinical courses: 17

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<td>NAA 100</td>
<td>Nursing Assistant Skills</td>
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<td>DMS 115</td>
<td>Sonography I</td>
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<td>DMS 119</td>
<td>Sonography II</td>
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<td>DMS 199</td>
<td>Ultrasonic Physics and Instrumentation</td>
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<td>DMS 201</td>
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<td>(1)</td>
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<td>DMS 202</td>
<td>Online OB/GYN Review</td>
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<td>DMS 255</td>
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<td>DMS 260</td>
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Vascular Track - 510910704

(Offers at JFC)

A total of 17 credit hours must be completed from the following clinical courses: 17

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<td>DMS 117</td>
<td>Vascular Sonography I</td>
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<td>DMS 118</td>
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<td>DMS 136</td>
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<td>DMS 204</td>
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*Required by Owensboro CTC.
DMS 206 Online Vascular Sonography III ........................................ 3
DMS 236 Vascular Clinical Education II ........................................ 8
DMS 237 Vascular Clinical Education III ........................................ 5
Subtotal 43
Total 62-67

Cardiac Track - 510910702
(Offered at ASC, JFC)

AHS 120 Medical Terminology ............................................... 1
CHE 140 Introductory General Chemistry ................................... 3
DMS 105 Introduction to Cardiology ........................................... 13
DMS 145 Cardiac Sonography I ............................................... 12
DMS 205 Cardiac Sonography II ............................................... 6
DMS 215 Cardiac Sonography III ............................................... 6
DMS 245 Cardiac Sonography IV ............................................... 6
Subtotal 47
Total 66-71

Certificates

Basic Vascular Technology - 5109103019
(Offered at BGT, WKC)

DMS 280 Basic Vascular Technology .......................................... 3
Total 3

Cardiac - 5109103029
(Offered at JFC)

CHE 140 Introductory General Chemistry ................................... 3
DMS 105 Introduction to Cardiology ........................................... 13
DMS 145 Cardiac Sonography I ............................................... 12
DMS 205 Cardiac Sonography II ............................................... 6
DMS 215 Cardiac Sonography III ............................................... 6
DMS 245 Cardiac Sonography IV ............................................... 6
Total 46

General - 5109103039
(Offered at JFC)

DMS 111 Abdominal Sonography .............................................. 7
DMS 116 OB/GYN Sonography ................................................ 7
DMS 121 Sonography Physics and Instrumentation ..................... 6
DMS 199 Online Physics Review ................................................. 1
DMS 201 Online Abdomen Review ............................................. 1
DMS 202 Online OB/GYN Review ............................................. 1
A total of 17 credit hours must be completed from the following courses: 17
DMS 126 Clinical Education I ............................................ (3-4)
DMS 230 Clinical Education II ............................................ (5-8)
DMS 240 Clinical Education III ............................................ (5-8)
Total 39

Vascular - 5109103049
(Offered at JFC)

DMS 117 Vascular Sonography I .............................................. 7
DMS 118 Vascular Sonography II .............................................. 6
DMS 121 Sonography Physics and Instrumentation ..................... 6
DMS 136 Vascular Clinical Education I ..................................... 4
DMS 199 Online Physics Review AND ........................................ 1
DMS 204 Online Review ......................................................... 2
DMS 206 Online Vascular Sonography III ................................. 3
DMS 236 Vascular Clinical Education II .................................... 8
DMS 237 Vascular Clinical Education III .................................... 5
Total 42

Basic Cardiac Ultrasound Technology - 5109103059
(Offered at BGT)

DMS 217 Basic Cardiac Ultrasound Technology .......................... 3
Total 3

Diesel Technology

Emphasizes the skills needed to analyze malfunction, repair, rebuild, and maintain construction equipment, agriculture equipment, or medium and heavy trucks. Provides instruction and experience in systems such as diesel engines, fuel injection, on-board computers, transmissions, steering and suspension, and brakes.

A student must receive a grade of “C” or better to receive credit for successful completion of courses in the diesel technology curriculum.

Associate in Applied Science

Diesel Technology - 4706057039
(Offered at ELC, SEC)

General Education:

Technical Core:

Basic Education:

Agriculture Diesel Technician Track - 470605701
(Offered at SEC)

NOTE: Computer/Digital Literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course. If demonstrated by a competency exam, an additional three credit hour class must be taken.
Construction Equipment Technician Track - 470605702

(Offered at SEC)

DIT 121 Introduction to Maintenance Welding Lab OR ........................ 3
IMT 100 Welding for Maintenance AND ........................................ 3
WLD 120 Shielded Metal ArcWelding (SMAW) AND ......................... (3)
WLD 121 Shielded Metal ArcWelding (SMAW) Lab .......................... (2)
DIT 123 Undercarriage Lab ........................................................ 3
DIT 152 Powertrain for Construction Equipment .......................... 3
DIT 153 Powertrain for Construction Equipment Lab .................. 2
Subtotal .............................................................................. 11-13

Total ..................................................................................... 65-67

Medium and Heavy Truck Technician Track - 470605703

(Offered at ELC, SEC)

DIT 180 Brakes ........................................................................... 3
DIT 181 Brakes Lab ..................................................................... 2
DIT 160 Steering and Suspension ............................................... 3
DIT 161 Steering and Suspension Lab .......................................... 2
DIT 121 Introduction to Maintenance Welding Lab OR .............. 3
IMT 100 Welding for Maintenance AND ........................................ 3
IMT 101 Welding for Maintenance Lab OR ................................... 2
WLD 120 Shielded Metal ArcWelding (SMAW) AND ......................... (3)
WLD 121 Shielded Metal ArcWelding (SMAW) Lab ......................... (2)
Subtotal .................................................................................. 10

Total ......................................................................................... 64

Recommended Technical Electives (Program Coordinator Approval required)

DIT 180 Brakes ........................................................................... 3
DIT 181 Brakes Lab ..................................................................... 2
DIT 160 Steering and Suspension ............................................... 3
DIT 161 Steering and Suspension Lab .......................................... 2
DIT 121 Introduction to Maintenance Welding Lab OR .............. 3
IMT 100 Welding for Maintenance AND ........................................ 3
IMT 101 Welding for Maintenance Lab OR ................................... 2
WLD 120 Shielded Metal ArcWelding (SMAW) AND ......................... (3)
WLD 121 Shielded Metal ArcWelding (SMAW) Lab ......................... (2)
DIT 123 Undercarriage Lab ........................................................ 3
DIT 152 Powertrain for Construction Equipment .......................... 3
DIT 153 Powertrain for Construction Equipment Lab .................. 2
DIT 105 Mechanical Concepts OR ............................................ 1
PMX 100 Precision Measurement ............................................... (3)
DIT 193 Special Problems I ....................................................... 1
DIT 195 Special Problems II ........................................................ 2
DIT 197 Special Problems III ..................................................... 3
DIT 198 Practice .......................................................... 1
DIT 258 Practice I.. .......................................................... 2
DIT 199 Cooperative Education .................................................. 1
DIT 299 Cooperative Education II ............................................... 2
(Or other courses as approved by the Program Coordinator that will prepare the student for entry into the workforce)

Diplomas

Agriculture Equipment Technician - 4706054039

(Offered at ASC, BSC, MYC, OW C, SEC, WKC)

General Education

Area 1 = Written Communication, Oral Communications, or Humanities/Heritage ......................................................... 3
Area 2 = Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning ......................................................... 3
Subtotal ..................................................................................... 6

Technical Courses

Computer/Digital Literacy course OR demonstrated competency ......................................................... 0-3
ADX 170 Climate Control .......................................................... 3
ADX 171 Climate Control Lab .................................................... 1
BEX 100 Basic Electricity for Non-Majors AND ......................... 3
BEX 101 Basic Electricity Lab for Non-Majors OR ...................... 2
ADX 120 Basic Automotive Electricity AND ............................. (3)
ADX 121 Basic Automotive Electrity Lab OR ................................ 2
ELT 110 Circuits ....................................................................... (5)
DIT 108 Preventive Maintenance Lab ........................................... 2
DIT 110 Introduction to Diesel Engines AND ......................... (3)
DIT 111 Introduction to Diesel Engines Lab OR ...................... 2
ADX 150 Engine Repair AND ..................................................... (3)
ADX 151 Engine Repair Lab ..................................................... 2
DIT 112 Diesel Engine Repair ................................................... 3
DIT 113 Diesel Engine Repair Lab ............................................ 2
DIT 150 Power Trains .......................................................... 3
DIT 151 Power Trains Lab ....................................................... 2
DIT 152 Powertrain for Construction Equipment .................... 3
DIT 153 Powertrain for Construction Equipment Lab ............. 2
DIT 121 Introduction to Maintenance Welding Lab OR .............. 3
IMT 100 Welding for Maintenance AND ........................................ 3

Total 44-49

Construction Equipment Technician - 4706054019

(Offered at ASC, BSC, HZC, MYC, OW C, SEC, WKC)

General Education

Area 1 = Written Communication, Oral Communications, or Humanities/Heritage ......................................................... 3
Area 2 = Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning ......................................................... 3
Subtotal ..................................................................................... 6

Technical Courses

Computer/Digital Literacy course OR demonstrated competency ......................................................... 0-3
ADX 170 Climate Control .......................................................... 3
ADX 171 Climate Control Lab .................................................... 1
BEX 100 Basic Electricity for Non-Majors AND ......................... 3
BEX 101 Basic Electricity Lab for Non-Majors OR ...................... 2
ADX 120 Basic Automotive Electricity AND ............................. (3)
ADX 121 Basic Automotive Electrity Lab OR ................................ 2
ELT 110 Circuits ....................................................................... (5)
DIT 108 Preventive Maintenance Lab ........................................... 2
DIT 110 Introduction to Diesel Engines AND ......................... (3)
DIT 111 Introduction to Diesel Engines Lab OR ...................... 2
ADX 150 Engine Repair AND ..................................................... (3)
ADX 151 Engine Repair Lab ..................................................... 2
DIT 112 Diesel Engine Repair ................................................... 3
DIT 113 Diesel Engine Repair Lab ............................................ 2
DIT 150 Power Trains .......................................................... 3
DIT 151 Power Trains Lab ....................................................... 2
DIT 152 Powertrain for Construction Equipment .................... 3
DIT 153 Powertrain for Construction Equipment Lab ............. 2
DIT 121 Introduction to Maintenance Welding Lab OR .............. 3
IMT 100 Welding for Maintenance AND ........................................ 3

Total 50-55
Recommended Technical Electives (Program Coordinator Approval required)

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<td>Brakes</td>
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<td>ADX 260</td>
<td>Electrical Systems AND</td>
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<td>ADX 261</td>
<td>Electrical Systems Lab</td>
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Certificate

Agriculture Equipment Mechanic Helper - 4706053109

(Offered at ASC, BSC, MYC, OW, SEC, SMC,WKC)

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<td>DIT 110</td>
<td>Introduction to Diesel Engines AND</td>
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<td>DIT 111</td>
<td>Introduction to Diesel Engines Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>ADX 260</td>
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<td>DIT 112</td>
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<td>DIT 113</td>
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<td>DIT 123</td>
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Construction Equipment Mechanic Helper - 4706053019

(Offered at ASC, BSC, HZC, MYC, OW, SEC, SMC,WKC)

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<td>DIT 110</td>
<td>Introduction to Diesel Engines AND</td>
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<td>DIT 123</td>
<td>Undercarriage Lab</td>
<td>2</td>
</tr>
<tr>
<td>DIT 199</td>
<td>Cooperative Education</td>
<td>1</td>
</tr>
<tr>
<td>DIT 299</td>
<td>Cooperative Education II</td>
<td>1</td>
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</tbody>
</table>

Diesel Engine Mechanic - 4706053079

(Offered at ASC, BSC, HZC, MYC, OW, SEC, SMC,WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIT 110</td>
<td>Introduction to Diesel Engines</td>
<td>3</td>
</tr>
<tr>
<td>DIT 111</td>
<td>Introduction to Diesel Engines Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>ADX 150</td>
<td>Engine Repair AND</td>
<td>(3)</td>
</tr>
<tr>
<td>ADX 151</td>
<td>Engine Repair Lab OR</td>
<td>(2)</td>
</tr>
<tr>
<td>DIT 112</td>
<td>Diesel Engine Repair Lab</td>
<td>3</td>
</tr>
<tr>
<td>DIT 113</td>
<td>Diesel Engine Repair Lab</td>
<td>2</td>
</tr>
<tr>
<td>DIT 114</td>
<td>Electives (Diesel Courses/Industrial Education Core)</td>
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</table>

Diesel Mechanics Assistant - 4706053159

(Offered at ASC, ELC, HZC, MYC, OWC, SEC, SMC,WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DIT 103</td>
<td>Preventive Maintenance Lab</td>
<td>2</td>
</tr>
<tr>
<td>DIT 110</td>
<td>Introduction to Diesel Engines</td>
<td>3</td>
</tr>
<tr>
<td>DIT 111</td>
<td>Introduction to Diesel Engines Lab</td>
<td>(2)</td>
</tr>
<tr>
<td>DIT 112</td>
<td>Diesel Engine Repair Lab</td>
<td>3</td>
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<tr>
<td>DIT 113</td>
<td>Diesel Engine Repair Lab</td>
<td>2</td>
</tr>
<tr>
<td>DIT 114</td>
<td>Powertrain for Construction Equipment</td>
<td>3</td>
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<tr>
<td>DIT 123</td>
<td>Undercarriage Lab</td>
<td>2</td>
</tr>
<tr>
<td>DIT 199</td>
<td>Cooperative Education</td>
<td>1</td>
</tr>
<tr>
<td>DIT 299</td>
<td>Cooperative Education II</td>
<td>1</td>
</tr>
</tbody>
</table>
### Diesel Steering & Suspension Mechanic - 4706053179  
(Offered at ASC, BLC, BSC, ELC, HZC, MYC, OWC, SEC, SMC, WKC)

- ADX 120 Basic Automotive Electricity AND................................. (3)
- DIT 190 Electrical Systems for Diesel Equipment AND ................. (2)
- DIT 191 Electrical Systems for Diesel Equipment Lab .................. (2)
- Total 27

### Electrical/Electronics Systems Mechanic - 4706053059  
(Offered at ASC, BSC, ELC, GTW, HZC, MYC, SEC, SMC, WKC)

- BEX 100 Basic Electricity for Non-Majors AND......................... (3)
- ADX 120 Basic Automotive Electricity AND........................................ (3)
- ADX 121 Basic Automotive Electricity Lab.............................. (2)
- ENGT 110 Circuits I ........................................................................... (5)
- DIT 190 Electrical Systems for Diesel Equipment AND ................. (2)
- DIT 191 Electrical Systems for Diesel Equipment Lab ................. (2)
- ADX 260 Electrical Systems .................................................. (3)
- ADX 261 Electrical Systems Lab .................................................. (2)
- Electives (Diesel Courses/Industrial Education Core) ...... 7
- Total 12

### Fluid Power Mechanic - 4706053119  
(Offered at ASC, BSC, ELC, HZC, MYC, OWC, SEC, SMC, WKC)

- FXP 100 Fluid Power OR................................................................. 3
- FXP 101 Fluid Hydraulics ......................................................... 2
- FXP 141 Fluid Power Lab .............................................................. 2
- Electives (Diesel Courses/Industrial Education Core) ...... 7
- Total 12

### Heavy Duty Brake Mechanic - 4706053039  
(Offered at ASC, BSC, ELC, HZC, MYC, OWC, SEC, SMC, WKC)

- DIT 180 Brakes .............................................................................. 3
- DIT 181 Brakes Lab ........................................................................ 2
- Electives (Diesel Courses/Industrial Education Core) ...... 7
- Total 12

### Heavy Duty Drive Train Mechanic - 4706053089  
(Offered at ASC, BSC, ELC, HZC, MYC, OWC, SEC, SMC, WKC)

- DIT 150 PowerTrains ............................................................... 3
- DIT 151 PowerTrains Lab ........................................................... 2
- Electives (Diesel Courses/Industrial Education Core) ...... 7
- Total 12

### Medium and Heavy Truck Mechanic Helper - 4706053149  
(Offered at ASC, BSC, ELC, HZC, MYC, OWC, SEC, SMC, WKC)

- ADX 120 Basic Automotive Electricity AND............................... (3)
- ADX 121 Basic Automotive Electricity Lab OR ......................... (2)
- BEX 100 Basic Electricity for Non-Majors AND......................... (3)
- BEX 101 Basic Electricity Lab for Non-Majors OR ....................... (2)
- EIT 110 Circuits I ........................................................................... (5)
- ADX 150 Engine Repair AND .......................................................... 3
- ADX 151 Engine Repair Lab OR ...................................................... 2
- DIT 110 Introduction to Diesel Engines AND ..................... (3)
- DIT 111 Introduction to Diesel Engines Lab ............................... (2)
- ADX 260 Electrical Systems AND .................................................. 3
- ADX 261 Electrical Systems Lab OR .................................................. 2
- DIT 190 Electrical Systems for Diesel Equipment AND .......... (3)
- DIT 191 Electrical Systems for Diesel Equipment Lab .......... (3)
- DIT 171 Climate Control .............................................................. (2)
- DIT 191 Electrical Systems for Diesel Equipment Lab .......... (2)
- Total 27
Education

The Associate in Applied Science Degree (AAS) in Education, Teacher Preparation, is a track for students who wish to begin coursework at a community and technical college and then apply for transfer admission to a four-year college or university. The Paraprofessional Certificate program is designed to prepare students to successfully complete the Kentucky Paraprofessional Assessment or Kentucky Department of Education approved alternative assessment. Paraprofessionals who wish to earn a two-year degree may complete the (AAS) Teacher Associate track. Associate in Applied Science

Associate in Applied Science
Education - 1315017019
Teacher Prep Track - 131501701 (Offered at BLC, ELC, GTW, HPC, JFC, OWC, SEC, SMC)

General Education
ENG 101 Writing I .............................................................. 3
ENG 102 Writing II ............................................................. 3
COM 181 Basic Public Speaking .............................................. 3
OR
COM 252 Introduction to Interpersonal Communications .......... (3) Humanities/Foreign Language .............................................. 3-4
HIS 108 History of the United States Through 1865 ................. 3
OR
HIS 109 History of the United States Since 1865 ....................... (3)
MAT 146 Contemporary College Mathematics ............................ 3
OR
MAT 150 College Algebra .................................................... (3)
OR
MA 109 College Algebra ....................................................... (3)
OR
MA 111 Contemporary Mathematics ....................................... (3) Humanities ............................................................. 3
PSY 110 General Psychology .................................................. 3
Social/Behavioral Sciences ................................................... 3

Subtotal 33-34

Technical Core or Support Core (Common)
Computer/Digital Literacy .................................................... 3
EDU 201 An Introduction to American Education ........................ 3
EDP 202 Human Development and Learning ............................... 3
EDP 203 Teaching Exceptional Learners in Regular Classrooms ........ 3
Total Common 12

Technical or Support Electives
Technical or Support Electives .................................................. 15
Total Teacher Preparation Track ................................................. 15
Total Credit Hours 61-62

At least one course must be selected from the identified Cultural Studies course list.
Must include at least one Science course with a laboratory experience.
Successfully passing the computer/digital competency exam will satisfy this requirement. If the computer competency exam is successfully completed, the student must take three (3) credit hours of coursework approved by the program coordinator.

Certificate
Paraeducator - 1315013019 (Offered at BLC, ELC, HPC, JFC, MYC, OWC, SEC, SMC)

EDU 110 Orientation to Education ............................................ 3
EDU 120 Child and Adolescent Development ............................... 3
EDU 130 Introduction to Special Education ................................ 3
EDU 140 Introduction to Behavior Management ............................. 3
EDU 150 Practical Experiences for the Paraeducator ....................... 3
EDU 280 Education Externship/Co-op ........................................ 3
Total Paraeducator Certificate ................................................. 15-18

Energy Systems

The Energy Systems degree is designed to prepare its graduates for entry level positions across the entire range of energy technologies. The initial track will prepare students to work safely and effectively as operators in fossil-fueled electricity generating power plants. The curriculum will also provide a background in other types of energy production and distribution, including solar, wind, geothermal, and petroleum-based as well as emerging technologies such as ethanol, biodiesel, and clean coal technologies. Graduates will have an understanding of the financial, societal, and environmental impacts of the various energy production technologies, and will be able to operate and troubleshoot the machinery and systems used in energy production.

Associate in Applied Science
Energy Systems - 1505037019 (Offered at MYC)

General Education
MAT 116 Technical Mathematics .............................................. 3
ENG 101 Writing I ............................................................... 3
PHY 151 Introductory Physics I or higher .................................... 3
Heritage/ Humanities ......................................................... 3
### Technical Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ESP 101</td>
<td>Introduction to Energy Systems</td>
<td>3</td>
</tr>
<tr>
<td>ESP 211</td>
<td>Power Plant Operations I</td>
<td>3</td>
</tr>
<tr>
<td>ISX 101</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>ELT 102</td>
<td>Blueprint Reading</td>
<td>2</td>
</tr>
<tr>
<td>ESP 220</td>
<td>Power Plant Thermodynamic or</td>
<td>3</td>
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<tr>
<td>ELT 210</td>
<td>Thermodynamic Applications</td>
<td>3</td>
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<tr>
<td>ENV 110</td>
<td>Introduction to Environmental Technology</td>
<td>(3)</td>
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<tr>
<td>ESP 110</td>
<td>Petroleum Based Fuels</td>
<td>3</td>
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<tr>
<td>ESP 280</td>
<td>Capstone in Energy Systems or</td>
<td>3</td>
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<tr>
<td>ISM 210</td>
<td>Fundamentals of Process Control</td>
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Subtotal: 24-27

**COE 199 requirement can be met by relevant work experience approved by the program coordinator.**

### Power Plant Operations Track - 150503701

(Offers at MYC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ESP 212</td>
<td>Power Plant Operations II</td>
<td>3</td>
</tr>
<tr>
<td>ESP 213</td>
<td>Power Plant Operations III</td>
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<tr>
<td>ESP 314</td>
<td>Power Plant Operations IV</td>
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<tr>
<td>ESP 120</td>
<td>Power Plant Chemistry</td>
<td>3</td>
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<tr>
<td>ESP 130</td>
<td>Electrical Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ESP 132</td>
<td>Electrical Machinery and Controls</td>
<td>3</td>
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<tr>
<td>COE** 199</td>
<td>Cooperative Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Subtotal: 21

**COE 199 Cooperative Education requirement can be met by relevant work experience approved by the program coordinator.**

### Certificate

Power Plant Operations - 1505033019

(Offers at MYC)

**General Education**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MAT 116</td>
<td>Technical Mathematics</td>
<td>3</td>
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<tr>
<td>PHY 151</td>
<td>Introductory Physics or Higher</td>
<td>3</td>
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Subtotal: 6

**Core**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ELT 102</td>
<td>Blueprint Reading</td>
<td>2</td>
</tr>
<tr>
<td>ESP 220</td>
<td>Power Plant Thermodynamic or</td>
<td>3</td>
</tr>
<tr>
<td>ELT 210</td>
<td>Thermodynamic Applications</td>
<td>3</td>
</tr>
<tr>
<td>ESP 211</td>
<td>Power Plant Operations I</td>
<td>3</td>
</tr>
<tr>
<td>ESP 120</td>
<td>Power Plant Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ISX 101</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
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<tr>
<td>ESP 212</td>
<td>Power Plant Operations II</td>
<td>3</td>
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<tr>
<td>ESP 213</td>
<td>Power Plant Operations III</td>
<td>3</td>
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<tr>
<td>ESP 130</td>
<td>Electrical Concepts</td>
<td>3</td>
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<td>COE** 199</td>
<td>Cooperative Education</td>
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Subtotal: 26

**TOTAL Credits: 60-64**

**Certificate**

Energy Technologies - 1505037029

(Offers at GTW)

**General Education**

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 101</td>
<td>Writing</td>
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<tr>
<td>MAT 110</td>
<td>Applied Mathematics OR</td>
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<tr>
<td>Any Higher Level Quantitative Reasoning Courses</td>
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<tr>
<td>PHY 171</td>
<td>Applied Physics OR</td>
<td>4</td>
</tr>
<tr>
<td>ISX 101</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>EGY 170</td>
<td>Energy/Utility Technologies</td>
<td>4</td>
</tr>
<tr>
<td>EGY 120</td>
<td>Outside Plant Communications</td>
<td>4</td>
</tr>
<tr>
<td>EET 110</td>
<td>Voice and Data Installer Level I</td>
<td>4</td>
</tr>
<tr>
<td>ISX 101</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>EGY 170</td>
<td>Energy/Utility Technologies</td>
<td>4</td>
</tr>
<tr>
<td>EGY 120</td>
<td>Outside Plant Communications</td>
<td>4</td>
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Subtotal: 25-29

**Technical Electives**

Any course listed below OR in the certificates listed below (not including courses in the technical core) OR as approved by the program coordinator.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COE 199</td>
<td>Cooperative Education (up to 8 credit hours)</td>
<td>16</td>
</tr>
<tr>
<td>DFT 122</td>
<td>Introduction to Computer Aided Drafting</td>
<td>16</td>
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</tbody>
</table>

Subtotal: 16

**TOTAL Credits: 60-64**

**Certificate**

Energy Efficiency Electrical Controls Technician – 1505033049

(Offers at GTW)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EET 154</td>
<td>Electrical Construction I</td>
<td>2</td>
</tr>
<tr>
<td>EET 155</td>
<td>Electrical Construction I Lab</td>
<td>2</td>
</tr>
<tr>
<td>EET 250</td>
<td>National Electric Code</td>
<td>4</td>
</tr>
<tr>
<td>EET 252</td>
<td>Electrical Construction II</td>
<td>2</td>
</tr>
<tr>
<td>EET 253</td>
<td>Electrical Construction II Lab</td>
<td>2</td>
</tr>
<tr>
<td>ELT 110</td>
<td>Circuits</td>
<td>3</td>
</tr>
<tr>
<td>EGY 220</td>
<td>Energy Efficiency Electrical Controls</td>
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Total: 21
Outside Plant Technician - 1505033039

(Offered at GTW)

ELT 110 Circuits .......................................................... 5
EET 110 Voice and Data Installer Level I ......................... 4
ISX 101 Introduction to Industrial Safety ......................... 3
EGY 120 Outside Plant Communications ....................... 4

Total 16-19

Energy Utility Technician - 1505033029

(Offered at GTW)

EET 150 Transformers ............................................... 2
EET 151 Transformers Lab .......................................... 1
ELT 110 Circuits .......................................................... 5
ISX 101 Introduction to Industrial Safety ......................... 3
EGY 170 Energy Utility Technologies ............................. 4

Total 15-18

Wind System Technologies - 1505033059

(Offered at BSC, BLC, GTW)

ELT 110 Circuits .......................................................... 5
IMT 150 Maintaining Industrial Equipment .................... 3
IMT 151 Maintaining Industrial Equipment Lab ............... 2
EGY 250 Wind / Turbine Technologies ............................ 4

Total 14

Solar/Photovoltaic Technologies - 1505033069

(Offered at BSC, BLC, GTW)

EET 154 Electrical Construction I .................................. 2
EET 155 Electrical Construction I Lab ............................. 2
ELT 110 Circuits .......................................................... 5
EGY 230 Solar / Photovoltaic Technologies ...................... 4

Total 13

Energy Efficiency and Analysis – 1505033079

(Offered at BSC, BTW, GTW)

ACR 170 Heat Load / Duct Design ................................ 3
EGY 240 Energy Efficiency and Analysis ......................... 4

Total 7-10

Associate in Applied Science

Engineering and Electronics Technology - 1500007019

(Offered at BGT, BLC, ELC, HPC, JFC, MYC, OWC, SMC)

General Education

MAT 150 College Algebra OR ........................................... 3
MAT 126 Technical Algebra and Trigonometry ............... (3)
PHY 171 Applied Physics OR ......................................... 4
Other Natural Sciences with Consent of Program Coordinator .......................... (3)
ENG 101 Writing ............................................................. 3
Social/Behavioral Sciences ............................................ 3
Oral Communications .................................................. 3
Heritage/Humanities .................................................... 3

Subtotal: 18-19

Core:

ELT 110 Circuits .......................................................... 5
ELT 114 Circuits II ......................................................... 5
ELT 210 Devices ............................................................ 4
ELT 120 Digital I ............................................................ 4
CAD 100 Introduction to Computer Aided Design OR .......... 3
Equivalent Course with Consent of Program Coordinator(3-4)

Total 24-25

Electronics Track - 150000707

(Offered at BLC, ELC, HPC, JFC, MYC, OWC, SMC)

Core:

ELT 214 .......................................................... 3
ELT 220 .......................................................... 3
Technical Electives* ............................................... 13

Subtotal: 20

Total 62-64

Computer Maintenance Track - 150000703

(Offered at BLC, ELC, JFC, SMC)

Core:

ELT 234 .......................................................... 3
IT 105 .......................................................... (3)
ELT 105 .......................................................... (3)
ELT 232 .......................................................... 3
IT 205 .......................................................... (3)
ELT 205 .......................................................... (3)
ELT 220 .......................................................... 3
Digital II .............................................................. 3
NIS 160 .......................................................... 3
IT 120 .......................................................... 4
CIT 160 .......................................................... 4
Technical Electives* ............................................... 9

Subtotal: 21-22

Total 63-66

*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Apprenticeship Track - 150000701

(Offered at JFC)

APS 201 Apprenticeship Studies ..................................... 24

Total 66-68

*Technical Electives: Any EET, ET, IMT, CIS, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Engineering and Electronics Technology

The Engineering and Electronics Technology program provides course work, competencies and experiences to prepare the students for success in the areas of Engineering technology, electronics, computer maintenance, mechanical, industrial, computer aided design, robotics and automation, communications, instrumentation, medical equipment, and telephony.

Progress in the Engineering and Electronics Technology program is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).
### Mechanical Track - 150000706
(Offered at JFC, OWC)

<table>
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<th>Course Title</th>
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<td>Mechanical Power Transmission Systems AND</td>
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<tr>
<td>ECT 124</td>
<td>Mechanical Power Transmission Systems Lab OR</td>
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<tr>
<td>IMT 150</td>
<td>Maintaining Industrial Equipment I AND</td>
<td>(3)</td>
</tr>
<tr>
<td>IMT 151</td>
<td>Maintaining Industrial Equipment I Lab</td>
<td>(2)</td>
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<tr>
<td>ECT 265</td>
<td>Applied Fluid Power</td>
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<tr>
<td>BRX 120</td>
<td>Basic Blueprint Reading</td>
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<tr>
<td>CAD 200</td>
<td>Intermediate Computer Aided Drafting</td>
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*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

### Industrial Track - 150000704
(Offered at BLC, HPC, JFC, MYC, OWC)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ECT 214</td>
<td>Devices II</td>
<td>4</td>
</tr>
<tr>
<td>ECT 220</td>
<td>Digital II</td>
<td>3</td>
</tr>
<tr>
<td>ECT 244</td>
<td>Electrical Machinery and Controls OR</td>
<td>4</td>
</tr>
<tr>
<td>EET 270</td>
<td>Electrical Motor Controls I AND</td>
<td>(2)</td>
</tr>
<tr>
<td>EET 271</td>
<td>Electrical Motor Controls I Lab</td>
<td>(2)</td>
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<tr>
<td>ECT 250</td>
<td>Programmable Logic Controllers OR</td>
<td>4</td>
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<tr>
<td>EET 276</td>
<td>Programmable Logic Controllers AND</td>
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<tr>
<td>EET 277</td>
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*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

### Computer Aided Design Track - 150000702
(Offered at HPC, JFC)

<table>
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<tbody>
<tr>
<td>CAD 150</td>
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</tr>
<tr>
<td>ECT 290</td>
<td>Selected Topics in Engineering Technology OR</td>
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<tr>
<td>ADFT 130</td>
<td>Introduction to Architecture</td>
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<td>Intermediate Computer Aided Drafting</td>
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*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

### Robotics and Automation Track - 150000705
(Offered at BGT, BLC, HPC, JFC, MYC)

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<td>CAD/ CAM/ CNC</td>
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<td>Applied Fluid Power</td>
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<td>ECT 266</td>
<td>Robotics and Industrial Automation</td>
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<td>ECT 244</td>
<td>Electrical Machinery and Controls OR</td>
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*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

### Communications Track - 150000708
(Offered at BLC, ELC)

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<tr>
<td>ECT 220</td>
<td>Digital II</td>
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*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

### Instrumentation Track - 150000709
(Offered at ELC)

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<td>IMT 110</td>
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<td>IMT 210</td>
<td>Fundamentals of Process Control</td>
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*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

### Medical Equipment and Instrumentation Track - 150000710

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<tr>
<td>BIO 135</td>
<td>Basic Anatomy and Physiology with Laboratory</td>
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<td>BMT 200</td>
<td>Insight into Biomedical Equipment Technology</td>
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<td>BMT 202</td>
<td>General Equipment Studies</td>
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<td>BMT 204</td>
<td>Electrical, Mechanical, and Optical Principles</td>
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<td>BMT 205</td>
<td>Biomedical Equipment Practices I</td>
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<td>Specialized Biomedical Equipment</td>
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### Diplomas

#### Electronics - 1500004019
(Offered at BLC, BSC, ELC, HPC, JFC, MDC, MYC, OWC, SEC, SMC)

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### General Education:

**Area 1:**
- Written Communication or Oral Communications........... 3
- AND

**Area 2:**
- MAT 150 College Algebra OR........................................ 3
- MAT 126 Technical Algebra and Trigonometry.................... (3)
- **Subtotal:** 6

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<td>ECT 210</td>
<td>Devices I</td>
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<td>CAD 100</td>
<td>Introduction to Computer Aided Design OR</td>
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<td>Engineering and Electronics Technology Capstone Course</td>
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<td>COED 198</td>
<td>Practicum OR............................................. 1-2</td>
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<td>COE 199</td>
<td>Cooperative Education OR................................ 1-2</td>
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*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.
### General Education:

**Area 1:** Written Communication or Oral Communications .......... 3 AND

**Area 2:**
- **MAT 150** College Algebra OR ........................................... 3
- **MAT 126** Technical Algebra and Trigonometry .......................... 3

**Subtotal:** 6

**Total** 55-57

*Technical Electives: Any EET, ET, ELT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.*

### Engineering Design Technician - 1500004089

(Offered at JFC)

**Area 1:** Written Communication or Oral Communications .......... 3 AND

**Area 2:**
- **MAT 150** College Algebra OR ........................................... 3
- **MAT 126** Technical Algebra and Trigonometry .......................... 3

**Subtotal:** 6

**Total** 55-57

*Technical Electives: Any EET, ET, ELT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.*

### Industrial Electronics - 1500004079

(Offered at BLC, HPC, JFC, MYC, OWC, SEC)

**Area 1:** Written Communication or Oral Communications .......... 3 AND

**Area 2:**
- **MAT 150** College Algebra OR ........................................... 3
- **MAT 126** Technical Algebra and Trigonometry .......................... 3

**Subtotal:** 6

**Total** 55-57

*Technical Electives: Any EET, ET, ELT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.*

### Communications - 1500004029

(Offered at BLC, ELC, JFC, OWC, SEC, SMC)

**Area 1:** Written Communication or Oral Communications .......... 3 AND

**Area 2:**
- **MAT 150** College Algebra OR ........................................... 3
- **MAT 126** Technical Algebra and Trigonometry .......................... 3

**Subtotal:** 6

**Total** 55-57

*Technical Electives: Any EET, ET, ELT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.*
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**Total:** 55-57

*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

### Robotics and Automation - 1500004039

(Offered at BGT, BLC, BSC, HPC, JFC, MYC, OWC)

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**Total:** 55-57

*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

### Instrumentation - 1500004099

(Offered at ELC)

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**Total:** 55-57

*Technical Electives: Any EET, ET, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.
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<td>ELT 114</td>
<td>Circuits II</td>
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<tr>
<td>ELT 210</td>
<td>Devices I</td>
</tr>
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<td>ELT 120</td>
<td>Digital I</td>
</tr>
<tr>
<td>CAD 100</td>
<td>Introduction to Computer Aided Design OR</td>
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<td>ELT 289</td>
<td>Engineering and Electronics Technology</td>
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<tr>
<td>COED 198</td>
<td>Practicum OR</td>
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<td>COE 199</td>
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<td>Digital II</td>
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<td>ISM 102</td>
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*Technical Electives: Any EET, ET, ELT, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

**Digital Telephony - 1500004109**

**General Education:**

**Area 1:**

- Written Communication or Oral Communications            3

**Area 2:**

- MAT 150 College Algebra OR                                3
- MAT 126 Technical Algebra and Trigonometry                3

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**Core:**

- ELT 110 Circuits I                                      5
- ELT 114 Circuits II                                     5
- ELT 210 Devices I                                      4
- ELT 120 Digital I                                      4
- CAD 100 Introduction to Computer Aided Design OR        3
- ELT 289 Engineering and Electronics Technology          4
- COED 198 Practicum OR                                   1-2
- COE 199 Cooperative Education OR                        1-2

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**Certificates**

**Electronics Tester - 1500003089**

(Offered at BGT, BLC, BSC, ELC, HEC, HPC, JFC, MYC, OWC, SEC, SMC)

- ELT 110 Circuits I                                      5
- ELT 114 Circuits II                                     5
- ELT 120 Digital I                                      5

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**Electronics Technician - 1500003069**

(Offered at BGT, BLC, BSC, ELC, HEC, HPC, JFC, MYC, OWC, SEC, SMC)

- ELT 110 Circuits I                                      5
- ELT 114 Circuits II                                     5
- ELT 210 Devices I                                      4
- ELT 214 Devices II                                     4
- ELT 120 Digital I                                      3
- ELT 220 Digital II                                     3

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**Maintenance Technician - 1500003059**

(Offered at BGT, BLC, BSC, ELC, HEC, HPC, JFC, MYC, OWC, SEC)

- CAD 100 Introduction to Computer Aided Design OR        3
- ELT 110 Circuits I                                      5
- ELT 114 Circuits II                                     5
- ELT 265 Applied Fluid Power                            3
- ELT 244 Electrical Machinery and Controls OR            4
- EET 270 Electrical Motor Controls I AND                  2
- EET 271 Electrical Motor Controls I Lab                  2
- EET 275 Programmable Logic Controllers OR               4
- EET 276 Programmable Logic Controllers AND               2
- EET 277 Programmable Logic Controllers Lab               | 2

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**Robotsics and Automation Technician - 1500003099**

(Offered at BGT, BLC, BSC, HEC, HPC, JFC, MYC, OWC, SEC, SMC)

- ELT 110 Circuits I                                      5
- ELT 114 Circuits II                                     5
- ELT 210 Devices I                                      4
- ELT 120 Digital I                                      3
- ELT 118 Manufacturing III, Computer Numerical Control OR | 5

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*Technical Electives: Any EET, ET, ELT, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.
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<td>EET 270</td>
<td>Electrical Motor Controls AND</td>
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<td>EET 271</td>
<td>Electrical Motor Controls Lab</td>
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<td>ELT 250</td>
<td>Programmable Logic Controllers OR</td>
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<td>EET 276</td>
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**Digital Telegraphy Technician - 150003119**

*(Offered at BSC, JFC, MYC, SEC)*

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<td>ELT 222</td>
<td>Mechanics of Telephony</td>
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<tr>
<td>ELT 224</td>
<td>Basic Telecommunications Installation</td>
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<tr>
<td>ELT 226</td>
<td>Safety in the Workplace OR</td>
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<td>ELT 120</td>
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**Computer Maintenance Technician - 150003029**

*(Offered at BSC, BLC, BSC, ELC, HEC, HPC, JFC, MYC, OW, SEC, SMC)*

<table>
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<td>ELT 234</td>
<td>Computer Hardware Maintenance OR</td>
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<td>IT 105</td>
<td>Computer Maintenance Essentials OR</td>
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<td>ELT 232</td>
<td>Computer Software Maintenance OR</td>
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<td>IT 205</td>
<td>Advanced Computer Maintenance OR</td>
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<td>ELT 205</td>
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**Industrial Electronics Technician I - 150003129**

*(Offered at BGT, BLC, BSC, ELC, HEC, HPC, JFC, MYC, OW, SEC)*

<table>
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<td>ELT 120</td>
<td>Digital I</td>
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</tr>
<tr>
<td>ELT 250</td>
<td>Programmable Logic Controllers OR</td>
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</tr>
<tr>
<td>EET 276</td>
<td>Programmable Logic Controllers AND</td>
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</tr>
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<td>Programmable Logic Controllers Lab</td>
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**Industrial Electronics Technician II - 150003139**

*(Offered at BGT, BLC, BSC, HPC, JFC, MYC, OW, SEC)*

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>Circuits II</td>
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<tr>
<td>ELT 210</td>
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<td>ELT 214</td>
<td>Devices II</td>
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<td>ELT 220</td>
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<td>ELT 244</td>
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<td>Electrical Motor Controls AND</td>
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<td>EET 271</td>
<td>Electrical Motor Controls Lab</td>
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<td>EET 276</td>
<td>Programmable Logic Controllers AND</td>
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**Mechanical Technician - 150003149**

*(Offered at BSC, HPC, JFC, MYC, OW, SEC)*

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<tbody>
<tr>
<td>CAD 100</td>
<td>Introduction to Computer Aided Design OR</td>
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<td>ELT 122</td>
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<td>ELT 124</td>
<td>Mechanical Power Transmission Systems AND</td>
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<tr>
<td>CAD 100</td>
<td>Introduction to Computer Aided Design OR</td>
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<tr>
<td>DFT 122</td>
<td>Introduction to Computer Aided Drafting</td>
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<td>CAD 200</td>
<td>Intermediate Computer Aided Drafting OR</td>
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<td>DFT 152</td>
<td>Intermediate Computer Aided Drafting OR</td>
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<td>CAD 201</td>
<td>Advanced 3D Modeling OR</td>
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<td>DFT 252</td>
<td>Parametric Modeling</td>
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*Technical Electives: Any EET, ET, ENGT, ELT, IMT, CIS, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.*
Environmental Science Technology

This program includes specialized environmental science courses in addition to general education coursework to provide individuals the background necessary for understanding the ecological relationships of the environment. Coursework also emphasizes the application of scientific principles to pollution control problems in accordance with state and federal regulations. Practical lab and field experience in sampling and analysis will be stressed. Emphasis is placed on developing the student's ability to function effectively in a variety of job situations. Graduates of this program will be prepared to sample and analyze air, water, and soil in accordance with state and federal regulations. Environmental technicians may be responsible for such job duties as air pollution surveillance, analysis of water and wastewater samples, ground water and surface water assessment, field sampling, data interpretation, and other support services to engineering and science professionals. Graduates in this field may be employed as technicians by federal, state, and local governmental units as well as private industry and environmental engineering consulting firms.

Admissions Requirements

The following information has been taken from the Rules of the Senate Act and is subject to change without notice. All applicants meeting the appropriate academic requirements shall be considered equally for admission to Bluegrass Community and Technical College or to any academic program thereof regardless of economic or social status, and without discrimination on the basis of race, color, religion, sex, marital status, beliefs, age, national origin, sexual orientation, or physical or mental disability.

In order to be admitted to the Environmental Science Technology (EST) Program, each student must be admitted to Bluegrass Community and Technical College.

In order to be admitted to the Environmental Science Technology Program, a student must:

1. Complete EST 150, EST 160, and MA 109 with a passing grade or transfer credit from an accredited institution for comparable courses (to be assessed by EST Coordinator), and
2. Attend a pre-admission conference with the EST Program coordinator or the coordinator's designee.

Associate in Applied Science

Environmental Science Technology - 1505077019

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<tr>
<td>EST 250</td>
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<td>EST 260</td>
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Technical Electives

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<td>PHY 151</td>
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<td>COE 199</td>
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<tr>
<td>EST 299</td>
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<tr>
<td>STA 210</td>
<td>3</td>
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<td>CAD 100</td>
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<td>ACH 185</td>
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<td>GIS 110</td>
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<tr>
<td>GIS 120</td>
<td>3</td>
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<tr>
<td>CIS 234</td>
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<tr>
<td>ENG 203</td>
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<tr>
<td>CHE 180</td>
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Cours not on this list may be approved at the coordinator's discretion.

* Satisfies General Education requirement for AAS degree

Certificates

Hazardous Materials Technician - 1505073019

<table>
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<td>ENV 100</td>
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<td>ENV 110</td>
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<td>ENV 120</td>
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<td>ENV 121</td>
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<td>ENV 140</td>
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<tr>
<td>ENV 141</td>
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<td>ENV 260</td>
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Waste Processing Attendant - 1505073029

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<tr>
<td>ENV 110</td>
<td>4</td>
</tr>
<tr>
<td>ENV 111</td>
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<td>2</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
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</tr>
<tr>
<td>ENV 140</td>
<td>Geology, Hydrology and Soils</td>
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<tr>
<td>ENV 270</td>
<td>Treatment and Disposal Technologies</td>
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<td>ENV 280</td>
<td>Water Treatment Technology</td>
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<tr>
<td>ENV 281</td>
<td>Water Treatment Technology Lab</td>
</tr>
<tr>
<td>TEC 200</td>
<td>Technical Communications</td>
</tr>
<tr>
<td>ENV 293</td>
<td>Special Problems I</td>
</tr>
<tr>
<td>ENV 295</td>
<td>Special Problems II</td>
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<td>Special Problems III</td>
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**Total Credits: 21**

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<td>Environmental Sampling Techniques Lab</td>
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<td>Geology, Hydrology and Soils</td>
<td>4</td>
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<tr>
<td>ENV 141</td>
<td>Geology, Hydrology and Soils Lab</td>
<td>2</td>
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<td>ENV 290</td>
<td>Wastewater Treatment Technology</td>
<td>6</td>
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<tr>
<td>ENV 291</td>
<td>Wastewater Treatment Technology Lab</td>
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<td>TEC 200</td>
<td>Technical Communications</td>
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**Electives**

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<th>Course Title</th>
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<td>Special Problems III</td>
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**Total Credits: 20**

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<tr>
<td>ENV 110</td>
<td>Introduction to Environmental Technology</td>
<td>4</td>
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<tr>
<td>ENV 111</td>
<td>Environmental Sampling Techniques Lab</td>
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<td>ENV 140</td>
<td>Geology, Hydrology and Soils</td>
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<tr>
<td>ENV 141</td>
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**Electives**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
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**Total Credits: 36**

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<tbody>
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<tr>
<td>ENV 100</td>
<td>Environmental Mathematics</td>
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<td>ENV 110</td>
<td>Introduction to Environmental Technology</td>
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<td>ENV 111</td>
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<td>ENV 140</td>
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<td>ENV 141</td>
<td>Geology, Hydrology and Soils Lab</td>
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**Electives**

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<tr>
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**Total Credits: 36**

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<tbody>
<tr>
<td>EQM 100</td>
<td>Introduction to Commercial Breeding Practices</td>
<td>3</td>
</tr>
<tr>
<td>EQS 103</td>
<td>Racehorse Care</td>
<td>3</td>
</tr>
<tr>
<td>EQS 118</td>
<td>Equine Bloodstock</td>
<td>3</td>
</tr>
<tr>
<td>EQS 125</td>
<td>Equine Health and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>EQS 299</td>
<td>Equine Cooperative Education (Internship)</td>
<td>1-9</td>
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</table>

**Total General Education Requirements: 15**

---

**Equine Studies**

The Equine Studies program will prepare students for a career as an equine professional such as jockey, horseman, or racing official. Students will learn basics of horse care, principles and techniques for riding as it relates to racehorse exercise, requirements for advancing to a professional jockey career; anatomy and physiology of horses; and life skills necessary for a successful career in the Equine industry.

The exercise rider certificate will prepare students for a career as a professional exercise rider. Students will learn the basics of horse care by taking care of at least one horse daily; principles of balance as it relates to efficient racehorse exercise; proper position and use of hands, arms, feet, legs, back and head when exercising a racehorse; requirements for advancing to a professional jockey career; anatomy and physiology of horses; and life skills necessary for a successful riding career.

**Associate in Applied Science**

**Equine Studies - 0150707019**

**(Offered at BL)***

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EQQ 100</td>
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<td>EQS 130</td>
<td>Introduction to the Racing Industry</td>
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<tr>
<td>EQQ 200</td>
<td>Lameness in Racehorses</td>
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<tr>
<td>EQS 203</td>
<td>Racing Stable Operations</td>
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**Total Technical Core: 29-32**

---

**Approved Technical Electives**

Any EQM or EQS course from alternate track. Eight (8) credit hours of electives may be taken from the approved list. This list is not all inclusive. Other technical elective courses may be taken with approval of the program advisor faculty.

**Technical Electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
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<td>SPA 101</td>
<td>Elementary Spanish</td>
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<td>EQS 118</td>
<td>Equine Bloodstock</td>
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<tr>
<td>EQS 125</td>
<td>Equine Health and Nutrition</td>
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<tr>
<td>EQS 299</td>
<td>Equine Cooperative Education (Internship)</td>
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### Jockey Track - 010507701
(Offered at BLC)

<table>
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<tbody>
<tr>
<td>EQS 111</td>
<td>Introduction To Riding Racehorses</td>
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</tr>
<tr>
<td>EQS 112</td>
<td>Racehorse Riding Skills I</td>
<td>3</td>
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<td>EQS 113</td>
<td>Racehorse Riding Skills II</td>
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<td>EQS 212</td>
<td>Racehorse Riding Principles</td>
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<td>EQS 213</td>
<td>Racehorse Riding Techniques</td>
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<td>EQS 215</td>
<td>Life Skills for Jockeys</td>
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### Horseman Track - 010507702
(Offered at BLC)

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<td>History of Thoroughbred Racing</td>
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<td>EQS 122</td>
<td>Yearling Breaking and Training</td>
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</tr>
<tr>
<td>EQS 123</td>
<td>Breaking and Prepping Two Year Olds</td>
<td>3</td>
</tr>
<tr>
<td>EQS 125</td>
<td>Equine Health and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>EQS 223</td>
<td>Training Principles and Practices</td>
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<tr>
<td>EQS 225</td>
<td>Life Skills for Horsemen</td>
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</table>

### Certificates

**Certificate**

**Financial and Customer Services**

This certificate is designed to provide students with the financial, communication, and customer service skills necessary to be successful in the global financial services market. The certificate will require four primary areas of study including two fundamental courses, Spanish and customer service, and two courses in finance and communication, which enable different areas of emphasis.

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<td>BAS 294</td>
<td>Money and Financial Institutions</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

**Fire/Rescue Science Technology**

If you are interested in a career in the fire service, the Fire/Rescue Science Technology Program will prepare you for the challenges facing today’s emergency responders. In the program you will learn the skills of fire suppression and prevention, technical rescue, hazardous materials, emergency medical care, and leadership. This program is beneficial whether you are seeking a career in emergency services (Fire, Rescue, EMS or Emergency Management) or if you are already involved in providing fire, rescue or EMS services in your community.

Students may enter the program with or without experience in emergency services. The degree, certificate, and diploma programs that are offered can help you in obtaining employment in various emergency service fields or if you are already a firefighter, help you get that promotion.
Emergency Medical Technician Certificate:

Students in the Emergency Medical Technician program are instructed in the proper care of sick and injured patients. Students are trained to treat victims suffering from traumatic and medical emergencies such as broken bones, puncture wounds, cardiac, and respiratory emergencies, vehicle accidents and more. This course meets the standards set forth by the US Department of Transportation National Standard Curriculum for EMT-Basic and the Kentucky Board of Emergency Medical Services. Students who successfully complete the course and its requirements will be awarded a certificate for Emergency Medical Technician, and will be prepared to challenge the certification examination process set forth by the Kentucky Board of Emergency Medical Services.

**Associate in Applied Science**

Fire/Rescue Science Technology - 4302037019

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SMC, WKC)

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<th>General Education:</th>
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</thead>
<tbody>
<tr>
<td>Heritage/ Humanities.......................... 3</td>
</tr>
<tr>
<td>Quantitative Reasoning........................ 3</td>
</tr>
<tr>
<td>Natural Sciences................................ 3</td>
</tr>
<tr>
<td>Social/ Behavioral Sciences................... 3</td>
</tr>
<tr>
<td>Written Communication........................... 3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer/ Digital Literacy.................... 0-3</td>
</tr>
<tr>
<td>FRS 101 Introduction to Fire Service.......... 3</td>
</tr>
<tr>
<td>FRS 102 Firefighters Basic Skills I.......... 3</td>
</tr>
<tr>
<td>FRS 103 Firefighters Basic Skills II......... 3</td>
</tr>
<tr>
<td>FRS 104 Firefighters Intermediate Skills I... 3</td>
</tr>
<tr>
<td>FRS 105 Firefighters Intermediate Skills II.. 3</td>
</tr>
<tr>
<td>FRS 201 Firefighters Intermediate Skills I.... 3</td>
</tr>
<tr>
<td>FRS 202 Firefighters Intermediate Skills II... 3</td>
</tr>
<tr>
<td>FRS 203 Firefighters Advanced Skills I........ 3</td>
</tr>
<tr>
<td>FRS 204 EMT First Responder.................... 3</td>
</tr>
<tr>
<td>FRS 205 Fire Officer I.......................... 5</td>
</tr>
<tr>
<td>FRS 206 Fire Officer II......................... 8</td>
</tr>
<tr>
<td>FRS 207 Fire Officer III........................ 6</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
</tbody>
</table>

**Total Credits** 61-64

NOTE: All FRS courses are available in modules; see course description section.

**Certificate**

Basic Firefighter - 4302033019

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SMC, WKC)

| FRS 101 Introduction to Fire Service.......... 3 |
| FRS 102 Firefighters Basic Skills I.......... 3 |
| FRS 103 Firefighters Basic Skills II......... 3 |
| FRS 104 Firefighters Intermediate Skills I... 3 |
| FRS 105 Firefighters Intermediate Skills II.. 3 |
| **Total Credits**                           | 12 |

NOTE: All FRS courses are available in modules; see course description section.

Advanced Firefighter - 4302033029

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SMC, WKC)

| FRS 101 Introduction to Fire Service.......... 3 |
| FRS 102 Firefighters Basic Skills I.......... 3 |
| FRS 103 Firefighters Basic Skills II......... 3 |
| FRS 104 Firefighters Intermediate Skills I... 3 |
| FRS 105 Firefighters Intermediate Skills II.. 3 |
| FRS 201 Firefighters Advanced Skills I........ 3 |
| FRS 202 Firefighters Advanced Skills II....... 3 |
| FRS 203 Firefighters Advanced Skills III...... 3 |
| **Total Credits**                           | 24 |

NOTE: All FRS courses are available in modules; see course description section.

**Fire Officer - 4302033039**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SMC, WKC)

| FRS 2051 Fire Prevention, Public Education and Fire Cause Determination I.................. 0.5 |
| FRS 2052 Firefighter Survival and Rescue.................................................... 1.1 |
| FRS 2053 Hazardous Materials Technician..................................................... 3.4 |
| FRS 2062 Managing Company Tactical Operations: Decision Making.......................... 1.0 |
| FRS 2063 Instructional Techniques for Company Officers...................................... 1.0 |
| FRS 2071 Company Officer................................................................. 3.5 |
| FRS 2072 Incident Command System (ICS)..................................................... 0.9 |
| FRS 2073 Leadership I: Strategies for Company Success................................. 0.8 |
| FRS 2074 Fire/Arson Detection (Arson I)......................................................... 0.8 |
| **Total Credits**                           | 13 |

NOTE: All FRS courses are available in modules; see course description section.

**Diploma**

Fire Chief - 4302034039

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SMC, WKC)

<table>
<thead>
<tr>
<th>General Education:</th>
</tr>
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<tbody>
<tr>
<td>Written Communication, Oral Communications</td>
</tr>
<tr>
<td>or Humanities/ Heritage....................... 3</td>
</tr>
<tr>
<td>Social/ Behavioral Sciences, Natural Sciences, or Quantitative Reasoning................. 3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer/ Digital Literacy Course OR</td>
</tr>
<tr>
<td>demonstrated competency........................ 0-3</td>
</tr>
<tr>
<td>FRS 101 Introduction to Fire Service......... 3</td>
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<tr>
<td>FRS 102 Firefighters Basic Skills I........ 3</td>
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<tr>
<td>FRS 103 Firefighters Basic Skills II........ 3</td>
</tr>
<tr>
<td>FRS 104 Firefighters Intermediate Skills I.. 3</td>
</tr>
<tr>
<td>FRS 105 Firefighters Intermediate Skills II.. 3</td>
</tr>
<tr>
<td>FRS 201 Firefighters Advanced Skills I....... 3</td>
</tr>
<tr>
<td>FRS 202 Firefighters Advanced Skills II...... 3</td>
</tr>
<tr>
<td>FRS 203 Firefighters Advanced Skills III..... 3</td>
</tr>
<tr>
<td>FRS 204 EMT First Responder.................... 3</td>
</tr>
<tr>
<td>FRS 205 Fire Officer I.......................... 5</td>
</tr>
<tr>
<td>FRS 206 Fire Officer II......................... 8</td>
</tr>
<tr>
<td>FRS 207 Fire Officer III........................ 6</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
</tbody>
</table>

**Total Credits** 61-64

NOTE: All FRS courses are available in modules; see course description section.

**Emergency Medical Technician - 5109042010**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SMC, SEC,WKC)

| FRS 2061 Emergency Medical Technician........ 6 |
| **Total Credits**                           | 6 |

NOTE: Contact faculty concerning pre-requisites.
Funeral Service

The Funeral Service program provides the educational foundation needed to seek a Kentucky or other state licensure, both as a funeral director and an embalmer.

Associate in Applied Science

Funeral Service - 1203017019
(Offers at SEC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101 Writing I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110 Math OR</td>
<td>3</td>
</tr>
<tr>
<td>MAT 146 Contemporary College Math OR</td>
<td>3</td>
</tr>
<tr>
<td>BIO 135 Basic Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 110 General Psychology OR</td>
<td>3</td>
</tr>
<tr>
<td>SOC 101 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101 Writing I</td>
<td>3</td>
</tr>
<tr>
<td>ACT 101 Fundamentals of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>FNS 101 Introduction to Funeral Service</td>
<td>2</td>
</tr>
<tr>
<td>FNS 115 Funeral Service Directing</td>
<td>3</td>
</tr>
<tr>
<td>FNS 130 Business and Mortuary Law</td>
<td>3</td>
</tr>
<tr>
<td>FNS 131 Funeral Service, Regulations, and Statutes</td>
<td>3</td>
</tr>
<tr>
<td>FNS 150 Pathology for Funeral Service</td>
<td>3</td>
</tr>
<tr>
<td>FNS 166 Sociology of Funeral Service</td>
<td>2</td>
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<tr>
<td>FNS 170 Thanatology</td>
<td>4</td>
</tr>
<tr>
<td>FNS 240 Restorative Arts</td>
<td>4</td>
</tr>
<tr>
<td>FNS 110 Funeral Service Management and Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>FNS 250 Embalming</td>
<td>4</td>
</tr>
<tr>
<td>FNS 255 Embalming Practicum</td>
<td>1</td>
</tr>
<tr>
<td>FNS 120 Funeral Counseling</td>
<td>4</td>
</tr>
<tr>
<td>FNS 275 Funeral Service Projects</td>
<td>2</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>45-53</strong></td>
</tr>
<tr>
<td><strong>Technical Core</strong></td>
<td><strong>23</strong></td>
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<tr>
<td><strong>Technical Component Minimum</strong></td>
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<tr>
<td><strong>Subtotal</strong></td>
<td><strong>60-68</strong></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>63-66</strong></td>
</tr>
</tbody>
</table>

NOTE:

1. For digital literacy, if computer/digitally literate, must be demonstrated by a competency exam.
2. The student must have a plan of study on file in the academic affairs office.
3. A combination of general education and technical courses should not exceed 68 credits.

GEOGRAPHIC INFORMATION SYSTEMS TECHNOLOGY

A Geographic Information System (GIS) is a powerful combination of mapping technology and databases that, when combined, may create an array of spatially arranged data on a map surface for detailed analysis. GIS has become commonplace throughout the private sector. GIS is currently utilized.

All students enrolled at Bluegrass Community and Technical College are eligible to pursue the GIS Technology Certificate. There is no application to enroll in the certificate, but it is suggested that if you elect to pursue the certificate that you inform the coordinator of the GIS Certificate as well as your technical advisor and the chair of your technical degree program. The curriculum is tailored to those enrolled in the following technical degree programs: Architectural Technology, Civil Engineering, Computer Information Systems, and Environmental Science Technology. The acquisition of a two-year technical degree coupled with a certificate in GIS Technology will make a graduate more marketable in his/her respective field. Those pursuing a B.A. or B.S. degree in geography will also find the curriculum tailored to those respective degree programs. GIS Technology Certificate requires the completion of twenty-four (24) hours of coursework. Non-certificate seeking students are free to take courses in GIS. All students pursuing the certificate must take the following four core courses.
Certificate
Geographic Information Systems Technology - 4507023019
(Offered at BLC)

Global Studies

The Associate of Applied Science Degree in Global Studies (Transfer) is designed to prepare students to be more globally aware and globally literate employees and citizens of the Commonwealth of Kentucky, the United States, and the world. It exposes students to a diverse set of courses and competencies which will prepare them to live and work in settings with diverse ethnic and cultural populations and to function more effectively as members of an increasingly interconnected world.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS 105</td>
<td>Introduction to Computing</td>
<td>3</td>
</tr>
<tr>
<td>GIS 110</td>
<td>Spatial Data Analysis and Map Interpretation</td>
<td>3</td>
</tr>
<tr>
<td>GIS 210</td>
<td>Advanced Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CIS 105</td>
<td>Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GIS 120</td>
<td>Additional Geographic Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must complete one of the following related field course pairings listed below. The student may not complete the requirement by selecting courses from different pairs. It is highly recommended that the student select the course pairing that doubles as requirements for their technical degree (or pre-major requirement for the B.A. / B.S. in geography).

Eligible Course Pairings for GIS Technology Certificate
- Earth's Physical Environment (GEO 130) and/or Pollution, Natural Hazards and Environmental Management (GEO 210) and/or Introduction to Planning (GEO 285)
- Fundamentals of Hydrological Geology (ENV 101) and Fundamentals of Solid Waste (ENV 203)
- Visual Basic I (CIS 148) and Visual Basic II (CIS 248)
- Introduction to Computer-Aided Design (CIS 100) and Intermediate Computer-Aided Design (CIS 200)
- Computer Aided Drafting I (ACH 185) and Computer Aided Drafting II (ACH 285) or Computer 3-D Modeling (ACHI 298)
- Introduction to Surveying (CE 211) and Intermediate Surveying (CE 220)

Students may utilize an additional six-hour course pairing not listed above with prior written approval from the coordinator of the GIS Certificate.

Recommended Track for GIS Technology Certificate
- GIS 110 Spatial Data Analysis and Map Interpretation (3)
- CIS 105 Introduction to Computing (3)
- GIS 120 Introduction to Geographic Information Systems (3)
- GIS 210 Advanced Geographic Information Systems (3)
- Course in related field (see above list) (3)

Total: 24

Certificate

Global Studies - 3020017019
(Offered at JFC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENG 102</td>
<td>Writing II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 105</td>
<td>Writing An Accelerated Course</td>
<td>3</td>
</tr>
<tr>
<td>MAT 146</td>
<td>Contemporary College Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MAT 150</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>COM 254</td>
<td>Introduction to Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>GBS 290</td>
<td>Global Studies Capstone Course</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 19

Associate in Applied Science

Global Studies - 3020013010
(Offered at ECTC, JFC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 254</td>
<td>Introduction to Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Global Studies Heritage</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Global Studies Humanities/Fine Arts</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Global Studies Natural Science/Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Global Studies Social Interaction</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total: 19

Health and Wellness Technology

The Health and Wellness Technology degree offers a flexible, innovative curriculum designed to meet the changing needs of the health care marketplace. The program will educate students in the principles of integrative modalities and the promotion of health and well-being. The program will provide students with the skills and knowledge necessary to work in a variety of settings, including but not limited to, hospitals, rehabilitation clinics, spas, behavioral health clinics, wellness/fitness centers, doctor's offices, private practice, and athletic programs at the high school, college, or professional level.

Certificate

Global Studies - 3020013010
(Offered at ECTC, JFC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 254</td>
<td>Introduction to Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Global Studies Heritage</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Global Studies Humanities/Fine Arts</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Global Studies Natural Science/Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Global Studies Social Interaction</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total: 19

Select from Global Studies Humanities/Fine Arts list.
Select from Global Studies Natural Science list.
Select from Global Studies Social Interaction list.
The Massage Therapy Certificate Program will train the Massage Therapist in techniques ranging from an entry level Swedish Massage for its therapeutic and relaxation benefits, through advanced clinical massage (sports and orthopedic massage) for the specific needs of athletes and to aid in recovery and rehabilitation from illness, injury and surgery. Using medical model, therapists will have expanded knowledge in Anatomy and Physiology, Kinesiology and Medical Terminology. Other modalities are introduced to the Massage Therapist's education to enhance their skills and knowledge. Business education is included in the program to assist therapists in the operation of a practice.

**Certification**

**Personal Trainer - 5109993029**

(Offered at GTW)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIT 103 Medical Office Terminology OR</td>
<td>3</td>
</tr>
<tr>
<td>CLA 131 Medical Terminology from Greek and Latin OR</td>
<td>3</td>
</tr>
<tr>
<td>AHS 115 Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>CPR 100 CPR for the Healthcare Professional</td>
<td>1</td>
</tr>
<tr>
<td>SFA 100 Safety and First Aid</td>
<td>1</td>
</tr>
<tr>
<td>BAS 200 Small Business Management OR</td>
<td>3</td>
</tr>
<tr>
<td>BAS 285 Personal and Organizational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MSG 100 Musculoskeletal Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>MSG 110 Musculoskeletal Anatomy and Physiology II</td>
<td>4</td>
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<tr>
<td>MSG 125 Massage Technique I</td>
<td>3</td>
</tr>
<tr>
<td>MSG 135 Massage Technique II</td>
<td>3</td>
</tr>
<tr>
<td>MSG 205 Advanced Clinical Massage I</td>
<td>3</td>
</tr>
<tr>
<td>MSG 210 Advanced Clinical Massage II</td>
<td>3</td>
</tr>
<tr>
<td>MSG 215 Massage Therapy Student Clinic</td>
<td>1</td>
</tr>
<tr>
<td>MSG 220 Massage Therapy Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits** 24-26

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The Personal Trainer Certificate offers a flexible, innovative curriculum designed to meet the changing needs of the wellness promotion and health care marketplace. The program will provide students with the skills and knowledge necessary to develop and implement exercise programs for healthy individuals or those who have medical clearance to exercise. Work settings include but are not limited to spas, fitness centers, weight loss clinics, corporate wellness centers, private practice, and high school athletic programs.

**Health Education**

**Certificate**

**Health Information Technology**

This program prepares the graduate to take an active role in the field of health information management. Graduates will interact with physicians, health professionals, and financial and administrative staffs to ensure the protection of information systems. Graduates will help determine health information budgets, resources and policies, utilizing current and accurate data. The curriculum includes course work in the supporting sciences and general education areas. Classroom instruction is supplemented with learning experiences in the campus laboratory and in area health care facilities. Students enrolled in the Health Information Program are required to achieve a minimum grade of "C" in each course in the program.

Health Information Technicians are employed in hospitals, medical clinics, nursing homes, other health care facilities and industry. Graduates with the AAS degree are qualified to write the American Health Information Management Association's Commission on Certification for Health Informatics and Information Management (CHIIM) Registered Health Information Technician examination and the CCA coding exami- nation. Graduates of the medical records coding specialist certificate may write the American Health Information Management Association’s CCA coding examination and the American Academy of Professional Coders’ CPC-A (and others as qualified) coding examinations.

Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first HIT course.

The Associate in Applied Science Degree Health Information Technology Program at Jefferson Community and Technical College is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Additional information may be found at CAHIIM’s website URL: [http://cahiim.org](http://cahiim.org).
# Associate in Applied Science

**Health Information Technology - 5107077019**  
*(Offered at BLC, GTW, HZC, JFC)*

## General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>Writing I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 102</td>
<td>Writing II</td>
<td>3</td>
</tr>
<tr>
<td>COM 181</td>
<td>Basic Public Speaking OR</td>
<td>3</td>
</tr>
<tr>
<td>COM 252</td>
<td>Introduction to Interpersonal Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>BIO 135</td>
<td>Human Anatomy and Physiology with laboratory OR</td>
<td>4</td>
</tr>
<tr>
<td>BIO 137</td>
<td>Human Anatomy and Physiology I AND</td>
<td>(4)</td>
</tr>
<tr>
<td>BIO 139</td>
<td>Human Anatomy and Physiology II</td>
<td>(4)</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Applied Mathematical OR</td>
<td>3</td>
</tr>
<tr>
<td>MAT 150</td>
<td>College Algebra</td>
<td>(3)</td>
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<tr>
<td>PSY 110</td>
<td>General Psychology OR</td>
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</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology</td>
<td>(3)</td>
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<tr>
<td>HPH 105</td>
<td>Patho/Pharm for Health Information Professionals</td>
<td>4</td>
</tr>
<tr>
<td>HPH 112</td>
<td>Reimbursement Methodologies</td>
<td>3</td>
</tr>
<tr>
<td>HPH 110</td>
<td>Legal/Ethical Issues in Health Information</td>
<td>2</td>
</tr>
<tr>
<td>HPH 105</td>
<td>Clinical Practices</td>
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<tr>
<td>HIT 201</td>
<td>Information Systems in Healthcare</td>
<td>3</td>
</tr>
<tr>
<td>HIT 202</td>
<td>Clinical Classification Systems I</td>
<td>4</td>
</tr>
<tr>
<td>HIT 207</td>
<td>Performance Improvement in Health Information</td>
<td>3</td>
</tr>
<tr>
<td>HIT 206</td>
<td>Clinical Classification Systems III</td>
<td>4</td>
</tr>
<tr>
<td>HIT 211</td>
<td>Health Care Management &amp; Statistics</td>
<td>3</td>
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<tr>
<td>HIT 215</td>
<td>Clinical Practicum</td>
<td>4</td>
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<tr>
<td>CIT 130</td>
<td>Productivity Software OR</td>
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<tr>
<td>OST 240</td>
<td>Software Integration</td>
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<td>CIT 130</td>
<td>Productivity Software OR</td>
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<tr>
<td>HPH 120</td>
<td>Radiation Biology</td>
<td>3</td>
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<td>HPH 102</td>
<td>Health Physics II</td>
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<tr>
<td>HPH 101</td>
<td>Health Physics I</td>
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<td>HPH 102</td>
<td>Health Physics II</td>
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<tr>
<td>HPH 201</td>
<td>Nuclear Instrumentation and Measurement I</td>
<td>4</td>
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<tr>
<td>HPH 202</td>
<td>Nuclear Instrumentation and Measurement II</td>
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<td>HPH 246</td>
<td>Environmental Law</td>
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<tr>
<td>ISK 100</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>QMS 101</td>
<td>Introduction to Quality Systems</td>
<td>3</td>
</tr>
<tr>
<td>ITE 250</td>
<td>Team Dynamics and Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>BAS 287</td>
<td>Supervisory Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits**: 60-63

**Subtotal**: 41

**Total Credits**: 63-67

---

**Certificate**

## Medical Record Coding Specialist - 5107073019

*(Offered at GTW, JFC)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLA 131</td>
<td>Medical Terminology from Greek or Latin OR</td>
<td>3</td>
</tr>
<tr>
<td>MIT 103</td>
<td>Medical Office Terminology OR</td>
<td>(3)</td>
</tr>
<tr>
<td>AHS 115</td>
<td>Medical Terminology</td>
<td>(3)</td>
</tr>
<tr>
<td>HIT 100</td>
<td>Introduction to Healthcare Delivery Systems</td>
<td>3</td>
</tr>
<tr>
<td>HIT 105</td>
<td>Patho/Pharm for Health Information Professionals</td>
<td>4</td>
</tr>
<tr>
<td>HIT 112</td>
<td>Clinical Classification Systems I</td>
<td>4</td>
</tr>
<tr>
<td>HIT 110</td>
<td>Reimbursement Methodologies</td>
<td>2</td>
</tr>
<tr>
<td>HIT 120</td>
<td>Information Systems in Healthcare</td>
<td>3</td>
</tr>
<tr>
<td>HIT 200</td>
<td>Clinical Classification Systems II</td>
<td>4</td>
</tr>
<tr>
<td>HIT 207</td>
<td>Performance Improvement in Health Information</td>
<td>3</td>
</tr>
<tr>
<td>HIT 206</td>
<td>Clinical Classification Systems III</td>
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<tr>
<td>HIT 201</td>
<td>Clinical Classification Systems III</td>
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</tr>
<tr>
<td>HIT 211</td>
<td>Health Care Management &amp; Statistics</td>
<td>3</td>
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<td>HIT 215</td>
<td>Clinical Practicum</td>
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</table>

**Total Credits**: 39-37

---

**Certificate**

## Radiation Control Technician - 5122053039

*(Offered at WKC)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>Health Physics Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>HPH 101</td>
<td>Health Physics I</td>
<td>3</td>
</tr>
<tr>
<td>HPH 102</td>
<td>Health Physics II</td>
<td>3</td>
</tr>
<tr>
<td>HPH 201</td>
<td>Nuclear Instrumentation and Measurement I</td>
<td>4</td>
</tr>
<tr>
<td>HPH 202</td>
<td>Nuclear Instrumentation and Measurement II</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits**: 17

---

**Certificate**

## National Registry of Radiation Protection Technologists

The Health Physics program is designed to prepare students to conduct health physics activities in a variety of occupational and environmental settings. Students will study the basic properties of radiation including its origin, its interactions with matter, and radiation detection procedures. Rules and regulations governing human exposure to occupational radiation health hazards are covered. Emphasis is placed on the proper use of survey instrumentation to detect and measure occupational radiation health hazards, the equipment and techniques employed to conduct work-place and environmental surveys, and the current technologies used in hazard control. The Radiation Control Technician certificate prepares students for employment in a Department of Energy (DOE) facility. The AAS degree in Health Physics prepares the graduate for the National Registry of Radiation Protection Technologists examination and for employment at a nuclear facility.
Health Science Technology

The Health Science Technology (HST) program is designed to prepare students for entry-level career opportunities in the field of healthcare and health-related services. The program is designed for those students who seek entry level jobs as well as for the currently employed individual wishing to broaden skills for career enhancement. Graduates will possess marketable skills sets for direct services as well as the foundation needed to understand current health care delivery. Many of the general education and core courses are required for completion of varied professional health programs. Examples include diagnostic medical sonography, medical assisting, nursing, physical therapy assistant, radiography, respiratory care, and surgical technology. The HST provides a smooth transition or career pathway to an Allied Health or nursing selective admission program once a student is accepted.

A grade of "C" or better is required in each biological science and quantitative reasoning course.

Associate in Applied Science

Health Science Technology - 5100007019
(Offered at ASC, HPC, JFC, WKC)

General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAT 150</td>
<td>College Algebra and Functions OR</td>
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<tr>
<td>MAT 110</td>
<td>Applied Math</td>
</tr>
<tr>
<td>ENG 101</td>
<td>Writing I</td>
</tr>
<tr>
<td>ENG 102</td>
<td>Writing II</td>
</tr>
<tr>
<td>BIO 135</td>
<td>Basic Human Anatomy OR</td>
</tr>
<tr>
<td>BIO 137</td>
<td>Human Anatomy &amp; Physiology I AND</td>
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<tr>
<td>BIO 139</td>
<td>Human Anatomy &amp; Physiology II</td>
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<td>PSY 110</td>
<td>General Psychology</td>
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<td>CLA 131</td>
<td>Medical Terminology from Greek and Latin OR</td>
</tr>
<tr>
<td>AHS 115</td>
<td>Medical Terminology OR</td>
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<td>MIT 103</td>
<td>Medical Office Terminology</td>
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<td>NAA 100</td>
<td>Nursing Assistant Skills</td>
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<td>Health Science Technical Courses**</td>
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</table>

Technical Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HEO 111</td>
<td>Heavy Equipment Operations I</td>
</tr>
<tr>
<td>HEO 125</td>
<td>Special Problems I</td>
</tr>
<tr>
<td>HEO 200</td>
<td>Heavy Equipment Operations II</td>
</tr>
<tr>
<td>HEO 225</td>
<td>Special Problems II</td>
</tr>
<tr>
<td>WPP 200</td>
<td>Workplace Principles</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td>34</td>
</tr>
</tbody>
</table>

Digital Literacy# must be demonstrated by computer exam or successfully completing a digital literacy course.

**Health Science Technical Course selection must result in final attainment of a minimum of three (3) certificate credentials.

Students may be able to earn certificates that are already present in other curricula, including but not limited to:

- Nursing Assistant
- Advanced Nursing Assistant
- Phlebotomy for the Healthcare Worker
- Pharmacy Technician
- Medical Coding
- Medical Office Radiology

---

Heavy Equipment Operation

Designed to instruct students in the safe operation of heavy equipment, e.g., bulldozers, backhoes, front-end loaders, hydraulic excavators and graders. Instruction in digging, ditching, sloping, stripping, grading, backfilling, clearing trees and rubble, and foundation excavating is provided as well as instruction in the proper care and maintenance of equipment.

**DIT 103 is a pre-requisite for courses in this program.

Certificate

Backhoe Operator - 4902023019
(Offered at HZC, SEC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEO 109</td>
<td>Power Shovel Backhoe Operator</td>
</tr>
<tr>
<td>HEO 125</td>
<td>Special Problems</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td>5</td>
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</table>

Bulldozer Operator- 4902023029
(Offered at HZC, SEC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEO 111</td>
<td>Bulldozer Operator</td>
</tr>
<tr>
<td>HEO 125</td>
<td>Special Problems</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

Front-End Loader Operator - 4902023039
(Offered at HZC, SEC)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>HEO 105</td>
<td>Utility Tractor Loader Operator</td>
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<tr>
<td>HEO 125</td>
<td>Special Problems</td>
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<td><strong>Total Credits</strong></td>
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</table>

Motor-Grader Operator - 4902023049
(Offered at HZC, SEC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HEO 106</td>
<td>Motor-grader Operator</td>
</tr>
<tr>
<td>HEO 125</td>
<td>Special Problems</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td>10</td>
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</table>

Hydraulic Excavator Operator - 4902023059
(Offered at SEC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HEO 100</td>
<td>Heavy Equipment Operations II</td>
</tr>
<tr>
<td>HEO 115</td>
<td>Hydraulic Excavator Operator</td>
</tr>
<tr>
<td>HEO 125</td>
<td>Special Problems II</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td>22</td>
</tr>
</tbody>
</table>
Historic Information Management

Archival Management
Trains individuals to arrange, preserve, and present archival materials for use, and instructs students in the basics of working in either public or private archives. The program will also provide students with a context for making decisions about the worthiness of material for archiving. The program is designed for students seeking entry into the field of archival management and those already working in the field.

Museum Management
Prepares students for entry level work in the museum field and provides technical training for persons working in museums. Among the topics addressed by the courses are the basics of collection development and cataloging, exhibit design, work with the public, and the use of computer technology in the museum environment.

Records Management
Focuses on training for persons responsible for the efficient management of an organization’s recorded information. Students will learn to identify the content, value and importance of recorded information and through a comprehensive understanding of the "information life cycle" learn to organize, manage and deliver that recorded information in a timely and efficient manner.

Certificates

Archival Management - 5401053029
(Offered at SEC)
Available Completely Online

ENG 101 Writing I ............................................................... 3
HIM 102 Archives Studies: Characteristics & Overview ............... 3
HIM 210 Archives Studies: Appraisal & Accessioning ................. 3
HIM 212 Archives Studies: Arrangement & Description ............... 3
HIM 214 Archives Studies: Preservation & Conservation ............... 3
HIM 216 Archives Studies: Automation & Electronic Records ......... 3
Total 24

Museum Management - 5401053019
(Offered at SEC)
Available Completely Online

ENG 101 Writing I ............................................................... 3
HIM 104 Museum Studies: Characteristics & Overview ............... 3
HIM 230 Museum Studies: Collections Care & Management ......... 3
HIM 232 Museum Studies: Conservation and Preservation .......... 3
HIM 234 Museum Studies: Exhibits ....................................... 3
HIM 236 Museum Studies: Automation .................................... 3
Total 24

Records Management - 5401053039
(Offered at SEC)
Available Completely Online

ENG 101 Writing I ............................................................... 3
HIM 106 Records Management: Characteristics & Overview .......... 3
OST 160 Records and Database Management .............................. 3
Total 24

Historic Preservation Technology

The program will focus on the study of preservation theory coupled with hands-on skill training to meet the needs of entry level individuals and prospective employers involved in the historic preservation field. Researching the background of structures designated as historic properties will enhance the learning experience while applying the Secretary of the Interior’s standards for the rehabilitation of historic structures.

Certificates

Historic Preservation Technology - 3012013019
(Offered at SEC, WKC)

BRX 220 Blueprint Reading for Construction ............................. 3
ACH 120 Theory and History of Architecture I ......................... 3
HIS 240 History of Kentucky .............................................. 3
HPT 100 Introduction to Historic Preservation ......................... 3
HPT 101 Introduction to Historic Preservation Lab ................... 2
ISX 100 Industrial Safety OR ............................................... 3
ISX 101 Introduction to Industrial Safety ................................ 3
Total 25
*Technical Electives: Select a minimum of 8 credit hours

HPT 120 Traditional Woodworking ......................................... 2
HPT 200 Masonry Repointing and Repair ............................... 2
HPT 202 Window Restoration and Repair ............................... 2
HPT 204 Roof Restoration and Repair ................................... 2
HPT 298 Field Experience Practicum .................................... 2

Homeland Security/Emergency Management

The degree program includes an overview of homeland security, emergency management and first responder agencies, including but not limited to: Fire Departments, Law Enforcement, and Medical Services and how these agencies function within the National Incident Management System.

Fire Science Track:
This degree track includes fire department organization, fire behavior, firefighter safety, personal protective equipment, portable fire extinguishers, fire hose, appliance and streams.

Criminal Justice Track:
This criminal justice degree track prepares the student for entry into the field of police work and related occupations. Criminal justice vocations have evolved from jobs with minimal requirements to jobs requiring complex knowledge and skills. This curriculum gives the student theory, principles, and techniques employed by criminal justice agencies and police units. The study of the law as it relates to criminal justice agencies, human behavior, government, and communications along with specialized course work comprise the curriculum.
Security Management Track:
The Security Management Coordinator degree track provides a comprehensive overview of physical security policies, procedures and techniques. Topics covered are perimeter protection, intrusion detection, access control, CCTV, security design and surveys, contingency planning, and acts of violence.

Homeland Security/Emergency Management Specialist Certificate:
This certificate program includes an overview of homeland security, emergency management and first responder agencies, including but not limited to: fire departments, law enforcement and emergency medical services and how these agencies function within the National Incident Management System.

Progression in the program is contingent upon achievement of a grade of "C" or better in each technical course for all program tracks above.

Associate in Applied Science
Homeland Security/Emergency Management - 4399997019
(Offered at BLC, WKC)

General Education Core
Written Communication ............................................ 3
Quantitative Reasoning .............................................. 3
Social/ Behavioral Sciences ........................................ 3
Natural Sciences ...................................................... 3
Heritage/ Humanities ................................................ 3
Oral Communications ................................................ 3
General Education Core Credit Hour Subtotal 18

Technical Core or Support Courses
Computer/ Digital Literacy ........................................ 0-3
HSM 100 Introduction to Homeland Security .................... 3
HSM 110 Introduction to Emergency Management ............... 3
CRJ 110 Principles of Asset Protection AND ..................... 3
CRJ 210 Physical Security Technology & Systems OR ........... 3
LSI 120 Comprehensive Security Specialist AND ............... (4)
LSI 146 Crisis Management/ Contingency Planning ........... (2)
HSM 225 Issues and Ethics in Homeland Security ............... 3
AHS 140 Introduction to Public and Community Health ........ 3
BAS 212 Introduction to Financial Management ................. 3
FRS 101 Introduction to Fire Science ............................. 3
FRS 2061 Emergency Medical Technician ....................... 6

NOTE: Computer/ Digital Literacy must be demonstrated either by competency exam or by completing a computer/ digital literacy course.

Technical Core Subtotal 30-33

Fire Science Track - 439999701
(Offered at BLC, WKC)
FRS 102 Firefighter Basic Skills I .................................. 3
FRS 103 Firefighters Basic Skills II ................................ 3
FRS 104 Firefighter Intermediate Skills I ......................... 3
FRS 105 Firefighters Intermediate Skills II ....................... 3
FRS 201 Firefighters Advanced Skills I ........................... 3

Fire Science Track Subtotal ...................................... 15

Fire Science Track Total Degree Requirements 63-66

Criminal Justice Track - 439999702
(Offered at BLC, WKC)
CRJ 100 Introduction to Criminal Justice ........................ 3
CRJ 204 Criminal Investigations .................................... 3
CRJ 215 Introduction to Law Enforcement ....................... 3

CRJ 217 Criminal Procedures ........................................ 3
CRJ 279 Terrorism and Political Violence ........................ 3

Criminal Justice Track Subtotal 15

Criminal Justice Track Total Degree Requirements 63-66

Security Management Track - 439999703
(Offered at BLC, WKC)
LSI 140 Managing Terrorism & Other Crimes ................ 1
LSI 150 Professional Locksmithing ............................... 4
Electives .......................................................... 10

A minimum of 3 credit hours must be taken from this list of electives:
LSI 130 GSA: Locks, Vaults & Containers ......................... 4
LSI 131 GSA: Locks, Vaults & Containers Certified Inspector Training ............................................... 1
LSI 151 Basic Safe Penetration .................................... 1
LSI 152 Combination Lock Manipulation ......................... 1
LSI 153 Safe Lock Servicing - Mechanical and Electronic .... 2
LSI 160 Fundamentals of Electricity ............................... 2
LSI 170 Electronic Access Control ................................. 2
LSI 195 Tactical Lock (restricted enrollment) .................. 8

Security Management Track Subtotal 15

Security Management Track Total Degree Requirements 63-66

Certificate
Homeland Security/Emergency Management Specialist - 4399993019
(Offered at JFC, WKC)
HSM 100 Introduction to Homeland Security ..................... 3
HSM 110 Introduction to Emergency Management ................ 3
CRJ 110 Principles of Asset Protection OR ....................... 3
CRJ 210 Physical Security Technology & Systems OR ........... 3
LSI 120 Comprehensive Security Specialist ..................... (4)
LSI 146 Crisis Management/ Contingency Planning ........... (2)
HSM 225 Issues and Ethics in Homeland Security ............... 3
AHS 140 Introduction to Public and Community Health ........ 3
BAS 212 Introduction to Financial Management ................. 3
FRS 101 Introduction to Fire Science ............................. 3
FRS 2061 Emergency Medical Technician ....................... 6

HSEM Specialist Certificate 30

Horticulture
The Horticulture program provides students with knowledge and skills needed for careers in greenhouse, nursery, and landscape operations. Students acquire practical experience in turf and landscape maintenance, design, plant production, and business management.

Associate in Applied Science
Horticulture - 0106017019
(Offered at JFC, OWC)

General Education:
Quantitative Reasoning ............................................ 3
Natural Sciences ...................................................... 3
Heritage/ Humanities ................................................ 3
Social/ Behavioral Sciences ........................................ 3
Written Communication ............................................ 3
Subtotal 15

152
### Technical Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HRT 110</td>
<td>Nursery Management</td>
<td>4</td>
</tr>
<tr>
<td>HRT 120</td>
<td>Turf Management</td>
<td>4</td>
</tr>
<tr>
<td>HRT 160</td>
<td>Retail Floral Design AND</td>
<td>4</td>
</tr>
<tr>
<td>HRT 161</td>
<td>Retail Floral Design Lab</td>
<td>2</td>
</tr>
<tr>
<td>HRT 130</td>
<td>Landscape Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>HRT 131</td>
<td>Landscape Maintenance Lab</td>
<td>2</td>
</tr>
<tr>
<td>HRT 150</td>
<td>Horticulture Business Management</td>
<td>3</td>
</tr>
<tr>
<td>HRT 210</td>
<td>Landscape Design</td>
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<tr>
<td>HRT 240</td>
<td>Greenhouse Management</td>
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<td>HRT 241</td>
<td>Greenhouse Management Lab</td>
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* Must meet computer/digital literacy requirement.

### Science Track - 010601701

(Offered at JFC, OWC)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COE 199</td>
<td>Cooperative Education OR</td>
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<tr>
<td>COED 198</td>
<td>Practicum</td>
<td>3</td>
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<tr>
<td>ACT 101</td>
<td>Fundamentals of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>BAS 200</td>
<td>Small Business Management</td>
<td>3</td>
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<tr>
<td>BMO 170</td>
<td>Business Management</td>
<td>3</td>
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<tr>
<td>OST 215</td>
<td>Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>BAS 267</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
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</table>

### General Education:

| Area 1: Written Communication, Oral Communications, or Heritage/ Humanities | 3 |
| Area 2: Social/ Behavioral Sciences, Natural Sciences or Quantitative Reasoning | 3 |

**Subtotal: 6**

### Technical:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>COE 199</td>
<td>Cooperative Education OR</td>
<td>3</td>
</tr>
<tr>
<td>COED 198</td>
<td>Practicum</td>
<td>3</td>
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<tr>
<td>HRT 104</td>
<td>Introduction to Herbaceous Plants</td>
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<tr>
<td>HRT 108</td>
<td>Introduction to Woody Plants</td>
<td>4</td>
</tr>
<tr>
<td>HRT 150</td>
<td>Horticulture Business Management</td>
<td>3</td>
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<tr>
<td>HRT 160</td>
<td>Retail Floral Design AND</td>
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</tr>
<tr>
<td>HRT 161</td>
<td>Retail Floral Design Lab</td>
<td>2</td>
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<tr>
<td>HRT 130</td>
<td>Landscape Maintenance</td>
<td>3</td>
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<td>HRT 131</td>
<td>Landscape Maintenance Lab</td>
<td>2</td>
</tr>
<tr>
<td>HRT 210</td>
<td>Landscape Design</td>
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<td><strong>Subtotal</strong></td>
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<td><strong>30-32</strong></td>
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**Total Credits: 63-68**

### Business Track - 010601702

(Offered at JFC, OWC)

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COE 199</td>
<td>Cooperative Education OR</td>
<td>2</td>
</tr>
<tr>
<td>COED 198</td>
<td>Practicum</td>
<td>2</td>
</tr>
<tr>
<td>ACT 101</td>
<td>Fundamentals of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>BAS 200</td>
<td>Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>BMO 170</td>
<td>Business Management</td>
<td>3</td>
</tr>
<tr>
<td>OST 215</td>
<td>Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>BAS 267</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
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<td><strong>20</strong></td>
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</tbody>
</table>

**Total Business Track Credits: 61-66**

### Diploma

### Landscape Technology - 0106014009

(Offered at BSC, JFC, OWC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HRT 130</td>
<td>Landscape Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>HRT 131</td>
<td>Landscape Maintenance Lab</td>
<td>2</td>
</tr>
<tr>
<td>HRT 210</td>
<td>Landscape Design</td>
<td>4</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>30-32</strong></td>
</tr>
</tbody>
</table>

**Total Credits: 36-38**

* If computer/digital literacy is met by the competency exam an additional 3 credit hours of general education or program elective must be taken.

### Certificates

### Greenhouse Operations - 0106013029

(Offered at BSC, JFC, MYC, OWC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 104</td>
<td>Introduction to Herbaceous Plants</td>
<td>4</td>
</tr>
<tr>
<td>HRT 240</td>
<td>Greenhouse Management</td>
<td>4</td>
</tr>
<tr>
<td>HRT 241</td>
<td>Greenhouse Management Lab</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>12</strong></td>
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</tbody>
</table>

### Greenhouse Production - 10613019

(Offered at OWC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 104</td>
<td>Introduction to Herbaceous Plants</td>
<td>4</td>
</tr>
<tr>
<td>HRT 240</td>
<td>Greenhouse Management</td>
<td>4</td>
</tr>
<tr>
<td>HRT 241</td>
<td>Greenhouse Management Lab</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>15-18</strong></td>
</tr>
</tbody>
</table>

### Horticulture Sales - 0106013119

(Offered at BSC, JFC, MYC, OWC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 108</td>
<td>Introduction to Woody Plants</td>
<td>4</td>
</tr>
<tr>
<td>HRT 104</td>
<td>Introduction to Herbaceous Plants</td>
<td>4</td>
</tr>
<tr>
<td>HRT 160</td>
<td>Retail Floral Design AND</td>
<td>4</td>
</tr>
<tr>
<td>HRT 161</td>
<td>Retail Floral Design Lab</td>
<td>2</td>
</tr>
<tr>
<td>HRT 130</td>
<td>Landscape Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>HRT 131</td>
<td>Horticulture Business Management</td>
<td>3</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>15-18</strong></td>
</tr>
</tbody>
</table>

### Landscape Installation - 0106013049

(Offered at BSC, JFC, MYC, OWC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 108</td>
<td>Introduction to Woody Plants</td>
<td>4</td>
</tr>
<tr>
<td>HRT 104</td>
<td>Introduction to Herbaceous Plants</td>
<td>4</td>
</tr>
<tr>
<td>HRT 130</td>
<td>Landscape Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>HRT 131</td>
<td>Landscape Maintenance Lab</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

153
Human Services

This program prepares individuals for entry level positions in agencies and institutions which provide social, community, educational, and mental health services. The curriculum provides an opportunity for the student to develop the knowledge and skills necessary for entry level employment. Included in the curriculum is a core of human services courses, general education courses, and technical courses with a specific human services emphasis. Application of human services principles and skills is provided through a clinical experience in an appropriate setting.

Upon completion of the program the graduate is prepared to seek employment in various areas which may include child care facilities, mental health settings, chemical dependency settings, hospitals, educational institutions, correctional facilities, geriatric settings, child and youth centers, and social service agencies.

Associate in Applied Science

Human Services- 4407017000

(Offered at ASC, BSC, JFC, MYC, OWC)

Technical Courses: Choose six hours

CRJ 101 Introduction to Criminal Justice ........................................ 3
CRJ 208 Delinquency and the Juvenile Justice System ..................... 3
EDP 201 Teaching Exceptional Learners in Regular Classrooms .......... 3
FAM 252 Introduction to Family Science ...................................... 3
FAM 253 Human Sexuality: Development, Behavior and Attitudes .... 3
HMS 200 Application of Assistive Technology for Persons with Disabilities ....................................................... 3
HMS 201/255 Introduction to Addictions ...................................... 3
HMS 212/210 Crisis Intervention ................................................ 3
HMS 220 Cultural Diversity in Human Services ......................... 3
HMS 235/235/255 Teaching Persons with Mental Retardation .......... 3
HMS 265 Working with Disabilities in Human Services ............... 3
HMS 269 Special Topics in Human Services .................................. 3
IEC 130 Early Childhood Development ...................................... 3
IEC 200 Child Guidance ......................................................... 3
MNA 100/101 Nursing Assistant Skills I .................................... 3
NAA 100 Human Relations ........................................................ 3
PSY 185 Human Potential .......................................................... 3
PSY 230 Psychosocial Aspects of Dying and Dying ....................... 3
SED 110 Orientation to Interpreting for the Deaf ......................... 3
SED 101 American Sign Language I .......................................... 3
SED 102 American Sign Language II ......................................... 3
SOC 120 SOC 220 The Community ............................................ 3
SOC 224 Introduction to Social Services .................................... 3
SWK 124 Developmental Social Welfare ..................................... 3
SWK 128 Introduction to Gerontology ....................................... 3
SWK 267 Juvenile Delinquency ................................................ 3
SWK 270 Corrections .................................................................. 3
SWK 275 The Family ................................................................. 3
SWK 276 Criminology ............................................................... 3
SWK 280 Methods of Working with the Aged ......................... 3
SWK 281 Psychology of Aging .................................................. 3

Murray State University Courses

SWK 120 Group Preparation and Selection for Foster and Adoptive Families .................................................. 2
SWK 121 Child Sexual Abuse for Foster and Adoptive Parents ........... 2

Eastern Kentucky University Courses

CDR 106 Foundations of Youth Work ........................................ 3
COR 423 Life Space: Crisis Intervention ...................................... 3
* Special Topics course at EKU; different section numbers indicate different topic content

Eastern Kentucky University Courses

SWK 106 Food Benefits ............................................................ 3
Industrial Chemical Technology

This program is designed to prepare its graduates for entry-level positions in the areas of process operators, process technicians, and chemical technicians. Basic knowledge in the areas of chemical unit operations, organic, analytical and inorganic chemistry, mathematics, policies and practices in areas of environment, health and safety, process systems and control; and statistics for quality help the graduate to understand the operation of modern chemical industries.

Associate in Applied Science
Industrial Chemical Technology - 4103017019
(Offered at JFC,WKC)

General Education
ENG 101 Writing I ............................................................ 3
CHE 140 Introductory General Chemistry .................... 3
CHE 145 Introductory General Chemistry Lab .......... 1
MAT 126 Technical Algebra and Trigonometry OR Higher Level Quantitative Reasoning Course* 3
Social/Behavioral Sciences .......................................... 3
Heritage/Humanities ................................................... 3
General Education .................................................... 16

Process Technician Track - 4103017019
(Offered at JFC,WKC)

Technical Core:
AET 110 Introduction to Circuit Analysis .................. 4
CHE 150 Introduction to Organic and Biological Chemistry 3
CHE 155 Introduction to Organic and Biological Chemistry Lab ................................................. 1
GEN 276 Employment and Professional Skills .......... 1
ICT 185 Introduction to Industrial Chemical Technology 1
ICT 190 Chemical Processes - Mass & Energy Balances 2
ICT 220 Unit Operations I ............................................. 3
ICT 230 Health, Safety & Environmental Practices 3
ICT 240 Unit Operations II ........................................... 3
ICT 250 Chemical Process Systems and Control 3
ICT 280 Capstone in Industrial Chemical Technology 2
IMT 140 Industrial Mechanics .................................. 2
IMT 141 Industrial Mechanics Lab ......................... 1
ITE 295 Independent Problems OR .......................... 1-2
COE 199 Co-operative Education ................................. 3
PHY 171 Applied Physics OR ........................................ 4
PHY 152 Introductory Physics II AND ................... (3)
PHY 162 Introductory Physics II Lab ......................... (1)
QMS 101 Introduction to Quality Systems ................. 3
TEC 200 Technical Communications ........................ 3
Mathematics .............................................................. 0-3

Pharmacy and Nuclear Science

Core Content:
IMD 100 Introduction to Information Systems .......... 3

Information Management and Design

The Information Management & Design program prepares students for careers in various industries utilizing cutting-edge technology within graphic design, web design, project management and library professions. Students will specialize their degree from a choice of four tracks.

The Graphic Design track provides the concepts and skills needed to create and produce design projects such as brochures, flyers, newsletters, logos, product packaging, photo restorations and manipulations, multimedia presentations, simple illustrations, and web sites using industry-standard techniques and graphic design applications.

The Web Design track provides the concepts and skills needed to create and produce web sites using industry-standard techniques using graphic and web design, and video editing applications. The Web Design track graduates will have the ability to create and maintain professional sites and also be capable of working with other web professionals such as programmers, network administrators and database administrators as well as interfacing with management and clients.

The Project Management track focuses on the management of time-limited operations in terms of four constraints: time, cost, resources and specification. Students learn to identify priorities, organize assignments and deploy the necessary resources to accomplish projects on time and within specified budgets.

The Library and Information Technology track prepares graduates for paraprofessional library work.

The courses within the Graphic and Web Design tracks will assist with preparation for Adobe Certifications and the Certified Internet Webmaster (CIW) certification exam. The Library and Information Technology track courses may be used to meet Kentucky public library certification requirements.

The IMD program also offers two certificates within the web and graphic design tracks. The web and graphic design certificates provide up-to-date training in current industry-standard software and trends for practitioners in the fields as well as introductory education for beginning students.

Associate in Applied Science
Information Management and Design - 5204027049
(Offered at BLC)

General Education Courses
ENG 101 Writing I* .......................................................... 3
ENG 102 Writing II* ...................................................... 3
Quantitative Reasoning Course* ................................ 3
Natural Sciences Course* ............................................. 3
Heritage/Humanities Course* ...................................... 3
Social/Behavioral Sciences Course* ......................... 3
Subtotal ................................................................. 18

Core Content:
IMD 100 Introduction to Information Systems ........... 3
## Project Management Track - 520402719
*(Offered at BLC)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMD 212</td>
<td>Advanced Microsoft Office Applications</td>
<td>3</td>
</tr>
<tr>
<td>IMD 235</td>
<td>Advanced Work Processing</td>
<td>3</td>
</tr>
<tr>
<td>IMD 260</td>
<td>Integrated Project Management</td>
<td>3</td>
</tr>
<tr>
<td>IMD 265</td>
<td>Project Management for Information Management &amp; Business</td>
<td>3</td>
</tr>
<tr>
<td>IMD 267</td>
<td>Microsoft Project Software</td>
<td>3</td>
</tr>
</tbody>
</table>

**Choose from Project Management Track Courses:**

- ACC 202: Managerial Accounting
- MGT 267: Introduction to Business Law
- MGT 274: Human Resource Management
- MGT 288: Self-Management
- ECO 202: Principles of Microeconomics
- ENG 203: Business Writing
- IMD 114: Information Literacy
- IMD 115: Introduction to Graphic Design
- IMD 127: Vector Design with Adobe Illustrator
- IMD 128: Raster Design with Adobe Photoshop
- IMD 175: Web Usability Design
- IMD 180: Intermediate Web Design
- IMD 226: Advanced Desktop Publishing
- IMD 230: Advanced Web Design
- IMD 232: Web Design with Adobe Dreamweaver
- IMD 240: Web Development with Adobe Flash
- IMD 250: Digital Video Editing with Final Cut Pro
- IMD 290: Photography
- IMD 294: Seminar in Information Management & Design Technologies
- IMD 299: Selected Topics in Information Management & Design

**Other Project Management Courses Approved by Program Coordinator:**

- Accounting Course
- Project Management Track Courses

**Total**

### 39

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## Library Information Technology Track - 520402709
*(Offered at BLC)*

**Available Completely Online**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIT 115</td>
<td>Introduction to Reference Services</td>
<td>3</td>
</tr>
<tr>
<td>LIT 124</td>
<td>Library Administration</td>
<td>3</td>
</tr>
<tr>
<td>LIT 132</td>
<td>Library Technical Services</td>
<td>3</td>
</tr>
<tr>
<td>LIT 243</td>
<td>Library Services for Children</td>
<td>3</td>
</tr>
<tr>
<td>LIT 245</td>
<td>Library Services for Young Adults</td>
<td>3</td>
</tr>
<tr>
<td>LIT 247</td>
<td>Library Services for Adults</td>
<td>3</td>
</tr>
<tr>
<td>LIT 271</td>
<td>Library Information Technology Track Courses</td>
<td>12</td>
</tr>
<tr>
<td>LIT 275</td>
<td>Seminar in Information Management &amp; Design</td>
<td>3</td>
</tr>
<tr>
<td>LIT 285</td>
<td>History of Libraries</td>
<td>3</td>
</tr>
<tr>
<td>LIT 299</td>
<td>Selected Topics in Library Information Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Choose a Total of 12 hours from the following:**

- LIT 130: Web Publishing for Public Libraries
- LIT 243: Library Services for Children
- LIT 245: Library Services for Young Adults
- LIT 247: Library Services for Adults
- LIT 281: History of Libraries
- LIT 299: Selected Topics in Library Information Management (may be repeated for up to 6 hours)

**Total**

### 63

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## Web Design - 520402708
*(Offered at BLC)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMD 180</td>
<td>Intermediate Web Design</td>
<td>3</td>
</tr>
<tr>
<td>IMD 230</td>
<td>Advanced Web Design</td>
<td>3</td>
</tr>
<tr>
<td>IMD 232</td>
<td>Web Design with Adobe Dreamweaver</td>
<td>3</td>
</tr>
<tr>
<td>IMD 240</td>
<td>Web Development with Adobe Flash</td>
<td>3</td>
</tr>
<tr>
<td>IMD 250</td>
<td>Digital Video Editing with Final Cut Pro</td>
<td>3</td>
</tr>
<tr>
<td>IMD 292</td>
<td>Portfolio Practicum: Web Design</td>
<td>3</td>
</tr>
<tr>
<td>IMD 265</td>
<td>Web Design Track Courses</td>
<td>6</td>
</tr>
</tbody>
</table>

**Choose from Web Design Track Courses:**

- IMD 115: Introduction to Graphic Design
- IMD 127: Vector Design with Adobe Illustrator
- IMD 128: Raster Design with Adobe Photoshop
- IMD 160: Introduction to E-Commerce
- IMD 175: Web Usability Design
- IMD 212: Advanced Microsoft Office Applications
- IMD 250: Digital Video Editing with Final Cut Pro
- IMD 260: Integrated Project Management
- IMD 265: Project Management for Information Management & Business
- IMD 290: Photography
- IMD 294: Seminar in Information Management & Design Technologies
- CIT 150: Internet Technologies

**Total**

### 63

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## Graphic Design Track - 520402707
*(Offered at BLC)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMD 115</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>IMD 127</td>
<td>Vector Design with Adobe Illustrator</td>
<td>3</td>
</tr>
<tr>
<td>IMD 128</td>
<td>Raster Design with Adobe Photoshop</td>
<td>3</td>
</tr>
<tr>
<td>IMD 180</td>
<td>Intermediate Web Design</td>
<td>3</td>
</tr>
<tr>
<td>IMD 226</td>
<td>Advanced Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>IMD 277</td>
<td>Typography</td>
<td>3</td>
</tr>
<tr>
<td>IMD 299</td>
<td>Advanced Photoshop OR</td>
<td>3</td>
</tr>
<tr>
<td>IMD 299</td>
<td>Advanced Illustrator</td>
<td>3</td>
</tr>
</tbody>
</table>

**Choose from Graphic Design Track Courses:**

- IMD 212: Advanced Microsoft Office Applications

**Total**

### 63

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**Note:**

- All courses are 3 credits unless specified otherwise.
- Courses marked with an asterisk satisfy the General Education requirement for the AAS degree.

**Subtotal**

### 27

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**Subtotal (General Education & Core Content)**

### 39

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**Subtotal**

### 66

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**Total**

### 63

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**Subtotal**

### 24

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**Total**

### 63

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**Subtotal**

### 42

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**Total**

### 63
The certificate in Library Information Technology prepares students for paraprofessional jobs in libraries and particularly in Kentucky public libraries. Upon completion of the academic certificate, students will be able to: perform basic library reference services using print and online sources, plan and produce library services and programs for a selected group of library customers, describe the role of the public library in the community as an agency for information services, and perform readers advisory services and collection development analysis for a selected group of Kentucky authors or genres. Courses taken for the Certificate in Library Information Technology may be used also for the Associate of Applied Science degree in Information Management & Design, Library Information Technology track. All Library Information Technology courses are web-based distance courses.

The Certificate in Library Information Technology requires 18 credit hours.

The required course is:
LIT 115 Introduction to Reference Services ........................................... 3

Students will select one course from each of the following groups to complete the certificate requirement of 18 credit hours:

1. Library Procedures
LIT 124 Library Administration OR ........................................... 3
LIT 132 Library Technical Services OR ............................. 3

2. Library Services
LIT 243 Library Services for Children OR ............................. 3
LIT 245 Library Services for Young Adults OR ............................. 3
LIT 247 Library Services for Adults OR ........................................... 3
LIT 248 Library Services for Preschool Children OR ............................. 3
LIT 280 Genealogy Services in Libraries OR ............................. 3

3. Library Information Technology Elective
LIT elective: any LIT course above LIT 115 ........................................... 3

4. Kentucky Literature (out-of-state students may substitute any English literature course)
LIT 200 Seminar in Kentucky Literature OR ........................................... 3
LIT 240 Literature of Appalachian Kentucky OR ............................. 3
LIT 241 Literature of Central Kentucky OR ............................. 3
LIT 242 Literature of Western Kentucky OR ............................. 3

5. General Education
ENG 101 Writing I OR ........................................... 3
ENG 102 Writing II OR ........................................... 3
HIS 108 History of the United States through 1865 OR ............................. 3
HIS 109 History of the United States since 1865 OR ............................. 3
HIS 240 History of Kentucky ........................................... 3

Total 18

The Certificate program in Insurance and Risk Management is a four-course (12 credit hour) credential. Students will learn the foundations of insurance production and multiple lines insurance production. Students will also master the fundamentals of operating an agency and managing sales. Completers of this certificate program will be eligible to sit for the national Accredited Advisor in Insurance (AAI) Certification exam.

The Integrated Engineering Technology Program offers students the opportunity to build a career maintaining integrated manufacturing systems found in advanced manufacturing, with an emphasis on automotive manufacturing. The program leads students through an interdisciplinary approach to maintaining and troubleshooting highly automated, complex manufacturing systems that include programmable logic controllers, robots, various types of drives, sensors, photoeyes, and electrohydraulics and electropneumatics. Graduates will be able to work as maintenance technicians in most manufacturing settings, particularly manufacturing settings related to the automotive industry.
### Technical Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IET 102</td>
<td>Computer/Digital literacy</td>
<td>3</td>
</tr>
<tr>
<td>IET 15</td>
<td>Blueprint Reading/Schematics</td>
<td>2</td>
</tr>
<tr>
<td>IET 107</td>
<td>Basic Electricity/Electronics</td>
<td>3</td>
</tr>
<tr>
<td>IET 108</td>
<td>Mechanical Drive Systems</td>
<td>5</td>
</tr>
<tr>
<td>IET 109</td>
<td>Safety</td>
<td>3</td>
</tr>
<tr>
<td>IET 110</td>
<td>Welding and Fabrication</td>
<td>4</td>
</tr>
<tr>
<td>IET 120</td>
<td>Machine Tool Operations</td>
<td>4</td>
</tr>
<tr>
<td>IET 201</td>
<td>Electrohydraulics/Pneumatics</td>
<td>6</td>
</tr>
<tr>
<td>IET 203</td>
<td>Programmable Logic Controllers</td>
<td>5</td>
</tr>
<tr>
<td>IET 205</td>
<td>Robot Maintenance</td>
<td>4</td>
</tr>
<tr>
<td>IET 206</td>
<td>Controls and Instrumentation</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Credits**: 46

### Diploma

**Integrated Engineering Technology - 1442014019**

**Area 1**: Written/Oral Communications or Heritage/Humanities... 3

**Area 2**: Technical Algebra and Trigonometry OR... 3

**MAT 126**: Technical Algebra and Trigonometry OR... 3

**Higher Level Quantitative Reasoning Course**: (3)

**Total Credits**: 53

#### Certificate

**Electrical Engineering Technology - 1442013029**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>IET 107</td>
<td>Basic Electricity/Electronics</td>
<td>3</td>
</tr>
<tr>
<td>IET 203</td>
<td>Programmable Logic Controllers</td>
<td>5</td>
</tr>
<tr>
<td>IET 205</td>
<td>Robot Maintenance</td>
<td>4</td>
</tr>
<tr>
<td>IET 206</td>
<td>Controls and Instrumentation</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Credits**: 17

**Mechanical Engineering Technology - 1442013019**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IET 102</td>
<td>Preventive Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>IET 108</td>
<td>Mechanical Drive Systems</td>
<td>5</td>
</tr>
<tr>
<td>IET 201</td>
<td>Electrohydraulics/Pneumatics</td>
<td>6</td>
</tr>
<tr>
<td>IET 110</td>
<td>Welding and Fabrication</td>
<td>4</td>
</tr>
<tr>
<td>IET 120</td>
<td>Machine Tool Operations</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits**: 21

#### Interactive Design

**The Interactive Design Technology program prepares students for present and future employment in expanding fields of interactive advertising/marketing and animation. Employers of these graduates include advertising agencies, marketing companies, in-house agencies, movie studios, production companies, and game developers.**

**Students will need to achieve a "C" or better in each class to remain in the program.**

**Certificate**

**3D Modeling Specialist - 0907023019**

(Offered at BGT, GTW)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IDT 100</td>
<td>Fundamentals of Design</td>
<td>3</td>
</tr>
<tr>
<td>IDT 110</td>
<td>3D Modeling &amp; Animation I</td>
<td>4</td>
</tr>
<tr>
<td>IDT 120</td>
<td>Digital Design Tools</td>
<td>4</td>
</tr>
<tr>
<td>IDT 210</td>
<td>3D Modeling &amp; Animation II</td>
<td>3</td>
</tr>
<tr>
<td>IDT 170</td>
<td>Project Strategy</td>
<td>3</td>
</tr>
<tr>
<td>IDT 250</td>
<td>Advanced Project and Portfolio Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**Computer/Digital Literacy Course**: 0-3

**Total Credits**: 20-23

#### Interdisciplinary Early Childhood Education

**The Interdisciplinary Early Childhood Education Program is designed to provide students an understanding of the cognitive, physical, social, and emotional development for working with young children. Opportunities to apply this knowledge in practical experiences are incorporated in the curriculum. Curriculum topics include, but are not limited to, developmental ages and stages, health and safety, curriculum planning, assessment, and family involvement. Employment opportunities are available in public and private preschools, early care educational settings, early intervention programs, Head Start, hospitals, campus child development centers, rehabilitation clinics, and recreation centers.**

**Students must earn a "C" or higher in each of the IEC courses in order to graduate.**

**Associate in Applied Science**

**Interdisciplinary Early Childhood Education - 1907097019**

(Offered at ASC, BLC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SMC, WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 101</td>
<td>Writing I</td>
<td>3</td>
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<tr>
<td>ENG 102</td>
<td>Writing II</td>
<td>3</td>
</tr>
<tr>
<td>COM 181</td>
<td>Basic Public Speaking OR</td>
<td>3</td>
</tr>
<tr>
<td>COM 252</td>
<td>Introduction to Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>PSY 110</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>KHP 230</td>
<td>Human Health &amp; Wellness OR</td>
<td>3</td>
</tr>
<tr>
<td>NFS 101</td>
<td>Human Nutrition and Wellness</td>
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</table>

**Total Credits**: 21-22

#### Technical Core Courses

<table>
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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>IEC 101</td>
<td>Orientation to Early Childhood Education</td>
<td>3</td>
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<tr>
<td>IEC 102</td>
<td>Foundations of Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>IEC 120</td>
<td>Health, Safety &amp; Nutrition OR</td>
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</tr>
<tr>
<td>KHP 230</td>
<td>Human Health &amp; Wellness OR</td>
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</tr>
<tr>
<td>NFS 101</td>
<td>Human Nutrition and Wellness</td>
<td>3</td>
</tr>
</tbody>
</table>
Certificate

Interdisciplinary Early Childhood Education Technical Studies - 1907093019

(Offered at ASC, BLC, ELC, GTW, HEC, HPC, HZC, MDC, MYC, OWC, SEC, SMK, WKC)

Required:

IEC 101 Orientation to Early Childhood Education ........................ 3
IEC 102 Foundations of Early Childhood Education .......................... 3
IEC 120 Health, Safety, and Nutrition OR ..................................... 3
KHP 230 Human Health & Wellness OR ......................................... 3
NFS 101 Human Nutrition and Wellness ....................................... (3)
IEC 130 Early Childhood Development ........................................ 3
IEC 200 Child Guidance .............................................................. 3
IEC 180 Approaches to Early Childhood Education Curriculum .......... 3
IEC 170 Observation and Assessment OR .................................... 3
IEC 190 Applied Experiences in Early Childhood Education .......... (3)
IEC 216 Literacy and Language in IECE ....................................... 3
KHP 230 Human Health & Wellness OR ......................................... 3
NFS 101 Human Nutrition and Wellness ....................................... (3)

Total Credits 39-42

Certificate

Interdisciplinary Early Childhood Education Technical Studies - 1907093019

(Offered at ASC, BLC, ELC, GTW, HEC, HPC, HZC, MDC, MYC, OWC, SEC, SMK, WKC)

Required:

IEC 101 Orientation to Early Childhood Education ........................ 3
IEC 102 Foundations of Early Childhood Education .......................... 3
KHP 230 Human Health & Wellness OR ......................................... 3
NFS 101 Human Nutrition and Wellness ....................................... (3)

Total Credits 48-51

Diploma

Interdisciplinary Early Childhood Education - 1907094019

(Offered at ASC, BLC, ELC, GTW, HEC, HPC, HZC, MDC, MYC, OWC, SMK, WKC)

Area 1 = Written Communication, Oral Communications, or Heritage/Humanities .............................................. 3
Area 2 = Social/Behavioral Sciences, or Quantitative Reasoning ........ 3

Subtotal 6

Certificate

Interdisciplinary Early Childhood Education Technical Studies - 1907093019

(Offered at ASC, BLC, ELC, GTW, HEC, HPC, HZC, MDC, MYC, OWC, SEC, SMK, WKC)

Required:

IEC 101 Orientation to Early Childhood Education ........................ 3
IEC 102 Foundations of Early Childhood Education .......................... 3
IEC 120 Health, Safety, and Nutrition OR ..................................... 3
KHP 230 Human Health & Wellness OR ......................................... 3
NFS 101 Human Nutrition and Wellness ....................................... (3)
IEC 130 Early Childhood Development ........................................ 3
IEC 200 Child Guidance .............................................................. 3
IEC 180 Approaches to Early Childhood Education Curriculum .......... 3
IEC 170 Observation and Assessment OR .................................... 3
IEC 190 Applied Experiences in Early Childhood Education .......... (3)
KHP 230 Human Health & Wellness OR ......................................... 3
NFS 101 Human Nutrition and Wellness ....................................... (3)

Total Credits 63-67

Certificate

Interdisciplinary Early Childhood Education Technical Studies - 1907093019

(Offered at ASC, BLC, ELC, GTW, HEC, HPC, HZC, MDC, MYC, OWC, SEC, SMK, WKC)

Required:

IEC 101 Orientation to Early Childhood Education ........................ 3
IEC 102 Foundations of Early Childhood Education .......................... 3
KHP 230 Human Health & Wellness OR ......................................... 3
NFS 101 Human Nutrition and Wellness ....................................... (3)
IEC 130 Early Childhood Development ........................................ 3
IEC 200 Child Guidance .............................................................. 3
IEC 180 Approaches to Early Childhood Education Curriculum .......... 3
IEC 170 Observation and Assessment OR .................................... 3
IEC 190 Applied Experiences in Early Childhood Education .......... (3)
IEC 216 Literacy and Language in IECE ....................................... 3
KHP 230 Human Health & Wellness OR ......................................... 3
NFS 101 Human Nutrition and Wellness ....................................... (3)

Total Credits 3-3
Invasive Cardiology

The goal of the Invasive Cardiology Program is to provide a competency-based didactic course with a well-rounded clinical experience. The student will be exposed to and expected to acquire skills, attitudes, and habits that are common to professionals in the medical field. Graduates will be prepared for a professional career as an Invasive Cardiovascular Technologist.

Certificate

Invasive Cardiology - 5109153019
(Offered at JFC)

<table>
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<tr>
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<td>IVC 165</td>
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<td><strong>Total Credits</strong></td>
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</tbody>
</table>

Locomotive Technology

Expertise in the inspection, repair, service and overhaul of locomotive electrical systems. Interpreting specifications from locomotive manuals, using testing procedures and equipment, diagnosing problems and performing repairs. To work in the railroad industry, following DOT guidelines.

Certificates

Locomotive Electrical Technician - 4902993029
(Offered at SMC)

<table>
<thead>
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<td>MAT 150</td>
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<td>MAT 126</td>
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<td>DIT 112</td>
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Logistics and Operations Management

The Logistics and Operations Management program is designed to teach students about the sourcing, procurement, conversion, and logistics concepts associated with the production and delivery of goods and services.

Associate in Applied Science

General Education Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 101</td>
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<td>MAT 110</td>
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<tr>
<td>Natural Sciences</td>
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<tr>
<td>Social/Behavioral Sciences</td>
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<tr>
<td>Heritage/Humanities</td>
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Technical or Support Courses

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<tr>
<td>ACC 201</td>
<td>3</td>
</tr>
<tr>
<td>BAS 160</td>
<td>3</td>
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<tr>
<td>BAS 282</td>
<td>3</td>
</tr>
<tr>
<td>BAS 287</td>
<td>3</td>
</tr>
<tr>
<td>BAS 256</td>
<td>3</td>
</tr>
<tr>
<td>BAS 289</td>
<td>3</td>
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<td>TEC 200</td>
<td>3</td>
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<td>LOM 100</td>
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<td>LOM 202</td>
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<td>ECO 101</td>
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Total Credits

| Credits | 60.5-68 |

Certificates

Logistics Management - 5202033019
(Offered at WKC)

<table>
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<tr>
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<td>LOM 101</td>
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<td>LOM 102</td>
<td>3</td>
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<td>BAS 287</td>
<td>3</td>
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<tr>
<td>TEC 200</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

Manufacturing Engineering Technology

The Manufacturing Engineering Technology degree offers students the opportunity to build a career in advanced manufacturing. It is focused on producing graduates to work as engineering technicians and first-line supervisors in manufacturing firms. The degree provides a broad foundation across many facets of operations management and manufacturing technologies. Graduates will be able to assist in leading projects across
multiple disciplines in advanced manufacturing firms. They will possess an understanding of manufacturing operations and possess the interpersonal skills to lead work groups. They will be able to work in almost any manufacturing setting from discrete manufacturing to continuous flow and assembly line operations.

## Associate in Applied Science
### Manufacturing Engineering Technology - 1506137029
(Offered at GTW)

### General Education

<table>
<thead>
<tr>
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<tr>
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<td>Basic Public Speaking OR</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101</td>
<td>Writing I</td>
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<tr>
<td>MAT 150</td>
<td>College Algebra</td>
<td>3</td>
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<tr>
<td>MAT 155</td>
<td>Trigonometry</td>
<td>3</td>
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<tr>
<td>STA 220</td>
<td>Statistical Method OR</td>
<td>3</td>
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<tr>
<td>MAT 170</td>
<td>Brief Calculus with Applications (3)</td>
<td>3</td>
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<tr>
<td>BAS 287</td>
<td>Supervisory Management</td>
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<tr>
<td>BAS 160</td>
<td>Introduction to Business</td>
<td>3</td>
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<tr>
<td>COE 199</td>
<td>Cooperative Education OR</td>
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<tr>
<td>MFG 175</td>
<td>Lean Operations</td>
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<tr>
<td>EET 271</td>
<td>Electrical Motor Controls I Lab</td>
<td>2</td>
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<tr>
<td>EET 270</td>
<td>Electrical Motor Controls I</td>
<td>2</td>
</tr>
<tr>
<td>BAS 289</td>
<td>Operations Management OR</td>
<td>3</td>
</tr>
<tr>
<td>MFG 256</td>
<td>Production Management OR</td>
<td>3</td>
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<tr>
<td>MFG 135</td>
<td>Fundamentals of Mechatronics</td>
<td>6</td>
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<tr>
<td>QMS 101</td>
<td>Introduction to Quality Systems</td>
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### Subtotal
|                |                                                   | 24    |

### Technical Electives

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<td>Supervisory Management</td>
<td>3</td>
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<tr>
<td>BAS 288</td>
<td>Personal and Organizational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>BRX 112</td>
<td>Blueprint Reading for Machinists OR</td>
<td>4</td>
</tr>
<tr>
<td>BRX 120</td>
<td>Basic Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>COE 199</td>
<td>Cooperative Education OR</td>
<td>1-5</td>
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<td>CAD 102</td>
<td>Drafting Fundamentals OR</td>
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<td>CAD 112</td>
<td>Engineering Graphics</td>
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<tr>
<td>DFT 152</td>
<td>Intermediate Computer Aided Drafting</td>
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<tr>
<td>EET 154</td>
<td>Electrical Construction I</td>
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<td>Electrical Construction I Lab</td>
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<td>Rotating Machinery</td>
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<td>Electrical Motor Controls I</td>
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<tr>
<td>EET 271</td>
<td>Electrical Motor Controls I Lab</td>
<td>2</td>
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<td>EET 272</td>
<td>Electrical Motor Controls II</td>
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<td>EET 273</td>
<td>Electrical Motor Controls II Lab</td>
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</tr>
<tr>
<td>EET 276</td>
<td>Programmable Logic Controllers</td>
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<tr>
<td>EET 277</td>
<td>Programmable Logic Controllers Lab</td>
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<td>ELT 110</td>
<td>Circuits I</td>
<td>5</td>
</tr>
<tr>
<td>ELT 114</td>
<td>Circuits II</td>
<td>5</td>
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<tr>
<td>ELT 260</td>
<td>Robotics and Industrial Automation</td>
<td>5</td>
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<tr>
<td>ETT 110</td>
<td>Voice &amp; Data Installer Level I</td>
<td>4</td>
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<tr>
<td>FPX 100</td>
<td>Fluid Power</td>
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<td>Fluid Power Lab</td>
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<tr>
<td>IMT 150</td>
<td>Maintaining Industrial Equipment I</td>
<td>3</td>
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<td>IMT 151</td>
<td>Maintaining Industrial Equipment I Lab</td>
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<tr>
<td>MFG 145</td>
<td>Manufacturing Processes OR</td>
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<tr>
<td>MCM 110</td>
<td>Fundamentals of MachineTool - A</td>
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<tr>
<td>MCM 112</td>
<td>Fundamentals of MachineTool - B</td>
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<tr>
<td>MCM 118</td>
<td>Metrology and Control Charts</td>
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<td>MCM 130</td>
<td>Manual Programming</td>
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### Core

<table>
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<th>Course Title</th>
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<tr>
<td>QMS 101</td>
<td>Introduction to Quality Systems</td>
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<td>QMS 220</td>
<td>Quality Audits</td>
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<tr>
<td>QMS 240</td>
<td>Statistics for Quality I (if ST291 is not taken in the core)</td>
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</table>

### Subtotal
|                |                                                   | 14    |

### Total Credits
|                |                                                   | 63-67 |

A minimum of fourteen (14) credit hours must be taken from the approved technical elective list. Other courses may be taken with the approval of the program coordinator.

## Certificates

### Technical Certificate - 1506138049
(Offered at GTW)

### General Education

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>COM 181</td>
<td>Basic Public Speaking OR</td>
<td>3</td>
</tr>
<tr>
<td>COM 252</td>
<td>Introduction to Interpersonal Communications</td>
<td>3</td>
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<td>MAT 150</td>
<td>College Algebra</td>
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### Subtotal
|                |                                                   | 6     |

### Core

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<td>Blueprint Reading for Machinists OR</td>
<td>4</td>
</tr>
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<td>Basic Blueprint Reading</td>
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<tr>
<td>CAD 102</td>
<td>Drafting Fundamentals OR</td>
<td>4</td>
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<tr>
<td>CAD 112</td>
<td>Engineering Graphics</td>
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<tr>
<td>MCM 118</td>
<td>Metrology and Control Charts</td>
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<td>QMS 101</td>
<td>Introduction to Quality Systems</td>
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<td>QMS 240</td>
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### Subtotal
|                |                                                   | 15-16 |

### Operations Management - 5202013369
(Offered at BSC, GTW)

### General Education

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<th>Course Title</th>
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<tr>
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### Subtotal
|                |                                                   | 3     |

### Core

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<tr>
<td>BAS 287</td>
<td>Supervisory Management</td>
<td>3</td>
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<tr>
<td>BAS 288</td>
<td>Personal and Organizational Leadership</td>
<td>3</td>
</tr>
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<td>Introduction to Quality Systems</td>
<td>3</td>
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### Subtotal
|                |                                                   | 9     |

### Total
|                |                                                   | 12    |

### Exploratory Machining - 4805033039

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### Total
|                |                                                   | 7     |
### MIT: Electrical Technology

The Electrical Technology Program focuses on preparing students for various entry-level electrical positions in industry and the building trades. The study of electrical theory in the classroom and the practical application of that theory in labs provide the foundation of this program. This program is flexible in offering three different tracks within the Associate of Applied Science degree. A variety of certificates and diplomas serve as pathways to the AAS degree tracks or as meeting specific training needs.

Students enrolled in the Electrical Technology program are required to achieve a minimum grade of "C" in the technical core and in those courses selected as technical electives.

#### Associate in Applied Science

**Electrical Technology - 4603027038**

(Offered at BLC, ELC, OWC, WKC)

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**Technical Core**

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**Industrial Electrician Track - 460302701**

(Offered at BLC, ELC, OWC, WKC)

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**Total Credits** | **29-35**

### Construction Electrician Track - 460302702

(Offered at BLC, ELC, OWC, WKC)

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**Total Credits** | **17-18**

### Motor Controls Electrician Track - 460302703

(Offered at BLC, ELC, WKC)

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**Total Credits** | **60-61**

### Diploma

**Electrical Technology - 4603024049**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)

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**Industrial Electrician Track - 460302701**

(Offered at BLC, ELC, OWC, WKC)

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**Total Credits** | **29-35**

### Manufacturing Industrial Technology

Two programs are offered under the broader heading of MIT. They are Electrical Technology and Industrial Maintenance Technology.

#### Fundamentals of Mechatronics - 1500003219

(Offered at BSC)

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<td>MFG 125</td>
<td>Special Topics in Engineering Technology</td>
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<td>MFG 130</td>
<td>Fundamentals of Mechatronics - A AND</td>
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#### Construction Electrician Track - 460302701

(Offered at BLC, ELC, OWC, WKC)

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**Total Credits** | **60-63**
ELT 271 Electric Motor Controls I Lab ........................................ 2
*Computer/Digital Literacy OR ........................................... 3
If any student successfully tests out of Computer/ Digital Literacy
he/she must take an additional Technical Course approved by the Electrical Program Coordinator ............................ (3)
Subtotal .............................................................................. 25

Industrial Electrician Track - 460302401
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
EET 154 Electrical Construction I AND .................................. 2
EET 155 Electrical Construction I Lab AND .............................. 2
EET 252 Electrical Construction II AND .................................. 2
EET 253 Electrical Construction II Lab OR .............................. 2
EET 254 Electrical Construction AND ..................................... (3)
EET 255 Electrical Construction Lab ....................................... (4)
EET 257 Programmable Logic Controllers Lab OR .................... 2
EET 278 Electrical Motor Controls II and PLCs AND ................. (3)
EET 279 Electrical Motor Controls II and PLCs Lab ................... (4)
Technical Electives ............................................................. 9
Subtotal .............................................................................. 23-25
Total Credits .......................................................................... 54-56

Construction Electrician Track - 460302402
(Offered at BGT, BLC, BSC, ELC, GTW, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
EET 154 Electrical Construction I AND .................................. 2
EET 155 Electrical Construction I Lab AND .............................. 2
EET 252 Electrical Construction II AND .................................. 2
EET 253 Electrical Construction II Lab OR .............................. 2
EET 254 Electrical Construction AND ..................................... (3)
EET 255 Electrical Construction Lab ....................................... (4)
Technical Electives ............................................................. 10
Subtotal .............................................................................. 17-18
Total Credits .......................................................................... 48-49

Motor Controls Electrician Track - 460302403
(Offered at BLC, BSC, OWC, WKC)
EET 272 Electrical Motor Controls II AND .............................. 2
EET 273 Electrical Motor Controls II Lab AND .......................... 2
EET 276 Programmable Logic Controllers ................................ 2
EET 277 Programmable Logic Controls Lab OR ....................... 2
EET 278 Electrical Motor Controls II and PLCs AND ................. (3)
EET 279 Electrical Motor Controls II and PLCs Lab ................... (4)
FPX 100 Fluid Power AND ...................................................... 3
FPX 101 Fluid Power Lab OR .................................................. 2
ELT 265 Applied Fluid Power .................................................. (3)
Technical Electives ............................................................. 7
Subtotal .............................................................................. 17-20
Total Credits .......................................................................... 48-51

Certificates

Electrical Construction - 460302309
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
ELT 110 Circuits I ................................................................. 5
ELT 114 Circuits II ................................................................. 5
ELT 150 Transformers ............................................................ 5
ELT 151 Transformers Lab ..................................................... 2
EET 250 National Electric Code .............................................. 4
EET 154 Electrical Construction I AND ................................. 2

Electrician Trainee Level I - 4603023039
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
ELT 110 Circuits I ................................................................. 5
ELT 114 Circuits II ................................................................. 5
Technical Electives ............................................................. 3
Total Credits .......................................................................... 13

Electrician Trainee Level II - 4603023059
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
ELT 110 Circuits I ................................................................. 5
ELT 114 Circuits II ................................................................. 5
Technical Electives ............................................................. 3
Total Credits .......................................................................... 13

Residential Electricity Level I - 4603023049
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
ELT 110 Circuits I ................................................................. 5
ELT 114 Circuits II ................................................................. 5
EET 154 Electrical Construction I ............................................ 2
EET 155 Electrical Construction I Lab .................................... 2
Total Credits .......................................................................... 14

Residential Electricity Level II - 4603023069
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
ELT 110 Circuits I ................................................................. 5
ELT 114 Circuits II ................................................................. 5
EET 154 Electrical Construction I ............................................ 2
EET 155 Electrical Construction I Lab .................................... 2
Total Credits .......................................................................... 21-22

Electrical Motor Control Level I - 4603023079
(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC, WKC)
ELT 110 Circuits I ................................................................. 5
ELT 114 Circuits II ................................................................. 5
EET 150 Transformers ............................................................ 2
EET 151 Transformers Lab ..................................................... 1
EET 264 Rotating Machinery .................................................. 2
EET 265 Rotating Machinery Lab OR ..................................... 2
EET 266 Rotating Machinery and Transformers ....................... (3)
EET 267 Rotating Machinery and Transformers Lab................ (3)
EET 250 National Electric Code .............................................. 4
EET 270 Electrical Motor Controls I AND .............................. 2
EET 271 Electrical Motor Controls I Lab AND .......................... 2
EET 264* Rotating Machinery .................................................. 2

163
### Electrical Motor Control Level II - 4603023089

*(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWG, SEC, SMC, WKC)*

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<td>Rotating Machinery Electrical Motor Controls I</td>
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<td>EET 269</td>
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<td>CPU 150</td>
<td>Computer Fundamentals OR</td>
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<td>CIS 100</td>
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**Total Credits:** 28-30

* May be offered in different combinations.

### Voice and Data Wiring Installer Level I - 4603023109

*(Offered at BLC, GTW, SMC)*

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<td>ETT 118</td>
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**Total Credits:** 14

### Voice and Data Wiring Installer Level II - 4603023099

*(Offered at ASC, BLC, ELC, GTW, SMC)*

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**Total Credits:** 15

### Voice and Data Wiring Technician - 4603023119

*(Offered at BLC, ELC, GTW, SMC)*

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<td>ETT 199</td>
<td>Cooperative Education for Voice and Data Wiring Technicians</td>
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**Total Credits:** 11

### MIT: Industrial Maintenance Technology

**An understanding of the requirements and opportunities in maintenance, good safety practices, pride in workmanship, and an understanding of the principles and accepted practices of the maintenance trade are covered in this program. Students are trained to hold positions in factories, hospitals, hotels, etc., where multi-skilled maintenance personnel are needed. Included are courses in air conditioning, carpentry, electricity, machine tool, metal fabrication, and welding.**

Progression in the Industrial Maintenance Technology program is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

### Associate in Applied Science

**Industrial Maintenance Technology - 470307019**

*(Offered at BGT, BLC, ELC, GTW, HEC, SMC, WKC)*

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### Technical Electives

Eighteen (18) credit hours of electives must be taken from the approved list. The list is not all inclusive. Other technical elective courses may be taken with approval of the program instructor/advisor.

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**Total Credits:** 63-68
### Diploma

**Industrial Maintenance Technician - 4703034049**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SMC, SEC, WKC)

#### General Education:

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<td>Fluid Power Lab OR</td>
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#### Technical Electives:

Fifteen (15) credit hours of electives must be taken from the approved list. The list is not all inclusive. Other technical elective courses may be taken with approval of the program instructor/advisor.

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***If courses equaling 10 credits are taken, five (5) credits may be used as electives.***

#### Certificates:

**Fluid Power Mechanic - 4703033129**

(Offered at BLC, BSC, ELC, HEC, HPC, JFC, MYC, OWC, SMC, SEC, WKC)

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**Industrial Maintenance Machinists Mechanic - 470303119**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SMC, SEC, WKC)

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**Industrial Maintenance Electrical Mechanic - 470303189**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SEC, SMC, WKC)

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**Industrial Maintenance Mechanic Level I - 4703033199**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SEC, SMC, WKC)

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**Industrial Maintenance Mechanic Level II - 4703033149**

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<td>MRN 203</td>
<td>Environmental Protection Rules</td>
<td>3</td>
</tr>
<tr>
<td>BAS 274</td>
<td>Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS 283</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS 293</td>
<td>Principles of Finance</td>
<td>3</td>
</tr>
<tr>
<td>BAS 160</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>MRN 207</td>
<td>Marine Diesel I</td>
<td>3</td>
</tr>
<tr>
<td>MRN 208</td>
<td>Marine Diesel II</td>
<td>3</td>
</tr>
<tr>
<td>MRN 209</td>
<td>Marine Diesel III</td>
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<tr>
<td>FPX 100</td>
<td>Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>ACR 100</td>
<td>Refrigerator Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>ACR 101</td>
<td>Refrigerator Fundamentals Lab</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Credits**: 60-63

### Marine Technology

The Marine Technology curriculum is designed to provide a strong theoretical base for employees of the inland marine industry. The program introduces students to basic inland marine principles and concepts by applying contemporary skills in a variety of employment positions based on industry needs. It provides students with a strong foundation of managerial and operational knowledge by using a problem-solving approach in state-of-the-art classroom and work experience environments. It builds leadership, management, communication skills, and professional ethics, which serve as a foundation for future development and career success. The program contains core technical courses and advanced courses in each track to address the employment needs of the domestic market.

### Associate in Applied Science

**Marine Technology - 490399701**

(Offered at WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>Writing</td>
<td>3</td>
</tr>
<tr>
<td>MAT 116</td>
<td>Technical Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>GEO 251</td>
<td>Weather and Climate</td>
<td>3</td>
</tr>
<tr>
<td>GEN 140</td>
<td>Development of Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MRN 100</td>
<td>Introduction to Marine Technology</td>
<td>3</td>
</tr>
<tr>
<td>MRN 101</td>
<td>Anatomy of a Towboat</td>
<td>3</td>
</tr>
<tr>
<td>MRN 102</td>
<td>Basic Marine Safety</td>
<td>3</td>
</tr>
<tr>
<td>MRN 199</td>
<td>Co-Op Experience I</td>
<td>6</td>
</tr>
<tr>
<td>MRN 299</td>
<td>Co-Op Experience II</td>
<td>6</td>
</tr>
<tr>
<td>BAS 160</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
</tbody>
</table>

**Subtotal**: 24-27

### Technical Core (required for all tracks):

- Computer/Digital Literacy

**Subtotal**: 0-3

### Wheelhouse Management Track - 490399701

(Offered at WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRN 204</td>
<td>Marine Electrical Systems I</td>
<td>3</td>
</tr>
<tr>
<td>MRN 205</td>
<td>Marine Electrical Systems II</td>
<td>3</td>
</tr>
<tr>
<td>MRN 206</td>
<td>Marine Diesel I</td>
<td>3</td>
</tr>
<tr>
<td>MRN 207</td>
<td>Marine Diesel II</td>
<td>3</td>
</tr>
<tr>
<td>FPX 100</td>
<td>Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>ACR 100</td>
<td>Refrigerator Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>ACR 101</td>
<td>Refrigerator Fundamentals Lab</td>
<td>2</td>
</tr>
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</table>

**Track Subtotal**: 22

**Track Total**: 60-63

### Marine Engineering Track - 490399702

(Offered at WKC)

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRN 204</td>
<td>Marine Electrical Systems I</td>
<td>3</td>
</tr>
<tr>
<td>MRN 205</td>
<td>Marine Electrical Systems II</td>
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</tr>
<tr>
<td>MRN 206</td>
<td>Marine Diesel I</td>
<td>3</td>
</tr>
<tr>
<td>MRN 207</td>
<td>Marine Diesel II</td>
<td>3</td>
</tr>
<tr>
<td>FPX 100</td>
<td>Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>ACR 100</td>
<td>Refrigerator Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>ACR 101</td>
<td>Refrigerator Fundamentals Lab</td>
<td>2</td>
</tr>
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</table>

**Track Subtotal**: 22

**Track Total**: 61-64
Marine Logistics Operations Track - 490399703
(Offered at WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS 288</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS 293</td>
<td>Principles of Finance</td>
<td>3</td>
</tr>
<tr>
<td>BAS 289</td>
<td>Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>MRN 708</td>
<td>Inland River Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRN 709</td>
<td>Applied Marine Operations</td>
<td>3</td>
</tr>
<tr>
<td>MRN 210</td>
<td>Intermodal Transportation</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 210</td>
<td>Physical Security Technologies &amp; Systems</td>
<td>3</td>
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</table>

Track Subtotal: 21

Track Total: 60-63

Certificate:

Marine Technology Business - 4903993019
(Offered at WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BAS 160</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BAS 288</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BAS 293</td>
<td>Principles of Finance</td>
<td>3</td>
</tr>
<tr>
<td>BAS 289</td>
<td>Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>MRN 208</td>
<td>Inland River Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRN 209</td>
<td>Applied Marine Operations</td>
<td>3</td>
</tr>
<tr>
<td>MRN 210</td>
<td>Intermodal Transportation</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 21-24

Masonry

The Masonry program prepares students for employment in the construction of houses, commercial structures and other projects involving brick, stone and other masonry materials. This program includes blueprint reading, introductory, intermediate and advanced masonry projects. Cost estimating, preparing materials lists, and practical experiences are included.

Progression in the Masonry program is contingent upon achievement of a grade of “C” or better in each technical course and maintenance of a 2.0 cumulative grade point average.

Diploma

Construction Mason - 4601014019
(Offered at BLC, BSC, JFC, MYC, SMC)

General Education: 6-9 credit hour requirement for diplomas in areas 1-3

Area 1 = Written Communication, Oral Communications, or Heritage/Humanities...3
Area 2 = Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning...3

Subtotal: 6

Technical Courses

Computer/Digital Literacy course OR demonstrated competency...0-3

Electives (Optional):

MSY 291 Special Problems III...3

Total Credits: 27

Certificates

Bricklayer Trainee - 4601013019
(Offered at BLC, BSC, JFC, MYC, SMC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISX 100</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>ISX 101</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>MSY 105</td>
<td>Introductory Masonry</td>
<td>3</td>
</tr>
<tr>
<td>MSY 115</td>
<td>Intermediate Masonry</td>
<td>3</td>
</tr>
<tr>
<td>MSY 199</td>
<td>Cooperative Education OR</td>
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</tr>
<tr>
<td>MSY 198</td>
<td>Practicum</td>
<td>3</td>
</tr>
<tr>
<td>MSY 205</td>
<td>Advanced Masonry</td>
<td>3</td>
</tr>
<tr>
<td>MSY 215</td>
<td>Masonry Lab</td>
<td>3</td>
</tr>
<tr>
<td>MSY 225</td>
<td>Brick Construction</td>
<td>3</td>
</tr>
<tr>
<td>MSY 235</td>
<td>Special Techniques in Brick Construction</td>
<td>3</td>
</tr>
<tr>
<td>MSY 298</td>
<td>Practicum</td>
<td>3</td>
</tr>
<tr>
<td>MSY 291</td>
<td>Special Problems III</td>
<td>3</td>
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</table>

Total Credits: 27

Bricklayer Helper - 4601013029
(Offered at BLC, BSC, JFC, MYC, SMC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISX 100</td>
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<tr>
<td>ISX 101</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>MSY 105</td>
<td>Introductory Masonry</td>
<td>3</td>
</tr>
<tr>
<td>MSY 215</td>
<td>Masonry Lab</td>
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</tr>
<tr>
<td>MSY 291</td>
<td>Special Problems III</td>
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Total Credits: 12

Construction Bricklayer - 4601013039
(Offered at BLC, BSC, JFC, MYC, SMC)

<table>
<thead>
<tr>
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<tr>
<td>BRX 220</td>
<td>Blueprint Reading for Construction</td>
<td>3</td>
</tr>
<tr>
<td>ISX 100</td>
<td>Industrial Safety OR</td>
<td>3</td>
</tr>
<tr>
<td>ISX 101</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>MSY 105</td>
<td>Introductory Masonry</td>
<td>3</td>
</tr>
<tr>
<td>MSY 115</td>
<td>Intermediate Masonry</td>
<td>3</td>
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<tr>
<td>MSY 199</td>
<td>Cooperative Education OR</td>
<td>3</td>
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<tr>
<td>MSY 198</td>
<td>Practicum</td>
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<tr>
<td>MSY 205</td>
<td>Advanced Masonry</td>
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<tr>
<td>MSY 215</td>
<td>Masonry Lab</td>
<td>3</td>
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<tr>
<td>MSY 225</td>
<td>Brick Construction</td>
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<tr>
<td>MSY 235</td>
<td>Special Techniques in Brick Construction</td>
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<td>MSY 298</td>
<td>Practicum</td>
<td>3</td>
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<tr>
<td>MSY 291</td>
<td>Special Problems III</td>
<td>3</td>
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<tr>
<td>MSY 275</td>
<td>Fireplace Construction</td>
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</tbody>
</table>
Mechatronic Systems

A Mechatronic Systems Operating Technician will function as a well-grounded machine operator in a complex system, with responsibility for efficient operation of the equipment with minimal down-times.

Certificate

Mechatronic Systems Operating Technician:
Siemens International Mechatronic Systems
Certification Level I - 1500003179
(Offered at BGT, JFC, OWC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MS 110</td>
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<tr>
<td>MS 120</td>
<td>4</td>
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<tr>
<td>MS 130</td>
<td>4</td>
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<tr>
<td>MS 150</td>
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<td>Total Credits</td>
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Electives:

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<th>Course</th>
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<tbody>
<tr>
<td>MS 160</td>
<td>2</td>
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<tr>
<td>MS 190</td>
<td>1</td>
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</tbody>
</table>

Medical Administrative Services

Certificate

Medical Coding and Reimbursement Specialist - 5107033029
(Offered at BGT, JFC)

The Medical Coding and Reimbursement Specialist program insures that medical services are correctly identified on insurance claim forms. The individual codes the diagnoses and procedures performed, submits claim forms, researches and corrects insurance claim rejections. This program prepares graduates to file insurance forms for reimbursement and to code properly using the ICD, CPT and the HCPCS codes for patient diagnoses and procedures. Students are provided with an in-depth knowledge of medical terminology, anatomy, and coding procedures.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AHS 109</td>
<td>4</td>
</tr>
<tr>
<td>BIO 130</td>
<td>3</td>
</tr>
<tr>
<td>BIO 135</td>
<td>4</td>
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<tr>
<td>BIO 137</td>
<td>4</td>
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<td>BIO 139</td>
<td>4</td>
</tr>
<tr>
<td>BIO 195</td>
<td>3</td>
</tr>
<tr>
<td>AHS 115</td>
<td>3</td>
</tr>
<tr>
<td>CLA 131</td>
<td>3</td>
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<tr>
<td>MIT 108</td>
<td>(3)</td>
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<tr>
<td>MBS 100</td>
<td>2</td>
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<tr>
<td>HIT 100</td>
<td>2</td>
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<tr>
<td>MBS 110</td>
<td>6</td>
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<td>MBS 205</td>
<td>(3)</td>
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<tr>
<td>MBS 199</td>
<td>0-8</td>
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<td>Total Credits</td>
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Medical Assisting

A medical assistant is an integral member of the health care delivery team, qualified by education and experience to work in the administrative office, the examining room and the physician's laboratory. Individuals in this unique position will be involved in many of the following skills:

- General: project a professional manner and image, adhere to legal and ethical principles, use medical terminology effectively, and use effective and correct verbal and written communication.
- Administrative: schedule, coordinate and monitor appointments, perform telephone and written communications, arrange hospital admissions, manage medical records, process insurance claims, manage office financial records, and maintain inventory.
- Clinical: prepare patient for examination procedures and treatment, record medical histories, take vital signs, chart patient information, administer medications and injections, provide patient instruction and education, perform venipunctures, collect and prepare other specimens, perform electrocardiograms (ECG), sterilize instruments, and perform basic laboratory tests.
- With additional education, the medical assisting graduate may perform limited radiography.

The Medical Assistant is a vital liaison between the doctor and patient and plays an important role in diagnosis and treatment. The many different roles assumed in this profession assure a fast moving and challenging career.

Progression in the Medical Assisting program is contingent upon achievement of a grade of "C" or above in each required course and maintenance of a 2.0 cumulative grade-point average or above (on a 4.0 scale).

Clinical orientation and externship are "non-paid work assignments". CPR requirements must be successfully completed prior to enrolling in the first clinical externship and must be kept current throughout the program.

Transportation to the physician's office/community agencies is the responsibility of each student.

The Medical Assisting programs at the colleges listed below* are accredited by the Commission on Accreditation of Allied Health Education Programs (www.caape.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756, 727/210-2350.

*Bluegrass CTC, Henderson CC, Jefferson CTC, Maysville CTC.
Associate in Applied Science
Medical Assisting - 5108017029
(Offered at BLC, GTW, HEC, JFC)

Required General Education:

MAT 105 Mathematics for Business OR
MAT 110 Applied Mathematics
BIO 135 Basic Anatomy and Physiology with Laboratory
PSY 110 General Psychology
ENG 101 Writing I

Additional Suggested General Education Courses (Not Required)

ENG 102 Writing II
COM 181 Basic Public Speaking OR
COM 252 Introduction to Interpersonal Communications

Support Classes

AHS 115 Medical Terminology OR
CLA 131 Medical Terminology from Greek and Latin OR
MIT 103 Medical Office Terminology
CPR 100 CPR for Health Care Professionals OR
KHP 190 First Aid and Emergency Care

Core Courses

MAI 105 Introduction to Medical Assisting
MAI 120 Medical Assisting Laboratory Techniques I
MAI 140 Medical Assisting Clinical Procedures I
MAI 150 Medical Assisting Administrative Procedures I OR
MIT 217 Medical Office Procedures
MAI 170 Dosage Calculations OR
FHM 100 Dosage Calculations
MAI 200 Pathophysiology for the Medical Assistant
MAI 220 Medical Assisting Laboratory Techniques II
MAI 230 Medical Insurance OR
MAI 104 Introduction to Medical Insurance
MIT 227 Medical Office Software
MAI 240 Medical Assisting Administrative Procedures II
MIT 250 Medical Assisting Clinical Procedures II
MIT 270 Pharmacology for the Medical Assistant
MAI 281 Medical Assisting Practicum
MAI 282 Medical Assisting Externship

Elective Courses:

OST 100 Keyboarding
MAI 260 Medical Transcription
MAI 299 Selected Topics Medical Assisting (Topic)

Elective List:

OST 100 Keyboarding
MAI 260 Medical Transcription
MAI 299 Selected Topics Medical Assisting (Topic)

Certificate

Medical Office Assistant - 5108013059
(Offered at BLC, HEC, JFC, MYC, OWC, SEC, SMC)

Diploma

Medical Assisting - 5108014020
(Offered at BLC, GTW, HEC, JFC, MYC, SEC, SMC)

General Education:

BIO 135 Basic Anatomy and Physiology with Laboratory
ENG 101 Writing I OR
TEC 200 Technical Communications

Support Classes

AHS 115 Medical Terminology OR
AHS 120 Medical Terminology OR

Core Courses

MAI 105 Introduction to Medical Assisting
MAI 120 Medical Assisting Laboratory Techniques I
MAI 140 Medical Assisting Clinical Procedures I
MAI 150 Medical Assisting Administrative Procedures I OR
MIT 217 Medical Office Procedures
MAI 170 Dosage Calculations OR
FHM 100 Dosage Calculations
MAI 200 Pathophysiology for the Medical Assistant
MAI 220 Medical Assisting Laboratory Techniques II
MAI 230 Medical Insurance OR
MAI 104 Introduction to Medical Insurance
MIT 227 Medical Office Software
MAI 240 Medical Assisting Administrative Procedures II
MIT 250 Medical Assisting Clinical Procedures II
MIT 270 Pharmacology for the Medical Assistant
MAI 281 Medical Assisting Practicum
MAI 282 Medical Assisting Externship

Elective Courses:

OST 100 Keyboarding
MAI 260 Medical Transcription
MAI 299 Selected Topics Medical Assisting (Topic)

Elective List:

OST 100 Keyboarding
MAI 260 Medical Transcription
MAI 299 Selected Topics Medical Assisting (Topic)

Certificate

Medical Office Insurance Billing and Coding # - 5108013049
(Offered at BLC, HEC, JFC, MYC, SEC, SMC)
Medical Office Administrative Assistant # - 5108013069
(Offered at BLC, HEC, JPC, MYC, SEC, SMC)

BIO 135 Basic Anatomy and Physiology with Laboratory .................. 4
AHS 115 Medical Terminology OR ................................................. 3
AHS 120 Medical Terminology OR ................................................ 3
CLA 131 Medical Terminology from Greek and Latin OR .................. (3)
MIT 103 Medical Office Terminology ............................................. (3)
MAI 105 Introduction to Medical Assisting ..................................... 3
MAI 150 Medical Assisting Administrative Procedures I OR .......... 3
MIT 217 Medical Office Procedures .................................................. (3)
MAI 250 Medical Assisting Administrative Procedures II OR ..... 3
MIT 227 Medical Office Software ...................................................... (3)
MAI 281 Medical Assisting Practicum ................................................. 1

Total Credits 18-20

Electrocardiograph Technician # - 5108013079
(Offered at JPC, MYC)

AHS 115 Medical Terminology OR ................................................. 3
AHS 120 Medical Terminology OR ................................................ 3
CLA 131 Medical Terminology from Greek and Latin OR .................. (3)
MIT 103 Medical Office Terminology ............................................. (3)
CPR 100 CPR for Healthcare Professionals OR ............................... 1
KHP 190 First Aid and Emergency Care .......................................... (2)
MAI 140 Medical Assisting Clinical Procedures I OR ....................... 4
MAI 240 Medical Assisting Clinical Procedures II ........................... (4)
MAI 281 Medical Assisting Practicum ................................................. 1

Total Credits 7-10

NOTE: Credit for CPR 100 may be granted with proof of CPR certification for Health Care Professionals.

Medical Office Limited Radiography # - 5108013139
(Offered at JFC)

MOR 100 Medical Office Limited Radiography ...................................... 6
MOR 115 Medical Office Limited Radiography Lab .............................. 3
MOR 117 Advanced Medical Office Limited Radiography .................. 6
MOR 119 Advanced Medical Office Limited Radiography Clinical ...... 3

Total Credits 18

Phlebotomist # - 5108013109
(Offered at GTW, HEC, MYC, SEC)

PHB 100 Phlebotomy ................................................................. 6
PHB 155 Phlebotomy Clinical ...................................................... 2-3

Total Credits 8-9

OR

MAI 120 Medical Assisting Laboratory Techniques I ....................... 3
PHB 155 Phlebotomy Clinical ...................................................... 2-3

Total Credits 5-6

OR

MAI 120 Medical Assisting Laboratory Techniques I ....................... 3
PHB 152 Phlebotomy: Clinical Experience .................................... 1

Total Credits 4

NOTE: For a directory of phlebotomy certification agencies and examination requirements, go to the Center for Phlebotomy Education web site.

# A competency level of successful completion of MAT 065, RDG 020 and ENC 091 must be attained for any certificate.

Mining Technology

The Mining Technology program will focus on the knowledge needed to succeed in the coal mining industry. Emphasis will be given to the statutory rights and safety procedures in all of the offerings including:

- self-rescuer device
- transportation controls
- communication controls
- mining conditions, mining methods, mining cycle, escapeways, emergency procedures, roof control, ground control, ventilation, health hazards, clean-up and rock dusting, health and safety aspects of assigned task, mine gases, explosives, compressed cylinders, electrical hazards, first aid, operation of equipment, electrical knowledge and troubleshooting, repairing electrical and fluid power equipment, maintaining the equipment, fabricating, supervising and the engineering aspects of mining

Associate in Applied Science

Mining Technology - 1509017019
(Offered at BSC, HZC, MDC)

General Education:

ENG 101 Writing I ............................................................................. 3
Quantitative Reasoning course* ..................................................... 3
Social/Behavioral Sciences course ................................................. 3
GLY 101 Physical Geology AND .................................................... 3
GLY 111 Laboratory for Physical Geology OR .............................. 1
Natural Sciences ............................................................................. (4)
Heritage/Humanities ..................................................................... 3
Subtotal 16

Technical Core:

MIT 151 Maintaining Industrial Equipment I Lab ......................... 3
MNG 160 Elements of Underground Mining .................................. 3
MNG 161 Elements of Underground Mining Lab ......................... 1
MNG 170 Elements of Surface Mining ............................................ 2
MNG 171 Elements of Surface Mining Lab ................................... 1
MNG 150 Mining Laws .................................................................. 3
BAS 160 Introduction to Business .................................................. 3
EFM 100 Personal Financial Management OR ........................ ...... 3
BAS 120 Personal Finance ............................................................. (3)
BAS 274 Mine Safety ..................................................................... 3
MNG 180 Environmental Issues in Mining .................................... 3

Subtotal 25-29

Operators Track - 150901702
(Offered at BSC, MDC)

IMT 150 Maintaining Industrial Equipment I Lab ......................... 3
IMT 151 Maintaining Industrial Equipment I .................................. 2
Technical Electives* ........................................................................ 14-16
Subtotal 39-21

Total Credits 60-66

Electricians Track - 150901703
(Offered at BSC, HZC, MDC)

MNG 123 Mining Electricity I AND .................................................. 4
MNG 125 Mining Electricity I Lab OR .............................................. 1
IMT 110 Industrial Maintenance Electrical Principles AND ......... (3)
IMT 111 Industrial Maintenance Electrical Principles Lab .......... (2)
ET/ELT 244 Electrical Machinery and Controls OR ...................... 4
Equivalent course

IMT 150 Maintaining Industrial Equipment I .................................. 3
IMT 151 Maintaining Industrial Equipment I Lab ......................... 2
Programmable Logic Controllers .................................................. 4
Technical Electives* ........................................................................ 2
Subtotal 20

Total Credits 61-65

Supervisors Track - 150901704
(Offered at BSC, MDC)

ACT 101 Fundamentals of Accounting .......................................... 3
MNG 286 Roof Control and Ventilation ......................................... 3
BAS 283 Principles of Management .............................................. 3

Subtotal 6
BAS 288 Personal and Organizational Leadership................................. 3
Technical Electives*................................................... 8
Subtotal .......................................................... 20
Total Credits ................................................... 61-65

**Mechanics Track - 150901705**
*(Offered at BSC, HZC, MDC)*

ET/ELT 265 Applied Fluid Power OR ............................................ (3)
FPX 100 Fluid Power AND.................................................. (3)
FPX 101 Fluid Power Lab .................................................. (2)
ET/ELT 122 Mechanical Power Transmission Systems......................... 3
IMT 100 Welding for Maintenance ........................................... 3
IMT 101 Welding for Maintenance Lab ..................................... 2
IMT 150 Maintaining Industrial Equipment I ................................ 3
IMT 151 Maintaining Industrial Equipment I Lab .......................... 2
Technical Electives*.................................................... 2
Subtotal .......................................................... 20-22
Total Credits ................................................... 61-68

**Engineering Operations Track - 150901701**
*(Offered at BSC, HZC)*

MA 112 Trigonometry OR .................................................. 2
MAT 155 Trigonometry ..................................................... (3)
ET/ELT 264 Mechanical Design OR equivalent course ....................... 4
Technical Electives*.................................................... 12
Subtotal .......................................................... 20-22
Total Credits ................................................... 61-67

*Technical Electives*

Any AIT, EET, ELT, IMT, CIS, NIS, IT, ISM, ENV, SMT, CAD, ICT, MFG
or any other course as approved by the program coordinator.

**Certificates**

**Underground Operator 1509013129**
*(Offered at BSC, HZC, MDC)*

MNG 160 Elements of Underground Mining ................................ 3
MNG 161 Elements of Underground Mining Lab ............................ 1-3
EFM 100 Personal Financial Management OR ................................ 3
BAS 120 Personal Finance OR ............................................... (3)
WPP 200 Workplace Principles .............................................. (3)

Total Credits ................................................... 7-9

**Underground Mechanic/Electrician - 1509013069**
*(Offered at BSC, HZC, MDC, SEC)*

Computer/ Digital Literacy .................................................. 0-3
Blueprint Reading course ................................................... 2-3
MNG 123 Mining Electricity I .............................................. 1
MNG 125 Mining Electricity I Lab ........................................... 4
IMT 100 Welding for Maintenance ........................................... 3
IMT 101 Welding for Maintenance Lab ..................................... 2
ET/ELT 244 Electrical Machinery and Controls OR ......................... 4
IMT 110 Industrial Maintenance Electrical Principles AND ............... (3)
IMT 111 Industrial Maintenance Electrical Principles Lab ................ (2)
ET/ELT 250 Programmable Logic Controllers ................................ 4
ET/ELT 265 Applied Fluid Power OR ............................................ 3
FPX 100 Fluid Power AND .................................................. (3)
FPX 101 Fluid Power Lab .................................................. (2)
IMT 150 Maintaining Industrial Equipment I ................................ 3
IMT 151 Maintaining Industrial Equipment I Lab .......................... 2
Total Credits ................................................... 28-35

**Underground Supervisor - 1509013079**
*(Offered at BSC, HZC, MDC, SEC)*

Mining Laws ............................................................. 3
Mine Safety .............................................................. 3
Mine Emergency Technician OR .............................................. 3
First Aid & Emergency Care .................................................. (2)
Roof Control and Ventilation ................................................ 3
Introduction to Business ..................................................... 3

Total Credits ................................................... 16-21

**Surface Operator - 1509013139**
*(Offered at BSC, MDC, SEC)*

Surface Technician/Greaser - 1509013119
*(Offered at BSC, SEC)*

Blueprint Reading Course ................................................... 2-3
MNG 170 Elements of Surface Mining ....................................... 2
MNG 171 Elements of Surface Mining Lab .................................... 1-3
EFM 100 Personal Financial Management OR ................................ 3
Personal Finance OR ....................................................... (3)
Workplace Principles ....................................................... 3
Special Problems I OR ..................................................... (3)
Technical Elective .................................................... (3)

Total Credits ................................................... 9-11

**Surface Field Mechanic - 1509013109**
*(Offered at BSC, SEC)*

Blueprint Reading Course ................................................... 2-3
Mechanical Power Transmission Systems ........................................ 3
Applied Fluid Power OR .................................................. (3)
Fluid Power AND.................................................. (3)
Fluid Power Lab .................................................. (2)
Welding for Maintenance ................................................... 3
Total Credits ................................................... 11-13

**Surface Technician/ Greaser - 1509013119**
*(Offered at BSC, SEC)*

Blueprint Reading Course ................................................... 2-3
PMX 100 Precision Measurement ............................................ 3
DIT 103 Preventive Maintenance Lab ....................................... 2
ET/ELT 122 Mechanical Power Transmission Systems ......................... 3

Total Credits ................................................... 8

**Mining Technician Assistant I - 1509013019**
*(Offered at BSC, SEC)*

Blueprint Reading Course ................................................... 2-3
PMX 100 Precision Measurement ............................................ 3
DIT 103 Preventive Maintenance Lab ....................................... 2
IMT 100 Welding for Maintenance ........................................... 3
Welding for Maintenance Lab ................................................ 2
Total Credits ................................................... 10

**Mining Technician Assistant II - 1509013029**
*(Offered at BSC, HZC, MDC, SEC)*

Blueprint Reading Course ................................................... 2-3
MNG 123 Mining Electricity I .............................................. 4
MNG 125 Mining Electricity I Lab ........................................... 4
ET/ELT 265 Applied Fluid Power OR ............................................ 3
FPX 100 Fluid Power AND .................................................. (3)
Fluid Power Lab .................................................. (2)
Total Credits ................................................... 8-10

Introduction
Mining Technician I - 1509013039
(From BSC, SEC)

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<td>MNG 161</td>
<td>Basic Engines and Drive Systems</td>
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<td>MNG 125</td>
<td>Motorcycle Sales and Marketing</td>
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<td>KHP 190</td>
<td>Future Aid and Emergency Care</td>
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<td>IMT 101</td>
<td>Welding for Maintenance</td>
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<td>IMT 106</td>
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Mining Technician II - 1509013049
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<td>MNG 129</td>
<td>Mining Safety and Health</td>
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<td>MNG 125</td>
<td>Mining Safety and Health</td>
<td>3</td>
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<tr>
<td>MNG 150</td>
<td>Mining Laws</td>
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<td>MNG 286</td>
<td>Roof Control and Ventilation</td>
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<td>KHP 190</td>
<td>First Aid and Emergency Care</td>
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<td>Total Credits</td>
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**Motorcycle Technology**

The Motorcycle Technology Program prepares students for careers in a motorcycle dealership or private business. A core curriculum provides students with a foundation of knowledge applicable to the motorcycle industry.

**Associate in Applied Science**

Motorcycle Technology - 4706117019
(From BSC)

**General Education**

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<td>ENG 101</td>
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<td>MAT 110</td>
<td>Applied Math</td>
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<td>General Science</td>
<td>3</td>
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<tr>
<td>MAT 220</td>
<td>Natural Science</td>
<td>3</td>
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<td>MAT 223</td>
<td>Oral Communications</td>
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<td>SUM 223</td>
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**Technical Core**

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<td>MOT 100</td>
<td>Introduction to Motorcycles</td>
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<tr>
<td>MOT 105</td>
<td>Introduction to Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MOT 120</td>
<td>Motorcycle Sales and Marketing</td>
<td>2</td>
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<tr>
<td>MOT 130</td>
<td>Shop Management</td>
<td>2</td>
</tr>
<tr>
<td>MOT 244</td>
<td>Service Requirements</td>
<td>2</td>
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<tr>
<td>MOT 260</td>
<td>Cooperative Education</td>
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<td>COE 199</td>
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<td>COE 198</td>
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**Repair Track - 470611701**
(From BSC)

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<tr>
<td>FEX 100</td>
<td>Fundamentals of Electricity</td>
<td>3</td>
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<tr>
<td>MOT 142</td>
<td>Basic Engines and Drive Systems</td>
<td>2</td>
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<tr>
<td>MOT 156</td>
<td>Frames and Suspensions</td>
<td>2</td>
</tr>
<tr>
<td>MOT 200</td>
<td>Advanced Engines and Drive Systems</td>
<td>2</td>
</tr>
<tr>
<td>MOT 220</td>
<td>Diagnostics and Troubleshooting</td>
<td>2</td>
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<tr>
<td>MOT 234</td>
<td>Performance Machine and Welding</td>
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Retail Technician I - 4706113019
(From BSC)

**Technical Courses**

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<tr>
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<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MOT 100</td>
<td>Introduction to Motorcycles</td>
<td>3</td>
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<tr>
<td>MOT 105</td>
<td>Introduction to Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MOT 120</td>
<td>Motorcycle Sales and Marketing</td>
<td>3</td>
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<tr>
<td>MOT 130</td>
<td>Shop Management</td>
<td>2</td>
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<tr>
<td>MOT 134</td>
<td>Service Requirements</td>
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<td>MOT 142</td>
<td>Basic Engines and Drive Systems</td>
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Retail Technician II - 4706113049
(From BSC)

**Technical Courses**

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<tr>
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<tbody>
<tr>
<td>MOT 100</td>
<td>Introduction to Motorcycles</td>
<td>3</td>
</tr>
<tr>
<td>MOT 105</td>
<td>Introduction to Information Systems</td>
<td>3</td>
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<tr>
<td>MOT 120</td>
<td>Motorcycle Sales and Marketing</td>
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<tr>
<td>MOT 130</td>
<td>Shop Management</td>
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<tr>
<td>BAS 200</td>
<td>Small Business Management</td>
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Approved Technical Electives: Repair Track:

<table>
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<tr>
<td>CIS 130</td>
<td>Microcomputer Application</td>
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<tr>
<td>CRT 100</td>
<td>Introduction to Collision Repair</td>
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<tr>
<td>CMM 110</td>
<td>Fundamentals of Machine Tools A</td>
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Note: Other Electives may be approved by the Program Coordinator.
Natural Gas Technology

Construction and Maintenance Technician
This program prepares students for performing job tasks in five functional areas of pipeline construction and maintenance: work related safety, installing and inspecting gas distribution piping, maintenance on gas pipelines, placing pipelines into service, and installing and monitoring cathodic protection systems. Classroom instruction and documented related skill performance prepares students to perform job related tasks at the technician level. Persons completing the program are “operator qualified” on related covered tasks according to 49CFR, Part 192, Subpart N.

Leakage and Corrosion Control Technician
This program prepares students for job related tasks in six functional areas of natural gas service: work related safety, installing and maintaining customer services lines and meter and regulator sets, installing gas operated equipment, installing and inspecting gas distribution piping and monitoring cathodic protection systems. Classroom instruction and documented related skill performance prepares students to perform job related tasks at the technician level. Persons completing the program are “operator qualified” on related covered tasks according to 49CFR, Part 192, Subpart N.

Gas Service Technician
This program prepares students for performing job tasks in four functional areas of natural gas leakage and corrosion control: work related safety, investigating and controlling gas leaks, installing cathodic protection systems, and monitoring cathodic protection systems. Classroom instruction and documented related skill performance prepares students to perform job related tasks at the technician level. Persons completing the program are “operator qualified” on related covered tasks according to 49CFR, Part 192, Subpart N.

Measurement and Regulation Technician
This program prepares students for performing job tasks in five functional areas of natural gas measurement and regulation: work related safety, basic gas laws, maintaining gas metering systems, maintaining gas regulation systems, and maintaining recording instruments. Classroom instruction and documented related skill performance prepares students to perform job related tasks at the technician level.

Certificates

Leakage and Corrosion Control Technician - 1509033020
(Offered at WKC)

| NGT  | Technologies Basic to the Delivery of Natural Fuel Gases | 3 |
| NGT  | Preventing/Controlling Worksite Incidents                | 3 |
| NGT  | Maintaining Compliance with 49 Code of Federal Regulations (CFR), Part 192 | 1 |
| NGT  | Pipeline Construction Safety                            | 3 |
| NGT  | Performing Patrol & Leakage Surveys on Natural Gas Pipeline Facilities | 3 |
| NGT  | Identifying Practices & Procedures Used to Control and Monitor Cathodic Protection Systems | 2 |
| Total Credits | | 21 |

Gas Service Technician - 1509033040
(Offered at WKC)

| NGT  | Technologies Basic to the Delivery of Natural Fuel Gases | 3 |
| NGT  | Preventing/Controlling Worksite Incidents                | 3 |
| NGT  | Maintaining Compliance with 49 Code of Federal Regulations (CFR), Part 192 | 1 |
| NGT  | Pipeline Construction Safety                            | 3 |
| NGT  | Installing & Maintaining Customer Service Lines and Meter and Regulator Sets | 3 |
| NGT  | Identifying Practices & Procedures Used to Control and Monitor Cathodic Protection Systems | 2 |
| Total Credits | | 21 |

Construction and Maintenance Technician - 1509033010
(Offered at WKC)

| NGT  | Technologies Basic to the Delivery of Natural Fuel Gases | 3 |
| NGT  | Preventing/Controlling Worksite Incidents                | 3 |
| NGT  | Maintaining Compliance with 49 Code of Federal Regulations (CFR), Part 192 | 1 |
| NGT  | Pipeline Construction Safety                            | 3 |
| NGT  | Installing & Maintaining Gas Metering Systems            | 3 |
| NGT  | Operating & Maintaining Gas Pressure Regulating Systems | 3 |
| Total Credits | | 24 |

Measurement and Regulation Technician - 1509033030
(Offered at WKC)

| NGT  | Technologies Basic to the Delivery of Natural Fuel Gases | 3 |
| NGT  | Preventing/Controlling Worksite Incidents                | 3 |
| NGT  | Maintaining Compliance with 49 Code of Federal Regulations (CFR), Part 192 | 1 |
| NGT  | Pipeline Construction Safety                            | 3 |
| NGT  | Installing & Maintaining Gas Distribution Piping         | 3 |
| NGT  | Performing Maintenance on Gas Pipelines                  | 3 |
| NGT  | Placing Gas Pipelines into Service                       | 3 |
| NGT  | Identifying Practices & Procedures Used to Control and Monitor Cathodic Protection Systems | 2 |
| Total Credits | | 21 |

Nuclear Medicine and Molecular Imaging Technology

The Nuclear Medicine and Molecular Imaging Technology (NMIMT) program prepares the individual to work in the field of Nuclear Medicine and Molecular Imaging. Nuclear Medicine and Molecular Imaging is the medical specialty that utilizes the nuclear properties of radioactive and stable isotopes to make diagnostic evaluation of the anatomic or physiologic conditions of the body and to provide therapy with unsealed radioactive materials. The skills of the nuclear medicine technologist complement those of the nuclear medicine physician and other professionals in the field. Nuclear medicine technologists have responsibilities in the following areas: (a) patient care and monitoring, (b) technical
skills related to radiation safety, radiopharmacy, clinical instrumentation, diagnostic and therapeutic procedures (including hybrid imaging and emerging technologies), quality control, and computers, and (c) administrative functions related to supplies and equipment, documentation of operations related to disposition of radioactive materials, quality control data, and patient records.

The NMMIT program is a selective admission program. A student must earn a grade of C or better in the prerequisite and concurrent mathematics and science courses to be admitted to and to remain enrolled in the program. Also, a student must earn a grade of C or better in each of the NMMIT courses to be retained in the program. After graduation from the program, the individual is eligible to write either the Nuclear Medicine Technology Certification Board (NMTCB) or the American Registry of Radiologic Technologists (ARRT) nuclear medicine technology examination to earn credentials. Please see the guidelines for the selective admission requirements to the Nuclear Medicine and Molecular Imaging Technology program.

Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first NJMI course.

Note: Hours Exception (71-73 for the A.A.S.) approved by the KCTCS Board of Regents in December 2010

Associate in Applied Science

Nuclear Medicine and Molecular Imaging Technology - 5109057039

(Offered at BLC, JFC)

General Education:

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<td>ENG 102</td>
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<td>MA 109</td>
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<td>CHE 140</td>
<td>Introductory General Chemistry</td>
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<tr>
<td>CHE 150</td>
<td>Introduction to Organic and Biological Chemistry</td>
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<td>CHE 155</td>
<td>Introduction to Organic and Biological Chemistry</td>
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<td>BIO 137</td>
<td>Human Anatomy &amp; Physiology I</td>
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<td>BIO 139</td>
<td>Human Anatomy &amp; Physiology II</td>
<td>4</td>
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<td>PHY 171</td>
<td>Applied Physics OR</td>
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<td>PHY 172</td>
<td>Physics for Health Sciences</td>
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<td>Social/ Behavioral Sciences</td>
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<td>Heritage/ Humanities</td>
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<td>NMI 141</td>
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<td>NMI 142</td>
<td>Radiation Biology/Protection</td>
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<td>NMI 160</td>
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<td>Physics and Instrumentation II</td>
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<td>NMI 170</td>
<td>Clinic II</td>
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<td>NMI 230</td>
<td>Radiopharmacy</td>
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<td>NMI 220</td>
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<td>Clinical Procedures III</td>
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<td>Clinical Procedures IV</td>
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Total Credits 71-73

Nursing

The Associate Degree Nursing program prepares graduates to use their skill and knowledge to fulfill the role of the nurse: enhance human flourishing, demonstrate sound nursing judgment, continually develop professional identity, and possess a spirit of inquiry to improve the quality of patient care. Encompassed within these roles are the core components of context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. These core components are introduced, developed, and built upon through the curriculum. Graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

Acceptance into the Associate Degree Nursing program is based on a selective admissions process. In order to be considered for admission, applicants must comply with college and program admission requirements prior to March 1 for admission to a fall NSG 101 course (July 1 for admission to a spring NSG 101 course).

Progression in the Associate Degree Nursing program is contingent upon achievement of a grade of "C" or better in each biological science, nursing and mathematics course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

CPR requirements must be successfully completed prior to enrolling in the first nursing course and must be kept current throughout the program. Documentation of successful completion of a minimum 75-hour nursing assistant course, or its equivalent, and documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

*Transportation to the community agencies is the responsibility of each student.

Note: The Kentucky Board of Nursing may deny a nursing graduate admission to the NCLEX-RN Exam if an individual has been convicted of a misdemeanor or felony which involves acts that bear directly on the qualifications of the graduate to practice nursing.

The following Associate Degree Nursing programs are accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Rd, NE, Suite 850, Atlanta, GA 30326, www.nlnac.org, telephone: (404) 975-5000:

- Ashland Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Somerset Community College, West Kentucky Community and Technical College. Note: Hours exception (69-72 for the AAS) approved by the KCTCS Board of Regents in June 2010.
Nursing Assistant - Advanced

Provides knowledge and skills for nurse aides to assume the role and responsibility required in a variety of health care settings.

Certificate

Advanced Nursing Assistant - 5139023019

(Available Completely Online)

NAA 125 Advanced Nursing Assistant OR .................................... (6)
NAA 100 Nursing Assistant Skills I AND .................................... (3)
NAA 115 Nursing Assistant Skills II OR ..................................... (3)
MNA 100 Medical Nurse Aide AND .......................................... (3)
NAA 115 Nursing Assistant Skills I .......................................... (3)
BIO 135 Basic Anatomy and Physiology with Laboratory OR ........... (4)
AHS 109 Introduction to Body Structure and Function OR ............... (4)
BI 137 Human Anatomy and Physiology I AND ................................ (4)
BI 139 Human Anatomy and Physiology II ................................... (4)
COM 181 Basic Public Speaking OR ............................................ (3)
COM 252 Introduction to Interpersonal Communication OR .............. (3)
ENG 101 Writing I OR ............................................................... (3)
TEC 200 Technical Communication ........................................... (3)

Total Credits 16-20

Nursing - Academic/Career Mobility Program

The Academic/Career Mobility Program provides a seamless educational option in nursing with two exit points allowing students to choose a career as an LPN or RN. The program is implemented in a shared framework which prepares graduates to use their skill and knowledge to fulfill the role of the nurse, enhance human flourishing, demonstrate sound nursing judgment, continually develop professional identity, and possess a spirit of inquiry to improve the quality of patient care. Encompassed within these roles are the core components of context and environment, knowledge and science, person professional development, quality and safety, relationship-centered care, and teamwork. These core components are introduced, developed, and built upon through the curriculum; however, distinct parameters have been established that support the PN and RN scopes of nursing practice. The curriculum is structured around a clearly defined organizing framework and provides the foundation for a competency-based approach to nursing education through the utilization of interactive and student-focused learning strategies. Content and performance-based outcomes for the nursing courses are selected, developed, and leveled from simple to complex. Students who successfully complete the first year will receive a diploma qualifying them to apply for licensure as practical nurses. Following successful completion of the second year, students will receive the Associate in Applied Science Degree in Nursing qualifying them to apply for licensure as registered nurses.

Acceptance into the program is based on a selective admissions process. In order to be considered for admission, applicants must comply with college and program admission requirements. Licensed practical nurses who graduated within one year of admission to the program or have practiced at least one full year within the past three years and hold a current unrestricted license for practical nursing will be admitted to the associate degree level.
Proof of active status on the Kentucky Medicaid Nurse Aide Registry or its equivalent is required prior to enrolling in the first nursing course. CPR certificate for Health Care Providers/Professional Rescuer must be obtained prior to enrolling in the first nursing course and certification must be kept current throughout the program. Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

Progression in the nursing program is contingent upon achievement of a grade of "C" or better in each biological science, nursing and mathematics course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Note: The Kentucky Board of Nursing may deny a nursing graduate admission to the NCLEX Exam if an individual has been convicted of a misdemeanor or felony which involves acts that bear directly on the qualifications of the graduate to practice nursing.

The following Practical Nursing Program is accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326 www.nlnac.org Telephone: (404) 975-5000.

Southwest Kentucky Community and Technical College

The following Associate Degree Nursing Program is accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326 www.nlnac.org Telephone: (404) 975-5000.

Southwest Kentucky Community and Technical College

Note: Hours Exception (69-72 for the A.A.S.) approved by the KCTCS Board of Regents in June 2010

Associate in Applied Science

Academic/Career Mobility Program in Nursing - 5138017049
(Offered at BGT, SEC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 100</td>
<td>4</td>
</tr>
<tr>
<td>BIO 101</td>
<td>4</td>
</tr>
<tr>
<td>BIO 225</td>
<td>4</td>
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<tr>
<td>BIO 227</td>
<td>(5)</td>
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<tr>
<td>PSY 110</td>
<td>3</td>
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<tr>
<td>PSY 223</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101</td>
<td>3</td>
</tr>
<tr>
<td>ENG 102</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110</td>
<td>3</td>
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<tr>
<td>MAT 150</td>
<td>(3)</td>
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<td>NRS 101</td>
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<td>NRS 102</td>
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<td>NRS 203</td>
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<td>NRS 204</td>
<td>3</td>
</tr>
<tr>
<td>Total CREDITS:</td>
<td>71-72</td>
</tr>
</tbody>
</table>

*General Education course

**Taken only by Licensed Practical Nurses who have been admitted to the program and have met the pre-requisites.

Note: Documentation of computer/digital literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

Proof of active status on the Kentucky Medicaid Nurse Aide Registry or its equivalent is required prior to enrolling in the first nursing course. CPR certificate for Health Care Providers/Professional Rescuer must be obtained prior to enrolling in the first nursing course and certification must be kept current throughout the program.

The Integrated Nursing Program provides a seamless educational pathway in nursing which allows students to choose multiple career options. The Integrated Nursing Program is designed to deliver nursing education to a cohort group of students with the opportunity to complete the Practical Nursing or Associate Degree Nursing level. The curriculum is structured around a clearly defined organizing framework and provides the foundation for a competency-based approach to nursing education through the utilization of interactive and student-focused learning strategies. Content and performance-based outcomes for the nursing courses are selected, developed, and leveled from simple to complex. Classroom instruction in theory and basic nursing skills is provided in various delivery methods. Under the guidance of program faculty, students gain valuable experience in the care of patients across the lifespan in a variety of healthcare settings and/or community agencies including hospitals, long term care facilities, clinics and child care centers.

The Practical Nursing option prepares graduates to function within the legal scope of practice under the supervision of a registered nurse or physician. The practical nursing level focuses on the maintenance of health and prevention of illness, the observation and nursing care of individuals experiencing changes in their health processes, and evaluation of health practices of patients. Students who choose practical nursing as a career can complete the components in three semesters and are eligible to apply for licensure as a nurse. Graduates are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).

The Associate Degree Nursing option prepares graduates to provide and manage patient care and to become members within the discipline of nursing. The associate nursing level focuses on the application of a specialized body of knowledge and skills obtained from social and biological sciences in providing evidenced-based, clinically competent care to individuals across the lifespan. Students choosing the Associate in Applied Science degree in Nursing can complete the components in four semes-
Acceptance into the Integrated Nursing Program is based upon a selective admissions process. In order to be considered for admission, applicants must comply with college and program admission requirements. Documentation of successful completion of a minimum 75-hour nursing assistant course, or its equivalent, and proof of active status on the Kentucky Medicaid Nurse Aide Registry is required prior to enrolling in the first integrated nursing course. Licensed practical nurses may receive credit for the first and second semester of nursing courses based upon specific college offerings, work experience, and active licensure status.

Students select their career preference upon admission to the program, but may choose to change their career path while in the program without reapplying for admission. Requests for career path changes will require submission of an application for tract change to the nursing admissions committee.

Progression within the Integrated Nursing Program is contingent upon achievement of a grade of "C" or better in all program course requirements and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

If more than three years have elapsed since initial enrollment in any nursing program, an applicant must repeat all nursing courses.

A nursing graduate with a misdemeanor or felony conviction may be denied permission to access the NCLEX by the Kentucky Board of Nursing.

The Madisonville Community College Associate Degree Nursing program is currently accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, www.nlnac.org. Telephone (404) 975-5000.

Note: Hours Exception (69-72 for the A.A.S.) approved by the KCTCS Board of Regents in June 2020.

### Associate in Applied Science

#### Nursing - 5138017069

(Offered at HZC, MDC)

<table>
<thead>
<tr>
<th>General Education</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>BIO 135</td>
<td>4</td>
<td></td>
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<tr>
<td>PSY 110</td>
<td>3</td>
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<tr>
<td>COM 181</td>
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<td>ENG 101</td>
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<tr>
<td>MAT 150</td>
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<tr>
<td><strong>HERITAGE/HUMANITIES</strong></td>
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<table>
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<tr>
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<td>OST 105</td>
<td></td>
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<tr>
<td>NIP 102</td>
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<td></td>
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<tr>
<td>NIP 116</td>
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<td>10</td>
</tr>
<tr>
<td>AHS 100</td>
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<td>NIP 120</td>
<td>3</td>
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<tr>
<td>NIP 128</td>
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</table>

Total Credits: 69-72

### Diploma

#### Practical Nursing - 5139014049

(Offered at HZC, MDC)

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<thead>
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<tbody>
<tr>
<td>BIO 135</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PSY 110</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COM 181</td>
<td>3</td>
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<td>ENG 101</td>
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</tr>
<tr>
<td><strong>TECHNICAL OR SUPPORT COURSES</strong></td>
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<tr>
<th>Technical or Support Courses</th>
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</thead>
<tbody>
<tr>
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<td>OST 105</td>
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<td>NIP 116</td>
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<td>AHS 100</td>
<td>2</td>
<td></td>
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<td>NIP 120</td>
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<td></td>
</tr>
<tr>
<td>NIP 128</td>
<td>10</td>
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</table>

Total Credits: 47-50

Note: CPR requirements must be successfully completed prior to enrollment in the first nursing course and kept current throughout the program. Documentation of successful completion of a minimum 75-hour nursing assistant course, or its equivalent, is required prior to enrolling in the first nursing course.

* BIO 137 and BIO 139 may be substituted for BIO 135.
** PSY 223 may be substituted for AHS 100.

### Certificates

#### Medicaid Nurse Aide - 5139012020

<table>
<thead>
<tr>
<th>Certificate</th>
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<tbody>
<tr>
<td>MNA 100</td>
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<td>NAA 100</td>
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<tr>
<td>NAA 125</td>
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</table>

Total Credits: 3-6

Note: Madisonville Community College does not offer NAA 125.

**NOTE:** After the student completes the second semester of the Integrated Nursing program, the student is eligible to sit for the KMA exam.

#### Kentucky Medication Aide - 5139012030

**NOTE:** After the student completes the second semester of the Integrated Nursing program, the student is eligible to sit for the KMA exam.
**Nursing - Practical Nursing**

The Practical Nursing program prepares individuals to practice within the legal scope of practical nursing under the supervision of a registered nurse or physician. Use of the nursing process at the practical nursing level toward the maintenance of health and prevention of illness, the observation and nursing care of persons experiencing changes in their health processes, and the evaluation of health practices of patients are emphasized.

Classroom instruction in theory and basic nursing skills is provided on campus. Under the guidance of program faculty, students gain valuable experience in the care of all ages in a variety of health care settings and/or community agencies - hospitals, long-term care facilities, clinics and child care centers. (Transportation to the community agencies is the responsibility of each student.)

Acceptance in the Practical Nursing program is based on a selective admission process.

Progression in the Practical Nursing program is contingent upon achievement of a grade of "C" or better in each course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

CPR requirements must be successfully completed prior to enrolling in the first nursing course and must be kept current throughout the program. Documentation of active status on the Medicaid Nurse Aide Registry or successful completion of an equivalent course within the previous three years is required prior to enrolling in the first nursing course.

Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

Note: The Kentucky Board of Nursing (KBN) may deny a nursing graduate admission to the NCLEX-PN Exam if an individual has been convicted of a misdemeanor or felony that involves acts that bear directly on the qualifications of the graduate to practice nursing.

**Diploma**

**Practical Nurse - 5139014039**

(Offered at ASC, BLC, BGT, BSC, ELC, HEC, HPC, JFC, MYC, SMC, WKC)

**Practical Nurse Track 1 - Traditional - 513901401**

(Offered at BGT, BLC, ELC, JFC, SMC)

**General Education:**

**Area 1 =**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEC 200</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 181</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 252</td>
<td>(3)</td>
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</table>

**Area 2 =**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 135</td>
<td>4</td>
</tr>
<tr>
<td>BIO 137</td>
<td>(4)</td>
</tr>
<tr>
<td>BIO 139</td>
<td>(4)</td>
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</tbody>
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**Subtotal** 7-11

**Technical Core:**

<table>
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<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>AHS 100</td>
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<tr>
<td>PSY 110</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 223</td>
<td>(3)</td>
</tr>
<tr>
<td>NPN 100</td>
<td>2</td>
</tr>
<tr>
<td>NPN 105</td>
<td>6</td>
</tr>
<tr>
<td>NPN 110</td>
<td>2</td>
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<tr>
<td>NPN 115</td>
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<td>NPN 125</td>
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<tr>
<td>NPN 130</td>
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<tr>
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**Recommended Electives:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>FHM 100</td>
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<tr>
<td>MAT 110</td>
<td>(3)</td>
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<td>AHS 105</td>
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<tr>
<td>AHS 130</td>
<td>(2)</td>
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<tr>
<td>NSG 299</td>
<td>(1-4)</td>
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</tbody>
</table>

*Taken by advanced nursing assistant and allied health graduates.

**Practical Nurse - Track 2 - Traditional Modified - 513901402**

(Offered at ASC, BSC, HEC, HPC, MYC, WKC)

**General Education:**

**Area 1 =**

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<thead>
<tr>
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<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>TEC 200</td>
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<tr>
<td>COM 181</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 252</td>
<td>(3)</td>
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</table>

**Area 2 =**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BIO 135</td>
<td>Basic Anatomy &amp; Physiology with Laboratory OR 4</td>
</tr>
<tr>
<td>BIO 137</td>
<td>Human Anatomy &amp; Physiology I AND (4)</td>
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<tr>
<td>BIO 139</td>
<td>Human Anatomy &amp; Physiology II (4)</td>
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**Subtotal** 7-11

**Technical Core:**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>AHS 100</td>
<td>Human Growth &amp; Development OR 2</td>
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<tr>
<td>PSY 110</td>
<td>General Psychology AND (3)</td>
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<tr>
<td>PSY 223</td>
<td>Developmental Psychology (3)</td>
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<tr>
<td>NPN 100</td>
<td>Introduction to Nursing &amp; Health Care System AND 2</td>
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<tr>
<td>NPN 105</td>
<td>Development of Care Giver Role AND 6</td>
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<tr>
<td>NPN 110</td>
<td>Pharmacology I OR 2</td>
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<tr>
<td>NPN 115</td>
<td>*Practical Nursing Bridge Course (6)</td>
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<td>NPN 125</td>
<td>Mental Health 3</td>
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<tr>
<td>NPN 130</td>
<td>Pharmacology II 3</td>
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<tr>
<td>NPN 135</td>
<td>Introduction to Health Deviations 6</td>
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**Recommended Electives:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHM 100</td>
<td>Dosage Calculations (2)</td>
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<tr>
<td>MAT 110</td>
<td>Applied Math (3)</td>
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<tr>
<td>AHS 105</td>
<td>Introductions to Health Occupations (3)</td>
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<tr>
<td>AHS 130</td>
<td>Infection Control (2)</td>
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<tr>
<td>NSG 299</td>
<td>Selected Topics in Nursing (Topic) (1-4)</td>
</tr>
</tbody>
</table>

*Taken by advanced nursing assistant and allied health graduates.

**Practical Nurse - Track 3 - Modular - 513901403**

(Offered at JFC)

**General Education:**

**Area 1 =**

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENG 101</td>
<td>Writing I 3</td>
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**Area 2 =**

<table>
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<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 137</td>
<td>Human Anatomy &amp; Physiology I 4</td>
</tr>
<tr>
<td>BIO 139</td>
<td>Human Anatomy &amp; Physiology II 4</td>
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<tr>
<td>MAT 110</td>
<td>Applied Mathematics 3</td>
</tr>
<tr>
<td>PSY 110</td>
<td>General Psychology 3</td>
</tr>
</tbody>
</table>

**Subtotal** 17

**Total Credits:** 45-57
The Occupational Therapy Assistant Program is designed to provide a quality educational experience that will train prospective professionals in the art and science of promoting and maintaining the holistic health and wellness of people, organizations, and populations through engagement in occupation. Graduates will be able to perform entry-level tasks under the supervision of an Occupational Therapist (OT). Graduates will develop skills necessary for employment as Certified Occupational Therapy Assistants, thereby meeting the students' individual needs and the expressed health-care needs of the local and extended communities served by the Colleges. The program strives to fill a growing need for professionals able to contribute to all facets of occupational therapy, from community-based programs to client-centered intervention. The program promotes the value and professional importance of life-long learning.

A basic background in natural sciences, mathematics, communication, and behavioral sciences undergirds the specialized course work. Specialized course work prepares students for the certification examination they will take to become Certified Occupational Therapy Assistants (COTA). Employment may be in hospitals, rehabilitation facilities, nursing homes, clinics, and other health care facilities, as well as within pediatric, community, or educational settings.

Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first OTA course.

The Occupational Therapy Assistant Program is accredited by the Accreditation Council on Occupational Therapy Education (ACOTE), of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA’s phone number is (301) 652-AOTA. Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice, however, state licenses are usually based on the results of the NBCOT Certification Examination.

### Technical Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSY 223</td>
<td>Developmental Psychology</td>
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<td>AHS 115</td>
<td>Medical Terminology OR</td>
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<tr>
<td>CLA 131</td>
<td>Medical Terminology from Greek and Latin</td>
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<td>NPN 106</td>
<td>Fundamentals of Nursing Care</td>
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<td>NPN 108</td>
<td>Pharmacology in Nursing</td>
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<tr>
<td>NPN 125</td>
<td>Mental Health</td>
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<tr>
<td>NPN 140</td>
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<tr>
<td>NPN 215</td>
<td>Nursing Trends &amp; Issues</td>
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</table>

**Total Credits: 39**

### Certificates

**Medicaid Nurse Aide - 5139012020**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

Available Completely Online

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<td>NAA 100</td>
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<tr>
<td>NAA 125</td>
<td>Advanced Nursing Assistant</td>
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**Total Credits: 3-6**

**Kentucky Medication Aide - 5139012030**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

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**Total Credits: 5**

### Occupational Therapy Assistant

The Occupational Therapy Assistant Program is accredited by the Accreditation Council on Occupational Therapy Education (ACOTE), of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA’s phone number is (301) 652-AOTA. Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice, however, state licenses are usually based on the results of the NBCOT Certification Examination.

### Associate in Applied Science

**Occupational Therapy Assistant - 5108037009**

(Offered at JFC, MDC)

**General Education Core**

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<td>PSY 110</td>
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<td>3</td>
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**Track 1 - 510803701**

(Offered at MDC)

**Additional General Education (MDC Only):**

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**Additional Technical Support Course (MDC Only):**

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**Subtotal: 23**

**Technical Core:**

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<tr>
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<td>3</td>
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<tr>
<td>OTA 126</td>
<td>Level I Fieldwork</td>
<td>1</td>
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<tr>
<td>OTA 146</td>
<td>Occupational Therapy in Mental Health</td>
<td>3</td>
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<tr>
<td>OTA 136</td>
<td>Physical Dysfunction</td>
<td>4</td>
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<td>OTA 226</td>
<td>Level II Fieldwork</td>
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<td>OTA 246</td>
<td>Pediatric Issues in Occupational Therapy</td>
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<td>OTA 256</td>
<td>Elder Issues in Occupational Therapy</td>
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<td>OTA 206</td>
<td>Community Practice</td>
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<td>Professional Transitions and Management</td>
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**Subtotal: 31**

**MDC Track 1 Total: 64**

**(BIO 137 & BIO 139) will be accepted as equivalent for BIO 135 required course.

**Track 2 - 510803702**

(Offered at JFC)

**Additional Technical Courses (MDC only):**

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<td>Skills and Interventions I</td>
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<td>OTA 125</td>
<td>Assistive Technology and Documentation</td>
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<td>OTA 225</td>
<td>Skills and Interventions II</td>
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<td>OTA 286</td>
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**Subtotal: 10**

**MDC Track 2 Total: 64**

### Additional General Education (JFC only):**

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<td>SOC 101</td>
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<tr>
<td>ENG 102</td>
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**Subtotal: 32**

**Total: 96**
### Technical Core

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<td>OTA 126</td>
<td>Level I A Fieldwork</td>
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<tr>
<td>OTA 146</td>
<td>Occupational Therapy in Mental Health</td>
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<td>OTA 156</td>
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<td>OTA 226</td>
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<td>OTA 256</td>
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### Additional Technical Courses (JFC only):

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<td>Media Principles &amp; Procedures II</td>
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<tr>
<td>OTA 286</td>
<td>Clinical Seminar</td>
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### Recommended Additional Technical Courses (JFC only):

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#### JFC Track Additional Technical Credit

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**TOTAL 67**

### Paralegal Technology

The Paralegal Technology curriculum is designed to prepare a person for entry-level employment as a paralegal in courts, corporations, law firms, and government agencies. Paralegal Technology is a program of study that requires courses in the technical area. In addition, the Associate in Applied Science degree also requires general education courses.

The curriculum is based on standards developed from the National Association of Legal Assistants' Descriptions of Certified Legal Assistant (CLA) Exam Sections. Additional research data used in the development of publication was collected from a review of related literature.

Industry standards are based on the National Association of Legal Assistants' Descriptions of Certified Legal Assistant (CLA) Exam Sections.

The successful completion of the Paralegal Technology Program should provide the student the opportunity for employment as a paralegal in private law firms, courts, trust departments of banks, corporations, and government agencies.

Progression in the Paralegal Technology program is contingent upon achievement of a grade of "C" or better in each paralegal technical course.

The Associate in Applied Science degree received upon completion of the concentration is not designed for transfer to a senior college or university. It is designed for immediate employment preparation.

+ Students should contact the senior college or university of their choosing to determine what, if any courses will be accepted as transfer credits.

### Associate in Applied Science

**Paralegal Technology - 2203023019**

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<tr>
<td>CIT 130</td>
<td>Computer/ Digital Literacy Course</td>
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<td>PGL 111</td>
<td>Legal Systems and Terminology</td>
<td>3</td>
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<td>PGL 112</td>
<td>Legal Research</td>
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<td>PGL 211</td>
<td>Family Law</td>
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<td>Legal Writing</td>
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<td>Wills and Estates</td>
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<td>PGL 223</td>
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<td>PGL 231</td>
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### Technical Support Courses

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<td>PGL 111</td>
<td>Legal Systems and Terminology</td>
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<td>PGL 112</td>
<td>Legal Research</td>
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<td>PGL 211</td>
<td>Family Law</td>
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<td>PGL 212</td>
<td>Legal Writing</td>
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<td>PGL 221</td>
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<td>PGL 224</td>
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<td>PGL 231</td>
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**TOTAL 45**

### Paramedic Technology

This program will prepare students to function as a paramedic to deliver emergency care in a variety of environments. The paramedic primarily provides pre-hospital emergency care to acutely ill or injured patients. This care is delivered in a variety of environments including ambulance, mobile advanced life support units, industrial on site units, fire departments, and other sites. The curriculum is designed to provide the student with the didactic knowledge and clinical skills to deliver emergency care. Graduates are eligible to take the Emergency Medical Technician-Paramedic (EMT-P) National Registry Examination upon completion of the program. This program meets the standards set forth by the U.S. Department of Transportation National Standard Training and KCTCS - Kentucky Board of Emergency Medical Services (KBEMS). Students in this program may earn either a certificate or Associate in Applied Science Degree. Credit may be awarded to currently practicing paramedics toward the Associate in Applied Science degree. Enrollment in this program is limited; therefore, a selective admissions process is followed. Students are required to hold current unrestricted certification in KY or hold current unrestricted registration with NREMT as EMT.
Associate in Applied Science
Paramedic Technology - 5109047010
(Offered at ASC, MDC, OWC, WKC)

General Education:

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Technical Courses:

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<td>Human Anatomy and Physiology I AND</td>
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<tr>
<td>BIO 139</td>
<td>Human Anatomy and Physiology II</td>
<td>(4)</td>
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<td>MIT 103</td>
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<td>PAR 230</td>
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<tr>
<td>CLA 131</td>
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NOTE: Students must be EMT certified prior to entering paramedic program coursework.

Certificate
Paramedic Technology - 5109043020
(Offered at ASC, BGT, BLC, HZC, GTW, JFC, MDC, OWC, SMC, WKC)

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<td>Human Anatomy and Physiology I AND</td>
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<td>Human Anatomy and Physiology II</td>
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<td>CLA 131</td>
<td>Medical Terminology Greek/Latin OR</td>
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<td>AHS 115</td>
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<td>PAR 110</td>
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Diploma
Pharmacy Technician II - 5108054029
(offer at ASC, JFC, SMC)

General Education:

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Certificates
Pharmacy Technician II - 5108053029
(offer at ASC, HPC, JFC, OWC, SMC, WKC)

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181
**Physical Therapist Assistant**

This program prepares the individual to become a physical therapist assistant (PTA) who is able to perform selected components of interventions and data collection under the direction and supervision of a physical therapist. The program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE). The curriculum combines general education and physical therapy courses. Various facilities are utilized for clinical experiences. The graduate is eligible to sit for the national licensing examination for the physical therapist assistant. Enrollment in this program is limited, therefore, a selective admissions process is followed. Students enrolled in the Physical Therapist Assistant program must achieve a minimum grade of "C" in each required general education course, a minimum grade of "C" in each required PTA didactic course, and a grade of pass in each clinical practicum course to complete the program.

*The Physical Therapist Assistant programs at Hazard Community and Technical College/Southeast Kentucky Community College, Jefferson Community and Technical College/Madisonville Community College, Somerset Community College, and West Kentucky Community and Technical College are accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA), 1111 North Fairfax Street, Alexandria, VA 22314; telephone: 703-706-3245; email accreditation@apta.org website: www.captenline.org

**Associate in Applied Science**

**Physical Therapist Assistant**

*(Offered at HZC, JFC, MDC, SEC, SMC, WKC)*

**Track 1 - 5108067029**

*(Offered at HZC, JFC, SEC, SMC, WKC)*

**Technical Support Courses**

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<td>PTA 150</td>
<td>Functional Anatomy and Kinesiology</td>
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<td>PTA 160</td>
<td>Medical and Surgical Conditions in Physical Therapy</td>
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<td>PTA 170</td>
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**Total**

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**Total Credits**

64-68

**NOTE:** Computer/Digital literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.

**Track 2 - 5108067039**

*(Offered at MDC)*

**Technical Support Courses**

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<td>Pathology &amp; Rehabilitation of Neurological &amp; Pediatric Conditions</td>
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**Total Credits**

35-38

**NOTE:** Computer/Digital literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.
### Plumbing Technology

Installing water supply and waste disposal systems in residential, commercial, and highly complex industrial sites is the focus of the plumbing program. In addition to practical experiences, instruction is given in laws and codes, blueprint reading, drawing, special equipment, and other related areas.

Progression in the Plumbing Technology program is contingent upon achievement of a grade of “C” or better in each PLB and BRX course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

### Certificate

**Plastics Processing - 1506073049**

(Offered at MYC)

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<td>Computer Applications for Technicians</td>
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<td>ISX 101</td>
<td>Plastic Processes and Materials</td>
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**Total Credits 3**

### Associate in Applied Science

**Plumbing Technology - 4605037019**

(Offered at ELC)

**General Education:**

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<tr>
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<tr>
<td>PLB 269</td>
<td>Sewer &amp; Drain Cleaning</td>
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<tr>
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<td>BAS 120</td>
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**Subtotal 18**

**Total 45 - 51**

### Diploma

**Plumber Mechanic - 4605034019**

(Offered at ELC, JFC, MYC, SMC)

**General Education:**

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<td>Area 2</td>
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**Subtotal 6**

**Technical Courses:**

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<td>PLB 105</td>
<td>Plumbing Principles</td>
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<td>PLB 160</td>
<td>Plumbing Systems, DWV &amp; Water</td>
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<td>PLB 161</td>
<td>Rough-In of Plumbing Fixtures</td>
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<td>PLB 250</td>
<td>Plumbing Appliances &amp; Fixtures</td>
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<td>Pumps &amp; Water Heaters</td>
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<td>Advanced Plumbing Lab OR</td>
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<td>PLB 265</td>
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**Subtotal 39-45**

**Total 60-63**

### Certificates

**Certified Backflow Tester* - 4605033079**

(Offered at BSC, ELC, JFC, MYC)

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**Total 3**

*Requires that the graduate pass a written test with 80% accuracy and a 3-part performance test.

**Finish Plumber - 4605033069**

(Offered at BSC, ELC, JFC, MYC)

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<td>PLB 151</td>
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<tr>
<td>PLB 251</td>
<td>Pumps &amp; Water Heaters</td>
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**Electives (Technical Core) | Credits | 6**

**Total 17**
### Professional Craft: Pottery

This program is designed to prepare individuals for employment as professional potters or in pottery-related fields. The curriculum introduces both traditional and contemporary concepts of pottery. The program provides training in technical skills, design skills, and marketing and business essentials. Coursework includes development of basic and advanced throwing skills with emphasis on form and design. Study will include pottery studio design and marketing procedures for the professional potter. Graduates will be able to open and operate their own pottery, work for existing pottery businesses, or transfer to a four-year degree program. Upon completion, graduates will receive an Associate in Applied Science degree.

#### Kiln Building for Professional Potters Certificate:

Includes instruction in the methods of kiln construction, the principles used in designing kilns, and instruction in how to prepare layouts for building kilns. Topics include safety, historical and perspective materials, design, type, fuels, and firing process. The program will also provide students with hands-on experience in the building of kilns for use by professional potters. Students will participate in the building of two different types of kilns using two different types of fuels. Upon successful completion of the program, students will be able to supervise the construction of kilns for use by professional potters.
Professional Raku Pottery Certificate:

Provides students with advanced instruction in the techniques of producing and firing raku pottery. The program provides instruction in advanced shapes and decoration, constructing, loading, and firing a personal raku kiln, and the creation of a body of work for a one-person show and sale.

Certificates

Klin Building for Professional Potters - 5007113029

(Offered at SEC)

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Professional Raku Pottery - 5007113019

(Also offered at SEC)

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<td>PC 254</td>
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<td>PC 256</td>
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Professional Studio Artist

The Professional Studio Artist (PSA) program prepares individuals for careers as independent studio artists and business owners, designers, performers and studio technicians. The curriculum offers technical, design, product development and performance classes in a variety of disciplines coupled with business, marketing and management courses. Class work covering the history and traditions of each discipline, basic studio development and technology requirements will be a vital part of the student's education. Students will complete a track of study and acquire the necessary technical proficiency, creative problem solving, business skills, production processes and the knowledge to apply these aspects to careers in the craft, music, theater, or applied arts fields.

The AASTTrack in Wood/Furniture Design prepares a student to start a business in studio furniture design and manufacturing, begin employment as a designer/maker for a small to mid-size woodworking company, work as a model maker/prototype builder for the wood/furniture industry, work as a furniture maker/technician, start a career as a furniture conservator, or pursue a four-year degree. The program of study will offer diverse and comprehensive study in furniture design and making, the technology of wood as a material, the technical aspects of wood machinery and hand tool usage, the importance and applications of drawing and design, and the practicality of business ownership, craft marketing and business management.

The AASTTrack in Jewelry/Metals prepares a student to start a business in studio jewelry design, producing one-of-a-kind and limited production works for the private market; work in a commercial studio as a professional jeweler or as a model designer/fabricator; or to enter into the field of jewelry metal conservation. Creative problem solving and functional design are essentials to the program as well as extensive laboratory coursework in all aspects of bench jewelry repair, the metalurgical science of precious metals, traditional and non-traditional metal processes, processes of jewelry mass production, silversmithing, goldsmithing and work in new technologies such as computer-aided jewelry design.

The diploma in Jewelry/Metals Studio Technician and the certificate in Jewelry/Metals Fundamentals will afford students the opportunity to acquire specialized and basic technical skills as jewelry makers and technicians. The jewelry Studio Certificate will give the student an intensive foundation in metal technique and studio practice. The diploma and certificate programs signify that the student possesses a basic understanding of jewelry design and making procedures necessary for entry level positions in the custom or commercial jewelry industry.

The AASTTrack in Bluegrass & Traditional Music prepares a student to begin work as a professional bluegrass and traditional musician in the areas of performance, touring, studio recording, studio engineering, and songwriting. The program also provides training in music business, management and event promotion while providing the student preparation to pursue a four-year degree. Program studies will offer in-depth mentoring and “real world” performance situations for solo, ensemble, and instrumental musicians as well as recording session set-up, sound enhancement and band management.

The diploma in Bluegrass & Traditional Studio Artist and the certificate in Bluegrass & Traditional Music Fundamentals will afford students the opportunity to acquire training in the basics of performance, recording, songwriting and management. The diploma and certificate programs signify that the student possesses a basic understanding of the major components necessary for an entry level career in Bluegrass and Traditional Music.

The AASTTrack in Ceramics prepares a student to start a business in studio production for pottery, tiles, slip casting, mold making and/or kiln building, begin employment as a studio technician to maintain equipment and manage various kinds of kiln firings, work for commercial ceramics businesses as a production designer, decorator, mold maker, decals maker, conservationist, kiln and/or glaze technician, or to pursue higher degrees in the field of ceramics. The program is designed to prepare students to become independent and self-reliant ceramists in creative and functional design.

The diploma in Ceramics Studio Technician and the certificate in Ceramics Fundamentals will afford students the opportunity to acquire specialized and basic technical skills as ceramicists and technicians. The Ceramics Studio Certificate will give the student an intensive foundation in ceramics technique and studio practice. The diploma and certificate programs signify that the student possesses a basic understanding of ceramic object design and making necessary for entry level positions in the custom or commercial ceramic industry. Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first PSA course.

Associate in Applied Science

Professional Studio Artist - 5002017019

(Offered at HZC)

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**HUM 202 for Bluegrass and Traditional Music Track**
### Wood/Furniture Design Track - 500201701
*(Offered at HZC)*

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<tr>
<td>ART 120 2-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 130 3-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>BAS 200 Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>ACT 101 Fundamentals of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>PSA 111 Introduction to Furniture Making</td>
<td>3</td>
</tr>
<tr>
<td>PSA 115 Furniture Making II</td>
<td>3</td>
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<tr>
<td>PSA 116 Wood Finishing</td>
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</tr>
<tr>
<td>PSA 117 Wood Turning for Furniture</td>
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<td>PSA 210 Furniture Making III</td>
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<td>PSA 211 Wood Bending and Veneering</td>
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<tr>
<td>PSA 212 Chair Design</td>
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<tr>
<td>PSA 215 Furniture Making IV</td>
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<tr>
<td>PSA 220 Furniture/ Wood Product Development</td>
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<td>PSA 240 Professional Artist Seminar</td>
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**Sub-Total** 43

**Total Credits** 61-64

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### Jewelry/Metals Track - 500201702
*(Offered at HZC)*

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<td>PSJ 110 Jewelry/ Metals I</td>
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<td>PSJ 116 Ancient Techniques</td>
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<td>PSJ 117 Metal Casting / Finishing Techniques</td>
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<td>PSJ 215 Jewelry/ Metals IV</td>
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<td>PSJ 216 Stone Setting</td>
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**Sub-Total** 45

**Total Credits** 63-64

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### Bluegrass and Traditional Music Track - 500201703
*(Offered at HZC)*

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<td>PSM 108 Songwriting I</td>
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<td>PSM 128 Songwriting II</td>
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**Sub-Total** 28-31

**Total Credits** 34-37

### Ceramics Track - 500201704
*(Offered at HZC)*

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<td>ACT 101 Fundamentals of Accounting I</td>
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<tr>
<td>PSC 112 Ceramics I</td>
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<td>PSC 115 Ceramics II</td>
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<td>PSC 117 Glaze Calculations</td>
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<td>PSC 211 Kiln Operation and Design</td>
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<td>PSC 212 Ceramic Production Techniques</td>
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**Sub-Total** 45

**Total Credits** 60-64

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### Diplomas

### Wood Studio Technician - 5002014019
*(Offered at HZC)*

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**Subtotal** 6

### Technical/ Support Courses

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<td>ART 130 3-Dimensional Design</td>
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**Subtotal** 28-31

### Technical/ Support Courses

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**Subtotal** 6

### Technical/ Support Courses

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<td>BAS 200 Small Business Management</td>
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<tr>
<td>PSA 110 Jewelry/ Metals I</td>
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<tr>
<td>PSA 115 Jewelry/ Metals II</td>
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<td>ART 110</td>
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<tr>
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<tr>
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</tr>
<tr>
<td>ART 115</td>
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**Bluegrass & Traditional Studio Artist - 5002014039**

(Offered at HZC)

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**Ceramics Studio Technician - 5002014049**

(Offered at HZC)

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**Certificates**

**Furniture Making Fundamentals - 5002013029**

(Offered at HZC)

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**Furniture Studio - 5002013059**

(Offered at HZC)

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**Jewelry/Metals Fundamentals - 5002013019**

(Offered at HZC)

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**Jewelry Studio - 5002013069**

(Offered at HZC)

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**Bluegrass & Traditional Music Fundamentals - 5002013039**

(Offered at HZC)

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<td>Principles of Marketing</td>
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<td>PSM 105</td>
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<td>PSM 108</td>
<td>Songwriting I</td>
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<td>PSM 110</td>
<td>Individual String Instrument Instruction x4</td>
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<td>Bluegrass &amp; Traditional Band/Ensemble x4</td>
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<td>PSM 241</td>
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**Ceramics Fundamentals - 5002013049**

(Offered at HZC)

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<td>3</td>
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<td>2-Dimensional Design</td>
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<tr>
<td>PSC 117</td>
<td>Glaze Calculations</td>
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**Introduction**

187
Ceramics Studio -5002013079
(Offered at HWC)  
PSC 112 Ceramics I .............................................................. 3
PSC 117 Glaze Calculations .................................................. 3
PSC 211 Kiln Operation and Design ......................................... 3
PSC 115 Ceramics II ................................................................... 3
PSC 212 Ceramics Production Techniques ................................. 3
Subtotal 15

Project Lead the Way

Project Lead the Way complements traditional college-preparatory academic studies with challenging career/technical studies, providing students with hands-on exposure to real-life engineering challenges.

Certificate

Engineering Related - PLTW - 1515993019
(Offered at OWC, MDC, SEC)
PLW 100 Introduction to Engineering Design .......................... 4
PLW 125 Principles of Engineering .......................................... 4
PLW 150 Digital Electronics .................................................. 4
PLW 200 Aerospace Engineering or ....................................... 4
PLW 225 Civil Engineering and Architecture or ..................... (4)
PLW 250 Computer Integrated Manufacturing ......................... (4)
PLW 255 Engineering Design and Development ....................... 4
Total Credits 20

Quality Management Systems

The Quality Management Systems program prepares students to analyze and implement systems for continuous improvement of functions and processes for the manufacturing, government, and service sectors. Students are taught to analyze and solve quality problems, prepare inspection plans and instructions, and select sampling plan applications. Emphasis is placed on learning the tools and techniques for controlling processes, improving process reliability, improving efficiencies, and eliminating defects. Upon completion of the program, graduates are qualified for employment in entry-level managerial or supervisory positions. Course work uses and reflects the body of knowledge found in professional quality certifications such as offered by the American Society for Quality.

Associate in Applied Science

Quality Management Systems - 1507027019
(Offered at ELC)
Available Completely Online

General Education
ENG 101 Writing I .............................................................. 3
ENG 102 Writing II .............................................................. 3
ENG 203 Business Writing OR ............................................... 3
ENG 204 Technical Writing .................................................. (3)
COM 181 Basic Public Speaking ............................................ 3
MA 109 College Algebra OR ................................................ 3
MAT 190 College Algebra .................................................... (3)
Social/Behavioral Sciences Course ...................................... 3
Heritage/Humanities Course .............................................. 3
Natural Sciences Course ................................................... 3
Elective .................................................................................. 3
Subtotal 27 hrs.

Technical Core 18-21 hrs.
QMS 101 Introduction to Quality Systems ................................ 3
QMS 201 Customer Service Improvement Skills .................... 3
QMS 202 Performance Management ..................................... 3
QMS 220 Quality Audits ....................................................... 3
QMS 240 Statistics for Quality I .......................................... 3
QMS 242 Statistics for Quality II .......................................... 3
Subtotal 18-21 hrs.

Technical Support Courses—15-17 hrs.
QMS 210 Lean Processes ..................................................... 3
QMS 212 Project Management .............................................. 3
QMS 251 Strategic Quality Planning ....................................... 3
QMS 252 Design of Experiments .......................................... 4
QMS 299 Topics in Quality Management Systems: (Topic) ....... 1-6
BAS 212 Introduction to Financial Management .................... 3
BRX 120 Basic Blue Print Reading ....................................... 3
CAD 100 Introduction to Computer-Aided Design ................. 3
CAD 150 Introduction to Programming .................................. 4
CAD 200 Intermediate Computer-Aided Design .................... 4
CAD 201 Advanced Computer-Aided Design ......................... 3
COE 199 Cooperative Education .......................................... 1-4
ECO 101 Contemporary Economic Issues ............................ 3
ELT 110 Circuits I ............................................................. 5
ELT 114 Circuits II ............................................................ 5
ENV 110 Introduction to Environmental Technology .......... 4
ELT 102 Blue Print Reading ................................................. 2
ELT 261 Instrumentation and Measurement ......................... 3
ISX 101 Introduction to Industrial Safety ............................. 3
ISX 100 Industrial Safety .................................................... 3
ME 105 Basic Engineering Graphics .................................... 3
MFG 145 Manufacturing Process ......................................... 3
MFG 256 Production Management ...................................... 3
MFG 265 Robotics Fundamentals ........................................ 3
Total 34-37

Diploma

Quality Technician - 1507024029
(Offered at ELC, HPC)

General Education
ENG 101 Writing I .............................................................. 3
MAT 150 College Algebra .................................................... 3
Subtotal 6

Technical Component
Computer/ Digital Literacy .................................................. 0-3
BRX 120 Basic Blue Print Reading ....................................... 3
QMS 101 Introduction to Quality Systems .......................... 3
QMS 201 Customer Service Improvement Skills .................... 3
QMS 202 Performance Management .................................. 3
QMS 220 Quality Audits ....................................................... 3
QMS 240 Statistics for Quality I .......................................... 3
QMS 242 Statistics for Quality II .......................................... 3
Subtotal 28-31

Technical Course form AAS List ............................................ 3
Total 34-37

Certificates

Lean Manufacturing Facilitator - 1507023119
QMS 101 Introduction to Quality Systems .......................... 3
QMS 210 Lean Processes ..................................................... 3
QMS 220 Quality Audits ....................................................... 3
Computer/ Digital Literacy .................................................. 0-3
Total Credits 9-12
Radiography

This program prepares the individual to become a radiographer. The radiographer is prepared to administer ionizing radiation for medical diagnostic imaging purposes. Emphasis is on radiation protection and quality patient care. The curriculum is comprised of specialized courses in radiography with concentrated study in the basic sciences, mathematics and general education. Students enrolled in the Radiography program must achieve a minimum grade of “C” in each Radiography course. Upon completion of the program, the graduate is eligible to apply to write the examination for registration as a radiographer by the American Registry of Radiologic Technologists. Radiographers may find positions in hospitals, health clinics, and physicians’ offices. Research laboratories and some industrial firms may also employ radiographers. The curriculum requires attendance in the summer session, fall, and spring semesters.

Note: CPR certificate must be obtained prior to enrolling in IMG 100 or IMG 104, IMG 106 and IMG 108 and certification must be kept current throughout the program. Note: Documentation of computer literacy as defined by KCTCS is required prior to admission to IMG courses.

Advanced Imaging in Radiography focuses on the areas of Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) in the Radiological Sciences. Didactic instruction prepares the technologist to work in the areas of CT and MRI in the healthcare setting and to sit for the Advanced Board Exams given by the American Registry of Radiologic Technologists. These courses are offered for technologists who are currently registered by the American Registry of Radiologic Technologists in Radiography or the Nuclear Medicine Technology Certification Board in Nuclear Medicine, or students who have completed one year and are currently enrolled in an accredited radiography or nuclear medicine program, or by consent of the instructor. The core curriculum courses are intended to provide the student with an overall knowledge of advanced patient care and sectional anatomy. The CT and MRI tracks focus on the physics, instrumentation and imaging techniques of these modalities. The student may choose CT or MRI or both. Although these courses are organized in a hierarchical pattern, depending on the entry-level knowledge and the needs of the student, they may be taken out of sequence with consent of the instructor.

Note: Hours Exception (71-75 for the A.A.S. and 56-62 for the Diploma) approved by the KCTCS Board of Regents in June 2010.

Associate in Applied Science

Radiography - 5109077029
(Offered at ASC, BGT, BLC, ELC, HZC, JFC, MDC, OWC, SEC, SMC, WKC)

General Education:

Social/Behavioral Sciences ........................................... 3
Heritage/Humanities .................................................. 3
Oral Communications .................................................. 3
Higher Level Quantitative Reasoning Course ......................... (3)

ENG 101 WritingI ........................................................... 3
MAT 150 College Algebra ................................................... (3)
BO 137 Human Anatomy & Physiology I ................................. 4
BO 139 Human Anatomy & Physiology II ................................. 4
PHY 171 Applied Physics ................................................... (4)

Subtotal 25-27

Support Courses:

CLA 131 Medical Terminology from Greek & Latin OR .................. 3
AHS 115 Medical Terminology ................................................. (3)

Subtotal 3
### Technical Courses:

**Track 1 - 510907701**

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<td>Clinical I</td>
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<td>IMG 110</td>
<td>Radiography II</td>
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<td>IMG 111</td>
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<td>IMG 210</td>
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**Track 2 - 510907702**

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<td>Patient Care in Radiography*</td>
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<td>IMG 114</td>
<td>Image Production and Acquisition</td>
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<td>IMG 214</td>
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*NAA 100 may be substituted for IMG 106.*

### Certificate

**Advanced Imaging in Radiography - 5109073029**

#### Core

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<td>Pathology for Advanced Medical Imaging Modalities</td>
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**Computed Tomography Track - 510907301**

*(Offered at HZC, OWC, SEC, SMC)*

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**Advanced Imaging in Radiography - Magnetic Resonance Imaging Track - 510907302**

*(Offered at HZC, OWC, SEC)*

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<tr>
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<td>Magnetic Resonance Imaging Technology</td>
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<td>Subtotal</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Credits</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

### Real Estate

This program has several purposes: (1) to prepare the student for entry into the real estate field; (2) to provide continuing education for the individual already licensed in real estate; (3) to provide an educational opportunity for persons wanting to fulfill professional or general interest needs; and (4) to provide a foundation for those planning to pursue the specialized fields of appraising, property management, commercial and industrial site selection, consulting, and urban and land use planning.

The curriculum covers such areas as real estate principles and practices; appraisal, finance, marketing, management, construction, and blueprints. Additional courses in real estate, business, and general education complete the program.

Individuals who complete the program may enter public or private employment in such real estate areas as sales, finance, development, management, valuation, and market analysis. With experience, the individual may opt for positions in appraising, consulting, brokerage, and property management.

The Real Estate Program also offers two Real Estate Certificate programs: the Real Estate Pre-Licensing Certificate requiring 6 hours and the Residential Real Estate Certificate requiring 12 hours. The Real Estate Pre-Licensing Certificate provides the information students need to prepare for the Real Estate License exam. The Residential Real Estate Certificate provides students the information needed to enhance their abilities as residential real estate agents.

### Associate in Applied Science

**Real Estate - 5215017000**

*(Offered at JFC)*

#### Program Requirements

**Computer/ Digital Literacy**

- REA 100 
- REA 120 
- REA 121 
- REA 122 
- ACH 100 

**General Education**

- ENG 101 
- ENG 102 
- HIS 101 
- HIS 102 
- ORL 101 
- ORL 102 
- SCI 101 
- SCI 102 
- SCI 103 
- SCI 104 
- SCI 105 
- SCI 106 
- SCI 107 
- SCI 108 
- SCI 109 

**Program Requirements**

- **Computer/ Digital Literacy**
- **General Education**
- **Technical Course**

#### Technical Courses (Choose one of the following)

- CIS 130 Microcomputer Applications
- REA 203 Commercial & Industrial Property
- REA 204 Land Planning & Development
associated with the maintenance and/or restoration of cardiopulmonary homeostasis. The curriculum includes intensive coursework in the supporting sciences and general education areas. Classroom instruction is supplemented with learning experiences in the campus laboratory and in area clinical affiliates. Students enrolled in the Respiratory Care program are required to achieve a minimum grade of "C" in each Respiratory Care course.

Although hospitals employ the majority of respiratory therapists, other employers include home care providers, medical clinics, nursing homes, and industry. Graduates are qualified to take the National Board for Respiratory Care examination in order to receive the Certified Respiratory Therapist (CRT) credential. Graduates who successfully completed the CRT examination may additionally write the advanced practice examination and receive the Registered Respiratory Therapist (RRT) credential.

*Note: The Kentucky Board for Respiratory Care may deny mandatory certification for convicted felons. Questions should be directed to the Kentucky Board for Respiratory Care.

**Note: Computer/ Digital literacy must be documented by competency exam or by completing a computer/ digital literacy course.

Note: Hours Exception (67-70 for the A.A.S ) approved by the KCTCS Board of Regents in June 2010.
Security Management

The Security Management Coordinator program provides a comprehensive overview of physical security policies, procedures and techniques. Topics covered are perimeter protection, intrusion detection, access control, CCTV, locks and locking devices, lighting, security design and surveys, contingency planning and acts of violence. Instruction in all types of security hardware, electronic and mechanical door locks, access control systems and their devices, as well as intrusion detection systems and cameras, safes and safe hardware is available.

The Supply Chain Security program provides an overview of the needs and requirements for a safe, secure supply chain. The program looks at threats, and offers solutions. The House Select Committee on Homeland Security issued a comprehensive assessment (February 2004) on the United States’ levels of preparation against terrorist activity. The Committee concluded in part “Pathways to the United States by land, sea and air are insecure.” Security throughout transportation, storage, shipping and receiving of cargo is addressed in this program. The concept of proactive versus reactive planning and the overall needs of security operations are discussed. Specific security systems are discussed, as well as the creation and implementation of security policies. Basic security equipment and procedures, including perimeter protection, intrusion detection, security surveys and CCTV systems are covered, as well as management issues to include terrorism, crisis management and basic guard force management. A Security Design section of the program looks at ways to maximize the security benefit within operational (financial and aesthetic) constraints.

Electives A minimum of 3 credit hours must be taken from this list of electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSI 100</td>
<td>Fundamental Principles of Physical Security</td>
<td>2</td>
</tr>
<tr>
<td>LSI 105</td>
<td>Force Protection</td>
<td>3</td>
</tr>
<tr>
<td>LSI 110</td>
<td>Security Surveys</td>
<td>2</td>
</tr>
<tr>
<td>LSI 115</td>
<td>Command Security Officer Training</td>
<td>4</td>
</tr>
<tr>
<td>LSI 130</td>
<td>GSA: Locks, Vault and Containers</td>
<td>4</td>
</tr>
<tr>
<td>LSI 131</td>
<td>GSA: Locks, Vault and Containers Certified</td>
<td>4</td>
</tr>
<tr>
<td>LSI 140</td>
<td>Managing Terrorism &amp; Other Crises</td>
<td>1</td>
</tr>
<tr>
<td>LSI 150</td>
<td>Professional Locksmithing</td>
<td>4</td>
</tr>
<tr>
<td>LSI 151</td>
<td>Inspector Training</td>
<td>1</td>
</tr>
<tr>
<td>LSI 152</td>
<td>Basic Safe Penetration</td>
<td>1</td>
</tr>
<tr>
<td>LSI 153</td>
<td>Combination Lock Manipulation</td>
<td>1</td>
</tr>
<tr>
<td>LSI 156</td>
<td>Safe Lock Servicing - Mechanical and Electronic</td>
<td>2</td>
</tr>
<tr>
<td>LSI 160</td>
<td>Fundamentals of Electricity</td>
<td>2</td>
</tr>
<tr>
<td>LSI 170</td>
<td>Electronic Access Control</td>
<td>2</td>
</tr>
<tr>
<td>LSI 180</td>
<td>Security and Crime Prevention Management</td>
<td>1</td>
</tr>
<tr>
<td>LSI 185</td>
<td>Security and Crime Prevention Countermeasures</td>
<td>1</td>
</tr>
<tr>
<td>LSI 190</td>
<td>Security Hardware &amp; Bypass Techniques</td>
<td>1</td>
</tr>
<tr>
<td>LSI 196</td>
<td>Tactical Lock (restricted enrollment)</td>
<td>8</td>
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<tr>
<td>LSI 150</td>
<td>Professional Industrial Locksmithing</td>
<td>4</td>
</tr>
<tr>
<td>LSI 153</td>
<td>Safe Lock Servicing</td>
<td>4</td>
</tr>
</tbody>
</table>

Safe & Lock Technician - 4301123040

Electives A minimum of 10 credit hours must be taken from this list of electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSI 110</td>
<td>Security Surveys</td>
<td>2</td>
</tr>
<tr>
<td>LSI 130</td>
<td>GSA: Lock, Vault and Containers</td>
<td>4</td>
</tr>
<tr>
<td>LSI 151</td>
<td>Basic Safe Penetration</td>
<td>1</td>
</tr>
<tr>
<td>LSI 152</td>
<td>Combination Lock Manipulation</td>
<td>1</td>
</tr>
<tr>
<td>LSI 160</td>
<td>Fundamentals of Electricity</td>
<td>2</td>
</tr>
<tr>
<td>LSI 170</td>
<td>Electronic Access Control</td>
<td>2</td>
</tr>
<tr>
<td>LSI 182</td>
<td>Managing Security Operations</td>
<td>2</td>
</tr>
</tbody>
</table>
Surgical First Assisting

The Surgical First Assistant provides aid in exposure, hemostasis, and other technical functions that will help the surgeon carry out a safe operation with optimal results for the patient. This role will vary considerably with the surgical operation, specialty area, and type of facility. Clinical skills performed under direct supervision of the surgeon include the following: positioning the patient, preparing the skin, providing visualization of the operative site, utilizing appropriate techniques to assist with hemostasis, participating in volume replacement or autotransfusion techniques as appropriate, utilizing appropriate techniques in the closure of body planes, selecting and applying appropriate wound dressings and providing assistance in securing drainage system to tissue.

This program provides clinical experience built upon classroom instruction in the basic sciences, patient care, aseptic techniques and surgical procedures. Students enrolled in the Surgical First Assistant Program are required to achieve a minimum grade of “C” in each Surgical First Assistant course. Graduates from the program are eligible to take the certifying exams offered by the National Surgical Assistant Association (CSA) or the National Board of Surgical Technologists and Surgical Assistants (CSFA).

Associate in Applied Science

Surgical First Assisting - 5109097039
(Offered at MDC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 135</td>
<td>Basic Anatomy and Physiology with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>ENG 101</td>
<td>Writing I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 150</td>
<td>College Algebra OR</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Applied Mathematics (oral)</td>
<td>3</td>
</tr>
<tr>
<td>SUR 109</td>
<td>Surgical Technology Fundamentals</td>
<td>9</td>
</tr>
<tr>
<td>SUR 101</td>
<td>Surgical Technology Fundamentals/Lab</td>
<td>1</td>
</tr>
<tr>
<td>SUR 125</td>
<td>Surgical Technology Skills Practicum I</td>
<td>2</td>
</tr>
<tr>
<td>SUR 130</td>
<td>Principles of Surgical Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>SUR 200</td>
<td>Surgical Technology Advanced Theory</td>
<td>9</td>
</tr>
<tr>
<td>SUR 201</td>
<td>Surgical Technology Skills Practicum II</td>
<td>6</td>
</tr>
<tr>
<td>SUR 275</td>
<td>Surgical Technology Advanced Clinical Practicum</td>
<td>2</td>
</tr>
<tr>
<td>SUR 280</td>
<td>Surgical Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>SUR 282</td>
<td>Perioperative Bioscience</td>
<td>3</td>
</tr>
<tr>
<td>SUR 284</td>
<td>Principles of Surgical Assisting</td>
<td>3</td>
</tr>
<tr>
<td>SUR 295</td>
<td>Surgical First Assistant Clinical</td>
<td>1</td>
</tr>
<tr>
<td>SUR 296</td>
<td>Surgical First Assistant Practicum</td>
<td>3</td>
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</tbody>
</table>

Total Credit Hours 15

Technical Courses:

Computer/Digital Literacy ........................................ 0-3
Introduction to Surgical Technology ................................ 3
Surgical Technology Fundamentals ................................ 9
Surgical Technology Fundamentals/Lab ............................. 1
Surgical Technology Skills Practicum I ........................... 2
Principles of Surgical Pharmacology ............................... 2
Surgical Technology Advanced Theory .............................. 9
Surgical Technology Skills Practicum II ........................... 6
Surgical Technology Advanced Clinical Practicum ............... 2
Surgical Anatomy .................................................... 5
Perioperative Bioscience ........................................... 3
Principles of Surgical Assisting ................................... 3
Surgical First Assistant Clinical .................................. 1
Surgical First Assistant Practicum ................................ 3

Subtotal 16

Total Credit Hours 15-18

For program admission, student must be a certified Surgical Technologist or an RN with operating room experience OR consent of instructor.

For program admission, CPR or BLS certificate must be obtained prior to enrolling in the course; certification must be kept current throughout the program.

NOTE: BIO 137 & BIO 139 may be substituted for BIO 135.

Certificate

Surgical First Assisting - 5109093020
(Offered at MDC, WKC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR 280</td>
<td>Surgical Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>SUR 282</td>
<td>Perioperative Bioscience</td>
<td>3</td>
</tr>
<tr>
<td>SUR 284</td>
<td>Principles of Surgical Assisting</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 15

CPR or BLS certificate must also be obtained prior to enrolling in the program; certification must be kept current throughout the program.

For program admission, student must be a certified Surgical Technologist or an RN with operating room experience. Student must provide current documentation of certificate/license.

Surgical Technology

Surgical technologists are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings such as medical offices, outpatient clinics, and the operating room.

The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works under the supervision of a surgeon to ensure that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.

A surgical technologist possesses expertise in the theory and application of sterile and aseptic techniques and combines the knowledge of human anatomy, surgical procedures, and implementation tools and technologies to facilitate a physician’s performance of invasive therapeutic and diagnostic procedures.

This program provides clinical experience built upon classroom instruction in the basic sciences, patient care, aseptic techniques and surgical procedures. Students enrolled in the Surgical Technology Program are required to achieve a minimum grade of “C” in each course required for the credential. Students who withdraw from or earn less than a “C” in any course with a Surgical Technology prefix will be dropped from the Surgical Technology program and must reapply for admission. CPR (for Healthcare Professionals) requirements must be successfully completed prior to enrolling in the first surgical technology course and must be kept current throughout the program.

Students who have completed program requirements must sit for the certifying examination offered by the National Board on Certification for Surgical Technology and Surgical Assisting (NBSTSA), 6 West Dry Creek Circle, Suite 100; Littleton, CO 80120; Phone: (800) 707 0057; www.nbstsa.org

The following programs hold accreditation from the Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1361 Park Street, Clearwater Florida 33756; (727) 210 2250; www.caahep.org which accredits programs upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA), 6 West Dry Creek Circle, Suite 110; Littleton, CO 80120; Phone (303) 684 9022; www.arcst.org; Ashland Community and Technical College Bluegrass Community and Technical College Bowling Green Technical College, Hazard Community and Technical College Jefferson Community and Technical College, Madisonville Community College, Owensboro Community and Technical College, Somerset Community College, Southeast Kentucky Community and Technical College, and West Kentucky Community and Technical College.
### General Education:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 137</td>
<td>Human Anatomy &amp; Physiology I AND</td>
<td>4</td>
</tr>
<tr>
<td>BIO 139</td>
<td>Human Anatomy &amp; Physiology II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Applied Mathematics OR</td>
<td>3</td>
</tr>
<tr>
<td>MAT 150</td>
<td>College Algebra OR</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101</td>
<td>Writing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social/Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Heritage/Humanities</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td><strong>20</strong></td>
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</table>

### Technical Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLA 131</td>
<td>Medical Terminology from Greek &amp; Latin OR</td>
<td>3</td>
</tr>
<tr>
<td>AHS 115</td>
<td>Medical Terminology OR</td>
<td>3</td>
</tr>
<tr>
<td>MIT 103</td>
<td>Medical Office Terminology</td>
<td>3</td>
</tr>
<tr>
<td>SUR 100</td>
<td>Surgical Technology Fundamentals/Theory OR</td>
<td>12</td>
</tr>
<tr>
<td>SUR 109</td>
<td>Introduction to Surgical Technology AND</td>
<td>3</td>
</tr>
<tr>
<td>SUR 110</td>
<td>Surgical Technology Fundamentals</td>
<td>9</td>
</tr>
<tr>
<td>BIO 225</td>
<td>Microbiology OR</td>
<td>4</td>
</tr>
<tr>
<td>BIO 226</td>
<td>Principles of Microbiology OR</td>
<td>3</td>
</tr>
<tr>
<td>BIO 227</td>
<td>Principles of Microbiology with Laboratory OR</td>
<td>5</td>
</tr>
<tr>
<td>BIO 118</td>
<td>Microbiology and Society</td>
<td>3</td>
</tr>
<tr>
<td>SUR 101</td>
<td>Surgical Technology Fundamentals Lab</td>
<td>1</td>
</tr>
<tr>
<td>SUR 130</td>
<td>Principles of Surgical Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>SUR 110</td>
<td>Surgical Technology Fundamentals</td>
<td>9</td>
</tr>
<tr>
<td>SUR 200</td>
<td>Surgical Technology Advanced Theory</td>
<td>2</td>
</tr>
<tr>
<td>SUR 201</td>
<td>Surgical Technology Skills Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>SUR 275</td>
<td>Surgical Technology Advanced Clinical Practicum</td>
<td>2</td>
</tr>
</tbody>
</table>

A total of 10 credit hours must be completed from the following practicum courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STN 100</td>
<td>Surgical Technology Fundamentals for Nurses</td>
<td>7</td>
</tr>
<tr>
<td>STN 101</td>
<td>Surgical Technology Lab for Nurses</td>
<td>1</td>
</tr>
<tr>
<td>STN 102</td>
<td>Surgical Technology Clinical for Nurses</td>
<td>6</td>
</tr>
<tr>
<td>STN 110</td>
<td>Surgical Technology Procedures for Nursing</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits:** 48-59

### Elective(s):

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR 103</td>
<td>Surgical Technology Didactic Practicum</td>
<td>1</td>
</tr>
<tr>
<td>SUR 270</td>
<td>Pathophysiology for Surgical Technology OR</td>
<td>2</td>
</tr>
<tr>
<td>MAI 200</td>
<td>Pathophysiology for Medical Assistants</td>
<td>3</td>
</tr>
<tr>
<td>BAS 120</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>MNA 100</td>
<td>Medicaid Nurse Aide OR</td>
<td>3</td>
</tr>
<tr>
<td>NAA 100</td>
<td>Nursing Assistant Skills I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits:** 60-65

### Diploma

**Surgical Technology - 5109094019**

(Offered at ASC, BGT, BLC, BSC, JFC, MDC, OWC, SEC, WKC)

### General Education:

<table>
<thead>
<tr>
<th>Area 1 =</th>
<th>Description</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>Writing</td>
<td>3</td>
</tr>
<tr>
<td>Area 2 =</td>
<td>Basic Anatomy &amp; Physiology with Lab OR</td>
<td>4</td>
</tr>
<tr>
<td>BIO 135</td>
<td>Human Anatomy &amp; Physiology I AND</td>
<td>4</td>
</tr>
<tr>
<td>BIO 137</td>
<td>Human Anatomy &amp; Physiology II OR</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td><strong>7-11</strong></td>
</tr>
</tbody>
</table>

### Technical Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLA 131</td>
<td>Medical Terminology from Greek &amp; Latin OR</td>
<td>3</td>
</tr>
<tr>
<td>AHS 115</td>
<td>Medical Terminology OR</td>
<td>3</td>
</tr>
<tr>
<td>MIT 103</td>
<td>Medical Office Terminology</td>
<td>3</td>
</tr>
<tr>
<td>SUR 100</td>
<td>Surgical Technology Fundamentals/Theory OR</td>
<td>12</td>
</tr>
<tr>
<td>SUR 109</td>
<td>Introduction to Surgical Technology AND</td>
<td>3</td>
</tr>
<tr>
<td>SUR 110</td>
<td>Surgical Technology Fundamentals</td>
<td>9</td>
</tr>
<tr>
<td>BIO 225</td>
<td>Medical Microbiology OR</td>
<td>4</td>
</tr>
<tr>
<td>BIO 226</td>
<td>Principles of Microbiology OR</td>
<td>3</td>
</tr>
<tr>
<td>BIO 227</td>
<td>Principles of Microbiology with Laboratory OR</td>
<td>5</td>
</tr>
<tr>
<td>BIO 118</td>
<td>Microbes and Society</td>
<td>3</td>
</tr>
<tr>
<td>SUR 101</td>
<td>Surgical Technology Fundamentals Lab</td>
<td>1</td>
</tr>
<tr>
<td>SUR 130</td>
<td>Principles of Surgical Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>SUR 110</td>
<td>Surgical Technology Fundamentals</td>
<td>9</td>
</tr>
<tr>
<td>SUR 200</td>
<td>Surgical Technology Advanced Theory</td>
<td>2</td>
</tr>
<tr>
<td>SUR 201</td>
<td>Surgical Technology Skills Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>SUR 275</td>
<td>Surgical Technology Advanced Clinical Practicum</td>
<td>2</td>
</tr>
<tr>
<td>STN 100</td>
<td>Surgical Technology Fundamentals for Nurses</td>
<td>7</td>
</tr>
<tr>
<td>STN 101</td>
<td>Surgical Technology Lab for Nurses</td>
<td>1</td>
</tr>
<tr>
<td>STN 102</td>
<td>Surgical Technology Clinical for Nurses</td>
<td>6</td>
</tr>
<tr>
<td>STN 110</td>
<td>Surgical Technology Procedures for Nursing</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 18

### Certificates

**Surgical Technology Bridge Program - 5109093019**

(Offers at BSC, MDC, OWC)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STN 100</td>
<td>Surgical Technology Fundamentals for Nurses</td>
<td>7</td>
</tr>
<tr>
<td>STN 101</td>
<td>Surgical Technology Lab for Nurses</td>
<td>1</td>
</tr>
<tr>
<td>STN 102</td>
<td>Surgical Technology Clinical for Nurses</td>
<td>6</td>
</tr>
<tr>
<td>STN 110</td>
<td>Surgical Technology Procedures for Nursing</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits:** 18

### Surveying and Mapping Technology

The curriculum is arranged for students to gain employment in surveying and mapping. It allows students to gain the educational requirements to sit for the licensing exams in the state of Kentucky. Classes emphasize problem solving encountered in the field of Surveying and Mapping Technology. Students perform routine topographical, boundary and other mapping surveying projects, as well as Global Positioning System surveys. Students establish essential data, keep notes, develop preliminary sketches, and prepare working drawings, profile and section maps, volume calculations, and topographic maps. Students use computer mapping and coordinate geometry software to accomplish these tasks.
**Associate in Applied Science**

**Surveying and Mapping Technology - 1511027029**
*(Offered at BSC)*

<table>
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<tr>
<th>Course</th>
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<tr>
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<tr>
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<td>SMT 160 Construction Surveying</td>
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<td>SMT 210 Advanced Surveying Measurement</td>
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<td>SMT 270 Professional Ethics and Conduct for Land Surveyors</td>
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**Diploma**

**Surveying Technician III - 1511024019**
*(Offered at BSC)*

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**Certificate**

**Surveying Technician II - 1511023029**
*(Offered at BSC, HZC, SEC)*

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**Surveying Technician I - 1511022029**
*(Offered at BSC, HZC, SEC)*

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**Technical Theatre**

**Certificate**

**Technical Theatre - 5005013019**
*(Offered at OWC)*

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<td>COM 181 Basic Public Speaking</td>
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<td>THA 150 Fundamentals of Production</td>
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<td>THA 250 Stage Electrics</td>
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<td>THA 260 Stagecraft</td>
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<td>ART 113 3-Dimensional Design</td>
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<td>ELT 110 Circuits I</td>
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<td>CAD 102 Drafting Fundamentals</td>
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**Truck Driver Training**

**Certificate**

**Tractor Trailer, CDLA I - 4902053010**
*(Offered at BSC)*

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**Tractor Trailer, CDLA II - 4902053029**
*(Offered at FFC)*

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**Tractor Trailer, CDLA III - 4902053039**
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<td>TRK 216 Advanced Driver Preparation</td>
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<td>TRK 220 Advanced Trucking Safety</td>
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**General Education Requirements**

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**Total Core Commercial Art Courses & Gen Ed** 39-42

*Either successfully passing computer competency exam or taking an approved computer/digital literacy course.
Technical or Support Courses
VCC 100 Introduction to Visual Communication ................................................. 3
VCA 102 Fundamentals of Drawing I ................................................................. 3
VCC 105 Fundamentals of Typographic Design .................................................... 3
VCA 106 Creative Typographic Design OR ......................................................... 3
VCA 108 Color Technology Applications ............................................................ (3)
VCC 110 Two Dimensional Design ................................................................. 3
VCC 220 Computer Page Layout OR ................................................................. 3
VCC 230 Advanced Computer Page Design ......................................................... (3)
VCC 200 Computer Illustration I OR ................................................................. 3
VCC 210 Computer Illustration II ................................................................. 3
VCC 166 Digital Imaging ...................................................................................... 3
Computer/Digital Literacy .................................................................................... 0-3
Total Credits for Layout Artist Certificate ......................................................... 24-27

Multimedia Certificate in Communication Arts - 5004063039
(Offered at JFC)

Technical or Support Courses
CIS 100 Introduction to Computers OR any Computer/Digital Literacy .................. 3
VCA 170 Advertising Design I ............................................................................... 3
VCA 161 Commercial Photography II ............................................................... 3
VCM 115 2-D Animation ....................................................................................... 3
VCC 166 Digital Imaging ...................................................................................... 3
VCM 220 Webpage Design ................................................................................... 3
Total Credits for MM Certificate in Commercial Art ........................................... 18

Associate in Applied Science
Design & Technology - 5004097019
(Offered at BSC)

Required General Education
MAT 110 Applied Mathematics OR ................................................................. 3
Higher Level Quantitative Reasoning ................................................................... (3)
Natural Sciences ................................................................................................. 3
Social/Behavioral Sciences ................................................................................ 3
ENG 101 Writing I ............................................................................................... 3
Heritage/Humanities ......................................................................................... 3
Subtotal ................................................................................................................ 15

Required Technical Core
Computer/Digital Literacy .................................................................................. 0-3
VCC 100 Introduction to Visual Communication ................................................. 3
VCA 102 Fundamentals of Drawing OR ................................................................. 3
ART 110 Drawing I ............................................................................................... (3)
VCC 105 Fundamentals of Typography ............................................................... 3
VCA 108 Digital Color Theory ............................................................................. 3
VCC 110 Graphic Design Concepts ...................................................................... 3
VCC 115 Strategic Concepts ................................................................................ 3
VCC 125 Introduction to Computer Graphics ....................................................... 3
VCA 280 Portfolio Development ......................................................................... 3
COE 199 Cooperative Education OR ................................................................. 3
VCC 298 Practicum OR ......................................................................................... (3)
VCC 297 Internship .............................................................................................. 3
Subtotal ................................................................................................................ 27-30

Interactive Multimedia Track - 500409702
(Offered at BSC)
CIS 120 ................................................................. 3
IMD 133 ................................................................. 3
IT 132 ................................................................. 3
VCM 115 ................................................................. 3
IT 134 ................................................................. 3
IMD 240 ................................................................. 3
NIS 152 ................................................................. 3
IMD 180 ................................................................. 3
VCM 220 ................................................................. 3
Approved Electives ............................................................................................... 9
Subtotal ................................................................................................................ 21
Total Credits for AAS Interactive Multimedia ..................................................... 63-66

Production Design Track - 500409703
(Offered at BSC)
Vinyl Graphics and Applications ........................................................................ 3
Dye-Sublimation Processes ................................................................................ 3
Pad Printing ........................................................................................................ 3
Digital Printing .................................................................................................... 3
Approved Electives ............................................................................................... 9
Subtotal ................................................................................................................ 21
Total Credits for AAS Production Design ............................................................ 63-66

Diplomas

Graphic Design - 5004094019
(Offered at BSC, GTW)

Required General Education
Written Communication OR .................................................................................. 3
Oral Communications OR ................................................................................... (3)
Humanities/Humanities ....................................................................................... 3
Quantitative Reasoning OR .................................................................................. 3
Natural Sciences OR ............................................................................................. (3)
Social/Behavioral Sciences .................................................................................. (3)
Subtotal ................................................................................................................ 6

Required Technical Core
Computer/Digital Literacy .................................................................................... 0-3
VCC 100 Introduction to Visual Communication ................................................................. 3
VCA 102 Fundamentals of Drawing OR ................................................................. 3
ART 110 Drawing I ............................................................................................... (3)
VCC 105 Fundamentals of Typography ............................................................... 3
VCA 108 Digital Color Theory ............................................................................. 3
VCC 110 Graphic Design Concepts ...................................................................... 3
VCC 115 Strategic Concepts ................................................................................ 3
VCC 125 Introduction to Computer Graphics ....................................................... 3
VCA 280 Portfolio Development ......................................................................... 3
COE 199 Cooperative Education OR ................................................................. 3
VCC 298 Practicum OR ......................................................................................... (3)
VCC 297 Internship .............................................................................................. (3)
VCC 260 Digital Prepress ...................................................................................... 3
VCA 240 Package Design .................................................................................... 3
VCA 250 Advertising Design ................................................................................ 3
Approved Electives ............................................................................................... 9
Subtotal ................................................................................................................ 48-51
Total Credits for Graphic Design Diploma ........................................................... 54-57
Interactive Multimedia - 5004094029
(Offered at BSC)

Required General Education
- Written Communication OR ........................................... 3
- Oral Communications OR ........................................... 3
- Humanities/Heritage ..................................................... 3
- Quantitative Reasoning OR ........................................... 3
- Natural Sciences OR ......................................................... 3
- Social/Behavioral Sciences ............................................ 3
Subtotal 6

Technical or Support Courses:
- Computer/Digital Literacy .................................................. 0-3
- VCC 100 Introduction to Visual Communication .................. 3
- VCA 102 Fundamentals of Drawing OR ......................... 3
- ART 110 Drawing I ............................................................ 3
- VCC 105 Fundamentals of Typography ......................... 3
- VCA 108 Digital Color Therapy ........................................ 3
- VCC 110 Graphic Design Concepts ................................... 3
- VCC 115 Strategic Concepts ............................................ 3
- VCC 125 Introduction to Computer Graphics .................. 3
Subtotal 18

VCC 218 Digital Printing ...................................................... 3
Approved Electives ........................................................... 9
Subtotal 48-51

Total Credits for Production Design Diploma 54-57

Certificates

Design Assistant - 5004093019
(Offered at BSC)

VCC 100 Introduction to Visual Communication .................. 3
VCA 102 Fundamentals of Drawing OR ......................... 3
ART 110 Drawing I ............................................................ 3
VCC 105 Fundamentals of Typography ......................... 3
VCC 108 Digital Color Therapy ........................................ 3
VCC 110 Graphic Design Concepts ................................... 3
VCC 115 Strategic Concepts ............................................ 3
VCC 125 Introduction to Computer Graphics .................. 3
Approved Electives ........................................................... 6
Subtotal 27

Total Credits for Design Assistant Certificate 27

Digital Photography - 5004093029
(Offered at BSC)

VCC 100 Introduction to Visual Communication .................. 3
VCA 260 Digital Prepress .................................................... 3
VCA 120 Digital Photography ............................................ 3
VCC 166 Digital Imaging ...................................................... 3
VCC 266 Advanced Digital Imaging .................................... 3
VCA 108 Digital Color Theory ............................................ 3
Approved Electives ........................................................... 6
Subtotal 24

Total Credits for Digital Photography Certificate 24

Electives for all Visual Communication Tracks:
- VCA 120 Digital Photography ............................................ 3
- VCA 151 Digital Filmmaking I .......................................... 3
- VCA 152 Digital Filmmaking II ........................................ 3
- VCA 160 Commercial Photography I ................................ 3
- VCA 161 Commercial Photography II ................................ 3
- VCA 170 Advertising Design I ........................................ 3
- VCA 171 Advertising Design II ........................................ 3
- VCA 240 Package Design .................................................. 3
- VCA 250 Advertising Design ............................................ 3
- VCA 251 Digital Filmmaking III ......................................... 3
- VCA 252 Digital Filmmaking IV ......................................... 3
- VCA 225 Corporate Design ............................................... 3
- VCA 260 Commercial Photography III ............................. 4
- VCA 261 Commercial Photography IV ................................ 4
- VCA 270 Advertising Design III ........................................ 4
- VCA 271 Advertising Design IV ........................................ 4
- VCA 280 Portfolio Development ......................................... 3
- VCA 290 Folio Seminar ....................................................... 3
- VCA 298 Practicum ............................................................. 4
- VCC 166 Digital Imaging .................................................... 3
- VCC 200 Computer Illustration .......................................... 3
- VCC 210 Advanced Computer Illustration ....................... 3
- VCC 212 Vinyl Graphics and Applications ....................... 3
- VCC 214 Dye-Sublimation Processes ................................. 3
- VCC 216 Pad Printing .......................................................... 3
- VCC 218 Digital Printing ...................................................... 3
- VCC 220 Computer Page Design ......................................... 3
- VCC 230 Advanced Computer Page Design ..................... 3
- VCC 260 Digital Prepress .................................................... 3
- VCC 266 Advanced Digital Imaging .................................... 3
- VCC 270 Portable Document Format (PDF) Basics .......... 3
- VCM 110 Fundamentals of Animation ................................ 3
- VCM 115 2-D Animation ................................................... 3
- VCM 140 Multimedia Audio and Video ............................ 3
- VCM 210 3-D Animation ................................................... 3
- VCM 215 Advanced 2-D Animation .................................... 3

Production Design - 5004094039
(Offered at BSC)

Required General Education
- Written Communication OR ........................................... 3
- Oral Communications OR ........................................... 3
- Humanities/Heritage ..................................................... 3
- Quantitative Reasoning OR ........................................... 3
- Natural Sciences OR ......................................................... 3
- Social/Behavioral Sciences ............................................ 3
Subtotal 6

Technical or Support Courses:
- Computer/Digital Literacy .................................................. 0-3
- VCC 100 Introduction to Visual Communication .................. 3
- VCA 102 Fundamentals of Drawing OR ......................... 3
- ART 110 Drawing I ............................................................ 3
- VCC 105 Fundamentals of Typography ......................... 3
- VCA 108 Digital Color Therapy ........................................ 3
- VCC 110 Graphic Design Concepts ................................... 3
- VCC 115 Strategic Concepts ............................................ 3
- VCC 125 Introduction to Computer Graphics .................. 3
- VCA 280 Portfolio Development ......................................... 3
- COE 199 Cooperative Education OR ............................... 3
- VCC 298 Practicum ............................................................. 3
- VCC 297 Internship ............................................................ 3
- VCC 212 Vinyl Graphics and Applications ....................... 3
- VCC 214 Dye-Sublimation Processes ................................. 3
- VCC 216 Pad Printing .......................................................... 3
Visual Communication: Multimedia

The Visual Communication: Multimedia Track provides students the skills necessary to prepare and produce multimedia presentations, web sites, animations, audio/visual presentations, etc. In order to advance in a Visual Communication: Multimedia (VCM) course, a student must make a letter grade of "C" or better in all required technical courses.

Associate in Applied Science

MultiMedia - 1003047019
(Offered at HZC, WKC)

General Education Requirements (35-18 credit hours)

Quantitative Reasoning .................................................. 3
Natural Sciences ............................................................ 3
Social/Behavioral Sciences ............................................. 3
Heritage/Humanities ..................................................... 3

ENG 101 Writing I ............................................................... 3

Subtotal 15

Technical Core

Computer/Digital Literacy .............................................. 0-3
VCC 100 Introduction to Visual Communication .................. 3
VCC 105 Fundamentals of Typography ............................. 3
VCC 110 Graphic Design Concepts .................................. 3
VCC 115 Strategic Concepts ............................................ 3
VCC 150 Computer Fundamentals for Visual Communication .... 3
VCC 166 Digital Imaging .................................................. 3
VCC 200 Computer Illustration I ....................................... 3
VCA 108 Digital Color Theory ....................................... 3
VCA 280 Professional Portfolio Development .................... 3
VCM 110 Fundamentals of Animation .............................. 3
COE 199 Cooperative Education or .................................. 3
VCC 297 Internship or .................................................. (3)
VCC 298 Practicum ......................................................... (3)

Subtotal 30-36

Animation Track - 100304701
(Offered at HZC, WKC)

VCM 115 2-D Animation .................................................. 3
VCM 215 Advanced 2-D Animation .................................. 3
VCM 210 3-D Animation .................................................. 3
VCM 225 Advanced 3-D Animation .................................. 3

Technical Electives ....................................................... 3

Subtotal 15

Total Credits for Animation Track 63-66

Digital Design Track - 100304703
(Offered at HZC, WKC)

VCC 220 Computer Page Design ....................................... 3
VCC 266 Advanced Digital Imaging .................................... 3
VCC 200 Computer Illustration II ..................................... 3
VCC 210 Computer Illustration III ..................................... 3

Technical Electives ....................................................... 3

Subtotal 15

Total Credits for Digital Design 63-66

Audio/Video Track - 100304704
(Offered at HZC, WKC)

VCM 115 2-D Animation .................................................. 3
VCM 215 Advanced 2-D Animation .................................. 3
VCM 140 Multimedia Audio & Video .................................. 3
VCM 240 Advanced Audio & Video .................................... 3

Technical Elective .......................................................... 3

Subtotal 15

Total Credits for Audio/Video Track 63-66
### Multimedia Track - 100304401
*(Offered at HZC, WKC)*

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**Total Credits for Multimedia Track** 54-57

### Web Design Track - 100304402
*(Offered at GTW, WKC)*

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**Total for Web Design Track** 54-57

### Animation Track - 100304403
*(Offered at SMC, WKC)*

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<td>VCM 210</td>
<td>3-D Animation</td>
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<td>VCM 215</td>
<td>Advanced 2-D Animation</td>
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<td>VCM 225</td>
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**Total for Animation Track** 54-57

### Digital Design Track - 100304404
*(Offered at WKC)*

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<td>VCC 266</td>
<td>Adv. Digital Imaging</td>
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**Total for Digital Design Diploma** 51-54

### Audio/Video Track - 100304405
*(Offered at WKC)*

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<td>VCM 215</td>
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**Total for Audio/Video Track** 54-57

### Certificates

#### Multimedia - 1003043019
*(Offered at HZC, JFC, WKC)*

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<td>VCM 110</td>
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<td>VCM 220</td>
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#### Animation - 1003043029
*(Offered at HZC, JFC)*

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<td>VCC 100</td>
<td>Introduction to Visual Communication</td>
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<td>VCC 105</td>
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<td>VCC 150</td>
<td>Computer Fundamentals for Visual Communication</td>
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<td>VCC 166</td>
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#### Web Design - 1003043039
*(Offered at BSC, GTW, HZC, JFC, SMC, WKC)*

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#### Audio/Video - 1003043049
*(Offered at HZC, WKC)*

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#### Digital Design - 1003043059
*(Offered at HZC, JFC, WKC)*

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<td>VCC 166</td>
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<td>VCM 200</td>
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<td>IT 130</td>
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Visual Communication: Printing

Printing is an option under the broader heading of Visual Communication. The Printing curriculum emphasizes technical competence to better prepare students for successful careers in print manufacturing, digital production, and/or printing management in a highly developed consumer economy. Laboratory experiences in page layout, computer illustration, photo imaging, press prep technologies, various printing operations, and finishing and bindery techniques are combined with classroom work. All technical courses must be completed with "C" (2.0) or greater to advance in all Visual Communication programs.

**Associate in Applied Science**

**Printing - 1003017019**

General Education Requirements - 15-18 credit hours

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Required Core:

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Print Manufacturing Track - 100301701

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**Total for Print Manufacturing AAS**

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<td>Advanced Digital Imaging</td>
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**Total for Digital Production AAS**

Diplomas

**Digital Production Artist - 1003014029**

( Offered at BSC, JFC, SMC, WKC )

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<tr>
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**Total for Digital Production Artist Diploma**

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**Total for Print Manufacturing Diploma**

Certificates

**Digital Production Assistant - 1003013019**

( Offered at BSC, JFC, SMC, WKC )

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<td>VCC 220</td>
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**Technical or Support Courses**

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**Total**
Volumetric Medical Imaging

The Volumetric Medical Imaging (VMI) Certificate is designed for students who are certified radiologic technologists. Students will learn to identify anatomical features in cross section and volume, reconstruct volumetric data from 2D radiological data, recognize pathologic anatomy, and manipulate volumes for physicians to review. Graduates will be qualified to seek employment in radiology departments of hospitals or with private companies who contract this service. Academic Program Coordinator permission is required to enter the certificate program. 

Prerequisites: Basic computer literacy, such as CIS 100 or equivalent, BIO 137, 139.

Certificate

Volumetric Medical Imaging - 5109113019

(Offered at JFC)

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<td>VMI 200 Sectional Anatomy &amp; Pathology I</td>
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<td>VMI 201 Sectional Anatomy &amp; Pathology II</td>
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<td>VMI 210 Volumetric Medical Imaging I</td>
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<td>VMI 211 Volumetric Medical Imaging II</td>
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Total Credits 24

* BIO 137&139 must have been completed within the last 10 years.

Welding Technology

The Welding Technology Program is dedicated to welding education, technology, and student success. Students in this program will learn various welding techniques, careers and the skills needed to be successful in the Welding Technology field. Welding occupations are primarily concerned with joining, surfacing, or repairing structures or parts made of metal or other weldable materials. The skills and knowledge needed to determine the appropriate welding technique required for a specific project and to successfully perform that technique are gained through course work and practical experience. The program offers a wide range of credentials including the Associate in Applied Science Degree, Diploma, and eleven certificates in Welding Technology.

Associate in Applied Science

Welding Technology - 4805087019

(Offered at BLC, BSC, ELC, JFC)

<table>
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<td>MAT 110 Applied Mathematics OR</td>
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<td>MAT 116 Technical Mathematics OR</td>
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<td>MAT 146 Contemporary College Mathematics OR</td>
<td>(3)</td>
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<tr>
<td>MAT 150 College Algebra OR</td>
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<td>MA 109 College Algebra</td>
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<td>Heritage/Humanities</td>
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<td>Natural Sciences OR</td>
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Recommended courses of:
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<td>Oxy-Fuel Systems OR</td>
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</tr>
<tr>
<td>WLD 110</td>
<td>Cutting Processes</td>
<td>2</td>
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<tr>
<td>WLD 111</td>
<td>Cutting Processes Lab</td>
<td>2</td>
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<tr>
<td>WLD 120</td>
<td>Shielded Metal Arc Welding (SMAW)</td>
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<td>WLD 121</td>
<td>Shielded Metal Arc Welding (SMAW) Fill Exit Lab</td>
<td>3</td>
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<tr>
<td>WLD 123</td>
<td>Shielded Metal Arc Welding (SMAW) Groove with Backing Lab</td>
<td>3</td>
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<tr>
<td>WLD 125</td>
<td>Shielded Metal Arc Welding (SMAW) Open Groove Lab</td>
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<td>WLD 130</td>
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<td>WLD 131</td>
<td>Gas Tungsten Arc Welding (GTAW) Fill Exit Lab</td>
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<td>WLD 133</td>
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<td>WLD 170</td>
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**Total Credits** 42 - 49

### General Education

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<td>WLD 298</td>
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<tr>
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**Total Credits** 42 - 49

### Diploma

**Combination Welder - 4805084029**

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**Total Credits** 6

**General Education Total Credits** 18 - 19

### Certificates

**Welder Helper - 4805083129**

(Offered at ASC, BGT, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

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<td>WLD 121</td>
<td>Shielded Metal Arc Welding (SMAW) Fill Exit Lab</td>
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<tr>
<td>WLD 130</td>
<td>Gas Tungsten Arc Welding (GTAW) AND</td>
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<td>WLD 131</td>
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**Total Credits** 2 - 5

**Gas Welder - 4805083039**

(Offered at ASC, BGT, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

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<tr>
<td>WLD 100</td>
<td>Oxy-Fuel Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>WLD 101</td>
<td>Oxy-Fuel Systems Lab</td>
<td>2</td>
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</table>

**Total Credits** 4

**ARC Cutter - 4805083099**

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

<table>
<thead>
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<tbody>
<tr>
<td>WLD 110</td>
<td>Cutting Processes</td>
<td>2</td>
</tr>
<tr>
<td>WLD 111</td>
<td>Cutting Processes Lab</td>
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</table>

**Total Credits** 5

**Tack Welder - 4805083119**

(Offered at ASC, BGT, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>WLD 170</td>
<td>Blueprint Reading for Welding</td>
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<tr>
<td>WLD 171</td>
<td>Blueprint Reading for Welding</td>
<td>3</td>
</tr>
<tr>
<td>WLD 151</td>
<td>Basic Welding A OR</td>
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**Total Credits** 2-3

### Introduction

*NOTE: Computer/Digital Literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.*
<table>
<thead>
<tr>
<th>Page 1</th>
<th>Production Line Welder - 4805083059</th>
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<tbody>
<tr>
<td>WLD 120</td>
<td>Shielded Metal Arc Welding (SMAW) AND ........................................ (2)</td>
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<tr>
<td>WLD 121</td>
<td>Shielded Metal Arc Welding (SMAW) Fillet Lab OR ................................ (3)</td>
</tr>
<tr>
<td>WLD 130</td>
<td>Gas Tungsten Arc Welding (GTAW) AND ............................................. (2)</td>
</tr>
<tr>
<td>WLD 131</td>
<td>Gas Tungsten Arc Welding (GTAW) Fillet Lab OR ................................... (3)</td>
</tr>
<tr>
<td>WLD 140</td>
<td>Gas Metal Arc Welding (GMAW) AND ................................................ (2)</td>
</tr>
<tr>
<td>WLD 141</td>
<td>Gas Metal Arc Welding (GMAW) Fillet Lab OR ....................................... (3)</td>
</tr>
<tr>
<td>WLD 100</td>
<td>Oxy-Fuel Systems Lab OR ................................................................. (2)</td>
</tr>
<tr>
<td>WLD 110</td>
<td>Cutting Processes .................................................................................. (2)</td>
</tr>
<tr>
<td>WLD 101</td>
<td>Oxy-Fuel Systems Lab OR ..................................................................... (2)</td>
</tr>
<tr>
<td>WLD 111</td>
<td>Cutting Processes Lab ............................................................................ (3)</td>
</tr>
<tr>
<td>WLD 120</td>
<td>Shielded Metal Arc Welding (SMAW) ................................................... 2</td>
</tr>
<tr>
<td>WLD 121</td>
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**AWS National Skills Standards Level I - 4805083089**

(Offered at ASC, BGT, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

| WLD 100 | Oxy-Fuel Systems OR ........................................................................ (2) |
| WLD 110 | Cutting Processes ................................................................................ (2) |
| WLD 101 | Oxy-Fuel Systems Lab OR ................................................................. (2) |
| WLD 111 | Cutting Processes Lab ......................................................................... (3) |
| WLD 120 | Shielded Metal Arc Welding (SMAW) ................................................... 3 |
| WLD 121 | Shielded Metal Arc Welding (SMAW) Fillet Lab ...................................... 3 |
| WLD 123 | Shielded Metal Arc Welding (SMAW) Groove with Backing Lab OR .......... 3 |
| WLD 225 | Shielded Metal Arc Welding (SMAW) Open Groove Lab .......................... 3 |
| WLD 170 | Blueprint Reading for Welding ......................................................... 2 |
| WLD 171 | Blueprint Reading for Welding Lab ................................................ 3 |
| Total | Credits ........................................................................................................ 33-34 |

---

**Shielded Metal Arc Welding - 4805083139**

(96 Offered at BGT, BLC, BSC, ELC, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

| WLD 120 | Shielded Metal Arc Welding (SMAW) ................................................... 2 |
| WLD 121 | Shielded Metal Arc Welding (SMAW) Fillet Lab ...................................... 3 |
| WLD 123 | Shielded Metal Arc Welding (SMAW) Groove with Backing Lab OR .......... 3 |
| WLD 225 | Shielded Metal Arc Welding (SMAW) Open Groove Lab .......................... 3 |
| WLD 170 | Blueprint Reading for Welding ......................................................... 2 |
| WLD 111 | Cutting Processes Lab ........................................................................... (3) |
| Total | Credits ........................................................................................................ 17-18 |

**Gas Metal Arc Welding - 4805083149**

(97 Offered at ASC, BGT, BLC, BSC, ELC, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

| WLD 140 | Gas Metal Arc Welding (GMAW) ............................................................ 2 |
| WLD 141 | Gas Metal Arc Welding (GMAW) Fillet Lab ........................................... 3 |
| WLD 143 | Gas Metal Arc Welding (GMAW) Groove Lab ........................................ 3 |
| WLD 140 | Gas Metal Arc Welding (GMAW) Groove with Backing Lab OR ............... 2 |
| WLD 245 | Gas Metal Arc Welding (GMAW) Pipe Lab A OR .................................... 3 |
| WLD 147 | Flux Cored Arc Welding (FCAW) Lab ............................................... (1) |
| WLD 170 | Blueprint Reading for Welding ......................................................... 2 |
| WLD 171 | Blueprint Reading for Welding Lab .................................................. 3 |
| WLD 100 | Oxy-Fuel Systems OR ........................................................................... 2 |
| WLD 110 | Cutting Process .................................................................................... (2) |
| WLD 101 | Oxy-Fuel Systems Lab OR ................................................................. (2) |
| WLD 111 | Cutting Processes Lab ......................................................................... (3) |
| Total | Credits ........................................................................................................ 15-18 |

**Gas Tungsten Arc Welding - 4805083159**

(98 Offered at ASC, BGT, BLC, BSC, ELC, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

| WLD 130 | Gas Tungsten Arc Welding (GTAW) ...................................................... 2 |
| WLD 131 | Gas Tungsten Arc Welding (GTAW) Fillet Lab ........................................ 3 |
| WLD 133 | Gas Tungsten Arc Welding (GTAW) Groove Lab ..................................... 3 |
| WLD 235 | Gas Tungsten Arc Welding (GTAW) Pipe Lab A OR ............................... 3 |
| WLD 170 | Blueprint Reading for Welding ......................................................... 2 |
| WLD 171 | Blueprint Reading for Welding Lab .................................................. 3 |
| WLD 100 | Oxy-Fuel Systems OR ........................................................................... 2 |
| WLD 110 | Cutting Process .................................................................................... (2) |
| WLD 101 | Oxy-Fuel Systems Lab OR ................................................................. (2) |
| WLD 111 | Cutting Processes Lab ......................................................................... (3) |
| Total | Credits ........................................................................................................ 17-18 |

---

**Recommended Electives:**

| WLD 229 | Shielded Metal Arc Welding (SMAW) Pipe Lab B ................................... 3 |
| WLD 237 | Gas Tungsten Arc Welding (GTAW) Pipe Lab B ...................................... 3 |
| WLD 247 | Gas Metal Arc Welding (GMAW) Pipe Lab B .......................................... 3 |
| WLD 253 | Pipe Fitting and Template Development Lab .................................... (1) |
| Total | Credits ........................................................................................................ 29-40 |
Women's and Gender Studies Certificate

Women's and Gender Studies Certificate Program provides an interdisciplinary approach that engages students in exploring and understanding historical and contemporary social issues with a focus on gender. The courses will require students to read, write, and think critically about such issues as identity, sexuality, the media, family, violence, health care, employment/disability, political structures, the intersection of gender, race, and poverty and the representation and participation of women on the world stage in artistic and socio-political spheres.

Certificate

Women's and Gender Studies - 0502073019

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGS 200</td>
<td>Introduction to Women's and Gender Studies in the Social Sciences OR</td>
<td>3</td>
</tr>
<tr>
<td>WGS 201</td>
<td>Introduction to Women's and Gender Studies in the Arts and Humanities</td>
<td>3</td>
</tr>
<tr>
<td>HIS 266</td>
<td>History of American Women to 1920</td>
<td>3</td>
</tr>
<tr>
<td>HIS 267</td>
<td>History of American Women from 1920</td>
<td>3</td>
</tr>
<tr>
<td>HIS 268</td>
<td>History of Women in America</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives (Selected from the following list or by consent of instructor):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 233</td>
<td>Literature and Identities: (Sexuality &amp; Representation)</td>
<td>3</td>
</tr>
<tr>
<td>ENG 232</td>
<td>Literature and Place (Sub-topic required)</td>
<td>3</td>
</tr>
<tr>
<td>ENG 234</td>
<td>Introduction to Women's Literature</td>
<td>3</td>
</tr>
<tr>
<td>FAM 253</td>
<td>Human Sexuality, Development, Behavior, and Attitudes</td>
<td>3</td>
</tr>
<tr>
<td>FLK 276</td>
<td>Introduction to Folk Studies</td>
<td>3</td>
</tr>
<tr>
<td>FLK 280</td>
<td>Cultural Diversity in the United States</td>
<td>3</td>
</tr>
<tr>
<td>GEO 160</td>
<td>Peoples of the Non-Western World</td>
<td>3</td>
</tr>
<tr>
<td>GEO 240</td>
<td>Geography and Gender</td>
<td>3</td>
</tr>
<tr>
<td>HIS 266</td>
<td>History of Women in America</td>
<td>3</td>
</tr>
<tr>
<td>HIS 268*</td>
<td>History of American Women to 1920*</td>
<td>3</td>
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<tr>
<td>HIS 268*</td>
<td>History of American Women from 1920*</td>
<td>3</td>
</tr>
<tr>
<td>HUM 121</td>
<td>Peace Studies</td>
<td>3</td>
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<tr>
<td>PHI 130</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 110</td>
<td>Medical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>REL 101</td>
<td>Introduction to Religious Studies</td>
<td>3</td>
</tr>
<tr>
<td>SOC 235</td>
<td>Social Inequality</td>
<td>3</td>
</tr>
<tr>
<td>SWK 275</td>
<td>Family</td>
<td>3</td>
</tr>
<tr>
<td>WGS 200*</td>
<td>Introduction to Women's and Gender Studies in the Social Sciences*</td>
<td>3</td>
</tr>
<tr>
<td>WGS 201*</td>
<td>Introduction to Women's and Gender Studies in the Arts and Humanities*</td>
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Total Credits: 12

Note: HIS 266 satisfies general education and cultural studies requirements. HIS 266 and HIS 267 do not meet general education nor cultural studies requirements.

Women’s and Gender Studies Electives (Required: 6 credits)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ANT 160</td>
<td>Cultural Diversity in the Modern World</td>
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<tr>
<td>ANT 220</td>
<td>Introduction to Anthropology</td>
<td>3</td>
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<tr>
<td>BIO 120</td>
<td>Human Ecology</td>
<td>3</td>
</tr>
<tr>
<td>COM 299</td>
<td>Special Topics in Communication: Gender and Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENG 233</td>
<td>Literature and Identities: (Sexuality &amp; Representation)</td>
<td>3</td>
</tr>
<tr>
<td>ENG 232</td>
<td>Literature and Place (Sub-topic required)</td>
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<td>ENG 234</td>
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<td>FAM 253</td>
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<tr>
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<td>Social Inequality</td>
<td>3</td>
</tr>
<tr>
<td>SWK 275</td>
<td>Family</td>
<td>3</td>
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</table>

Total Credits: 12

Wood Manufacturing Technology

(Under Revision)

This diverse program is designed to provide broad-based training for entry-level employees in the secondary wood processing industry. Students are exposed to an array of tasks ranging from product design to installation of finished products including: furniture, cabinetry, and millwork.

Diploma

Wood Technologist - 4807034019

(Offered at JFC)

Required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CPU 100#</td>
<td>Introduction to Computers</td>
<td>3</td>
</tr>
<tr>
<td>DFT 120</td>
<td>Computer Aided Drafting</td>
<td>4</td>
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<tr>
<td>CAD 100</td>
<td>Introduction to Computer-Aided Design</td>
<td>3</td>
</tr>
<tr>
<td>EFH 100</td>
<td>Elementary Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>ISX 100</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>WMT 110</td>
<td>Technical Drawing and Blueprint Reading</td>
<td>2</td>
</tr>
<tr>
<td>WMT 120</td>
<td>Wood Product Manufacturing</td>
<td>4</td>
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<tr>
<td>WMT 160</td>
<td>Wood Finishing</td>
<td>2</td>
</tr>
<tr>
<td>WMT 199</td>
<td>Wood Drying</td>
<td>2</td>
</tr>
<tr>
<td>WMT 230</td>
<td>Introduction to Panel Processing</td>
<td>2</td>
</tr>
<tr>
<td>WMT 240</td>
<td>Cabinet Making Technology</td>
<td>4</td>
</tr>
<tr>
<td>WMT 250</td>
<td>Furniture Technology</td>
<td>4</td>
</tr>
<tr>
<td>WMT 260</td>
<td>Millwork Technology</td>
<td>4</td>
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<tr>
<td>WMT 280</td>
<td>Estimating</td>
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<tr>
<td>WPP 200</td>
<td>Workplace Principles</td>
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Total Credits: 46-47

Certificates

Cabinetmaker - 480703019

(Offered at JFC)

Required:

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<th>Course Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CPU 100</td>
<td>Introduction to Computers</td>
<td>3</td>
</tr>
<tr>
<td>DFT 120</td>
<td>Computer Aided Drafting</td>
<td>4</td>
</tr>
<tr>
<td>CAD 100</td>
<td>Introduction to Computer-Aided Design</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Applied Mathematics*</td>
<td>3</td>
</tr>
<tr>
<td>WMT 110</td>
<td>Technical Drawing and Blueprint Reading</td>
<td>2</td>
</tr>
<tr>
<td>WMT 120</td>
<td>Wood Product Manufacturing</td>
<td>4</td>
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<tr>
<td>WMT 160</td>
<td>Wood Finishing</td>
<td>2</td>
</tr>
<tr>
<td>WMT 230</td>
<td>Introduction to Panel Processing</td>
<td>2</td>
</tr>
<tr>
<td>WMT 240</td>
<td>Cabinet Making Technology</td>
<td>4</td>
</tr>
<tr>
<td>WMT 280</td>
<td>Estimating</td>
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<tr>
<td>WMT 198</td>
<td>Wood Drying</td>
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Electives (Technical Course List):

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<tbody>
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<td>CAD 200</td>
<td>Intermediate Computer-Aided Design</td>
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Total Credits: 27-28

Furniture Maker - 4807033029

(Offered at JFC)

Required:

<table>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CPU 100</td>
<td>Introduction to Computers</td>
<td>3</td>
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<tr>
<td>DFT 120</td>
<td>Computer Aided Drafting</td>
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<tr>
<td>CAD 100</td>
<td>Introduction to Computer-Aided Design</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Applied Mathematics*</td>
<td>3</td>
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<tr>
<td>WMT 110</td>
<td>Technical Drawing and Blueprint Reading</td>
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<td>Wood Finishing</td>
<td>2</td>
</tr>
<tr>
<td>WMT 230</td>
<td>Introduction to Panel Processing</td>
<td>2</td>
</tr>
<tr>
<td>WMT 250</td>
<td>Furniture Technology</td>
<td>4</td>
</tr>
<tr>
<td>WMT 280</td>
<td>Estimating</td>
<td>2</td>
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Electives (Technical Course List):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 200</td>
<td>Intermediate Computer-Aided Design</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credits: 27-28
### Technical Electives
- **WMT 290** Advanced Wood Processing .............................. 4
- **CAD 200** Intermediate Computer Aided Design ................. 4

**Total Credits**: 27-28

*Curriculum committee is in process of changing mathematics requirements.

### Millworker - 4807033039

*(Offered at JFC)*

### Required:
- **CPU 100** Introduction to Computers ................................. 3
- **DFT 120** Computer Aided Drafting I OR ............................. 4
- **CAD 100** Introduction to Computer Aided Design ............... (3)
- **MAT 110** Applied Mathematics* ..................................... 3
- **WMT 110** Technical Drawing and Blueprint Reading ........... 2
- **WMT 120** Wood Product Manufacturing ............................... 4
- **WMT 200** Lumber Grading ............................................... 2
- **WMT 210** Dry Kiln Operation .......................................... 2
- **WMT 260** Millwork Technology ......................................... 4
- **WMT 270** Molded/Grinder Operation ................................... 2

**Technical Electives**

- **CAD 200** Intermediate Computer Aided Design ................. 4

**Total Credits**: 27-28

*Curriculum committee is in process of changing mathematics requirements.

### Zoo Animal Technology

The Zoo Technology program prepares students for entry-level positions at zoos and related occupations. The curriculum gives students a background in writing, computer applications, communication skills, animal biology, conservation biology, applied mathematics, and basic zoo operations.

### Certificate

**Zoo Animal Technician - 2607013019**

*(Offered at JFC)*

- **BIO 112** Introduction to Biology ..................................... 3
- **BIO 120** Human Ecology .................................................. 3
- **BIO 122** Introduction to Conservation Biology .................... 3
- **BIO 143** Zoology with Laboratory ..................................... 4
- **ZOO 293** Applied Experiences in Zoo Technology ............. 3-6
- **MAT 110** Applied Mathematics* ..................................... 3
- **COM 181** Basic Public Speaking ...................................... 3

**Total Credits**: 22-25

### Associate in Fine Arts (A.F.A.) Curricula

#### Theatre Arts

The Associate in Fine Arts (A.F.A.) in Theatre degree program is designed for students who plan to transfer to a four-year institution in order to pursue a BFA in the Theatre Arts and/or acquire credentials for a career in arts-related areas. The program includes general education requirements, Theatre foundation courses in acting and stagecraft, as well as a wide variety of performance and production-related electives. Students will focus on the development of performance skills and a basic knowledge of technical theatre, while participating firsthand in fully realized theatrical productions every semester. Classes will also encourage analytical skills and critical analysis. Students will be encouraged to participate in state and regional theatre auditions and festivals with audition pieces prepared specifically with an eye toward securing professional work.

### General Education Core Requirements

**Total Credits**: 25

#### Writing/Accessing Information
- **ENG 101** Writing ......................................................... 3
- **ENG 102** Writing ......................................................... 3

#### Oral Communications
- **THA 101** Introduction to Theatre ................................... 3
- **THA 191** Performance Practicum (I) (May be repeated) to equal 3 hours, OR ............................................... 3
- **THA 195** Special Projects in Theatre Arts (Project Title) OR ................................................ (3)

#### Practicum Core
- **THA 196** Summer Theatre Workshop ................................ (3)

#### Concentration (Choose 18 hours from the Approved Theatre Electives)

**Total Credits**: 18

- **THA 127** Acting Techniques ............................................ 3
- **THA 150** Fundamentals of Production ............................... 3
- **THA 200** Introduction to Dramatic Literature ..................... 3
- **THA 283** American Theatre ............................................. 3
- **FLM 110** Filmmaking Treatment through Storyboard ............ 4
- **FLM 120** Filmmaking Storyboard through Production ........... 4
- **FLM 130** Filmmaking Editing through Distribution .............. 4

(FLM courses are co-requisites)

- **MUS 192** University Chorus ............................................ 1
- **ART 110** Drawing I ....................................................... 3
- **ENG 281** Introduction to Film ......................................... 3
- **ENG 282** International Film Studies .................................. 3
- **IMD 250** Digital Video Editing Final Cut .......................... 3

Other Courses approved by program coordinator

### Associate in Fine Arts

**Theatre - 5005017019**

*(Offered at BLC)*

#### General Education Core Requirements

**Total Credits**: 25-28

#### Theatre Core Requirements

**Total Credits**: 15

#### Practicum Core

**Total Credits**: 3

#### Concentration (Approved Theatre Electives)

**Total Credits**: 18

Other Courses approved by program coordinator

### Summary

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Core Requirements</td>
<td>25-28</td>
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<tr>
<td>Theatre Core Requirements</td>
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<tr>
<td>Practicum Core</td>
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<tr>
<td>Concentration (Approved Theatre Electives)</td>
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<tr>
<td>Total</td>
<td>61-64</td>
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</tbody>
</table>
## Certificate

Filmmaking - From Script to Screen - 5006023019  
(Offered at BLC)

The Filmmaking: Script to Screen certificate program will provide students with a hands-on, practical overview of the filmmaking process. In addition to a working knowledge of the elements of filmmaking, graduates will have a greater understanding of the collaborative process, creative problem solving, and critical thinking. Graduates will have an enhanced level of media literacy and deeper understanding of filmmaking as a communication strategy for dissemination of ideas. The curriculum supports the desire of the film industry for a stronger filmmaking workforce in Kentucky.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLM 110</td>
<td>Filmmaking Treatment to Storyboard</td>
<td>4</td>
</tr>
<tr>
<td>FLM 120</td>
<td>Filmmaking: Storyboard through Production</td>
<td>4</td>
</tr>
<tr>
<td>FLM 130</td>
<td>Filmmaking: Editing through Distribution</td>
<td>4</td>
</tr>
<tr>
<td>THA 126</td>
<td>Acting I</td>
<td>3</td>
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<tr>
<td>THA 190</td>
<td>Production Practicum OR</td>
<td>1</td>
</tr>
<tr>
<td>THA 191</td>
<td>Performance Practicum</td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
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<td></td>
</tr>
</tbody>
</table>

## Visual Art

The Associate in Fine Arts (AFA) in Visual Art degree program is designed for students who plan to transfer to a four-year institution in order to pursue a BFA in the Visual Arts and/or a career in arts-related areas requiring pre-professional credentials. The program includes general education requirements, visual arts foundation courses in drawing, design, and art history, as well as a wide variety of studio art electives. Students will focus on the development of artistic skills and a visual vocabulary for personal expression, while exploring both traditional and nontraditional art areas. Classes will also encourage analytical and creative problem solving skills and experience in both verbal presentation of ideas and critical concepts. A personal portfolio of artwork will be a tangible result of a student completing this program.

### Associate in Fine Arts

Visual Art - 5007027019  
(Offered at HZC, WKC)

#### General Education Core Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>Writing I</td>
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</tr>
<tr>
<td>ENG 102</td>
<td>Writing II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Oral Communications</td>
<td>3</td>
</tr>
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#### Visual Art - 5007027019

<table>
<thead>
<tr>
<th>Course Code</th>
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<tr>
<td>ART 105</td>
<td>Renaissance through Medieval Art History</td>
<td>3</td>
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<tr>
<td>ART 106</td>
<td>Ancient through Medieval Art History</td>
<td>3</td>
</tr>
<tr>
<td>ART 110</td>
<td>Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 112</td>
<td>2-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 113</td>
<td>3-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 210</td>
<td>Drawing II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
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#### Concentration (Choose 18 hours from the Approved Art Studio Electives)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 211</td>
<td>Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 220</td>
<td>Painting I</td>
<td>3</td>
</tr>
<tr>
<td>ART 221</td>
<td>Painting II</td>
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<tr>
<td>ART 240</td>
<td>Ceramics I</td>
<td>3</td>
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<tr>
<td>ART 241</td>
<td>Ceramics II</td>
<td>3</td>
</tr>
<tr>
<td>ART 260</td>
<td>Sculpture I</td>
<td>3</td>
</tr>
<tr>
<td>ART 261</td>
<td>Sculpture II</td>
<td>3</td>
</tr>
<tr>
<td>ART 270</td>
<td>Printmaking I</td>
<td>3</td>
</tr>
<tr>
<td>ART 271</td>
<td>Printmaking II</td>
<td>3</td>
</tr>
<tr>
<td>ART 280</td>
<td>Beginning Film Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART 281</td>
<td>Digital Photography I</td>
<td>3</td>
</tr>
<tr>
<td>ART 282</td>
<td>Digital Photography II</td>
<td>3</td>
</tr>
<tr>
<td>ART 290</td>
<td>Survival Skills for Artists</td>
<td>3</td>
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<tr>
<td>ART 299</td>
<td>Directed Studies in Art</td>
<td>1-3</td>
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<tr>
<td>ART 321</td>
<td>Jewelry/Metals I</td>
<td>3</td>
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<tr>
<td>ART 322</td>
<td>Jewelry/Metals II</td>
<td>3</td>
</tr>
</tbody>
</table>

### Summary

General Education Core Requirements ........................................... **24**  
Fine Arts Core Requirements ................................................ **18**  
Concentration (Approved Art Studio Electives) .............................. **18**  
**Total** ............................................................................... **60**

#### Notes

1. **Degree requirements:** completion of minimum 60 credit hours; minimum cumulative 2.0 GPA; minimum of 15 credit hours earned at the institution awarding the degree; cultural studies course; and demonstration of computer literacy.
2. **Graduation requirements:** 1. Courses chosen to satisfy General Education requirements must be selected from an approved list which may be found in the KCTCS catalog at [http://legacy.kctcs.edu/catalog/](http://legacy.kctcs.edu/catalog/).  
   2. A course used to fulfill one category cannot be used to fulfill another category.
   3. Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.
Course Descriptions

Courses are numbered as follows:
001 through 099 – Orientation and developmental courses
100 through 199 – Undergraduate credit
200 through 299 – Undergraduate credit; sophomore classification may be required.
Modular courses have four-digit course numbers with the first three numbers representing the parent course, e.g., BA 1601 is the first module of BA 160. Course descriptions are published for recently approved courses, and those that have been offered in the preceding two-year period. Other active courses may be offered that are not published in the printed catalog.

A&S  Art & Sciences

A&S 100 (1 - 6)  Course ID: 002195
Special Introductory Course
This course permits the offering at the introductory level of special courses of an interdisciplinary, topical, or experimental nature. Each proposal must be approved by the Dean of the College of Arts and Sciences. A particular title may be offered at most twice under the A&S 100 number. Students may not repeat under the same title. May be repeated to a maximum of 12 credits. Prerequisite: Will be set by instructor.
Components: Lecture

AAD  Arts Administration

AAD 200 (3)  Course ID: 004620
Fundamentals of Arts Administration
Arts administration, planning, evaluation, funding and finance in arts organizations are emphasized. Students are engaged in arts management projects related to career goals. Lecture: 3 credits (45 contact hours). Prerequisite: AAD 100, ENG 102.
Components: Lecture

ACC  Accounting

ACC 201 (3)  Course ID: 000927
Financial Accounting
Presents generally accepted accounting principles used for the measurement and reporting of financial information in the financial statements. Prerequisite: Sophomore standing (30 credit hours) or consent of the instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

ACC 202 (3)  Course ID: 000001
Managerial Accounting
An introduction to the use of accounting data within an organization to analyze and solve problems and to make planning and control decisions. Prerequisite: ACC 201 or ACT 101 and ACT 102. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Course Also Offered in Modules

ACC 2011 (1)  Course ID: 005946
Financial Accounting-Accounting as an Information System
Presents the accounting cycle and preparation of financial statements. Prerequisite: Sophomore Standing (30 credit hours) or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2012 (1)  Course ID: 005947
Financial Accounting-Accounting for Merchandising Businesses
Presents accounting for merchandising businesses including inventories, receivables and internal control. Prerequisite: Sophomore Standing (30 credit hours) or Consent of Instructor and ACC 2011 or equivalent. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2013 (1)  Course ID: 005948
Financial Accounting-Long Term Assets and Long Term Financing Activities
Presents measuring and reporting of long term assets and long term financing activities. Prerequisite: Sophomore Standing (30 credit hours) or Consent of Instructor ACC 2011 and ACC 2012 or equivalent. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2021 (1)  Course ID: 005949
Cost Terms Concepts, and Classifications
Introduces the student to managerial accounting, differentiates between financial and managerial accounting, and presents cost and cost behaviors. Prerequisite: ACC 201 or (ACT 101 and ACT 102). Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2022 (1)  Course ID: 005950
Planning and Control
Presents performance evaluation, and methods of financial statement analysis. Prerequisite: ACC 2021. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2023 (1)  Course ID: 005951
Using Cost Data in Decision Making
Introduces the student to master and capital budgets. Prerequisite: ACC 2022. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACH  Architecture

ACH 100 (3)  Course ID: 004679
Construction Documents I
This is the first course of a four-semester studio sequence. Proper methods and fundamentals of architectural construction documents and residential construction will be introduced. Drafting conventions utilizing basic hand drafting tools and computer-aided drawing techniques will be studied. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture

ACH 110 (1)  Course ID: 004680
Survey of the Architectural Profession
In this course, the student will gain an understanding of the language of architecture and develop an appreciation for building design strategies through direct analysis. In addition, various career opportunities in architecture and related professions will be explored. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACH 120 (3)  Course ID: 004681
Theory and History of Architecture I
The development of architecture as it is related to world culture with an emphasis on design, structure, materials, eco-social, and political factors are considered. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACH 150 (3)  Course ID: 004682
Construction Documents II
This is the second course of a four-semester studio sequence. Students develop architectural construction documents for multi-level framed construction. Students
will further develop an understanding of programming, schematics, design development, and construction document production using current computer-aided technology. Emphasis will be placed on building codes and related discipline coordination. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours). Prerequisite: ACH 100 or consent of instructor.

Components: Laboratory, Lecture

ACH 160 (3) Course ID: 004683
Building Materials and Construction I
The essentials of the theory of selected building materials (Construction Specifications Institute, Divisions 2-7) and their assembly in appropriate systems are presented with particular attention to component selection and behavior under various loads, climatic conditions and fire. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 161 (3) Course ID: 004684
Building Materials and Construction II
The essentials of the theory of selected building materials (Construction Specifications Institute, Divisions 7-16) and their assembly in appropriate systems are presented with particular attention to component selection and behavior under various loads, climatic conditions and fire. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 170 (3) Course ID: 004685
Theory and History of Architecture II
A survey of the architectural periods from the neo-classic to the present is presented. This course is a continuation of ACH 120. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 175 (3) Course ID: 004686
Introduction to Systems
An overview of the various systems found in buildings and the influences that shape architectural design and construction is presented. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 180 (1-3) Course ID: 005463
Selected Topics in Architectural Technology (Topic)
The subject matter of this course may vary from semester to semester as new technology is developed and new issues evolve and/or to address local architectural issues. This course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of Instructor. Lecture: 1-3 credits (15-45 contact hours).

Components: Lecture

ACH 194 (3) Course ID: 004687
Visual Composition
In this course, the student will study the aesthetic principles found in both two-dimensional and three-dimensional compositions. These principles will be applied in exercises involving drawing, model construction and creative writing. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (120 contact hours).

Components: Laboratory, Lecture

ACH 195 (3) Course ID: 004856
Computer Aided Drafting I
Students learn how computer hardware and software are used in preparing architectural documents. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

ACH 200 (3) Course ID: 004688
Construction Documents III
This is the third course of a four-semester studio sequence. Students study the methods by which commercial buildings are designed and constructed. Basic skills are developed relating to the implementation of determinants in this process such as program analysis, applicable codes, construction methods and materials as well as computer applications. Through the completion of a series of structured projects including the preparation of a set of architectural construction documents for a medium-sized building, students apply the knowledge necessary to achieve these goals. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours). Prerequisite: ACH 150 and ACH 185/ACH 195 or consent of instructor.

Components: Laboratory, Lecture

ACH 225 (3) Course ID: 004689
Structures
Students study structural materials and systems including the design of simple structural components. Prerequisite: ACH 175 and MAH 125, or consent of instructor.

Components: Lecture

ACH 250 (3) Course ID: 004690
Construction Documents IV
This is the fourth course of a four-semester studio sequence. Students prepare a set of advanced construction documents using current computer-aided drafting techniques. Emphasis will be placed on design principles and site development for a commercial construction project. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours). Prerequisite: ACH 200 or consent of instructor.

Components: Laboratory, Lecture

ACH 260 (3) Course ID: 004691
Office Practice
This course is intended to serve as a capstone course in the Architectural Technology program. Emphasis is placed on preparing students for the workplace by focusing on the professional, legal, and business aspects of the architectural and construction industries. Case studies are reviewed and projects are prepared by students with the goal of introducing them to a broader set of circumstances that affect how decisions are made in the practice of architecture. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 275 (3) Course ID: 004692
Mechanical and Electrical Systems
Students engage in a qualitative and quantitative study of environmental control systems used in buildings. Prerequisite: ACH 175 and MAT 125, or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 285 (3) Course ID: 005464
Computer-Aided Drafting II
Students learn how to modify selected computer-aided drafting software to enhance construction document production. Integration of other software will also be discussed. Prerequisite: ACH 185 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 290 (3) Course ID: 004694
Building Codes I
Students will analyze the content and format of current building codes. The necessity for building codes, problems in interpretation and application as well as legal aspects will be discussed. Prerequisite: ACH 150 and ACH 185 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 291 (3) Course ID: 004695
Construction Management
Students examine the principles and current practices of construction management with emphasis on project organization, scheduling and cost control. Prerequisite: ACH 150, ACH 160 and ACH 161, or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 292 (3) Course ID: 004696
Building Codes II
This course will be continuation of ACH 290, Building Codes I, with a more in-depth study of current building codes. Prerequisite: ACH 290 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 293 (3) Course ID: 004697
Presentation Techniques
Students will explore a variety of presentation and rendering techniques used in the architectural profession. Design skills and the understanding of spatial relationships will be further developed. Prerequisite: ACH 100 or consent of instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

ACH 294 (3) Course ID: 004698
Specification Writing
This course provides an in-depth study of the importance of specifications in the design and construction process. Students will engage in research, evaluate the quality of building materials, study the methods of writing specifications, and gain exposure to industry-standard software in preparing a variety of specifications. Prerequisite: ACH 150, ACH 160, ACH 161, or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 295 (3) Course ID: 004693
Computer-Aided Drafting II
Students learn how to modify selected computer-aided drafting software to enhance construction document production. Integration of other software will also be discussed. Prerequisite: ACH 195 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 297 (3) Course ID: 004699
Estimating Techniques
Students investigate the factors affecting the cost of construction, labor productivity, materials, overhead and profit, including area and volume computations. Current methods of cost estimating will be applied. Prerequisite: ACH 150 and MAT 125; or consent of instructor. Lecture: 2.5 credits (37.5 contact hours); Laboratory: 0.5 credits (7.5 contact hours).

Components: Laboratory, Lecture

ACH 298 (3) Course ID: 004700
Computer 3D Modeling
Students learn how computer hardware and software are used in preparing 3D architectural drawings and client-oriented presentations. Prerequisite: ACH 150 and ACH 185 or consent of instructor.

Components: Lecture

ACH 299 (3) Course ID: 000949
Refrigeration Fundamentals
Introduces refrigerant piping and fundamentals of refrigeration including environmental issues associated with HVAC. Corequisite: ACR 101. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 101 (2) Course ID: 000950
Refrigeration Fundamentals Lab
Introduces fundamentals of refrigeration including environmental issues associated with HVAC and refrigerant piping. Develops proper hands-on techniques in the servicing and troubleshooting of basic systems. Stresses proper use and care of tools, equipment, materials, and safety. Corequisite: ACR 100. Laboratory: 2 credits (60 contact hours).

Components: Laboratory

ACH 102 (3) Course ID: 000951
HVC Electricity
Introduces students to basic physics of electricity. Covers Ohm's law; measuring resistance, voltage, ohms, watts and amps; constructing various types of electrical circuits; selecting wire and fuse sizes; and troubleshooting an electric motor and motor controls. Corequisite: ACR 103. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACH 103 (2) Course ID: 000952
HVC Electricity Lab
Introduces students to basic physics of electricity. Provides for application of Ohm's law; and measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to troubleshoot an electric motor and motor controls. Corequisite: ACR 102. Laboratory: 2 credits (60 contact hours).

Components: Laboratory
ACR 112 (3) Course ID: 000953
Sheet Metal Fabrication
The student will learn to make patterns and lay out and construct common sheet metal duct fittings. Corequisite: ACR 113.
Components: Lecture

ACR 113 (2) Course ID: 000954
Sheet Metal Fabrication Lab
Provides lab time for students to lay out, cut, construct, and install common sheet metal duct fittings. Corequisite: ACR 112. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

ACR 130 (3) Course ID: 000955
Electrical Components
Introduces operation, checking, adjusting and troubleshooting commercial ice machines. Prerequisite: (ACR 100 and ACR 102) with a grade of C or greater. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACR 250 (3) Course ID: 000963
Cooling and Dehumidification
Includes working characteristics of air conditioning units with air and water cooled condensers. Covers line, low voltage and pneumatic controls. Prerequisite: (ACR 100 & ACR 101) with a grade of C or greater. Corequisite: ACR 251. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACR 251 (2) Course ID: 000964
Cooling and Dehumidification Lab
Prepares the student for installing, servicing, and troubleshooting air conditioning systems with water and air cooled condensers and line and low voltage. Prerequisite: (ACR 100 & ACR 101) with a grade of C or greater. Corequisite: ACR 250. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

ACR 260 (3) Course ID: 000965
Heating and Humidification
Explains heating systems from simple fossil fuel furnaces through more complex systems. Concentrates on line and control voltage circuitry pertaining to these systems. Prerequisite: (ACR 102 and ACR 103) with a grade of C or greater. Corequisite: ACR 260. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACR 271 (2) Course ID: 000968
Heat Pump Application Lab
Provides lab time for application of troubleshooting, checking, adjusting, and installing reverse cycle units. Prerequisite: [(ACR 100 and ACR 102) with a grade of C or greater] or Permission of Instructor. Corequisite: ACR 271. Lecture: 3 credits (45 contact hours).
Components: Laboratory

ACR 291 (1) Course ID: 000970
Instructor Consent Required Special Problems I
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory

ACR 293 (2) Course ID: 000971
Instructor Consent Required Special Problems II
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory

ACR 295 (3) Course ID: 000972
Instructor Consent Required Special Problems III
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory

ACR 299 (2) Course ID: 000974
Instructor Consent Required Cooperative Education Program
Practicum provides supervised on-the-job work experience related to the student’s educational objectives. Students participating in Practicum do not receive compensation. Prerequisite: Permission of the Instructor.
Components: Co-Op

ACT Accounting

ACT 101 (3) Course ID: 000004
Fundamentals of Accounting I
Students are introduced to accounting terminology and general theoretical principles. The major focus of the course is on the accounting cycle and the communication of financial information to decision-makers. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACT 102 (3) Course ID: 000005
Fundamentals of Accounting II
Basic financial accounting concepts and methods are expanded to include accounting for partnerships and corporations. Lecture: 3 credits (45 contact hours). Prerequisite: ACT 101.
Components: Lecture

ACT 177 (3) Course ID: 005238
Entrepreneurial Accounting
Includes issues and concerns that are vital to small and medium-size businesses. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACT 196 (3) Course ID: 000007
Payroll Accounting
Introduces the design and implementation of modern payroll systems. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACT 277 (3) Course ID: 000008
Managerial Accounting Topics
The study of the uses of accounting information in managerial planning and control of organizations. Prerequisite: ACC 202. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACT 279 (3) Course ID: 000010
Computerized Accounting Systems
Accounting concepts and principles are applied using computerized accounting systems. Lecture: 3 credits (45 contact hours). Prerequisite: ACC 201 or ACT 101 and ACT 102 or concurrent enrollment in ACT 102. Computer literacy 3 credit hours.
Components: Lecture

ACT 281 (3) Course ID: 000013
Individual Taxation
The study of the theory and applications of federal and individual income taxes will be emphasized. Lecture: 3 hours. Prerequisite: One semester of college accounting or consent of instructor.
Components: Lecture
Financial Accounting Topics

Additional in-depth exposure to financial accounting procedures for classifying, recording, reporting, and disclosure; intended primarily for students enrolled in the Accounting Technology AAS program and the Accounting Option in the Business Administration AAS Program. Prerequisite: ACC 201 or ACT 101 and ACT 102. Lecture: 3 credits (45 contact hours).

Components: Lecture

ACT 290 (1 - 3) Course ID: 000015
Instructor Consent Required Selected Topics in Accounting (Topic)

This course is designed to expand course offerings as new technology is developed, new issues evolve and/or to address local accounting issues. Topics may vary from semester to semester at the discretion of the instructor; courses may be repeated with different topics to a maximum of six credit hours. Lecture: 1-3 hours. Prerequisite: Consent of instructor.

Components: Lecture

ACT 295 (3) Course ID: 000016
Corporate and Partnership Taxation

The study of federal and state tax laws applying to corporations, partnerships, and other entities will be emphasized. Lecture: 3 hours. Prerequisite: ACT 251 or equivalent.

Components: Lecture

ACT 1771 (0.6) Course ID: 005239
Rationale for a Well Designed Accounting System

Developing a well designed accounting system for the entrepreneur. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

ACT 1772 (0.6) Course ID: 005240
Contractual and Legal Reporting Requirements

Common contractual and legal reporting requirements. Lecture: 0.6 credits (9 contact hours). Prerequisite: ACT 1771 or consent of the instructor.

Components: Lecture

ACT 1773 (0.6) Course ID: 005241
Overview of Accounting for the Entrepreneur

Overview of accounting for the entrepreneur. Lecture: 0.6 credits (9 contact hours). Prerequisite: ACT 1772 or consent of the instructor.

Components: Lecture

ACT 1774 (0.6) Course ID: 005242
Introduction to Computer Accounting Software to Record Basic Accounting Transactions

Computer accounting software to record basic accounting transactions. Lecture: 0.6 credits (9 contact hours). Prerequisite: ACT 1773 or consent of instructor.

Components: Lecture

ACT 1775 (0.6) Course ID: 005243
Introduction to Computer Accounting Software to Generate Financial Statements

Computer accounting software to generate financial statements. Lecture: 0.6 credits (9 contact hours). Prerequisite: ACT 1774 or consent of the instructor.

Components: Lecture

ACT 1961 (0.5) Course ID: 006117
Payroll Records

Introduces the records required for today’s payroll or human resource manager. Covers the relationship between Payroll and Human Resources and their common laws. Concludes with salary computations and methods to compute Gross Payroll. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

ACT 1962 (0.5) Course ID: 006118
Payroll Taxes

Covers federal and state tax withholding and employer-side payroll expenses. Prerequisite: ACT 1961. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

ACT 1963 (0.5) Course ID: 006119
Accounting for Payroll

Covers federal and state unemployment laws and accounting for payroll. Prerequisite: ACT 1961. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

ACT 1964 (1) Course ID: 006120
Manual Payroll

Requires the student to complete a Quarterly Payroll Simulation. Prerequisite: ACT 1962 & 1963. Lecture: 1 credit (15 contact hours).

Components: Lecture

ACT 1965 (0.5) Course ID: 006121
Computerized Payroll

Requires the student to complete a Computerized Payroll Simulation. Prerequisite: ACT 1962 & 1963. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

ADX Automotive Technology

ADX 120 (3) Course ID: 000983
Basic Automotive Electricity

Introduces the student to the principles, theories, and concepts of the automotive electrical system that include the unique diagramming, coding and locating of wiring, and component devices. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

ADX 121 (2) Course ID: 000984
Basic Automotive Electricity Lab

Provides hands-on work designed to allow the student to use the concepts, principles, and theories covered in Basic Automotive Electricity. ADX 120, in practical application. Provides the student a work experience alternating between periods of off campus and work in a classroom laboratory setting. Pre-requisite or Corequisite: ADX 120. Lab: 2.0 credits (90 contact hours).

Components: Laboratory

ADX 150 (3) Course ID: 000985
Engine Repair

Provides a series of lectures and demonstrations on the fundamentals of engine repair, troubleshooting, and engine operation and maintenance. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

ADX 151 (2) Course ID: 000986
Engine Repair Lab

Provides practical experiences and applications relating to engine repair, inspection, trouble shooting and maintenance. The student may be provided a work experience alternating between periods of off campus and work in a classroom laboratory setting. Pre-requisite or Corequisite: ADX 150. Lab: 2.0 credits (90 contact hours).

Components: Laboratory

ADX 170 (3) Course ID: 000987
Climate Control

Introduces the theory and operation of heating and air conditioning systems, air conditioning terminology, and servicing and troubleshooting mechanical and electrical circuits of heating and air conditioning systems. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

ADX 171 (1) Course ID: 000988
Climate Control Lab

Provides opportunities to trouble shoot, repair and perform maintenance on heating and air conditioning systems. Provides experiences in safety precautions, special tool uses, component operation and how to service and trouble shoot the complete system. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Pre-requisite or Corequisite: ADX 170. Lab: 1.0 credit (45 contact hours).

Components: Laboratory

ADX 260 (3) Course ID: 000989
Electrical Systems

Focuses on the theory and principles relating to automotive electrical/electronic components. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

ADX 261 (2) Course ID: 000990
Electrical Systems Lab

Provides practical applications and experiences related to the theory and principles of automotive electrical/electronic components. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Pre-requisite or Corequisite: ADX 260. Lab: 2.0 credits (90 contact hours).

Components: Laboratory

AER Aeronautics

AER 100 (1) Course ID: 006358
Introduction to Lean Systems

Introduces the scientific principles of energy and fuels and investigates specific topics: nature and extent of energy resources, economics and environmental effects, alternative energy, energy technology, health and safety. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AER 102 (4) Course ID: 006359
Introduction to Energy

Introduces the scientific principles of energy and fuels and investigates specific topics: nature and extent of energy resources, economics and environmental effects, alternative energy, energy technology, health and safety. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AER 110 (4) Course ID: 006360
Introduction to Circuit Analysis

Covers basic electrical components as well as DC/AC circuit configurations; introduces the theory and operation of solid state devices such as diodes, BJTs, FETs, and operational amplifiers; emphasizes circuit construction, analysis, and troubleshooting. Corequisite: MT 125 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AER 112 (4) Course ID: 006361
Alternative Energy Fundamentals

Addresses topics of alternative energy sources including passive and active solar systems, fuel cells, hydroelectric power, geothermal heat transfer, photovoltaic systems, biofuels, and wind energy. Prerequisite: AER 102. Lecture/ Lab: 4 credits (75 contact hours).

Components: Lecture

AER 114 (4) Course ID: 006362
Solar and Wind Energy Generation

Introduces the methods and equipment necessary for the production of electrical energy by alternative means to include photovoltaic systems, wind turbines and solar water heating. Prerequisite: AER 110 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture
AET 120 (4) Course ID: 006363
Power Electronics
Introduces the circuitry and components used to convert the power generated by alternative methods to line voltage and current values commonly used in residential and commercial electrical installations; includes Thyristor theory and application, inverter types and application, and battery charging and maintenance. Prerequisite: AET 110 or Consent of Instructor. Lecture/Lab: 4 credits (90 contact hours).

Components: Lecture

AET 130 (3) Course ID: 006364
Industrial Sensors
Covers various types of industrial sensors and opto-electronic devices. Prerequisite: AET 110 or Consent of Instructor. Lecture: 3 credits (60 contact hours).

Components: Lecture

AET 140 (4) Course ID: 006365
Industrial Equipment Maintenance
Covers maintenance techniques and practices commonly found in a wide variety of industrial settings to include areas such as lubrication, mechanical drives, bearings, and safe working practices. Lecture/Lab: 4 credits (90 contact hours).

Components: Lecture

AET 150 (4) Course ID: 006366
Advanced Circuit Analysis
Introduces the more advanced concepts of DC and AC circuits. Topics include Kirchhoff's Laws, network theorems, Delta-Y conversion, reactive circuits, complex impedances, 2-matching, resonance, and LC tank loading effect. Prerequisite: AET 110 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 160 (4) Course ID: 006367
Industrial Controls Electronics
Introduces the concepts of industrial power control to include solid state devices, controllers, single and poly-phase rectification, and DC power supplies. Prerequisite: AET 110 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 170 (4) Course ID: 006368
Digital Circuits and Concepts
Covers the basics of digital electronics to include logic gates, number systems, Boolean algebra, Karnaugh mapping, registers, bi-stable circuits, and basic arithmetic circuits. Prerequisite: AET 110 or consent of instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 180 (3) Course ID: 006369
Industrial Computer Architecture
Introduces the basic layout of industrial computers as preparatory course leading into the more advanced PLC's; includes binary and hexadecimal number systems, bus oriented computer systems, I/O scan, interfacing considerations, and introduction to programmable controllers. Prerequisite: AET 110 or Consent of Instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

AET 190 (4) Course ID: 006370
Industrial Computer Programming Concepts
Covers programming concepts specifically directed toward industrial programmable devices such as PLCs. Prerequisite: Consent of instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 200 (4) Course ID: 006371
Integrated Circuits
Focuses on integrated circuits as they apply to linear and non-linear applications to include integration techniques, operational amplifiers, linear voltage amplifiers, waveform generators, comparators, active filters, and interfacing. Prerequisite: AET 150 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 210 (4) Course ID: 006372
Alternative Energy Independent Studies
Provides the student with the opportunity to put to practical use, by way of a student project, the knowledge and skills gained in AET 102, AET 112, AET 114, and AET 120. Prerequisite: AET 112 and AET 114 and AET 120. Lecture/Lab: 4 credits (105 contact hours).

Components: Lecture

AET 220 (4) Course ID: 006373
Modulation Techniques and Applications
Introduces the various types of electronic modulation including amplitude, frequency, and phase modulation with emphasis on antenna theory and the study of RP power in both resonant and non-resonant loads. Prerequisite: AET 200 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 230 (3) Course ID: 006374
Introduction to Circuit Design
Utilizes ideas learned in previous electronics courses to design, build, and test circuits based upon design criteria provided by the instructor. Prerequisite: [AET 170 and AET 200] or Consent of Instructor. Lecture/Lab: 3 credits (60 contact hours).

Components: Lecture

AET 240 (4) Course ID: 006375
Industrial Machinery Control
Examines AC and DC motors and their associated control equipment. Introduces ladder logic and schematic diagram interpretation and drawing. Gives the student practical experience in the design, construction and troubleshooting of industrial motor control circuits. Advances the use of solid state devices and system integration. Prerequisite: AET 110. Lecture/Lab: 4 credits (90 contact hours).

Components: Lecture

AET 250 (4) Course ID: 006376
PLC Networking
Introduces the basic concepts in PLC networking to include networking protocols specific to industrial controllers, ASCII codes, bus topologies, and handling of remote I/O. Prerequisite: AET 190. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 260 (4) Course ID: 006377
Instructor Consent Required Robotics and Programmable Controls
Introduces the theory of robots and programmable controls including terminology, components, and basic programming; provides theory of servo and non-servo robots and their controllers. Prerequisite: Consent of instructor. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 270 (4) Course ID: 006378
Advanced PLC Programming
Introduces the student to the wide range of capabilities, beyond basic programming needs, which are available to the modern PLC user. Includes data Manipulation; shift register and sequencer instructions; binary, octal and hexadecimal numbering systems; and analog inputs and outputs. Prerequisite: EET 276 and EET 277. Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 290 (4) Lecture/Lab: 4 credits (75 contact hours).

Components: Lecture

AET 300 (4) Course ID: 006379
Aerospace Studies I
A course designed to provide the student with a basic understanding of the contribution of aerospace power to the total U.S. strategic offensive and defensive military posture. The student also develops leadership abilities by participating in a military organization, the cadet corps, which offers a wide variety of situations demanding effective leadership. Corequisite: AFS 111. Lecture: 1 credit (15 contact hours).

Components: Lecture

AET 315 (1) Lecture/Lab: 1 credit (45 contact hours).

Components: Laboratory

AET 375 (4) Course ID: 005360
Leadership Laboratory I
A course designed for development of basic skills required to be a manager, including communications, human relations, and administration of equal opportunity. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 111. Laboratory: 1 credit (45 contact hours).

Components: Laboratory

AET 385 (1) Course ID: 005361
Aerospace Studies II
A course designed to provide the student with a basic understanding of the contribution of aerospace power to the total U.S. strategic offensive and defensive military posture. The student also develops leadership abilities by participating in a military organization, the cadet corps, which offers a wide variety of situations demanding effective leadership. Corequisite: AFS 111. Lecture: 1 credit (15 contact hours).

Components: Lecture

AET 390 (1) Course ID: 005362
Leadership Laboratory II
A continuation of AFS 315. A course designed to develop managerial skills including superior/subordinate relationships, communications, customs and courtesies, basic drill movements and career progression requirements. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 113. Laboratory: 1 credit (45 contact hours).

Components: Laboratory

AET 405 (1) Course ID: 005363
Aerospace Studies III
Introduces the study of air power from a historical perspective; focuses on the development of air power into a primary element of national security. Leadership experience is continued through active participation in the cadet corps. Prerequisite: AFS 111, 113 or PAS approval. Lecture, 1 hour; leadership laboratory, one hour.

Components: Lecture

AET 420 (1) Course ID: 005364
Leadership Laboratory III
A course designed for development of advanced skills required to be a manager/leader, including leadership studies, public speaking, group dynamics, motivation and preparation for field training. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 211. Laboratory: 1 credit (45 contact hours).

Components: Laboratory

AET 430 (1) Course ID: 005365
Aerospace Studies IV
Provides a foundation for understanding how air power has been employed in military and non-military operations to support national objectives. Examines the changing mission of the defense establishment, with particular emphasis on the United States Air Force. Leadership experience is continued through participation in the cadet corps. Lecture, one hour; leadership laboratory, one hour per week. Prerequisite: AFS 111, 113 or PAS approval.

Components: Lecture

AET 450 (1) Course ID: 005366
Leadership Laboratory IV
A continuation of AFS 215. A course designed to develop supervisory management skills to include communications, techniques of critique, social actions, personnel evaluation procedures, problem solving, role playing and field training preparation. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 213.

Components: Laboratory

AET 475 (1) Course ID: 005367
Aerospace Studies V
A course designed to develop supervisory management skills to include communications, techniques of critique, social actions, personnel evaluation procedures, problem solving, role playing and field training preparation. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 213.
AGR 101 (3) Course ID: 000750
The Economics of Food and Agriculture
Introduces the field of agricultural economics and some of the basic tools and concepts of decision-making. Illustrates concepts in terms of selected current social and economic issues including the role of agriculture in both a national and international dimension. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Agriculture
AGR 125 (3) Course ID: 002209
Introduction to Fertilizers and Soils
Introduces practical aspects of soils and fertilizers as related to plant growth and production. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
AGR 130 (2) Course ID: 005135
Field Applications in Agriculture
Includes methods of solving many application problems encountered in agriculture using applied mathematical and logic skills. Emphasizes practical mathematical skills already acquired from secondary education to address agricultural situations involving computations necessary for upper level courses in agriculture. Requires some knowledge of agricultural situations. Prerequisite: MAT 055 or equivalent placement level. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
AGR 140 (3) Course ID: 000021
Issues In Agriculture
Provides an introduction to agriculture and current issues pertaining to the agricultural industry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
AGR 150 (3) Course ID: 000022
Agricultural Power
Provides an introduction to farm equipment and their power units through classroom instruction that concentrates on specific principles that govern the equipment. Includes a lab that applies the principles learned in the classroom. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (45 contact hours).
Components: Laboratory, Lecture
AGR 160 (3) Course ID: 004279
Horticultural Science
A study of the practical principles and practices used in horticulture.
Components: Lecture
AGR 165 (3) Course ID: 000023
Agricultural Seminar
Includes reports and discussion of problems in relation to operations of agricultural business. Offered only in summer. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
AGR 170 (3) Course ID: 000024
Introduction to Equipment, Machines, and Engines
Provides an introduction to tractors, combines, balers, forage harvesters and windrowers and various attachments. Includes a study of the operation, adjustments, and repairs. Covers an introduction to engines in which theory and minor repairs will be discussed. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).
Components: Laboratory, Lecture
AGR 180 (2) Course ID: 000025
Agricultural Internship I
Provides the opportunity to broaden the educational experience through appropriate observation and individualizes work assignments related to the prerequisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. Pre-requisite Or Co-requisite: (AGR 150 and AGR 140) or Consent of Instructor. Lab: 2.0 credits (75 contact hours).
Components: Laboratory
AGR 190 (2) Course ID: 000026
Agricultural Internship II
Provides the opportunity to broaden the educational experience through appropriate observation and individualized work assignments related to the prerequisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. Prerequisite: (AGR 125 and AGR 180 and AGR 170) or Consent of Instructor. Lab: 2.0 credits (75 contact hours).
Components: Laboratory
AGR 200 (2) Course ID: 000028
Agricultural Internship III
Provides the opportunity to broaden the educational experience through appropriate observation and individualized work assignments related to the prerequisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. NOTE: Internship III is a variable credit (1-2 credit hours) with a total 2 credit hour program requirement. Students must take a minimum of one credit hour of Internship in their last semester of enrollment or after all agricultural classes have been completed. Prerequisite: AGR 180 and AGR 190. Lab: 2.0 credits (75 contact hours).
Components: Laboratory
AGR 220 (3) Course ID: 000030
Computers In The Agricultural Environment
Provides an introduction to computers as they relate to the agricultural environment. Prerequisite: CIS 100. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
AGR 223 (3) Course ID: 000410
Introduction to Artificial Insemination for Cattle
The primary objective of this course is to instruct students in artificial insemination techniques in cattle. Topics will include reproductive system, herd health, nutrition, semen handling, and estrus detection and synchronization. Prerequisite: AG 240 or consent of Instructor.
Components: Laboratory, Lecture
AGR 230 (3) Course ID: 005136
Career Development in Agriculture
Includes essential aspects of career preparation, entry, adjustment, and advancement in agriculture and related fields. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
AGR 240 (3) Course ID: 000032
Introduction to Animal Science
Provides a limited overview of the farm species of livestock. Includes the study of major livestock breeds of beef and dairy cattle, sheep, swine, poultry, and horses. Covers management application for livestock production as well as production facilities. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credits (30 contact hours).
Components: Laboratory, Lecture
AGR 250 (3) Course ID: 000033
Introduction to Plants/Crop Production
Familiarizes students with the basic principles and theories involved in field crop production. Provides a limited understanding of how crops are grown as a prelude to growing crops successfully. Covers pest and pesticides as well as plant disease and protection. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
AGR 100 (2) Course ID: 001515
Human Growth and Development
Course focus is on the promotion of health through assessment of individuals' growth and development across the life span. Consideration is given to the family, cultural, environmental, spiritual, and genetic influences when meeting basic human needs. Lecture: 2 credits (30 contact hours).
Components: Lecture
AHS 105 (3) Course ID: 000037
Introduction to Health Occupations
Basic health care concepts and skills for students interested in or planning a career in health care are introduced. Basic body mechanics, health care delivery systems, caregiver/client relationships, infection control, basic assessment skills, first aid, cardiopulmonary resuscitation certification, team-building skills and problem-based learning are included. Lecture: 2.5 hours; Laboratory: 2 hours.
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules
AHS 109 (4) Course ID: 001516
Introduction to Body Structure and Functions
Provides knowledge of the structure and function of the human body with emphasis on normalcy. Includes interaction of all body systems in maintaining homeostasis and promotes an understanding of health maintenance. Not intended as a general education science course.
Lecture: 4 credits (60 contact hours).
Components: Lecture
AHS 110 (5) Course ID: 000038
Instructor Consent Required Emergency Medical Technician
Basic fundamentals for the emergency medical technician with stress on the proper care of emergency patients and their safe transport to a medical facility. The course prepares the student to take the Kentucky certification examination as an Emergency Medical Technician.
Lecture: 4 hours; Laboratory: 2 hours. Prerequisite: Consent of Instructor.
Components: Laboratory, Lecture
AHS 115 (3) Course ID: 003808
Medical Terminology
A study of anatomical, physiological and pathological terminology with emphasis on work structures and definition of root words, suffixes, and prefixes from Greek and Latin. Additional emphasis is placed on spelling and pronunciation. Primarily designed for individuals preparing for a career in health care. No previous knowledge of Greek or Latin is required. Lecture: 3 hrs.
Components: Lecture
AHS 120 (1) Course ID: 001517
Medical Terminology
Basic medical word techniques emphasizing anatomical, physiological and medical terms. Lecture: 1 credit (15 contact hours).
Components: Lecture
AHS 125 (3) Course ID: 005758
Health Careers Exploration
Introduces a variety of occupational opportunities in healthcare and an overview of educational and basic healthcare employment requirements. Includes an observation in the healthcare setting. Prerequisite: AHS 105. Lecture: 2 hours; Lab: 1 credit (30:1 ratio)
Components: Laboratory, Lecture
AHS 130 (2) Course ID: 001518
Infection Control
Promotes an understanding of the effects of microorganisms on the human body. Includes standard precautions necessary for health maintenance and infection control, focusing on reducing the incidence of disease. Not intended as a general education science course. Lecture: 2 credits (30 contact hours).
Components: Lecture
AHS 140 (3) Course ID: 005520
Introduction to Public and Community Health
Introduces students to the management of public health emergencies. Topics include human epidemics and pandemics, agricultural and plant diseases, and emergency medicine. Lecture: 3 credits (45 contact hours).
Components: Lecture
AHS 140 (3) Course ID: 005520
Introduction to Public and Community Health
Introduces students to the management of public health emergencies. Topics include human epidemics and pandemics, agricultural and plant diseases, and emergency medicine. Lecture: 3 credits (45 contact hours).
Components: Lecture
AHS 201 (3) Course ID: 002358
Management Principles for Allied Health Providers
Many allied health practitioners will assume the role of a manager during the course of their career. This course is designed to provide theory and application focusing on the development of strategies and skills to assume professional responsibilities in management and administration. Lecture: 3 credits (45 contact hours).
Components: Laboratory, Lecture

AHS 203 (3) Course ID: 005479
Diversity in Health Care
Introduces students to health care consumers from various cultural backgrounds. Emphasizes the cultural heritage and diversity existing in contemporary society and cultural factors that affect nontraditional and underrepresented consumers’ access to and use of health care resources. Broadens students’ perception and understanding of health/illness and the variety of meanings these terms carry for members of differing sociocultural populations. Lecture: 3 credits (45 contact hours).
Components: Lecture

AIT Advanced Integrated Technology

AIT 100 (4) Course ID: 005955
Power Generation and Utilization
Introduces electrical, hydraulic, and pneumatic power systems used in industry. Provides theory and application of DC and AC, including three-phase power and theory and application of hydraulic and pneumatic power utilizing basic circuits. Prerequisite: Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 110 (3) Course ID: 005956
Power Distribution Systems
Provides instruction in the use of electrical, hydraulic, and pneumatic power as it applies in industry. Covers AC/DC circuit analysis, single-phase and three-phase power including hydraulic and pneumatic power and basic principles of pressure and flow. Prerequisite: AIT 100 or consent of instructor. Lecture/Lab: 3 credits (67.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 120 (3) Course ID: 005957
Equipment Installation
Focuses on the installation of electrical, hydraulic and pneumatic industrial systems. Emphasizes motor installation, wiring/box selection, conduit preparation and installation, hydraulic/pneumatic supply, piping, controls, and various lifting and rigging techniques. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 3 credits (75 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 130 (4) Course ID: 005958
Measurement and Instrumentation
Covers measurement and instrumentation concepts and applications, choice of proper instrumentation and calibration, manual and automated measurement processes. Prerequisite: MT 120 or higher. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 160 (1) Course ID: 005961
Workplace Safety
Focuses on industrial safety practices. Includes personal safety and equipment, hazard recognition, and safeguards. Covers electrical safety procedures and hazardous materials. Emphasizes OSHA rules and regulations. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture: 1 credit (15 contact hours).
Components: Lecture

AIT 170 (3) Course ID: 005962
Equipment Maintenance
Introduces the student to maintenance techniques and procedures used to maintain industrial equipment including lubrication and troubleshooting. Examines power transmission methods such as V-belt drives, chain drives, couplings, gear reducers, chain drives, bearings, and seals. Focuses on use of hand tools and precision measuring instruments to remove and replace bearings and seals, and perform shaft alignment. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 3 credits (75 contact hours). (30:1 Ratio Lab).
Components: Lecture

AIT 190 (3) Course ID: 006561
Integrated Power Plant Operations
Introduces students to main components found within a fossil power plant. Provides in-depth study of following systems: cooling water system, steam flow system, air flow system, gas flow system, and power distribution. Provides instruction in the integration of systems within a fossil fuel power plant. (Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR instructor consent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 200 (4) Course ID: 005963
Process Management and Quality Control
Emphasizes project team organization. Introduces the following concepts: cycle time, production time, first pass yield, and barrier identification. Introduces quality control including understanding acceptance criteria with tolerances, data collection, and data reporting. Prerequisite: AIT 130 or Consent of Instructor. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 210 (4) Course ID: 005964
Advanced Equipment Maintenance
Focuses on maintenance techniques and procedures used with advanced and highly technical industrial machinery, including lubrication, V-belt and shaft drives, couplings, chain drives, bearings and seals, brakes and clutches, machine vibration and analysis, laser alignment, and troubleshooting techniques. Emphasizes the use of hand tools and precision measuring instruments. Prerequisite: Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 220 (3) Course ID: 006565
The Integrated Power Grid
Introduces students to types of power plants that are tied to the electric grid other than fossil power plants. Provides overview of nuclear, hydro, and many forms of renewable energy. Includes forms of alternative energy power plants such as solar, wind, and bio-mass power plants. Prerequisite: AIT 130 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 240 (4) Course ID: 006573
Analysis of National Electrical Code Development and Structure
Prepares students for taking examination for electrical license and employer testing through understanding of concepts contained in the National Electrical Code. Prerequisite: Reading assessment score at level of RDG 20 or successful completion of developmental courses prior to RDG 020. Lecture: 4.0 credits (60 contact hours).
Components: Lecture

AIT 250 (5) Course ID: 006574
Application of the National Electrical Code for Residential Wiring
Applies articles of National Electrical Code to residential wiring. Pre-requisite: AIT 240 or consent of instructor. Lecture/Lab/Practicum: 5.0 credits (165 contact hours).
Components: Laboratory, Lecture, Practicum

AIT 260 (4) Course ID: 006575
Application of the National Electrical Code for Special Circuits
Applies articles of National Electrical Code to special occupancies, equipment, conditions, and communications. Pre-requisite: AIT 240 or consent of Instructor. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture

AIT 270 (2) Course ID: 006942
Introduction to Robotics and Programmable Logic Controllers
Examines fundamental architecture of programmable logic controllers as it pertains to industrial application and incorporates ladder logic principles, commonly used instruction language, editing, program navigation and program analysis. Includes the fundamentals of 6-axis robotics including manual manipulation, execution of existing robot program files, modification of target parameters, and safety interlocks. Pre-requisite: AIT 1501 or Consent of Instructor. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 290 (0.1 - 5) Course ID: 005965
Instructor Consent Required Selected Topics in Advanced Integrated Technology
Includes selected topics in integrated technology, due to rapidly changing technology or in response to local needs. Covers topics which vary from semester to semester at the discretion of the instructor. May repeat course with different topics to a maximum of five credit hours. Prerequisite: Consent of Instructor. Lecture/Lab: Varies by topic.
Components: Lecture

AIT 1001 (2) Course ID: 006150
Basic Electrical Knowledge
Provides introductory theory and application of DC/AC circuits, control transformers, and operation of DC power supplies. Prerequisite: Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/ Lab: 2 credits (45 contact hours).
Components: Lecture

AIT 1002 (1) Course ID: 006151
Power Development
Introduces electrical power systems used in industrial settings, including basic theory and application of DC generators, alternators, and electric motors. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or completion of AIT 1001 or consent of instructor. Lecture/Lab: 1 credit (22.5 contact hours).
Components: Lecture

AIT 1003 (1) Course ID: 006152
Hydraulic/Pneumatic Fundamentals
Introduces basic theory and application of hydraulic and pneumatic industrial power systems. Prerequisite: Reading assessment exam scores above KCTCS developmental
Placement level or successful completion of prescribed developmental courses or completion of AIT 1002 or consent of instructor. Lecture/Lab: 1 credit (22.5 contact hours).

Components: Lecture

AIT 1101 (1) Course ID: 006153
Electrical Power Distribution
Provides instruction in the use of electrical power as it applies in industry. Includes AC/DC circuit analysis, AC power generation and three-phase distribution systems, and transformers. Prerequisite: AIT 100 or consent of instructor. Lecture/Lab: 1.0 credits (45 contact hours).

Components: Lecture

AIT 1102 (2) Course ID: 006154
Fluid Power Distribution
Provides instruction in the use of hydraulic and pneumatic power as it applies to industry. Includes basic principles of pressure and flow, basic hydraulic/pneumatic circuits including pumps, valves, cylinders, and motors. Prerequisite: Reading assessment scores above KCTCS developmental placement level; or successful completion of prescribed developmental courses; or AIT1101; or consent of instructor. Lecture/Lab: 2.0 credit (45 contact hours).

Components: Lecture

AIT 1201 (1) Course ID: 006155
Electrical Installation
Focuses on the installation of electrical industrial systems, including print reading, wiring/box selection, component installation, raceways and conduit, control wiring, and wiring techniques. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 1 credit (25 contact hours).

Components: Lecture

AIT 1202 (1) Course ID: 006156
Piping, Pneumatic, & Installation
Focuses on the installation of pneumatic industrial systems, including interpretation of drawings and diagrams, fabrication of pipe and pipefittings, pneumatic supply lines, piping safety, and pipe installation for pneumatic systems. Prerequisite: AIT 1201 or consent of instructor. Lecture/Lab: 1 credit (25 contact hours).

Components: Lecture

AIT 1203 (1) Course ID: 006157
Mechanical Installation
Includes motor and machine mounting, speed, torque, power measurement, and various lifting and rigging techniques. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 1 credit (25 contact hours).

Components: Lecture

AIT 1301 (2) Course ID: 006158
Principles of Instrumentation
Introduces measurement and instrumentation concepts and applications by examining the four main components of instrumentation: temperature, pressure, flow, and level. Prerequisite: (MT 120 or higher) OR consent of instructor. Lecture/Lab: 2.0 credit (45.0 contact hours).

Components: Lecture

AIT 1302 (2) Course ID: 006159
Integrated Process Control
Covers measurement and instrumentation concepts and applications and introduces the concept of loop controls and the proper calibration of loops. Examines the importance of PID controllers in a control loop. Prerequisite: (MT 120 or higher) OR consent of instructor. Lecture/Lab: 2 credits (45 contact hours).

Components: Lecture

AIT 1401 (2) Course ID: 006161
Basic Electrical Controls
Provides instruction in the integrated application of basic electrical controls including electrical motor controls with starting, reversing, and stopping devices. Prerequisite: AIT 100 or AIT 1001 or consent of instructor. Lecture/Lab: 2 credits (45 contact hours).

Components: Lecture

AIT 1402 (1) Course ID: 006162
Basic Pneumatic Controls
Introduces the student to pneumatic speed control circuits. Uses air pressure regulators and flow controls to obtain cylinder speeds. Prerequisite: AIT 100 or AIT 1003 or consent of the instructor. Lecture/Lab: 1 credit (22.5 contact hours).

Components: Lecture

AIT 1403 (1) Course ID: 006163
Basic Hydraulic Controls
Provides instruction in hydraulic speed and pressure control; includes flow control valves, metering circuits, pressure reducing valves, and sequence valves. Prerequisite: AIT 100 or AIT 1003 or consent of the instructor. Lecture/Lab: 1 credit (22.5 contact hours).

Components: Lecture

AIT 1501 (2) Course ID: 006164
Intermediate Electrical Controls
Provides instruction in the integrated application of advanced industrial controls for electrical systems. Emphasizes variable frequency drives, proximity sensors, SCR speed controls. Prerequisite: AIT140 or AIT1401 or consent of instructor. Lecture/Lab: 2 credits (45 contact hours).

Components: Lecture

AIT 1502 (1) Course ID: 006165
Intermediate Pneumatic Controls
Provides instruction in the integrated application of advanced industrial controls for pneumatic systems. Emphasizes pneumatic logic circuits. Prerequisite: AIT 140 or AIT 1402 or consent of instructor. Lecture/Lab: 1 credit (22.5 contact hours).

Components: Lecture

AIT 1503 (1) Course ID: 006166
Intermediate Hydraulic Controls
Provides instruction in the integrated application of advanced industrial controls for hydraulic circuits. Emphasizes hydraulic synchronization circuits and multi-pressure circuits. Prerequisite: AIT 140 or AIT 1402 or consent of instructor. Lecture/Lab: 1 credit (22.5 contact hours).

Components: Lecture

AIT 1901 (1) Course ID: 006562
Water and Steam Systems
Provides instruction in the main components and integration of water and steam systems within a fossil fuel power plant. (Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR consent of instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

AIT 1902 (1) Course ID: 006563
Air and Gas Flows
Provides instruction in the main components and integration of air and gas flows within a fossil fuel power plant. (Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR consent of instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

AIT 1903 (1) Course ID: 006564
Power Distribution
Provides instruction in the main components and integration of the power distribution of a fossil fuel power plant. (Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR consent of instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

AIT 2001 (2) Course ID: 006167
Integrated Process Management
Emphasizes project team organization. Introduces the following concepts: cycle time, production time, first pass yield, and barrier identification/Pre-requisite: AIT 130 or Consent of Instructor. Lecture/Lab: 2 credits (45 contact hours).

Components: Lecture

AIT 2002 (2) Course ID: 006168
Quality Control and SPC
Introduces quality control including understanding acceptance criteria with tolerances, data collection, and data reporting. Prerequisite: AIT 130 or Consent of Instructor. Lecture/Lab: 2 credits (45 contact hours).

Components: Lecture

AIT 2101 (1) Course ID: 006169
Predictive/Predictive Maintenance and Lubrication
Focuses on maintenance techniques and procedures used with advanced and highly technical industrial machinery. Prerequisite: Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Lecture

AIT 2102 (1) Course ID: 006170
Power Transmission Systems
Focuses on maintenance techniques and procedures used with advanced and highly technical industrial machinery including v-belt and shaft drives, couplings, chain drives, bearings and seals, brakes and clutches. Prerequisite: Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Lecture

AIT 2103 (2) Course ID: 006171
Advanced Mechanical
Focuses on troubleshooting techniques necessary for advanced and highly technical industrial machinery. Prerequisite: Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Lecture

AIT 2201 (1) Course ID: 006566
Nuclear Power Plant Operations
Provides instruction to students on the operation of a nuclear power plant. Gives an overview of how a nuclear power plant operates and principles behind its operation. Pre-requisite: AIT 190 or Consent of Instructor. Lecture: 1.0 (15.0 Contact hours).

Components: Lecture

AIT 2202 (1) Course ID: 006567
Hydro and Wind Energy Systems
Provides instruction to students on the operation of a hydro and wind turbine power plants. Gives an overview of how a hydro and wind turbines power plant operates and principles behind its operation. Pre-requisite: AIT 190 or Consent of Instructor. Lecture: 1.0 (15 contact hours).

Components: Lecture

AIT 2203 (1) Course ID: 006568
Solar and Biomass Energy Systems
Gives an overview of several forms of solar and bio-mass energy systems. Provides in-depth study of benefits of renewable energy and struggles of implementation. Prerequisite: AIT 190 or Consent of Instructor. Lecture: 1.0 (15 contact hours).

Components: Lecture

AIT 2301 (1) Course ID: 006570
Power Plant Management
Examines power plant troubleshooting skills, and power plant process management aptitudes. Pre-requisite: AIT 220 OR Consent of Instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture
AIT 2302 (1) Course ID: 006571
Power Plant Practicum
Demonstrates proper resume and interview skills. Includes shadowing of a power plant technician in the field for 60 hours. Pre-requisite: AIT 190 and AIT 220 or Consent of Instructor. Practicum: 1 credit (60 contact hours).
Components: Practicum

AIT 2303 (1) Course ID: 006572
Edison Electrical Institute Exam Prep Course
Prepares students to take the Edison Electrical Institute Exam which is a job requirement for employment as a power plant technician. Pre-requisite: AIT 220 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

AIT 2701 (1) Course ID: 006943
Introduction to PLCs
Examines fundamental architecture of programmable logic controllers as it pertains to industrial applications and incorporates ladder logic principles, commonly used instruction language, editing, program navigation and program analysis. Pre-requisite: AIT 1901 or Consent of Instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).
Components: Lecture
Campus: MDC

AMS American Military Studies

AMS 101 (2) Course ID: 000907
Introduction to the Army
This introductory level course is designed to give students an appreciation for the role the Army currently plays in our society. The course covers the history of the Army and the roles and relationships of the Army within our society. The course also covers some of the basic skills necessary for today's leaders to include oral presentation, time management, map reading, basic rifle marksmanship and squad tactics.
Components: Lecture

AMS 102 (2) Course ID: 000782
Introduction to Leadership
This course is designed to acquaint the student with the fundamental skills necessary to be a leader, both in military and civilian context. Course also covers basic military map reading skills. Prerequisites: None.
Components: Lecture

AMS 211 (2) Course ID: 004854
Advanced Leadership I
This course focuses on both theoretical and practical aspects of leadership. Students will examine topics such as written and oral communication, effective listening, assertiveness, personality, adult development, motivation, and organizational culture and change. Lecture: 2 credits (30 contact hours).
Components: Lecture

AMS 250 (1) Course ID: 005380
Basic Military Science Lab
A hands-on practicum which exposes the student to the military skills required for basic technical and tactical competence to enter the Advanced Course. Laboratory, two hours per week and two week-end exercises. May be repeated to a maximum of four credits. Practicum: 1 credit (32 contact hours).
Components: Practicum

AMT Aviation Maintenance Technology

AMT 100 (1) Course ID: 004348
Mathematics
Instruction on the aerodynamic and physical forces acting on an aircraft in flight to be taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (75:1 ratio/37 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture

AMT 101 (1) Course ID: 004349
Theory of Flight
Instruction on the aerodynamic and physical forces acting on an aircraft in flight to be taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.75 credits (11 contact hours) Lab: 0.25 credits (15:1 ratio/4 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture

AMT 102 (1) Course ID: 004350
Aircraft Weight and Balance
Teaches knowledge and skills necessary in measuring, calculating, and documenting aircraft weight and balance. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (75:1 ratio/37 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture

AMT 103 (1) Course ID: 004351
Cleaning and Corrosion Control
Provides instruction in the identification, cause, prevention, removal and treatment of corrosion. Also, includes interior and exterior cleaning of the aircraft. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (75:1 ratio/37 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture

AMT 104 (1) Course ID: 004352
Basic Electricity
Provides instruction in basic electricity theory, concepts, components, physics, meter operation and use, battery construction and servicing. Will be taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (90:1 ratio/45 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture

AMT 105 (1) Course ID: 004353
Fluid Lines and Fittings
Provides an understanding of basic hydraulic functions, the fabrication of tubing and flex hoses as well as seal comparability. Taught by lectures, demonstrations, worksheets, reading assignments and projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture

AMT 106 (1) Course ID: 004354
Aircraft Drawing and Blueprint Reading
Provides instruction in reading and interpretation of basic industrial and aircraft blue prints. This is taught by lecture, demonstration, worksheet, reading assignments and projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture

AMT 107 (1) Course ID: 004355
Physics
Provides instruction in basic principles of physics as related to aviation maintenance. This is taught by lecture, demonstration, worksheet, reading assignments and projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture

AMT 108 (1) Course ID: 004356
Ground Handling and Servicing
Basic handling and ground service techniques of the aircraft taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture
Course ID: 004365

Provides instruction in the inspection, testing, repair,
selection, and installation of aircraft fabric covering.
Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1
ratio/22 contact hours) Prerequisite: AMT 100, 101, 102,
All AMT courses must be achieved with a grade of C or
greater.
Components: Lecture

AMT 211 (1)
Aircraft Finishes

Course ID: 004366

Provides instruction in the identification, application and
inspection of aircraft finishing materials. Lecture: 0.5
credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22
contact hours) Prerequisite: AMT 100, 101, 102, 103,
104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT
courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 213 (1)
Assembly and Rigging

Course ID: 004367

Covers the methods and techniques used in the assembly
of subunits and major components of the airframe. Also
covers the rigging of primary, secondary and auxiliary
control surfaces. Lecture: 0.5 credits (8 contact hours) Lab:
0.5 credits (90:1 ratio/45 contact hours) Prerequisite: AMT
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112,
and 113. All AMT courses must be achieved with a grade
of C or greater.
Components: Lecture

AMT 215 (1)
Airframe Inspection

Course ID: 004368

Instruction includes inspection of airframes to determine
airworthiness. Lecture: 0.5 credits (8 contact hours) Lab:
0.5 credits (45:1 ratio/22 contact hours) Prerequisite: AMT
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112,
and 113. All AMT courses must be achieved with a grade
of C or greater.
Components: Lecture

AMT 221 (2)
Course ID: 004369
Hydraulic and Pneumatic Power Systems

Repair of hydraulic and pneumatic power systems
Components: identify and select hydraulic fluids; and
inspect, check, service, troubleshoot, and repair hydraulic
and pneumatic power systems. Lecture: 1 credit (15
contact hours) Lab: 1 credit (75:1 ratio/75 contact hours)
Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107,
108, 109, 111, 112, and 113. All AMT courses must be
achieved with a grade of C or greater.
Components: Lecture

AMT 223 (1)
Aircraft Landing Gear Systems

Course ID: 004370

Inspect, check, service and repair landing gear, retraction
systems, shock struts, bakes, wheels, tires, and steering
system. Instruction provided by lecture, demonstration, and
practical projects. Lecture: 0.5 credits (8 contact hours)
Lab: 0.5 credits (90:1 ratio/45 contact hours) Prerequisite:
AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109,
111, 112, and 113. All AMT courses must be achieved with
a grade of C or greater.
Components: Lecture

AMT 225 (2)
Aircraft Electrical Systems

Course ID: 004477

Checking, inspecting, troubleshooting and repair of aircraft
electrical system and system components are included.
Instruction is provided by lecture, demonstration, and
practical projects. Lecture: 0.5 credits (8 contact hours)
Lab: 1.5 credits (75:1 ratio/112 contact hours) Prerequisite:
AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109,
111, 112, and 113. All AMT courses must be achieved with
a grade of C or greater
Components: Lecture

AMT 227 (1)
Course ID: 004371
Communication and Navigation Systems
Discussion, inspection, and troubleshooting navigational
and communication systems is included. Lecture: 0.5
credits (8 contact hours) Lab: 0.5 credits (30:1 ratio/15
contact hours) Prerequisite: AMT 100, 101, 102, 103,

104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT
courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 229 (1)
Aircraft Fuel Systems

Course ID: 004372

Checking, inspection, servicing, repair and troubleshooting
fuel systems and components are covered. Types of
fuels used in various aircraft. Discussion of the problems
associated with fueling and various techniques in fueling
are included. Lecture: 0.5 credits (8 contact hours) Lab: 0.5
credits (90:1 ratio/45 contact hours) Prerequisite: AMT 100,
101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and
113. All AMT courses must be achieved with a grade of C
or greater.
Components: Lecture

AMT 231 (1)
Course ID: 004373
Cabin Atmospheric Control Systems

Checking, inspection, servicing, repair, and troubleshooting
of the heating, cooling, air conditioning, pressurization,
and oxygen systems are included. Lecture: 0.5 credits (8
contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours)
Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107,
108, 109, 111, 112, and 113. All AMT courses must be
achieved with a grade of C or greater.
Components: Lecture

AMT 233 (1)
Ice and Rain Control Systems

Course ID: 004374

Rain and ice control and removal systems are included.
Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (15:1
ratio/7 contact hours) Prerequisite: AMT 100, 101, 102,
All AMT courses must be achieved with a grade of C or
greater.
Components: Lecture

AMT 235 (1)
Fire Protection Systems

Course ID: 003985

Fire detection and extinguishing systems are included.
Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (15:1
ratio/7 contact hours). Prerequisite: AMT 100, 101, 102,
All AMT courses must be achieved with a grade of C or
greater.
Components: Lecture

AMT 237 (1)
Position and Warning Systems

Course ID: 004375

Inspecting, checking, troubleshooting and repair of
heading, speed, altitude, time, attitude, temperature,
pressure and position indicating systems and installation of
instruments. Inspection, checking and servicing of speed
and take-off warning systems, electrical brake controls,
antiskid systems, and autopilot systems. Lecture: 0.5
credits (8 contact hours) Lab: 0.5 credits (15:1 ratio/7
contact hours) Prerequisite: AMT 100, 101, 102, 103,
104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT
courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 239 (1)
Aircraft Instrument Systems

Course ID: 004376

Check, inspect and troubleshoot the pitot/static system,
floating compass system and the gyros used for flight
instruments. Discussion of the role of mechanics when
working with precision instruments is included. Lecture:
0.5 credits (8 contact hours) Lab: 0.5 credits (15:1 ratio/7
contact hours) Prerequisite: AMT 100, 101, 102, 103,
104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT
courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 241 (4)
Turbine Engines

Course ID: 004377

Construction, repair and overhaul of turbine engines is
included. Lecture: 2 credits (30 contact hours) Lab: 2
credits (60:1 ratio/120 contact hours) Prerequisite: AMT
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112,
and 113. All AMT courses must be achieved with a grade
of C or greater.
Components: Lecture

AMT 243 (3)
Course ID: 004378
Reciprocating Engine Theory and Operation

Theory and development of the aircraft internal combustion
engine as well as instruction in the use of engine
construction and repair are covered. Lecture: 0.5 credits
(8 contact hours) Lab: 2.5 credits (45:1 ratio/112 contact
hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105,
106, 107, 108, 109, 111, 112, and 113. All AMT courses
must be achieved with a grade of C or greater.
Components: Lecture

AMT 245 (1)
Engine Inspection

Course ID: 004379

The operation and inspection of turbine engines is covered.
Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1
ratio/22 contact hours) Prerequisite: AMT 100, 101, 102,
All AMT courses must be achieved with a grade of C or
greater.
Components: Lecture

AMT 247 (4)
Course ID: 004380
Reciprocating Engine Overhaul

Inspection, checking, servicing and the repair of opposed
and radial engines and reciprocating engine installation
will be taught by lecture, demonstration, student feedback
and participation. Lecture: 2 credits (30 contact hours) Lab:
2 credits (60:1 ratio/120 contact hours) Prerequisite: AMT
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112,
and 113. All AMT courses must be achieved with a grade
of C or greater.
Components: Lecture

AMT 251 (1)
Course ID: 004381
Engine Fuel System Components

Operation, inspection and repair of fuel systems
and components of aircraft fuel systems, by reading
assignments, worksheets, lecture, demonstration and
practical projects. Lecture: 0.5 credits (8 contact hours)
Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite:
AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109,
111, 112, and 113. All AMT courses must be achieved with
a grade of C or greater.
Components: Lecture

AMT 253 (1)
Engine Fuel Metering Systems

Course ID: 004382

AMT 255 (1)
Induction Systems

Course ID: 004383

AMT 257 (1)
Engine Cooling Systems

Course ID: 004384

Operation, inspection and repair of fuel metering systems
are taught by reading assignments, worksheets, lecture,
demonstration and practical projects. Lecture: 0.5 credits
(8 contact hours) Lab: 0.5 credit (75:1 ratio/37 contact
hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105,
106, 107, 108, 109, 111, 112, and 113. All AMT courses
must be achieved with a grade of C or greater.
Components: Lecture
Inspection, checking, troubleshooting, servicing and repair
of engine ice and rain control systems, heat exchangers,
superchargers, carburetor air intake and induction
manifolds are taught by reading assignments, worksheets,
lecture, demonstration and practical projects. Lecture: 0.5
credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22
contact hours) Prerequisite: AMT 100, 101, 102, 103,
104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT
courses must be achieved with a grade of C or greater.
Components: Lecture
Inspection and repair of engine cooling system
components are taught by reading assignments,
worksheets, lecture, demonstration and practical projects.
Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1
ratio/7 contact hours) Prerequisite: AMT 100, 101, 102,
All AMT courses must be achieved with a grade of C or
greater.
Components: Lecture

217

Introduction

AMT 209 (1)
Aircraft Covering


AMT 259 (1) Course ID: 004385
Engine Exhaust Systems
Inspection and repair of engine exhaust system components are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 261 (1) Course ID: 004386
Engine Instrument Systems
Troubleshooting, servicing and repair of fluid flow and heat transfer systems and repair of engine temperature, pressure, and r.p.m. indicating systems are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 263 (1) Course ID: 004387
Fire Protection Systems
Inspecting, checking, servicing, troubleshooting, and repair of fire extinguishers, fire detection and extinguishing systems are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 265 (2) Course ID: 004388
Engine Electrical Systems
Repair of engine electrical systems and components, and to install, check, and service engine electrical wiring, controls, switches, indicators, and protective devices by lecture, reading assignments, demonstration and practical projects. Lecture: 1 credit (15 contact hours) Lab: 1 credit (60:1 ratio/60 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 267 (1) Course ID: 004389
Engine Ignition Systems
Operation and overhaul of magneto and ignition harness; repair of engine ignition system components; and inspect, check, service, troubleshoot, and repair reciprocating and turbine engine ignition systems by lecture, reading assignments, worksheets, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 269 (1) Course ID: 004390
Lubrication Systems
Purpose, use, and selection of lubricants; repair engine lubrication system components; and inspect, check, service, troubleshoot and repair engine lubrication systems taught by lecture, reading assignments, worksheets, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (150:1 ratio/75 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of C or greater.
Components: Lecture

AMT 271 (1) Course ID: 004391
Propellers
Inspection, checking, servicing, and repair of propeller synchronization and ice control systems are included. Students will identify and select propeller lubricants, balance propellers, and repair propeller control system components. Inspection, checking, servicing, and repair of
APT 102 (4) Course ID: 004540
Process Fundamentals
Presents fundamental knowledge necessary for process operations. Develops an understanding of the basic principles of process operations. Covers the fundamental areas of physics, chemistry, and mathematics necessary to understand the control process in industry. Includes topics on fluid behavior, fluid in motion, piping and valves, and the laws and nature of heat. Prerequisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (120 contact hours).

Components: Laboratory, Lecture

APT 104 (3) Course ID: 004537
Rotating and Reciprocating Equipment
Presents fundamental knowledge necessary for process operations and entry-level maintenance personnel. Develops an understanding of mechanical energy and the way it is put to use in industrial applications. Covers various forms of energy and how this energy can be converted to perform work. Includes topics on operating instructions, basic troubleshooting skills, and basic maintenance skills typically performed by personnel on pumps, compressors, and prime movers. Prerequisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (120 contact hours).

Components: Laboratory, Lecture

APT 106 (2) Course ID: 004538
Process Chemistry
Presents fundamental knowledge of chemistry necessary for process operations. Focuses on the basics of chemistry as they apply to water treatment and hydrocarbon processing. Includes, but are not limited to: basic chemical terminology, molecular formulas, structural formulas, common chemical symbols, and the chemical nature of the operator's job, work environment, and products. Prerequisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

APT 108 (2) Course ID: 004539
Stationary Equipment
Presents fundamental knowledge in the operation and troubleshooting of stationary equipment. Provides a solid foundation on which to build sound maintenance and operations programs. Covers common equipment designs, operating instructions, troubleshooting aids to help identify malfunction, and handling emergency situations and routine scheduled maintenance. Includes topics on heat exchangers, heat transfer, cooling towers, and refrigeration. Prerequisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

APT 142 (4) Course ID: 004541
Instrumentation
Develops an understanding of how to control and operate processes. Involves work on real life simulators to ensure an understanding of process operations has been achieved. Covers measurement fundamentals and control strategies as applied to unit operations, industrial chemical operations, and operating tactics and strategies. Provides basic instruction in process control instrumentation as it relates to the manufacturing operations and will promote smoother, more efficient control of automated systems. Prerequisite: APT 108 with a grade of “C” or greater OR Instructor Consent. Lecture/Lab: 4.0 credits (105 contact hours).

Components: Lecture

APT 144 (4) Course ID: 004542
Process Operations
Develops an understanding of modern processing techniques, practical examples of normal and abnormal operating situations, and advanced training in enhancing productivity while cutting operating costs. Provides maintenance personnel and technicians an understanding of the overall process and their roles in maintaining efficient production rates. Involves work on real life simulators to insure an understanding of process operations. Includes unit operations, industrial chemical operations, and a variety of equipment used in industrial processes. Prerequisite: APT 108 with a grade of “C” or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (120 contact hours/60:1 ratio).

Components: Laboratory, Lecture

APT 146 (2) Course ID: 004543
Process Applications
Develops an understanding of how to control and operate processes. Involves work on real life simulators to insure an understanding of process operations. Includes a study of interactive control strategies in unit operations, industrial chemical operations, and compressor operations and applications. Prerequisite: APT 108 with a grade of “C” or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours).

Components: Lecture

APT 148 (2) Course ID: 004544
Process Operation Safety
Develops an understanding of how to safely start-up, shutdown, control and operate industrial processes. Includes safe operating tactics and strategies, and procedures as they apply to unit operations and industrial chemical operations. Prerequisite: APT 108 with a grade of “C” or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours).

Components: Lecture

APT 154 (6) Course ID: 005336
Power Plant Practice
Develops an understanding of power plant basics, systems, and equipment and how they are utilized to safely start-up, shutdown, control, and operate a power generation unit. Includes safe operating tactics, strategies, and procedures as they apply to normal and abnormal unit operations. Applies various safety and protection equipment and procedures to unit operations. Prerequisite: APT 108 with a grade of “C” or greater. Lecture: 4 credits (60 contact hours). Laboratory: 2 credits (120 contact hours).

Components: Laboratory, Lecture

APT 156 (2) Course ID: 005337
Power Plant Protection
Develops an understanding of how to safely start-up, shutdown, control, and operate a power generation unit. Includes safe operating tactics, strategies, and procedures as they apply to unit operations and various safety and protection equipment incorporated into unit operations. Prerequisite: APT 108 with a grade of “C” or greater. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (60 contact hours).

Components: Laboratory, Lecture

APT 158 (3) Course ID: 005510
Lineman Technology I
Trains the student in the use of and/or assembly of materials, tools, and equipment common to the electric utility industry. Provides an overview of the energy delivery system, personal responsibility in regard to safety and job requirements, qualifies the student to climb poles, and trains the student to perform tasks typically required of entry-level apprentices. Prerequisite: APT 108 or Consent of Instructor. Corequisite: APT 159, EET 150, EET 151. Lecture: 3 credits (45 contact hours).

Components: Lecture

APT 159 (4) Course ID: 005511
Lineman Technology I Lab
Provides hands-on experience in the use of and/or assembly of materials, tools, and equipment common to the electric utility industry. Provides an opportunity for the student to climb poles and perform tasks typically required of entry-level apprentices. Prerequisite: APT 108 or Consent of Instructor. Corequisite: APT 158, EET 150, EET 151. Laboratory: 4 credits (240 contact hours).

Components: Laboratory

APT 202 (3) Course ID: 004545
Federally Mandated Training
Presents a fundamental knowledge of OSHA, EPA and DOT regulations as concerned with hazardous waste generators and the fundamental knowledge necessary for process operations to qualify for hazardous response to incidents. Covers the required skills to qualify them for HAZWOPER Operations level response. Includes, but are not limited to: HAZCOM, HAZWOPER Operations level, personal protective equipment, working at elevated heights, respirators, SCBAs, and specific hazardous materials. Prerequisite: Consent of Instructor. Lecture/Lab: 2.0 credits (90 contact hours).

Components: Lecture

APT 204 (1) Course ID: 004546
Safety Skills Training
Presents a fundamental knowledge of OSHA, EPA and DOT regulations as concerned with hazardous waste generators. This fundamental knowledge is necessary for process operations to qualify for hazardous response to incidents. The student will be trained in the required skills to qualify them for HAZWOPER Operations level response. The course studies include, but are not limited to: Hazcom, Hazwoper Operations level, personal protective equipment, working at elevated heights, respirators, SCBAs, and specific hazardous materials. (This course will be presented in a semester format.) Prerequisite: APT 148 with a grade of “C” or greater. Corequisite: APT 202. Laboratory: 1 credit (60 contact hours/60:1 ratio).

Components: Laboratory

APT 251 (2) Course ID: 001036
Application of Process Operations
Prepares the student to demonstrate a working knowledge of the application of the various components involved in process operations. Prerequisite: Instructor Consent. Lecture/Lab: 2.0 credits (75 contact hours).

Components: Lecture

APT 258 (3) Course ID: 005512
Lineman Technology II
Expands training in the use of and/or assembly of materials, tools, and equipment common to the electric utility industry. Provides pole top rescue techniques, kilo-Watt Hour (KWH) meter reading, installation of overhead service, voltage testing, operation of bucket trucks, splicing and the application of knowledge and skills typically required of intermediate-level apprentices. Prerequisite: APT 158, APT 159, EET 150, EET 151. Corequisite: APT 259. Lecture: 3 credits (45 contact hours).

Components: Lecture

APT 259 (4) Course ID: 005513
Lineman Technology II Lab
Provides hands-on experience in the use and/or assembly of intermediate materials, tools, and equipment common to the utility industry. Provides an opportunity for the student to load/unload and set poles, operate bucket truck and other hydraulic equipment, and perform tasks typically required of intermediate-level apprentices. Prerequisite: APT 158, APT 159, EET 150, EET 151. Corequisite: APT 258. Laboratory: 4 credits (240 contact hours).

Components: Laboratory

APT 291 (2 - 3) Course ID: 001037
Instructor Consent Required Special Problems in Applied Process Technologies
Provides additional experience in identified areas of student's need. The subject area and/or tasks must be approved by an assigned instructor. Must also have a component where the student is evaluated by an industry professional. Prerequisite: Consent of Instructor. Discussion: 2.0 - 3.0 credits (45-135 contact hours).

Components: Discussion

APT 299 (1 - 6) Course ID: 001039
Instructor Consent Required Cooperative Education Program
For students approaching the major career transition from college to work as a co-op student. Provides supervised-on-the-job work experience related to the student's educational objectives. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Consent of Instructor. Co-Op: 1-6 credits (75-450 contact hours).

Components: Co-Op
ART 100 (3) Course ID: 000049
Introduction to Art
Provides a basic overview of the study, language, history and cultural relevance of visual art and is designed primarily for non-art majors. Utilizes visually-enhanced lectures and may include optional introductory studio experiences.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ART 104 (3) Course ID: 004346
Introduction to African Art
Examines the arts of Africa, including sculpture, painting, pottery, textiles, architecture, altar arts, human adornment and performance art, on the basis of style, iconography, and function, and in relation to religious, political, market and daily contexts. Explores the ways in which Africa has been conceived and deconstructed the assumptions shaping each approach. Addresses the processes (and problems) of collecting and displaying African art throughout the course. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities

ART 105 (3) Course ID: 000035
Ancient Through Medieval Art History
Surveys the historical development of art and architecture with primary emphasis on cultures of Egypt, Western Asia, Greece, Rome and Medieval Europe. Pre-requisite: English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ART 106 (3) Course ID: 000036
Renaissance Through Modern Art History
Surveys the historical development of Western art and architecture from the 14th Century through the present. Pre-requisite: English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ART 110 (3) Course ID: 004110
Drawing I
Introduction to basic drawing skills and concepts. Projects in line, value, space and composition are among the topics that will be explored in a variety of media. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 112 (3) Course ID: 004111 2-Dimensional Design
Investigates design principles of balance, unity and variety, emphasis, rhythm, and their application to the elements of art, including line, shape, value and color. Uses a variety of media. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 113 (3) Course ID: 004112 3-Dimensional Design
Investigates three-dimensional form and spatial design, including line, plane, mass, surface and structure. Includes the study of various materials, tools, and sculptural techniques. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 121 (3) School Art
Introduction to art and to the teaching of art in the lower (1-3) elementary grades.
Components: Laboratory, Lecture
Campus: MYC

ART 201 (3) Course ID: 000621
Ancient Art History
Examines the art and architecture of the ancient Mediterranean, focusing on one or more of the cultures of Greece, Rome, Egypt, and the Near East. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course (s)) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ART 202 (3) Course ID: 000457
Medieval Art History
Examines the architecture, sculpture, painting, and related arts from the rise of Christianity to the beginnings of the Renaissance. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course (s)) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ART 203 (3) Course ID: 000186
Renaissance Art History
Examines the art in Europe from the 14th to 18th centuries, with emphasis on the major styles, artists, and developments from the early Renaissance through the age of the Baroque. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course (s)) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ART 204 (3) Course ID: 000806
Modern Art History
Examines the visual arts from the 18th through the 20th centuries, with primary emphasis on Europe and the United States. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course (s)) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ART 208 (3) Course ID: 00017
Introduction to Art Education
Investigates the theoretical, historical, psychological, and sociological foundations of art education in a lecture/lab format. Provides a critical examination of individual and group activities currently offered in the elementary school art program and includes lectures, curriculum design, evaluation of processes and techniques. Exploration and analysis of design, media and concepts, with special attention to classroom application. ART 208 satisfies the state art requirement for general elementary teacher requirement certification (4 hours of field work required). Lecture: 1 hour; Laboratory: 2 hours.
Components: Laboratory, Lecture

ART 210 (3) Course ID: 004114
Drawing II
Advanced studio investigation of drawing techniques and concepts. Projects in line, value, composition and space will be investigated through individual development of style and expression, with extensive use of figure models. Pre-requisite: ART 110. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 211 (3) Course ID: 004113
Life Drawing
Introduces basic life drawing skills and concepts. Explores topics such as projects in line, value, space, and composition in a variety of media with the human form as the subject matter. Includes drawings in class from a nude human model. Pre-requisite: ART 110. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture

ART 220 (3) Course ID: 004115
Painting I
Studio investigation of the technical and formal concerns of painting, including an understanding of color theory, materials, paint application, and image making. Pre-requisite: ART 110 or Consent of Instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 221 (3) Course ID: 004116
Painting II
Includes advanced studio investigation of the technical and formal concerns of painting. Continues the development of individual style and expression. Pre-requisite: ART 220. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 231 (3) Course ID: 007075
Jewelry/Metals I
Introduces the aesthetic and technical issues relating to basic metalworking techniques such as sawing, filing, piercing, forging, forming, soldering, and finishing. Emphasizes demonstrations and hands-on work to present the concepts of metal manipulation. Emphasizes instructor-led critiques. Provides an introduction to historical and contemporary metal work. Lecture/Lab: 3.0 credit (90 contact hours).
Components: Lecture
Campus: WKCTC

ART 232 (3) Course ID: 007076
Jewelry/Metals II
Continues the development of techniques introduced in Jewelry/Metals I. Emphasizes problem-solving skills and the development of personal creativity. Stresses the aesthetic and technical issues relating to raising, enameling, forging, casting, and more advanced sculptural processes. Includes discussion and critique as integral parts of the coursework. Pre-requisite: ART 231 or Consent of Instructor. Lecture/Lab: 3.0 credit (90 contact hours).
Components: Lecture
Campus: WKCTC

ART 240 (3) Course ID: 004117
Ceramics I
Introduces a variety of forming and finishing techniques used in working with clay and glaze. Hand building, wheel throwing, surface alteration and glazing will be investigated, along with a brief overview of ceramic history, aesthetics and studio safety. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
ART 241 (3) Course ID: 004118
Ceramics II
Continues studio investigation of ceramic techniques in hand-building and/or wheel throwing, glazing, surface decoration, glazing and firing. Continued development of individual style and personal expression. Prerequisite: ART 240. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 245 (3) Course ID: 000050
Beginning Ceramics
Introduction to ceramic forms in hand-building, wheel throwing, glazing, and decorative techniques. A major objective is to help students understand and appreciate art (and ceramics, specifically) and to begin to produce work of personal significance. An accompanying objective is to expose students to traditional techniques and historical perspectives of claywork along with contemporary approaches.
Components: Laboratory, Lecture
Campus: MYC

ART 250 (3) Course ID: 004119
Sculpture I
Studio investigation of the technical and formal concerns of three-dimensional expression. Basic sculptural methods of modeling, casting, carving and assembling will be explored in a variety of media. Prerequisite: ART 110, ART130. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 261 (3) Course ID: 006207
Sculpture II
Continues the development of sculptural techniques started in Sculpture I. Exploration of subject matter and personal creativity will be emphasized. Students will develop and utilize problem solving skills. Prerequisite: ART 260 or consent of instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 270 (3) Course ID: 006208
Printmaking I
Introduces the possibilities and potential of the printmaking media for generating fine arts ideas and images. Explores traditional and contemporary printmaking processes of monotype and monoprint, relief, lithography, intaglio, and stencil. Covers black and white and multiple color printing methods. Introduces printmaking vocabulary and aesthetics. Prerequisite: (ART 110 and ART 120) or consent of instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 271 (3) Course ID: 006209
Printmaking II
Explores concepts and techniques in intaglio, lithography, screen-print and/or relief printing with an introduction to contemporary computer/digital aided printmaking processes. Stresses individual expression by creating original imagery while continuing to learn about printmaking as a process. Emphasizes two-dimensional design and color theory concepts and drawing skills. Prerequisite: ART 270 or permission of instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 280 (3) Course ID: 006210
Beginning Film Photography
Introduces black and white film photographic processes including the use of a camera and the darkroom. Stresses technical and compositional aspects of photography as an art medium. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 281 (3) Course ID: 006211
Digital Photography I
Introduction to the skills, techniques and applications needed to create and manipulate digital photographs and to develop an understanding of photography as a fine art medium. Instruction will include the use of the digital camera and its controls to compose and capture photographs, scanning, printing and using Adobe Photoshop as a “digital darkroom”. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 282 (3) Course ID: 006212
Digital Photography II
Emphasizes the creation of fine art photographs that reflect the intent and vision of the photographer. Stresses the technical and aesthetic issues relating to image capture, manipulation, printing and presentation. Explores visual and conceptual skills, professional workflow and photographic history. Prerequisite: ART 281 or permission of instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture

ART 290 (3) Course ID: 006213
Survival Skills for Artists
Introduces skills needed to attain a higher level of education and/or a career in the visual arts. Explores the wording and formatting of credentials and statements. Covers the critical language of art, digital and printed portfolios, exhibiting artwork, marketing, career opportunities, the hazards of art materials and setting up an art studio. Prerequisite: 9 credits of ART 100 / 200 level classes or permission of instructor. Lecture: 2 credits (30 contact hours), Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

ART 299 (1 - 3) Course ID: 006214
Instructor Consent Required Directed Studies in Art:
(Topic)
Provides an opportunity to cover topics outside the normal range of studio classes or further investigation of topics and techniques covered in studio classes. Prerequisite: Consent of instructor. Laboratory: 1-3 credits (30-90 contact hours).
Components: Laboratory

ASC Animal Sciences

ASC 106 (3) Course ID: 000056
Agricultural Animal Science
Relationships of food production and consumption to income of humans throughout the world; major livestock (beef and dairy cattle, sheep, swine, poultry, and horses) production areas of the world; relationships between live animal merit and yield of retail cuts of meat; identification of skeletal components; identification and functions of reproductive and digestive tract components; characteristics of breeds of beef and dairy cattle, sheep, swine, poultry and horses. Lecture: 3 credits.
Components: Lecture

ASL American Sign Language

ASL 101 (3) Course ID: 005753
American Sign Language I
A functional-notional approach to learning beginning American Sign Language (ASL). Development of basic knowledge of and understanding of conversational ASL and cultural features of the language and community. Lecture: 3 credits (45 contact hours). Laboratory: 0 credits (15 contact hours).
Components: Laboratory, Lecture
Attributes: AH - Foreign Language
Campus: BLC
Attributes: University Course (Eastern Kentucky University)
ASL 102 (3) Course ID: 005754
American Sign Language II
Continued development of basic knowledge of and understanding of conversational ASL and cultural features of the language and community. Prerequisite: ASL 101 with a minimum grade of C or permission of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 0 credit (15 contact hours).
Components: Laboratory, Lecture
Attributes: AH - Foreign Language
Campus: BLC
Attributes: University Course (Eastern Kentucky University)

AST Astronomy

AST 101 (3) Course ID: 000058
Frontiers of Astronomy
Covers the life histories of stars, the nature of black holes and quasars, the origin of the universe, planets of the solar system, and the possibilities for extraterrestrial life. Includes observation-based activities. A one-semester introductory course for non-science majors. Credit is not given to students who have received credit for AST 191 or AST 192. Lecture: 3 credits (45 contact hours).
Components: Lecture

AST 155 (3) Course ID: 006341
Astrobiology
Examines topics related to the origins of planets, the requirements for life, the search for life away from Earth, the societal implications of discovering other forms of life, and the future of life on Earth and in space from a multidisciplinary perspective. Credit not available for both BIO 155 and AST 155. Prerequisite: MT065 and ENC091 or equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture

AST 191 (3) Course ID: 000060
The Solar System
Emphasizes the nature, origin, and evolution of planets, satellites, and other objects in the Solar System. Includes historical astronomy, the naked eye phenomena of the sky, and modern solar system discoveries made by spacecraft. Lecture: 3 credits (45 contact hours).
Components: Lecture

AST 192 (3) Course ID: 000062
Stars, Galaxies and the Universe
Emphasizes the Sun and the universe outside the Solar System. Has a principal theme of the origin and evolution of stars, galaxies and the universe at large. Includes topics of black holes, quasars, and the big bang model of the universe. Prerequisite: (MT120 or MT122) or a minimum ACT math score of 18. Lecture: 3 credits (45 contact hours).
Components: Lecture

AST 195 (1) Course ID: 000065
Introductory Astronomy Laboratory
Involves performance of exercises in both planetary and stellar astronomy, including Kepler’s Laws of Planetary Motion and Newton’s Laws of Motion. Examines the functions and limitations of different types of telescopes and mounts. Includes observation of the sun, moon, planets, binaries, galaxies, and nebulae. Prerequisite or corequisite: AST101 or AST191 or AST192; MT 120 or two years of high school algebra; or consent of the instructor.
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science
Campus: BLC

ATE 101 (3) Course ID: 007113
Aviation Math
Covers mathematics related to the aerodynamic and physical forces acting on an aircraft in flight. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 1.0 credit (40.5 contact hours).
Components: Lecture

ATE 102 (3) Course ID: 007114
Introduction to Aircraft Maintenance I
Teaches knowledge and skills necessary in measuring, calculating, and documenting aircraft weight and balance. Provides instruction in the identification, cause, prevention, removal and treatment of corrosion. Includes interior and exterior cleaning of the aircraft. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 104 (3 - 30) Course ID: 007115
Introduction to Aircraft Maintenance II
Provides instruction on the aerodynamic and physical forces acting on an aircraft in flight, basic electricity theory, concepts, components, physics, meter operation and use, battery construction and servicing, and basic principles of physics as related to aviation maintenance. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 106 (3) Course ID: 007116
Introduction to Aircraft Maintenance III
Provides instruction in reading and interpretation of basic industrial and aircraft blueprints, basic handling and ground service techniques of the aircraft, the use of maintenance publications, aircraft mechanic privileges and limitations, and the use and completion of required forms and records. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 108 (3) Course ID: 007117
Introduction to Aircraft Maintenance IV
Provides an understanding of basic hydraulic functions, the fabrication of tubing and flex hoses as well as seal comparability. Includes instruction in structural inspection, materials and fasteners, and repair methods. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 202 (3) Course ID: 007118
Aircraft Structures I
Covers the principles of sheet metal layout, bending, and rivet installation. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 204 (3) Course ID: 007119
Aircraft Structures II
Provides instruction in the inspection, service and repair of welded aircraft assemblies and structures, metal and composite aircraft structures, including laminated and honeycomb structures, plastic materials, interior furnishings and access openings. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 206 (3) Course ID: 007120
Aircraft Structures III
Includes inspection of airframes to determine airworthiness. Covers the methods and techniques used in the assembly of subunits and major components of the airframe; and the rigging of primary, secondary and auxiliary control surfaces. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 208 (3) Course ID: 007121
Aircraft Structures IV
Provides instruction in the repair of wood structures, the inspection, testing, repair, selection, and installation of aircraft fabric covering; and the identification, application and inspection of aircraft finishing materials. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 222 (3) Course ID: 007122
Aircraft Systems I
Covers the repair of hydraulic and pneumatic power systems components. Includes the inspection, check, service, and repair of landing gear, retraction systems, shock struts, brakes, wheels, tires, and steering system. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 224 (3) Course ID: 007123
Aircraft Systems II
Covers checking, inspecting, troubleshooting and repair of aircraft electrical system and system components. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 226 (3) Course ID: 007124
Aircraft Systems III
Covers checking, inspection, servicing, repair and troubleshooting of fuel systems and components, heating, cooling, air conditioning, pressurization, and oxygen systems; and rain and ice control and removal systems. Includes elements of fuels used in various aircraft and a discussion of the problems associated with fueling and various techniques in fueling. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 228 (3) Course ID: 007125
Aircraft Systems IV
Includes discussion, inspection, and troubleshooting of navigational and communication systems, fire detection and extinguishing systems. Covers the inspection, troubleshooting, and repair of heading, speed, altitude, time, attitude, temperature, pressure and position indicating systems and instruments. Provides for the inspection, checking and servicing of speed and take-off warning systems, electrical brake controls, antiskid systems, and autopilot systems; and the pitot-static system, floating compass system and the gyro used for flight instruments. Includes the role of mechanics working with precision instruments. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 242 (3) Course ID: 007126
Aircraft Powerplants I
Covers theory and development of the aircraft internal combustion engine as well as instruction in the use of engine construction and repair. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 244 (3) Course ID: 007127
Aircraft Powerplants II
Covers inspection, checking, servicing and the repair of opposed and radial engines and reciprocating engine installation. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 246 (3) Course ID: 007128
Aircraft Powerplants III
Includes construction, repair and overhaul of turbine engines. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 248 (3) Course ID: 007129
Aircraft Powerplants IV
Includes construction, repair and overhaul of turbine engines. Covers the operation and inspection of turbine engines. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 252 (3) Course ID: 007130
Aircraft Powerplants System I
Includes the purpose, use, and selection of lubricants; repair of engine lubrication system components; and the inspection, checking, servicing, troubleshooting and repairing of engine lubrication systems, propeller synchronization and ice control systems, fixed-pitch, constant-speed, and feathering propellers, and propeller governing systems. Provides for the identification and selection of propeller lubricants, balance propellers, and repair of propeller control system components. Covers the installation, troubleshooting and the removal of propellers. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 254 (3) Course ID: 007131
Aircraft Powerplants System II
Covers troubleshooting, servicing and repair of fluid rate of flow indicating systems and repair of engine temperature, pressure, and rpm indicating systems. Includes the operation and overhaul of magneto and ignition harness; repair of engine ignition system components; and the inspection, check, service, troubleshooting, and repair of reciprocating and turbine engine ignition systems. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 256 (3) Course ID: 007132
Aircraft Powerplants System III
Includes the inspection, checking, troubleshooting, servicing and repair of engine ice and rain control systems, heat exchangers, superchargers, carburetor air intake and induction manifolds. Covers the repair of engine electrical system components, and the installing, checking, and servicing of engine electrical wiring, controls, switches, indicators, and protective devices. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 258 (3) Course ID: 007133
Aircraft Powerplants System IV
Covers the operation, inspection and repair of fuel systems and components of aircraft fuel systems and fuel metering systems. Includes the inspection and repair of engine cooling system components, engine exhaust system components, and engine fire detection and extinguishing systems. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture

ATE 292 (3) Course ID: 006783
Introduction To Aviation Electronics
Provides instruction in basic to intermediate electronics and specifically how they relate to aviation maintenance technology. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
AUT 142 (3) Course ID: 001058
Suspension and Steering
Presents the automotive suspension system, the diagnosing of suspension problems, identifying components, recognizing tire wear problems, wheel balancing and the use of alignment. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

AUT 160 (3) Course ID: 001059
Suspension and Steering Lab
Introduces skills necessary in the diagnosis and repair of automotive suspension systems, wheel alignment, and wheel balancing. The student may be provided a work experience alternating between periods of off-campus work and in a classroom laboratory setting. Pre-requisite or Co-requisite: AUT 160. Lab: 2.0 credits (90 contact hours).

Components: Laboratory

AUT 161 (2) Course ID: 001060
Automatic Transmission/Transaxle Lab
Involves the study of the operating principles of rear and front wheel drive automatic transmissions and transaxles and the testing and diagnostic process. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

AUT 161 (2) Course ID: 001061
Automatic Transmission/Transaxle Lab
Develop diagnostic and repair skills related to the operation of rear and front wheel automatic transmissions and transaxles. The student may be provided a work experience alternating between periods of off campus and work in a classroom laboratory setting. Pre-requisite or Co-requisite: AUT 160. Lab: 2.0 credits (90 contact hours).

Components: Laboratory

AUT 180 (3) Course ID: 001062
Instructor Consent Required Practicum
The Practicum provides supervised on-the-job work experience related to the student’s educational objectives. Students who participate in the practicum do not receive compensation. Prerequisite: Permission of the Instructor

Components: Practicum

AUT 181 (2) Course ID: 001063
Instructor Consent Required Cooperative Education Program
Co-op provides supervised on-the-job work experience related to the student's educational objectives. Students who participate in the Cooperative Education program receive compensation for their work. Prerequisite: Permission of the Instructor

Components: Co-Op

BAM 100 (6) Course ID: 001071
Introduction to Building & Apartment Maintenance
This course covers required safety practices in the shop and workplace; identification and use of hand tools used in the construction trades; identification of construction materials; interpretation of blueprints and/or drawings; and exposure to various mechanical and structural systems in a residential structure.

Components: Lecture

BAM 110 (3) Course ID: 001072
Residential Maintenance Carpentry
This course covers the basic aspects of framing, roofing, window, door, and stair maintenance. The student will receive training in the proper use of ladders and in the handling and storage of building materials. Prerequisite: BAM 100

Components: Lecture

BAM 120 (3) Course ID: 001074
Residential Interior Maintenance
This course covers the basic aspects of drywall hanging, finishing, and repair; painting; window, door, and floor moldings; laying composition and vinyl flooring; and maintaining ceramic tile. Prerequisite: BAM 100

Components: Lecture

BAM 140 (3) Course ID: 001078
Residential Maintenance Wiring
This course covers the basic aspects of electric theory, wire and cables, fixtures and devices, and troubleshooting and maintenance wiring. Prerequisite: BAM 100

Components: Lecture

BAR 150 (12) Course ID: 001087
Intermediate Barber Styling Services
The study of chemistry relative to the barbering industry with emphasis on the pharmacological compounds contained in shampoo, permanent waving solutions, hair color and relaxing chemicals. Anatomy and physiology of the human body and its functions. The basic principles of bacteriology. Intermediate level barbering skills will be introduced and practiced in the barbering lab. Prerequisite: BAR 100. Lecture: 3 credits (45 contact hours); Laboratory: 9 credits (405 contact hours).

Components: Laboratory, Lecture
**BAS Business Administration Systems**

**BAS 120 (3) Personal Finance**  
Course ID: 000095  
Provides information needed to make intelligent choices and to take effective action in the management of personal resources. Applies financial planning, buying, borrowing, saving, budgeting, investing, insurance, and taxes to personal finances. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 155 (3) Personal Selling**  
Course ID: 000100  
Introduces the professional selling process involving a series of interrelated activities with emphasis on planning and delivery of sales presentations and simulation and role playing of sales techniques. Examines the six selling steps including—prospecting, qualifying, presenting, answering objections, closing, and the after-sale service. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 160 (3) Introduction to Business**  
Course ID: 000101  
Introduces business careers, terminology, and the interrelationships of business topics. Presents the complexities of business and the impact on communities and their economies. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 170 (3) Entrepreneurship**  
Course ID: 005244  
Presents topics such as product development, finance, and business plan preparation and their impact on entrepreneurship/small business management. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 200 (3) Small Business Management**  
Course ID: 000104  
Introduces the facets of establishing and operating and/or owning a small business, including legal forms of business organization, finance, accounting, insurance, governmental regulations and assistance, economics, marketing, and management principles. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Course Equivalents:** MG 200  
**Attributes:** Course Also Offered in Modules

**BAS 212 (3) Introduction to Financial Management**  
Course ID: 000105  
Introduces the basic concepts of managing financial resources and techniques of financial analysis used for practical business decisions. Demonstrates use of financial ratios to evaluate the past performance of the firm, financial planning techniques, the effect of leverage on profitability and risk, the time value of money, and contemporary approaches to working capital management and capital budgeting. Computes financial ratios, constructs pro forma financial statements, conducts break-even analysis, and computes present and future values of funds. Prerequisite: MAT 105 or MAT 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 250 (1) Business Employability Seminar**  
Course ID: 000106  
Creates an error-free portfolio of business employment documents, using computer technology to assist with composition, proofreading, and formatting. Demonstrates professional interviewing skills through mock interviews. Course is offered on a pass/fail basis. Prerequisite: CIS 100 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 256 (3) International Business**  
Course ID: 002280  
Introduces the business and managerial processes in a global context. Examines the importance and impact of the economic, cultural, and political environment on business functions. Determines the effect of management functions as they apply across various cultures. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 260 (2) Professional Development and Protocol**  
Course ID: 004432  
Prepares students approaching the major career transition from college to work either as a graduating student or as a cooperative education student. Focuses on acceptable business protocol and how to project a professional image. Prerequisite: BAS 250 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 267 (3) Introduction to Business Law**  
Course ID: 000107  
Introduces the state and federal court systems, tort and criminal law, law of contracts, partnership, sale of goods, government regulations, bailment, negotiable instruments, methods of research, and the judicial system (discovery, trial, and appellate processes). Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 274 (3) Human Resource Management**  
Course ID: 000108  
Introduces basic methods of recruiting, selecting, training, compensating, and maintaining a productive workforce. Examines concepts of effective employee relations including collective bargaining, contract administration, and safety and health programs. Emphasizes techniques for systematic human resource planning and development of policies consistent with government regulations. Prerequisite: BAS 160 and BAS 283 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 280 (1 - 4) Business Internship**  
Course ID: 004474  
Provides an opportunity for a work experience related to the student's educational objective and concepts learned in courses required for credential. (One hour of credit, up to a maximum of four credit hours, awarded for every 40 hours of approved work experience, not to exceed 160 hours). Prerequisite: Sophomore Standing or Consent of Instructor. Practicum/Internship: 1.0 - 4.0 credits

**Components:** Practicum

**BAS 282 (3) Principles of Marketing**  
Course ID: 000109  
Introduces marketing functions as it applies to various types of business organizations with attention to the marketing concept, including the marketing mix of product, price, promotion, and distribution decisions; international marketing; and social responsibility. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 283 (3) Principles of Management**  
Course ID: 000110  
Examines the functional framework of planning, organizing, leading, and controlling as it is utilized to introduce the management process. Introduces the interdisciplinary nature of management with the inclusion of relevant aspects of human behavior and rational decision making. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 285 (3) Problems in Marketing and Management**  
Course ID: 000112  
Demonstrates knowledge of theories and techniques in management and marketing with emphasis on the action-skills that managers need for success. Examination of various course topics in this capstone course include: delegating, motivating employees, team building, conflict management, coaching, and managing change. Prerequisite: (BAS 160 and BAS 283) or prior supervisory experience. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 288 (3) Management and Ethics**  
Course ID: 000113  
Examines the roles and responsibilities of the supervisor, emphasizing human relations skills while recognizing the behavioral factors of individuals and groups in the work environment. Applies conceptual knowledge base and skills to identify and develop the supervisor's role and responsibilities. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 289 (3) Personal and Organizational Leadership**  
Course ID: 000115  
Recognizes personal leadership skills that are essential for effective team and organizational guidance while examining organizational leadership theories that promote personal and organizational goal setting, ethical management, time management, human relations, effective communication, and fundamentals of synergy. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 290 (3) Operations Management**  
Course ID: 005531  
Introduces the fundamental concepts, principles, and practices of operations management. Introduces and examines operations management careers, terminology and concepts in both manufacturing and service organizations. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 291 (3) Management, Ethics and Society**  
Course ID: 005579  
Examines the business leadership-government-society relationship. Includes business leadership, ethics, decision-making, social costs, corporate responsibility, governance, global trends and the role of government in business. Prerequisite: BAS 283 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
**Attributes:** Course Also Offered in Modules

**BAS 292 (3) Retail Management**  
Course ID: 000116  
Examines retail structure, merchandising, promotions, store control, and decision. Identifies fundamental principles of store organization, consumer behavior, and customer service. Includes retailing trends, opportunities, and problems. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Contact Hours</th>
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<tbody>
<tr>
<td>BAS 293 (3)</td>
<td>Principles of Finance</td>
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<tr>
<td>BAS 294 (3)</td>
<td>Money and Financial Institutions</td>
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<td>BAS 1603 (0.6)</td>
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<td>BAS 1202 (0.7)</td>
<td>Managing Your Money</td>
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<td>BAS 1203 (1)</td>
<td>Managing Investments</td>
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<tr>
<td>BAS 1601 (0.6)</td>
<td>The Foundations of Business</td>
<td>0.6</td>
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<td>Business Ownership, Money, and Quality</td>
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The above table includes a variety of courses offered in different credit hours and contact hours, covering various aspects of business management, financial planning, marketing, and law. Each course is designed to provide students with a comprehensive understanding of different business principles and strategies.
BAS 2742 (0.6) Course ID: 005151
Bringing Employees Into the Organization
Identifies the operational requirements of the employee intake function, including HR planning, job analysis, employee recruitment, and employee selection. Prerequisite: BAS 2741 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2743 (0.6) Course ID: 005152
Developing and Evaluating Employees
Examines training and development methods, career planning tools, and performance appraisal methods and techniques. Prerequisite: BAS 2742 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2744 (0.6) Course ID: 005153
Compensating Employees
Identifies compensation design, pay for performance systems, benefits, and employee services. Pre-requisites: BAS 2743 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2745 (0.6) Course ID: 005154
Employee Relations
Recognizes occupational safety and health adherence, collective bargaining issues, and establishing effective working relationships. Prerequisite: BAS 2744 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2821 (0.5) Course ID: 005288
Introduction to Entrepreneurial Marketing
Introduces small business marketing. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2822 (0.5) Course ID: 005289
Environmental Market Strategy Planning
Identifies essential information for an environmental and SWOT analysis in developing marketing objectives for a small business marketing plan. Prerequisite: BAS 2821 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2823 (0.5) Course ID: 005290
Product and Market Strategies
Examines essential information to develop product and marketing strategies for the small business marketing plan. Prerequisite: BAS 2822 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2824 (0.5) Course ID: 005291
Market Distribution and Promotion
Identifies information to develop small business distribution and promotion strategies. Prerequisite: BAS 2823 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2825 (0.5) Course ID: 005292
Pricing Strategies
Identifies pricing strategies for developing small businesses. Prerequisite: BAS 2824 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2826 (0.5) Course ID: 005293
Market Implementation, Evaluation and Control
Examines information to implement, evaluate and control a small business marketing plan. Prerequisite: BAS 2825 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2831 (0.5) Course ID: 005819
Introduction to Management
Provides an overview and introduction to management and the evolution of management thought. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2832 (0.5) Course ID: 005820
Planning and Decision Making
Examines the planning function as it relates to the relationship to other management functions and creative problem solving and decision making. Prerequisite: BAS 2831 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2833 (0.5) Course ID: 005821
The Process of Organizing
Examines organizing as a process as it applies to formal and informal organizations. Prerequisite: BAS 2832 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2834 (0.5) Course ID: 005822
Leading and Staffing
Develops the concepts of leadership and managing change. Examines managing human resources and communication and motivation. Prerequisite: BAS 2833 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2835 (0.5) Course ID: 005823
Controlling
Examines the different aspects of the principles and theories of control as it relates to management information and decision support systems. Prerequisite: BAS 2834 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture

BAS 2836 (0.5) Course ID: 005824
Special Concerns in Management
Examines international management and succeeding in one's career. Prerequisite: BAS 2835 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).

Components: Lecture

BAS 2841 (0.6) Course ID: 005825
Effective Decision Making & Delegation
Applies strategies and theories of management to demonstrate the effectiveness of sound decision-making skills and the power of delegation. Prerequisite: BAS 160 and BAS 283 or prior supervisory experience. Lecture: 0.6 credit (9 contact hours).

Components: Lecture

BAS 2842 (0.6) Course ID: 005826
Empowerment and Motivation
Examines the theories of motivation and strengthens the manager's ability to guide institutions and followers through periods of change. Prerequisite: BAS 2841. Lecture: 0.6 credit hours (9 contact hours).

Components: Lecture

BAS 2843 (0.6) Course ID: 005827
Effective Coaching and Mentoring
Demonstrates importance of delegation and effective use of coaching or mentoring to provide constructive feedback to developing employees. Prerequisite: BAS 2842. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2844 (0.6) Course ID: 005828
Communication and Teamwork
Applies communication techniques that allow for effective conflict resolution and encourages strong group outcomes. Prerequisite: BAS 2843. Lecture: 0.6 credit (9 contact hours).

Components: Lecture

BAS 2845 (0.6) Course ID: 005829
Effective Meetings and Quality Processes
Examines effective techniques for conducting meetings and applying theories of quality management. Prerequisite: BAS 2844. Lecture: 0.6 credit (9 contact hours).

Components: Lecture

BAS 2871 (0.6) Course ID: 005155
The Role of the Team Leader
Identifies the new responsibilities of the team leader with emphasis on competencies, planning, and controlling the work environment. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2872 (0.6) Course ID: 005156
Organizing and Developing Your Team
Recognizes the fundamentals of organizing a work environment, appraising performance, acquiring training, and developing team members. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2873 (0.6) Course ID: 005157
The Leadership Reins
Examines the attributes of motivation and communication in a variety of leadership styles appropriate for different managerial environments. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2874 (0.6) Course ID: 005158
Managing the Team Through Conflict and Change
Examines guiding workgroups through constantly changing and challenging work environments in order to achieve organizational priorities. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2875 (0.6) Course ID: 005159
Decision Making and Problem Solving in a Quality Culture
Identifies principles of effective decision making and problem solving with emphasis on enhancing quality workplace cultures. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2881 (0.6) Course ID: 005160
Become a Great Leader
Examines leadership philosophies, values, characteristics, and the specific role the leader plays in directing the strategic planning process. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2882 (0.6) Course ID: 005161
Self Management: Time, Stress, & Effective Change Techniques
Identifies management techniques and skills that provide leaders with the capabilities to maximize both personal and organizational effectiveness. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2883 (0.6) Course ID: 005162
Effective Delegation and Empowerment
Identifies strategies of delegation and empowerment that facilitate high levels of organizational effectiveness. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2884 (0.6) Course ID: 005163
Communicating for Interdependence
Identifies the use of effective communication techniques that increase interdependence in workgroups. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2885 (0.6) Course ID: 005164
Teamwork and Synergy
Emphasizes the power of synergy and the implementation of effective team environments. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BAS 2901 (1) Course ID: 006103
Moral Philosophy and Business
Examines the nature of morality and the ethical philosophy and nature of business leadership and decision making. Prerequisite: BAS 283 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).

Components: Lecture

BAS 2902 (1) Course ID: 006104
American Business
Examines the nature of capitalism, the social-government relationship, including the business leadership-government-society relationship. Recognizes the importance of decision making, social cost, corporate responsibility, governance, and the role of government in business. Prerequisite: BAS 2901 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
BAS 2903 (1) Course ID: 006105
The Organization and Its People
Examines the business leadership-government-society relationship, including the challenges and issues in today's workplace environment with an emphasis on moral choices faced by employees. Prerequisite: BAS 2902 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BEX Basic Electricity
BEX 100 (3) Course ID: 001118
Basic Electricity for Non-Majors
This course introduces non-majors to the basic physics of electricity. Students apply Ohm's law; measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to troubleshooting an electric motor and coil. Corequisite: BEX 101
Components: Lecture

BEX 101 (2) Course ID: 001119
Basic Electricity Lab for Non-Majors
This is a hands-on class designed to allow the student to use the concepts, principles, and theories covered in Basic Application. Electricity for non-majors BEX 100. Corequisite: BEX 100.
Components: Laboratory

BIO Biological Sciences
BIO 112 (3) Course ID: 000127
Introduction to Biology
Basic study of structure, function and interactions of living organisms, including cell theory, genetics, energetics, evolution and ecology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science, Course Also Offered in Modules

BIO 113 (SN) Course ID: 000133
Introduction to Biology Lab
Emphasizes basic laboratory studies of structure, function and interactions of living organisms including cell theory, genetics, energetics, evolution, and ecology. Prerequisite/ Corequisite: BIO 112. Laboratory: 1 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory, Course Also Offered in Modules

BIO 114 (3) Course ID: 000167
Biology I
Basic biological concepts as cell structure and function, metabolism, chemical basis of biology, protein synthesis, genetics, and evolution. Emphasis is placed on the cellular level. Corequisite: BIO 115. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

BIO 115 (1) Course ID: 000165
Biology Laboratory I
A two-hour laboratory to be offered concurrently with BIO 114. Designed to acquaint the student with the use of analytical techniques in biology, theory, and methods involved in experimentation, in order to facilitate a greater understanding of concepts presented in lecture and the way in which information is gathered in science. Laboratory: 1 credit (30 contact hours). Corequisite: BIO 114.
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory, Course Also Offered in Modules

BIO 116 (3) Course ID: 000168
Biology II
Basic biological concepts as ecology, biologic diversity (to include the Kingdoms of life), reproduction, growth, and development. Emphasis placed on multicellular systems. Corequisite: BIO 117. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

BIO 117 (1) Course ID: 000166
Biology Laboratory II
A two-hour laboratory to be offered concurrently with BIO 116. Designed to acquaint the student with the use of analytical techniques in biology, theory, and methods involved in experimentation in order to facilitate a greater understanding of concepts presented in lecture and the way in which information is gathered in science. Laboratory: 1 credit (30 contact hours). Corequisite: BIO 116.
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

BIO 118 (3) Course ID: 004988
Microbes and Society
An introduction to the science of microbiology addressing the role of microorganisms in nature and in human welfare. Contemporary topics will include infectious diseases, genetic engineering, the environment and biological warfare. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

BIO 120 (3) Course ID: 000126
Human Ecology
Interrelationships among humans, other organisms and the environment including principles of energy and matter, resource use, biogeochemical cycling, trophic structures, sustainability and human impacts on the environment. Prerequisite/Corequisite: BIO 120 or BIO 124. Laboratory: 1 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

BIO 121 (3) Course ID: 005191
Introduction to Ecology Laboratory
Basic laboratory studies of interactions among living organisms and their environment including biogeochemical cycling, trophic structures, sustainability and human impacts on the environment. Prerequisite/Corequisite: BIO 121. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science, SN - Science

BIO 122 (3) Course ID: 000175
Introduction to Conservation Biology
Historical and current perspectives on species extinction and global loss of biological diversity is presented. Methods used to conserve plant and animal life in the United States and around the world are surveyed, and conservation activities and needs are discussed in societal, cultural, economic, and political contexts. Prerequisite: High school biology recommended. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

BIO 124 (3) Course ID: 000177
Principles of Ecology
Study of the principles and interrelationships between organisms and their environment with emphasis on the analytical and statistical methods of ecology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

BIO 130 (3) Course ID: 000170
Aspects of Human Biology
Aspects of human biology will be introduced from the molecular level to the integrated whole. Attention will be given to the biological bases of various health and wellness issues. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

BIO 135 (4) Course ID: 000169
Basic Anatomy and Physiology with Laboratory
Presents the fundamental structure of the human body and the physiological mechanisms involved in normal functioning are presented through lecture and student participation in laboratory activities. Prerequisite: (Reading, English and Mathematics assessment exam scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s) or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science

BIO 137 (4) Course ID: 000172
Human Anatomy and Physiology I
The interrelationship of structure and function of each body system will be presented in two semesters. The first semester will include basic chemistry, cell structure, cell physiology, metabolism, tissues, and integumentary, skeletal, muscular, and nervous systems. Prerequisite: Reading, English and Mathematics assessment exam scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s) or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science

BIO 139 (4) Course ID: 000174
Human Anatomy and Physiology II
The second semester continues the study of the interrelationships of organ systems, including the endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, and urinary systems. Prerequisite: BIO 137. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science, Course Also Offered in Modules

BIO 140 (3) Course ID: 000130
Botany
The anatomy, physiology, and biodiversity of plants emphasizing life processes, the cell, development, heredity, plant systems, evolution, taxonomy, phylology and ecology. Includes laboratory studies of the morphology, physiology, and reproduction of plants with emphasis on flowering plants. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

BIO 141 (4) Course ID: 000178
Botany with Laboratory
The anatomy, physiology, and biodiversity of plants emphasizing life processes, the cell, development, heredity, body systems, evolution, taxonomy, phylology and ecology. Includes laboratory studies of the morphology, physiology, and reproduction of plants with emphasis on flowering plants. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science

BIO 142 (3) Course ID: 000128
Zoology
The anatomy, physiology, and biodiversity of animals emphasizing life processes, the cell, development, heredity, body systems, evolution, taxonomy, phylology and ecology. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

BIO 143 (4) Course ID: 000180
Zoology with Laboratory
The anatomy, physiology, and biodiversity of animals emphasizing life processes, the cell, development, heredity, body systems, evolution, taxonomy, phylology and ecology. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science
Honors Biology: Structure and Function of Biological Molecules

The prime objectives of this course are to provide honors students with a basic understanding of the structural and functional properties and interrelationships of the molecules that are common to all living systems, and to elucidate the fundamental principles upon which all life is predicated. Lecture: Three hours; laboratory: three hours per week. Prerequisite: Enrollment in Honors Program. High school chemistry is strongly recommended.

Components: Laboratory, Lecture

BIO 209 (2) 

Introduction to Microbiology Laboratory

Laboratory exercises in general microbiology. Laboratory: Four hours. Prerequisite: One unit of chemistry or consent of instructor. BIO 208/226 should be taken concurrently.

Components: Laboratory

 Attributes: SL - Science Laboratory, SL - Science Laboratory

BIO 144 (3) 

Insect Biology

Presents an overview of the biology of both beneficial and detrimental insects including physiology, behavior, ecology, and evolution. Lecture: Three credits (45 contact hours).

Components: Lecture

 Attributes: SN - Science, SN - Science

BIO 150 (3) 

Principles of Biology I

Presents knowledge of biological principles at the cellular and molecular levels, similarities and differences in structure and function of simple and complex cells and theories on the origin and evolution of biological systems. Part one of a two semester sequence (BIO 150 and BIO 152). Prerequisite: CHE 170 or concurrent enrollment) or consent of instructor. Lecture: Three credits (45 contact hours).

Components: Lecture

 Attributes: SN - Science, SN - Science

BIO 216 (4) 

Biological Inquiry and Analysis

An inquiry-based introduction to concepts in biology. Research-oriented activities will emphasize the skills and attitudes necessary for understanding and conducting scientific inquiry. Lecture: Three credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

 Attributes: University Course (Morehead State University), Campus: MOC

BIO 220 (3) 

The Genetic Perspective

Covers introductory genetics for non-science majors examining how heredity affects humans and the remainder of the living world and providing some insights into other fields of science from the geneticists' perspective. Prerequisite: BIO 112 or consent of instructor. Lecture: Three credits (45 contact hours).

Components: Laboratory, Lecture

 Attributes: SN - Science, SN - Science

BIO 224 (4) 

Introduction to Molecular & Cell Biology

An introduction to molecular and cell structure. Emphasis is on nucleic acids and protein structure. The laboratory experience presents fundamental techniques for the isolation and characterization of biological molecules. Prerequisite: A semester of college biology and college chemistry. Lecture: Three credits (45 contact hours); Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture

 Attributes: SN - Science, SN - Science

BIO 225 (4) 

Medical Microbiology

The characteristics of microorganisms and their relation to health and disease are studied. Prerequisite: BIO 137 and BIO 139 or equivalent. Lecture: Two credits (30 contact hours); Laboratory: Two credits (60 contact hours).

Components: Laboratory, Lecture

 Attributes: SN - Science, SN - Science, Course Also Offered in Modules

BIO 226 (3) 

Principles of Microbiology

Introduction to fundamental microbiological principles and techniques emphasizing structural functional, ecological, and evolutionary relationships among microorganisms. Prerequisite: BIO 112 or consent of instructor. Lecture: Three credits (45 contact hours).

Components: Lecture

 Attributes: SN - Science, SN - Science

BIO 227 (5) 

Principles of Microbiology with Laboratory

Introduction to fundamental microbiological principles and techniques emphasizing structural functional, ecological, and evolutionary relationships among microorganisms. Includes laboratory exercises in general microbiology. Prerequisite: BIO 112 or consent of instructor. Lecture: Three credits (45 contact hours); Laboratory: Two credits (60 contact hours).

Components: Laboratory, Lecture

 Attributes: SL - Science Laboratory, SL - Science Laboratory

BIO 295 (1 - 3) 

Instructor Consent Required Independent Investigation In Biology

Investigates specific topics or problems in the field of the biological sciences. May be repeated for a maximum of six credits. Laboratory varies with credit. Prerequisite: Permission of Instructor. Laboratory: Varies with credit.

Components: Independent Study, Lecture

 Attributes: SN - Science

BIO 299 (1 - 3) 

Instructor Consent Required Selected Topics In Biology: (Topic)

Addresses recent trends and discoveries in selected areas of biology in a seminar format. Emphasizes discussion and critical thinking. May be repeated with different subtitle for a maximum of six credits. Prerequisite: Permission of Instructor. Lecture: Varies with credit.

Components: Lecture

BIO 1121 (0.75) 

Science, Biochemistry, and Hierarchy of Life

Covers basic studies of the Scientific method, the molecules of life and the hierarchy of life. Lecture. 0.75 credit (11.25 contact hours).

Components: Lecture

BIO 1122 (0.75) 

Cell Structure, Function, Energetics, and Cell Division

Covers basic studies of cell structure, function, energetics, and cell division. Prerequisite: BIO 1121. Lecture. 0.75 credit (11.25 contact hours).

Components: Lecture

BIO 1131 (0.25) 

Scientific Method and Molecules of Life Lab

Covers basic laboratory studies of the molecules of life and a study of the scientific method. Prerequisite or corequisite: BIO 1121 or BIO 112. Laboratory: 0.25 credit (7.5 contact hours).

Components: Laboratory

BIO 1132 (0.25) 

Cell Structure and Function Lab

Covers basic laboratory studies of structure and function of cells. Prerequisite: BIO 1131. Prerequisite or corequisite: BIO 112 or BIO 112. Laboratory: 0.25 credit (7.5 contact hours).

Components: Laboratory

BIO 1133 (0.25) 

Genetics, Evolution and Diversity Lab

Covers basic laboratory studies of genetics, evolution and diversity. Prerequisite: BIO 1123. Prerequisite or corequisite: BIO 1123 or BIO 112. Laboratory: 0.25 credit (7.5 contact hours).

Components: Laboratory

BIO 1134 (0.25) 

Ecology Lab

Covers basic laboratory studies of ecology. Prerequisite: BIO 1133. Prerequisite or corequisite: BIO 1124 or BIO 112. Laboratory: 0.25 credit (7.5 contact hours).

Components: Laboratory

BIO 1371 (1) 

Homeostasis, Chemistry and Cells

An introduction to science that includes scientific principles, homeostasis, chemistry, cell structure and function. There is also an introduction to systems, body regions, directions, and cavities. Pre-requisite: Reading, English, and Mathematics assessment exam scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s) or consent of instructor. Lecture: .75 credits (11.25 contact hours). Lab: .25 credits (7.5 contact hours).

Components: Laboratory, Lecture

BIO 1372 (1) 

Tissues, Integumentary, and Skeletal System

The interrelationship and structure and function of tissues, the integumentary system and bone structure, and how all of these systems interact to retain homeostasis. There is also a focus on joints and skeletal anatomy. Pre-requisite: Successful completion of modularized class BIO 1371. Lecture: .75 credits (11.25 contact hours). Lab: .25 credits (7.5 contact hours).

Components: Laboratory, Lecture
**BIO 1373 (1) Course ID: 006653**
Muscles and Metabolism
The interrelationship and structure and function of the muscular system and how it is involved in maintaining homeostasis and how it relates to biochemistry and metabolism. There is also a focus on muscular anatomy and movements. Pre-requisite: Successful completion of modularized class BIO 1372. Lecture: .75 credits (11.25 contact hours). Lab: .25 credits (7.5 contact hours).
Components: Laboratory, Lecture

**BIO 1374 (1) Course ID: 006654**
Nervous System
The interrelationship and structure and function of each body system in two semesters. The first semester will include basic chemistry, cell structure, cell physiology, metabolism, tissues, and integumentary, skeletal, muscular, and nervous systems. Pre-requisite: Successful completion of modularized class BIO 1373. Lecture: .75 credits (11.25 contact hours). Lab: .25 credits (7.5 contact hours).
Components: Laboratory, Lecture

**BIO 1391 (1) Course ID: 006655**
Endocrine, Reproduction, and Genetics
Continues the study of the interrelationships of organ systems, including the endocrine and reproductive systems and genetics. Pre-requisite: BIO 137 or completion of all BIO 137 modularized classes. Lecture: .75 credits (11.25 contact hours). Lab: .25 credits (7.5 contact hours).
Components: Laboratory, Lecture

**BIO 1392 (1) Course ID: 006656**
Digestive and Lymphatic System
Continues the study of the interrelationships of organ systems, including the digestive and lymphatic systems. Pre-requisite: Completion of BIO 1391. Lecture: .75 credits (11.25 contact hours). Lab: .25 credits (7.5 contact hours).
Components: Laboratory, Lecture

**BIO 1393 (1) Course ID: 006657**
Cardiovascular System, Heart & Blood
Continues the study of the interrelationships of organ systems, including the cardiovascular system. Pre-requisite: Completion of BIO 1392. Lecture: .75 credits (11.25 contact hours). Lab: .25 credits (7.5 contact hours).
Components: Laboratory, Lecture

**BIO 1394 (1) Course ID: 006658**
Respiratory and Urinary System and Water/Electrolyte Balance
Continues the study of the interrelationships of organ systems, including the respiratory, urinary, and fluid systems. Pre-requisite: Completion of BIO 1393. Lecture: .75 credits (11.25 contact hours). Lab: .25 credits (7.5 contact hours).
Components: Laboratory, Lecture

**BIO 1378 (1) Course ID: 006659**
Special Topics in Business and Industry: (Topic)
Offered in response to local workforce needs; topics may vary and the course may be repeated with different topics, with no more than 12 credit hours of BIT 194 applicable toward degree completion. Offered on a pass/fail basis but students may elect to switch from pass/fail to audit at any time during the course.
Components: Lecture

**BIT 195 (0.1 - 0.3) Course ID: 006939**
Special Topics in Business and Industry: (Topic)
Offered in response to local workforce needs; topics may vary and the course may be repeated with different topics, with no more than 12 credit hours of BIT 194 applicable toward degree completion. Offered on a pass/fail basis but students may elect to switch from pass/fail to audit at any time during the course.
Components: Lecture

**BIT 196 (0.2 - 0.3) Course ID: 004126**
Business & Industry Special Topics: (Topic)
Special topics in business and industry will be offered in response to local workforce needs. Topics may vary and the course may be repeated with different topics. This course will be offered on a pass/fail basis. Prerequisite: Consent of Instructor.
Components: Lecture

**BIT 197 (0.2 - 0.3) Course ID: 004128**
Business & Industry Selected Topics: (Topic)
Selected topics in business and industry will be offered in response to local workforce needs. Topics may vary and the course may be repeated with different topics. Prerequisite: Consent of instructor.
Components: Lecture

**BIT 198 (0.2 - 0.3) Course ID: 003867**
Special Topics in Business & Industry (Topic)
Special topics in business and industry will be offered in response to local workforce needs. Topics may vary and the course may be repeated with different topics, with no more than 12 credit hours of BIT 198 applicable toward degree completion. This course will be offered on a pass/fail basis. Students may elect to switch from pass/fail to audit at any time during the course. Lecture: .2-2 credit hours; Laboratory: variable. Prerequisite: Consent of instructor.
Components: Laboratory, Lecture

**BIT 199 (0.2 - 0.3) Course ID: 003866**
Selected Topics in Business & Industry (Topic)
Selected topics in business and industry will be offered in response to local workforce needs. Topics may vary and the course may be repeated with different topics. Students may elect to switch from graded to audit at any time during the course. Lecture: 0.2-2 credit hours; Laboratory: variable. Prerequisite: Consent of instructor.
Components: Laboratory, Lecture

**BIO 1395 (1) Prerequisite or corequisite: PH 171. Lecture/Lab: 2 credits (37.5 contact hours). (30:1 Ratio Lab).**

**BIO 1396 (1) Prerequisite or corequisite: PH 171. Lecture/Lab: 4 credits (60 contact hours).**

**BMO Business and Office Technology**

**BMO 170 (3) Course ID: 001125**
Introduction to Business Management
This course introduces the concepts and principles of effective business management and includes forms of business ownership, typical business organizational structures, relationship of business to the community, and the effect of government regulations on businesses.
Components: Lecture

**BMO 270 (3) Course ID: 001130**
Business Management
This course further develops concepts and principles needed for managing a business or department within a business. Problem-solving activities and case studies are used in researching the position of the manager in the typical business. Product and service promotion in business; the effects government regulations have on a business; and educational requirements of a professional business career are topics covered in the course.
Prerequisite: BMO 170
Components: Lecture

**BMT 110 (2) Course ID: 001133**
BMET Career Perspectives and Field Practices
Provides information on employment and career advancement opportunities as well as practices in support of a hospital-wide safety program. Prerequisite: BMT 100. Lecture/Lab: 2 credits (37.5 contact hours). (30:1 Ratio Lab).
Components: Lecture

**BMT 120 (4) Course ID: 001135**
Essentials of Analog and Digital Electronics for BMETs: Level 1
Emphasizes basic analog and digital devices and associated circuits as well as their use within medical equipment. Prerequisite or corequisite: AIT 110. Lecture/Lab: 4 credits (75 contact hours). (30:1 Ratio Lab).
Components: Lecture

**BMT 130 (4) Course ID: 005953**
Essentials of Analog and Digital Electronics for BMETs: Level 2
Emphasizes advanced analog and digital devices and associated circuits as well as their use within medical equipment. Prerequisite: BMT 120. Lecture/Lab: 4 credits (75 contact hours). (30:1 Ratio Lab).
Components: Lecture

**BMT 140 (4) Course ID: 005954**
Biomedical Instrumentation and Biophysical Measurements
Emphasizes biophysical signals and measurements obtained from the human body, their clinical significance, and the technology used to detect, process, display, and record such information. Prerequisite: BMT 130 and BIO 135. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio Lab).
Components: Lecture

**BMT 210 (1) Course ID: 001138**
Fundamental Engineering Design Principles Encountered in Medical Technology
Emphasizes a variety of engineering and scientific principles and their applications in the design and development of medical equipment including pressure, fluid mechanics, thermodynamics, optics, and sound. Prerequisite: PH 171 and (MT 125 or higher). Lecture/Lab: 1 credit (18 contact hours) (30:1 Ratio Lab).
Components: Lecture

**BMT 215 (4) Course ID: 005966**
Principles and Practices of Medical Equipment Maintenance and Management
Investigates key aspects of a Medical Technology Management Program. Emphasizes medical device service principles and practices including inspecting, testing, maintenance, calibration, and repairs. Prerequisite: BMT 110. Corequisite: BMT 230. Lecture/Lab: 4 credits (75 contact hours) (30:1 Ratio Lab).
Components: Lecture

**BMT 230 (3) Course ID: 001140**
Understanding, Maintaining, and Servicing Medical Equipment
Explores the purposes and functionality of various types of medical technology as well as their performance testing, maintenance, and management requirements. Prerequisite: BMT 130. Prerequisite or corequisite: BMT 140 and BMT 215. Lecture/Lab: 3 credits (45 contact hours) (30:1 Ratio Lab).
Components: Lecture
Understanding, Maintaining, and Servicing Specialized Medical Equipment
Explores the purpose and functionality of various types of specialized medical technology as well as their performance, data collection, maintenance, and management requirements. Emphasizes mechanical ventilators, anesthesia machines, hemodialysis machines, video endoscopy systems, and other imaging modalities such as digital radiography, fluoroscopy, and diagnostic ultrasound. Prerequisite: BRX 1203 or consent of instructor. BRX 210 and BRX 215. Prerequisite or corequisite: BRX 110. Lecture/Lab: 3 credits (60 contact hours); (30:1 Ratio Lab)
Components: Lecture

BRX Blueprint Reading

Basic Blueprint Reading for Machinist
Basic applied math, lines, multi-view drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings are presented. Safety will be emphasized as an integral part of the course. Lecture: 2 credits (30 contact hours).
Components: Lecture

Basic Blueprint Reading
Includes basic applied math, lines, multiview drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings. Emphasizes safety as an integral part of the course. Lecture: 3 credits (45 contact hours).
Components: Lecture

Basic Blueprint Reading
Provides the student with a beginning and advanced series of lectures, demonstrations, and practice exercises in the study of prints. Safety will be emphasized as an integral part of this course. Lecture: 4 credits (60 contact hours).
Components: Lecture

Basic Blueprint Reading
Provides the student with an advanced series of lectures, demonstrations, and practice exercises in the study of prints involving math (both decimal and metric), combination of lines, multi-view drawings, assembly drawings, fasteners, machining and construction processes, datum coordinates, numerical control prints, sheet metal prints, welding, casting and forging prints. Safety will be emphasized. Lecture: 2 credits (30 contact hours). Prerequisite: BRX 110 with a grade of C or greater or Consent of Instructor.
Components: Lecture

Mechanical Blueprint Reading
Provides a series of lectures, demonstrations, and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings, building materials and specifications lists, and construction dimensioning systems and charts/schedules.
Components: Lecture

Mechanical Blueprint Reading
This course provides the student with an advanced series of lectures, demonstrations, and practice exercises in the study of prints involving math (both decimal and metric), combination of lines, multi-view drawings, assembly drawings, fasteners, machining and construction processes, datum coordinates, numerical control prints, sheet metal prints, welding, casting and forging prints. Safety will be emphasized as an integral part of the course.
Components: Lecture

Print Reading Fundamentals
Presents basic applied math, lettering, lines, multiview drawings, title blocks, material lists and the drawing change system. Lecture: 1 credit (15 contact hours).
Components: Lecture

Drawing Views and Setup
Presents sketching, auxiliary and sectional views. Prerequisite: (BRX 1201 with a grade of C or better) or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

Dimensioning and Tolerances
Presents print dimensioning and tolerances and thread specifications. Prerequisite: (BRX 1202 with a grade of C or better) or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

Building Science Engineering

Energy Auditor Preparation
Provides a scientific foundation upon which inspectors and auditors can build an accurate understanding of modern structures including an overview of technology, examples of typical installations and their defects, procedures for performing audits, and guidelines for analyzing potential retrofits. Presents a balanced approach to building performance to address energy efficiency, building durability, and human health. Lecture/Lab: 5.0 credits (90 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

Building Science
Includes the physical principles and measurement units of building science. Lecture/Lab: 1.0 credit (18 contact hours).
Components: Lecture

Building Assessment Skills
Assess the building construction techniques and use measurements to evaluate building performance. Lecture/Lab: 1.0 credit (18 contact hours).
Components: Lecture

Diagnosing Air Leakage
Focuses on methods of measuring air leakage, guidelines for evaluating potential energy savings, and principles for evaluating natural and mechanical ventilation strategies. Lecture/Lab: 1.0 credit (18 contact hours).
Components: Lecture

Heating and Cooling
Covers the range of equipment used, describes the operation of each, and provides guidance for assessing the most critical operating parameters. Includes assessment of ducts and airflow. Lecture/Lab: 1.0 credit (18 contact hours).
Components: Lecture

The Building Shell and Durable Healthy Home
Covers insulation and air sealing. Includes window repair and replacement, moisture management, ventilation equipment, and pollutant source-control. Lecture/Lab: 1.0 credit (18 contact hours).
Components: Lecture

Introduction to Biotechnology
Introduces current and future applications of biotechnology. Covers biotechnology career opportunities and bioethics. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

Introduction to Biotechnical Engineering
Project Lead The Way® course in Biotechnical Engineering. Explores students to the diverse fields of biotechnology including biomedical engineering, bio-molecular genetics, bioprocess engineering, as well as agricultural and environmental engineering. Engages students in engineering design problems related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, human interface, bioprocesses, forensics, and bio-ethics. Pre-requisite or Co-requisite: Successful completion of, or concurrent enrollment in; high school biology or chemistry course or equivalent; or consent of instructor. Lecture/Lab: 4.0 credits (105 contact hours).
Components: Lecture
Campus: OWC

Nuclear Acid Methods
Covers theory of DNA structure and function. Emphasizes laboratory skills in a variety of DNA manipulations. Prerequisite: One semester of college biology with lab or college chemistry with lab or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

Biotechnology Techniques I
Introduces theory and techniques for media and solution preparations, use of analytical equipment, and laboratory safety. Includes various nucleic acid techniques, gene expression and purification, and bioinformatics. Prerequisite: A semester of college biology with lab or college chemistry with lab or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

Biotechnology Techniques II
Covers various protein techniques, extraction and purification, and assays. Prerequisite: BTN 201. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

Cell Culture and Function
Covers use of cell culture in modern biotechnological applications with emphasis on laboratory skills in a variety of cell culture techniques. Prerequisite: (BTN 110 with a grade of C or better) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

Biotechnical Engineering
Engages students in the engineering design problems related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, human interface, bioprocesses, forensics, and bio-ethics. Prerequisite: Consent of instructor. Lecture/Lab: 4.0 credits (105 contact hours).
Components: Laboratory, Lecture

Mechanical Blueprint Reading
Provides the student with an advanced series of lectures, demonstrations, and practice exercises in the study of prints involving math (both decimal and metric), combination of lines, multi-view drawings, assembly drawings, fasteners, machining and construction processes, datum coordinates, numerical control prints, sheet metal prints, welding, casting and forging prints. Safety will be emphasized. Lecture: 2 credits (30 contact hours).
Components: Lecture

Basic Blueprint Reading
Includes basic applied math, lines, multiview drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings. Emphasizes safety as an integral part of the course.
Components: Lecture

Building Science
Introduces fundamental principles and capabilities of CAD, basic drafting conventions, and operations. Provides an in-depth study of computer aided drafting commands, terminology, command utilization, and skill development. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules
CAD 102 (4) Course ID: 004052

DRAFTING FUNDAMENTALS
Introduces the fundamentals of drafting in the use of equipment through measurement of lines, angles, circles, arcs, and irregular curves; determining line weights; drafting and sketching of geometric constructions; orthogonal projection; characteristics of lines and planes; lettering; and dimensioning techniques. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 108 (3) Course ID: 005186

INTRODUCTION TO SURVEYING
Introduces the elements of surveying including measurements, distance corrections, leveling, angles, area computation, computer calculations, topographic surveying, electronic distance measuring instruments, construction surveying, GPS, and GIS. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CAD 112 (4) Course ID: 004054

ENGINEERING GRAPHICS
Explores lines and planes as they relate to orthographic projection to show the size and shape of objects. Includes application of principles and graphic elements of sections, techniques involved in oblique projections, axonometric projections, and perspective drawings; and dimensioning techniques and symbol usage common to all drafting disciplines. Prerequisite: CAD 102 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 120 (4) Course ID: 004067

INTRODUCTION TO ARCHITECTURE
Introduces a practical approach to architectural drafting using board and/or computer aided drafting methods as it relates to residential and commercial architecture, specifications, and structural systems including wood, masonry, concrete, and steel. Prerequisite: CAD 100 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 130 (4) Course ID: 004057

DESCRIPTIVE GEOMETRY
Examines the spatial relationships between points, lines, and planes in various orthographic projections with graphical solutions; explores the processes to solve problems using auxiliary view projection methods, revolutions, intersections, and developments. Prerequisite: CAD 122 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 150 (4) Course ID: 002017

PROGRAMMING IN CAD
Introduces fundamental principles of the computer language(s) that represents and interfaces with the main CAD software. Includes writing subroutines and programs to perform CAD functions not available in the main CAD software. Prerequisite: CAD 100 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 200 (4) Course ID: 002018

INTERMEDIATE COMPUTER AIDED DRAFTING
Produces advanced two- and three-dimensional object drawings with CAD software to learn the techniques of drafting, layering, and symbols associated with one or more design applications, and calculate perimeters, areas, and mass associated with the drawings. Prerequisite: CAD 100 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 201 (4) Course ID: 000219

PARAMETRIC MODELING
Introduces parametric modeling and design of a CAD workstation in exploring the techniques associated with drafting and design using parametric modeling software. Introduces creation of parametric models and explores associative function and flexibility of concurrent part design. Lecture: 2.0 credits (30 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 212 (4) Course ID: 004059

INDUSTRIAL DRAFTING PROCESSES
Explores weldment design, welding symbols, welding processes, and fabrication techniques, tool and die, and jig and fixture drawings. Includes design specifications, pattern drawings, casting, forming processes, and mechanical design principles in relation to the manufacturing industry. Covers screw-thread design and related fastening concepts as they relate to manufactured items and construction. Prerequisite: CAD 100 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 220 (4) Course ID: 004068

ARCHITECTURAL DESIGN
Applies the theory of architectural design and presentation techniques. Deals with site selection, use of materials in design, spatial relationships, and aesthetics. Explores traditional and contemporary design, designers, processes, and historical milestones. Uses board and computer techniques to illustrate interiors and exteriors of student designs. Prerequisite: CAD 120 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 222 (4) Course ID: 004061

MECHANICAL DESIGN
Explores the design principles, mechanical adaptation, and drawing practices involved in the development of mechanical working drawings and the design principles in various manufacturing disciplines; gear drawing and design, and cam and follower drawing and design; mechanical assemblies, machine design, power transmission, bearings, and seals in assemblies. Involves shop processes in these mechanical designs. Prerequisite: CAD 100 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 230 (4) Course ID: 003996

CONSTRUCTION TECHNIQUES
Covers the elements for constructing standard residential and commercial structures; essentials of standard construction details, which illustrate the various construction methods involved in wood frame, solid masonry, masonry veneer, concrete, and steel construction. Includes the development of a portfolio for these techniques. Prerequisite: CAD 120 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 240 (4) Course ID: 004008

ADVANCED DIMENSIONING AND MEASUREMENT
Presents an in-depth study of advanced industrial dimensioning principles, tolerances, and A.N.S.I. standards. Explores shape and geometric characteristics of parts through geometric dimensioning and tolerancing through drafting application and study. Prerequisite: CAD 100 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 252 (4) Course ID: 004070

COMMERCIAL DETAILEDING
Explores commercial drafting building codes, building structure, materials, and structural detailing and detailing. Emphasizes calculation of dimensions to determine appropriate structural members. Prerequisite: CAD 120 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 262 (4) Course ID: 005185

WORKING DRAWINGS
Prepare a set of working drawings to be used in a portfolio that shows mastery of the architectural drafting processes and knowledge of building construction techniques. Prerequisite: CAD 120 with a grade of C or better or Approval of the Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

CAD 291 (2) Course ID: 004063

SPECIAL PROBLEMS
Explores weldment design, welding symbols, welding processes, and fabrication techniques, tool and die, and jig and fixture drawings. Includes design specifications, pattern drawings, casting, forming processes, and mechanical design principles in relation to the manufacturing industry. Covers screw-thread design and related fastening concepts as they relate to manufactured items and construction. Prerequisite: CAD 100 with a grade of C or better or Approval of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory

CAD 292 (4) Course ID: 005188

DEPARTMENT CONSENT REQUIRED INDUSTRIAL APPLICATIONS
Provides an in-depth study of a portfolio of mechanical drawings specific to the occupational opportunities in specific geographical locations. Focuses on various assignments and curriculum as determined by the program instructor. Prerequisite: Approval of Program Coordinator. Lecture: 1.0 - 4.0 credits (30-120 contact hours).
Components: Laboratory

CAD 293 (1 - 4) Course ID: 004064

DEPARTMENT CONSENT REQUIRED SPECIAL PROBLEMS
Provides an in-depth study of a portfolio of mechanical drawings specific to the occupational opportunities in specific geographical locations. Focuses on various assignments and curriculum as determined by the program instructor. Prerequisite: Approval of Program Coordinator. Lecture: 1.0 - 4.0 credits (30-120 contact hours).
Components: Laboratory, Lecture

CAD 298 (1 - 3) Course ID: 004065

DEPARTMENT CONSENT REQUIRED PRACTICUM
Provides supervised on-the-job work experience related to the student’s educational objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Approval of Program Coordinator. Practicum: 1.0-3.0 credits (45-135 contact hours).
Components: Practicum

CAD 299 (1 - 3) Course ID: 004066

DEPARTMENT CONSENT REQUIRED COOPERATIVE EDUCATION
Provides supervised on-the-job work experience related to the student’s educational objectives. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Approval of Program Coordinator. Co-op: 1.0-3.0 credits (45-135 contact hours).
Components: Co-Op

CAD 1001 (0.75) Course ID: 005634

CAD BASICS
Uses a computer graphic workstation in the application of fundamental principles and capabilities of CAD, terminology, and operations. Includes coordinate systems and basic CAD operations. Prerequisite: DFT 102 or BRX 120 with a grade of C or better. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

CAD 1002 (0.75) Course ID: 005635

2-DIMENSIONAL DRAWING
Uses a computer graphic workstation in the application of fundamental principles and capabilities of CAD, specifically construction and manipulation of 2-dimensional shapes. Prerequisite: CAD 1001 with a grade of C or better or consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.25 credits (7.5 contact hours).
Components: Laboratory
CAD 1003 (0.75)  Course ID: 005636  Sections and Orthographic Projections
Uses a computer graphic workstation in the application of fundamental principles and capabilities of CAD, specifically orthographic projections and drafting of sections. Prerequisite: (CAD 1002 with a grade of C or better) or consent of instructor. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

CAD 1004 (0.75)  Course ID: 005637  Dimensioning
Uses a computer graphic workstation in the application of fundamental principles and capabilities of CAD, specifically proper placement of dimensions. Prerequisite: (CAD 1003 with a grade of C or better) or consent of instructor. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

CAR 126 (3)  Course ID: 001152  Intro to Construction
Provides a discussion of the different employment opportunities of carpentry-related careers within the construction industry including different construction systems and methods as well as basic management methods of a construction project. Emphasizes the different building materials and the correct use of hand and power tools. Includes shop and job-site safety. Lecture: 3 credits (45 contact hours).
Components: Lecture

CAR 127 (1)  Course ID: 001153  Intro to Construction - Lab
Permits students to research different employment opportunities of carpentry-related careers. Introduces the student to different construction systems and methods as well as practice basic management methods of a construction project. Permits student to become familiar with common building materials and the correct use of hand and power tools. Implements shop and job-site safety standards. Corequisite: CAR 126. Laboratory: 1 credit (30 contact hours).
Components: Laboratory

CAR 140 (3)  Course ID: 001154  Surveying & Foundations
Enables the student to become familiar with construction surveying methods, site layout procedures and materials used in the construction of foundation systems as well as discussion on the use of the builders level, transit and laser levels. Covers characteristics of concrete, excavation procedures, forming methods and material estimating. Lecture: 3 credits (45 contact hours).
Components: Lecture

CAR 141 (2)  Course ID: 001155  Surveying & Foundations-Lab
Familiarizes the student with construction surveying methods, site layout procedures and materials used in the construction of foundation systems as well as the application of the builders level, transit and laser levels. Covers characteristics of concrete, excavation procedures, forming methods and material estimating. Corequisite: CAR 140. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

CAR 150 (3)  Course ID: 001156  Concrete Formwork
Introduces the carpentry student to heavy and commercial concrete form construction methods. Covers information about properties of concrete as a building material, rigging, concrete wall form systems, above grade floor systems, vertical piers and column form systems, on grade curb forms, horizontal beam forms, fire proofing encasement forms, stair forms, bridge and deck forms. Familiarizes student with OSHA construction standards on Concrete and Shoring, and Excavations. Corequisite: CAR 150. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

CAR 190 (3)  Course ID: 001158  Light Frame Construction I
Emphasizes methods of floor, wall and stair framing, layout and construction. Provides discussion of industry safety standards and building codes. Lecture: 3 credits (45 contact hours).
Components: Lecture

CAR 191 (2)  Course ID: 001159  Light Frame Const. I-Lab
Permits the student to practice floor, wall, and stair framing layout and construction techniques including the implementation of building codes and industry safety standards during lab or job-site practice. Corequisite: CAR 190. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

CAR 196 (3)  Course ID: 001160  Light Frame Construction II
Covers basic roof design and combination roof designs used in the construction industry including the layout and installation practices that will be used to fabricate and install ceiling joists, rafter, and roof decking materials. Includes layout and installation practices for roof truss systems, jobsite safety practice, scaffold and ladder-safety that deals with roof construction and building code requirements for roof construction and material estimating. Lecture: 3 credits (45 contact hours).
Components: Lecture

CAR 197 (2)  Course ID: 001161  Light Frame Const. II-Lab
Covers basic roof design and construction methods used in the construction industry including layout, cut and install ceiling joists, rafters, and roof decking materials. Includes layout and installation practices for roof truss systems, jobsite safety practice, scaffold and ladder safety that deals with roof construction and building code requirements for roof construction and material estimating. Corequisite: CAR 196. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

CAR 198 (1 - 6)  Course ID: 005344  Instructor Consent Required Special Topics in Carpenter
Includes various Construction Carpenter Technology topics, issues and trends. Topics may vary semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of Instructor. Lecture: 1-6 credits (15-90 contact hours). Laboratory: 1-6 credits (30-180 contact hours).
Components: Lecture

CAR 200 (3)  Course ID: 001162  Light Frame Construction III
Presents the concepts of interior and exterior finish materials and methods of installation. Lecture: 3 credits (45 contact hours).
Components: Lecture

CAR 201 (2)  Course ID: 001163  Light Frame Const. III-Lab
Provides an opportunity for students to perform basic applications of the concepts of interior and exterior finish methods for light frame construction. Corequisite: CAR 200. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

CAR 240 (3)  Course ID: 001164  Light Frame Construction IV
Covers the concepts that support the planning, construction and installation of methods for kitchen and bath cabinetry and countertops. Provides discussion of special finish trim techniques including finish stair construction and specialty millwork. Lecture: 3 credits (45 contact hours).
Components: Lecture

CAR 241 (2)  Course ID: 001165  Light Frame Const. IV-Lab
Allows the student to practice the concepts that support the planning, construction and installation methods for kitchen and bath cabinetry and countertops including special trim techniques of finish construction and specialty millwork. Corequisite: CAR 240. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

CAR 298 (2)  Course ID: 001166  Practicum in Construction
Refines the techniques and skills taught in the previous course, provides supervised on-the-job experience related to the students educational and career training objectives. Practicum can be performed on the college campus with work assignments supervised by your program coordinator. Consists of a minimum of 150 contact hours. Two credit hours will be granted after completion. Students participating in the Practicum do not receive compensation as in the co-op program. Prerequisite: ISX 100 and/or Permission from program Instructor. Practicum: 2 credits (150 contact hours).
Components: Practicum

CAR 299 (2)  Course ID: 001167  Co-op in Construction
Refines the techniques and skills taught in the previous courses. Provides a supervised on-the-job experience related to the students educational and career training objectives. The program will consist of a minimum of 150 contact hours. 2.0 credit hours will be granted after completion. Prerequisite: ISX 100 and/or Permission from program Instructor. Co-op: 2 credits (150 contact hours).
Components: Co-Op

CET 150 (3)  Course ID: 004703  Civil Engineering Graphics
This course provides the opportunity for the student to learn the basic theory necessary to generate and understand typical civil engineering working drawings. The student will develop graphic communication skills using current industry standard software. Prerequisite: CAD 100 or ACH 185/195. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture

CET 190 (2)  Course ID: 004704  Civil Engineering Materials
The course will provide a practical look at current practice in the use of materials for civil engineering applications. Students will learn test procedures, design considerations, and overall evaluation methods for these materials. The course will include the study of soils, aggregates, concrete, and asphalt cement. Prerequisite: ACH 160. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture

CET 210 (3)  Course ID: 004705  Structural Analysis and Design
The course will cover building structure for civil engineering technology students, including different types of building loads and their effect upon the various materials used by architects, engineers and technologists. The students will be introduced to quality construction techniques utilizing steel, concrete and reinforced concrete. Industry manuals, specifications and computer programs will be utilized to familiarize the student with current technology. Prerequisite: ACH 225. Lecture: 3 credits (45 contact hours).
Components: Lecture

CET 220 (4)  Course ID: 004706  Intermediate Surveying
The course will include the application of surveying practices for route surveying for highways, construction staking, and topographic surveys. Students will perform field surveying and evaluation, convert outdated deed descriptions into current measurements, and prepare record plats. Prerequisite: CE 211. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Campus: BLC
Hydrology and Drainage
Students will be introduced to the fundamentals of hydrology, including hydraulics of open and closed systems, water quality and drainage. Characteristics of pressures and flows in pipes, storm water runoff, culvert and ditch flow will be studied. Prerequisite: ACH 160, ACH 225, and PHY 211, or consent of instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

CHE 280 (3) Course ID: 004708
Highway Design
Students will be introduced to the fundamentals of highway design. Different components involved in designing a typical highway, including planning, surveying, mapping, and preliminary and final design will be explored using computer design software. Prerequisite: CAD 100 or ACH 185/195, MA 159, and CE 211. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

CHE 295 (1 - 4) Course ID: 005036
Instructor Consent Required Independent Problems
A problem or special project, approved by the instructor, will provide an opportunity for independent study for Civil Engineering Technology students. This course may be repeated to a maximum of six credits. Prerequisite: Consent of instructor. Lecture: Variable. Laboratory: Variable.

Components: Laboratory, Lecture

CHE Chemistry

CHE 120 (3) Course ID: 000237
The Joy of Chemistry
Introduces non-science majors to the main concepts and applications of chemistry in our society. Prerequisite: (Math ACT score of 19) OR (MT 120 or MT 122) with a grade of C or better. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: SN - Science, SN - Science, Course Also Offered in Modules

CHE 125 (1) Course ID: 006172
The Joy of Chemistry Laboratory
Reinforces concepts covered in CHE 120 and introduces scientific inquiry through selected experiments. Prerequisite or corequisite: CHE 120. Laboratory: 1 credit (45 contact hours) (45:1 ratio).

Components: Laboratory

Attributes: SL - Science Laboratory, SL - Science Laboratory

CHE 130 (4) Course ID: 000236
Introductory General and Biological Chemistry
Presents the elementary principles of general, organic and biological chemistry. Prerequisite: (Math ACT score of 19) OR (Applied Mathematics with a grade of C or better). Lecture: 3.0 credits (45 contact hours); Lab: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory

CHE 140 (3) Course ID: 000224
Introductory General Chemistry
Introduces topics in general chemistry, including properties of matter, stoichiometry, gases, atomic structure, bonding, acids and bases, oxidation and reduction, and nuclear chemistry. Intended for students interested in a one-semester course in general chemistry and recommended for students seeking careers in allied health fields. Prerequisite: (Math ACT score of 19) OR (MT 120 or MT 122 with a grade of C or better). Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: SN - Science, SN - Science

CHE 145 (1) Course ID: 000239
Introductory General Chemistry Laboratory
Reinforces concepts covered in CHE 140 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments dealing with chemical and physical properties, qualitative analysis, and quantitative analysis. Prerequisite or corequisite: CHE 140. Laboratory: 1 credit (45 contact hours, 45:1 ratio).

Components: Laboratory

Attributes: SL - Science Laboratory, SL - Science Laboratory

CHE 150 (3) Course ID: 000226
Introduction to Organic and Biological Chemistry
Continues the sequence begun in CHE 140. Introduces topics in organic chemistry and biochemistry. Introduces organic functional groups, their reactions, and the chemistry of proteins, nucleic acids, carbohydrates, and lipids. Prerequisite: CHE 140 with a grade of C or better. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory

CHE 155 (1) Course ID: 006173
Introduction to Organic and Biological Chemistry Laboratory
Reinforces concepts covered in CHE 150 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments dealing with the preparation, characterization, and purification of organic compounds and the reactions of biomolecules. Prerequisite: CHE 140 and CHE 145. Prerequisite or corequisite: CHE 150. Laboratory: 1 credit (45 contact hours, 45:1 ratio).

Components: Laboratory

Attributes: SL - Science Laboratory, SL - Science Laboratory

CHE 160 (2) Course ID: 000238
Preparation for General College Chemistry
Prepares students for success in CHE 170. Introduces vocabulary and nomenclature and provides students with practice in dimensional analysis, stoichiometry, and other critical skills. Offered on a Pass/Fail basis only. Prerequisite: (Math ACT 19) OR (Intermediate Algebra with a grade of C or better). Lecture: 2 credits (30 contact hours).

Components: Lecture

CHE 170 (3) Course ID: 000225
General College Chemistry I
Focuses on major chemical topics, including stoichiometry, atomic structure, properties of matter and the relationship between molecular structure and chemical behavior. Emphasizes solving of mathematical problems which illustrate the principles of chemistry. Designed for students in the sciences, engineering, and pre-professional programs. Prerequisite: (ACT math score of 21) OR (College Algebra with C or better) OR (CHE 130 OR CHE 140 with a grade of C or better). Lecture: 2 credits (30 contact hours, 45:1 ratio).

Components: Lecture

Attributes: SN - Science, SN - Science

CHE 171 (3) Course ID: 006174
General College Chemistry I Workshop
Focuses on problem solving and further application of CHE 170 or CHM 175 course materials. If students withdraw from the associated CHE 170/CHM 175 course, they must also withdraw from CHE 173. Prerequisite or corequisite: CHE 170 or CHM 175. Laboratory: 1 credit (15 contact hours).

Components: Lecture

CHE 175 (1) Course ID: 000240
General College Chemistry Laboratory I
Reinforces concepts covered in CHE 170 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments. Emphasizes both quantitative and qualitative techniques. Prerequisite or corequisite: CHE 170. Laboratory: 1 credit (45 contact hours, 45:1 ratio).

Components: Laboratory

Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory

CHE 180 (3) Course ID: 000227
General College Chemistry II
Continues CHE 170. Focuses on major chemical topics, including acid-base chemistry, kinetics, thermodynamics, and chemical equilibrium. Emphasizes solving of mathematical problems which illustrate the principles of chemistry. Designed for students in the sciences, engineering, and pre-professional programs. Prerequisite: (CHE 170 with a grade of C or better) and (College Algebra with C or better). Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: SN - Science, SN - Science

CHE 183 (1) Course ID: 006186
General College Chemistry II Workshop
Focuses on problem solving and further application of CHE 180 or CHE 185 course materials. If students withdraw from the associated CHE 180/185 course, they must also withdraw from CHE 183. Prerequisite or corequisite: CHE 180 or CHE 185. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

CHE 185 (1) Course ID: 000241
General College Chemistry Laboratory II
Reinforces concepts covered in CHE 180 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments. Emphasizes both quantitative and qualitative techniques. Prerequisite: CHE 175 with a grade of C or better. Prerequisite or corequisite: CHE 180. Laboratory: 1 credit (45 contact hours, 45:1 ratio).

Components: Laboratory

Attributes: SL - Science Laboratory, SL - Science Laboratory

CHE 190 (3) Course ID: 006802
Industrial Chemistry
Introduces topics in basic chemical engineering and chemical processing. Includes organic chemistry, synthetic polymers, energy sources, diffusion, fluid flow, heat transfer, recycling, air and water pollution. Intended for students in the chemical engineering technology program. Pre-requisite: (CHE 140 and CHE 145) or consent of instructor. Co-requisite: CHE 195. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CHE 195 (1) Course ID: 006803
Industrial Chemistry Laboratory
Reinforces concepts covered in CHE 190. Includes basic laboratory techniques, methods, and selected experiments dealing with chemical engineering technology. Pre-requisite: (CHE 140 and CHE 145) or consent of instructor. Co-requisite: CHE 190. Lab: 1.0 credit hour (45 contact hours).

Components: Laboratory

CHE 253 (3) Course ID: 006580
Materials Science
The properties of materials as reflected by the atomic and electronic structure of their constituent elements. Mechanical, thermal, electrical, magnetic, optical, and chemical characteristics of metallic, ceramic, polymeric, and composite solids. Pre-requisites: CHE 180. Lecture: 3.0 (45 contact hours).

Components: Lecture

Attributes: University Course (University of Louisville)
Campus: JFC

CHE 270 (3) Course ID: 000230
Organic Chemistry I
Presents the fundamental principles of organic chemistry. Emphasizes the structures and properties of carbon-containing compounds. Introduces organic reactions, their mechanisms, and applications to synthesis. Prerequisite: CHE 180 with a grade of C or better. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: SN - Science, SN - Science

CHE 275 (2) Course ID: 000231
Organic Chemistry Laboratory I
Introduces common techniques used in the laboratory for purification, separation, identification, and reactions of organic compounds. Prerequisite: CHE 185 with a grade of C or better. Prerequisite or corequisite: CHE 270. Laboratory: 2 credits (60 contact hours).

Components: Laboratory

Attributes: SL - Science Laboratory, SL - Science Laboratory
CHE 280 (3)  Course ID: 000232
Organic Chemistry II
Presents further applications of the principles of organic chemistry. Continues the study of organic reactions, their mechanisms, synthesis and modern spectrosopic techniques. Prerequisite: CHE 270 with a grade of C or better. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

CHE 285 (2)  Course ID: 000233
Organic Chemistry Laboratory II
Explores the synthesis, purification, and characterization of organic compounds in the laboratory. Prerequisite: CHE 275 with a grade of C or better. Prequisite or corequisite: CHE 280. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

CHE 299 (1 - 3)  Course ID: 006177
Instructor Consent Required Laboratory Research in Chemistry: (Topic)
Offers the students the opportunity to perform laboratory research on a problem chosen by the instructor. Course may be repeated to a maximum of six credit hours. Prerequisite: Consent of Instructor. Laboratory: 1-3 credits (30-90 contact hours).
Components: Laboratory

CHE 1201 (0.75)  Course ID: 006126
Fundamentals
Introduces non-science majors to the fundamentals and applications of chemistry in our society. Prerequisite: Math ACT score of 19 OR (MT 120) or (MT 122) with a grade of C or better. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1202 (0.75)  Course ID: 006127
Chemistry in Society
Introduces non-science majors to the applications of chemistry in society. Prerequisite: CHE 1201. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1203 (0.75)  Course ID: 006128
Selected Topics in Chemistry and Culture
Introduces non-science majors to selected topics in chemistry and culture. Prerequisite: CHE 1201 or 1202. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1204 (0.75)  Course ID: 006129
Special Topics: Fields of Chemistry
Introduces non-science majors to different fields in chemistry through applied special topics. Prerequisites: CHE 1201, 1202, or 1203. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CIS 100 (3)  Course ID: 000242
Introduction to Computers
Familiarizes students with various types of computer hardware and software including the use of an operating system. Explores common program functions of key applications and special functions available in word processing, electronic spreadsheet, database, and presentation software. Teaches online skills and concepts including networking, electronic mail, Web browsing, and Internet research. Prerequisite: Basic Keyboarding Skills. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Computer Literacy, Course Also Offered in Modules

CIS 107 (1)  Course ID: 005465
Database Applications
Presents use of microcomputer and database application software to prepare elementary tables, forms, queries, reports, and database concepts. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIS 110 (3)  Course ID: 000243
Operating Systems Concepts
A conceptual and practical overview of operating systems is covered. Topics include preparing disk(s); creating, displaying, copying, and deleting files and directories; using batch files and text editors, graphical user interfaces, and memory management. Hands-on experience with hardware/software is provided. Lecture: 3 hours. Prerequisite: Computer literacy course or consent of instructor.
Components: Lecture

CIS 120 (3)  Course ID: 000244
Program Design and Development
Covers the design and development of computer programs for common business-oriented problems. Emphasizes programming concepts and techniques common to all languages. Uses a programming language to illustrate and practice these concepts. Lecture: 3 hours. Prerequisite: Computer literacy course, MT 120 or MT 122, or consent of instructor.
Components: Lecture
Attributes: Course Also Offered in Modules

CIS 130 (3)  Course ID: 000245
Microcomputer Applications
Instructs in use of microcomputer and current word processing, database, and spreadsheet software. Includes thesaurus and spell checker. Includes requirements, capabilities, limitations, and applications of these software packages. Prerequisite: CIS 100 or Equivalent or consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

CIS 133 (1)  Course ID: 000248
Spreadsheet Applications
Students use a microcomputer and spreadsheet software to create, edit, and print spreadsheets. Topics include formatting, use of functions, macros, and business graphs. Laboratory: 2 hours. Prerequisite: CIS 100 or CIS 101 or equivalent. Components: Laboratory

CIS 147 (3)  Course ID: 000255
Query Programming
This first-level programming language course covers the fundamentals of SQL (a standard relational query and definition language). The syntax for table creation, modification, and access will be introduced. The relational database model will be emphasized using the data definition language and data manipulation language, including relational algebra (projection, selection, join, etc.). The host language interface will be used to develop interactive screens and format reports. Lecture: 3 hours. Prerequisite: CIS 110, CIS 120 and CIS 130.
Components: Lecture

CIS 148 (3)  Course ID: 002350
Visual BASIC I
Provides students with the knowledge and skills to code, execute, and document comprehensive programs in Visual Basic. Involves the use of forms for input/output, controls to trigger events, structures to control program execution, sequential and random access of files, arrays, and error handling. Prerequisite: CIS 120 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

CIS 149 (3)  Course ID: 003811
Java Programming I
Introduction to object oriented programming in Java. Writing, compiling, testing, and debugging of basic applets and applications that use a graphical user interface. Prerequisite: CIS 120 or Consent of Instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory

CIS 151 (3)  Course ID: 000258
Introduction To Electronic Commerce
An overview of telecommunications is provided in this course, which emphasizes electronic media and their applications in business. It introduces the new opportunities and changes in business operations which are developing as businesses use tools such as multimedia, teleconferencing, electronic data interchange, telemarketing, telecommuting and the Internet. Students who do not have Internet skills should take BA 150/CIS 150 Doing Business on the Internet concurrently. Lecture: 3 credits (45 contact hours).
Components: Lecture

CIS 155 (3)  Course ID: 004322
C/C++ Programming I
Introduces concepts and techniques involved in developing C/C++ applications including writing, compiling, testing, and debugging basic applications that use a graphical user interface. Covers programming concepts of structure fields, arrays, functions, file management, and error handling. Prerequisite: CIS 120 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

CIS 200 (1 - 3)  Course ID: 000261
CIS Topic: (Topic)
Concepts of data processing which are not being covered in other courses are dealt with in this course. Topics vary from semester to semester at discretion of the instructor. May be repeated with different topics to a maximum of six credit hours. Lecture: 1-3 hours (variable). Prerequisite: Consent of instructor.
Components: Lecture

CIS 210 (3)  Course ID: 000262
Communications and Networking
Communications and networking concepts including hardware, software, and transmission media; access methods and protocols; and network configurations are included. System design considerations are addressed. Emphasis is on local area networks, and students install a simple local area network. Lecture: 3 hours. Prerequisite: CIS 110 and CIS 130 or equivalent.
Components: Lecture

CIS 220 (3)  Course ID: 000263
Systems Analysis and Design
Methodologies for developing business-oriented computer information systems are covered including the definition of needs, creation of specifications, and implementation of systems. Modern systems analysis and software tools are covered. Lecture: 3 hours. Prerequisite: ENG 102 or concurrent; and CIS 120; Programming Language I recommended.
Components: Lecture

CIS 230 (3)  Course ID: 000264
Advanced Microcomputer Applications
Students use advanced functions of current software packages (word processing, spreadsheet, database management, presentation developers). Topics include working with complex documents, spreadsheets, and databases. Additionally, students will create sophisticated presentations and prepare data for distribution on the Web. Lecture: 3 hours. Prerequisite: CIS 130 or consent of instructor.
Components: Lecture
Attributes: Course Also Offered in Modules

CIS 248 (3)  Course ID: 002351
Visual BASIC II: Desktop Applications
Provides students with the knowledge and skills to design, develop, and implement Visual Basic applications designed to run on individual computers or workstations. Lecture: 2 hours; Laboratory: 2 hours. Prerequisite: Visual Basic I or consent of instructor.
Components: Laboratory

CIS 249 (3)  Course ID: 003812
Java Programming II
A continuation of Java Programming I using input and output streams, advanced graphical user interface features, the benefits of object oriented techniques, and database connectivity with stand alone applications. Prerequisite: CIS 149 or Consent of Instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory

CIS 250 (1 - 3)  Course ID: 000265
CIS Topic: (Topic)
Concepts of data processing which are not being covered in other courses are dealt with in this course. Topics vary from semester to semester at discretion of the instructor. May be repeated with different topics to a maximum of six credit hours. Lecture: 1-3 hours (variable). Prerequisite: Consent of instructor.
Components: Lecture

CIS 260 (1 - 3)  Course ID: 000266
CIS Topic: (Topic)
Concepts of data processing which are not being covered in other courses are dealt with in this course. Topics vary from semester to semester at discretion of the instructor. May be repeated with different topics to a maximum of six credit hours. Lecture: 1-3 hours (variable). Prerequisite: Consent of instructor.
Components: Lecture

CIS 270 (1 - 3)  Course ID: 000267
CIS Topic: (Topic)
Concepts of data processing which are not being covered in other courses are dealt with in this course. Topics vary from semester to semester at discretion of the instructor. May be repeated with different topics to a maximum of six credit hours. Lecture: 1-3 hours (variable). Prerequisite: Consent of instructor.
Components: Lecture
CIS 250 (4)  Course ID: 005224
Java Game Development I
Game Development using the Java Programming language. Two dimensional game creating for both single user and multi-user games. Server Administration including controlling player communication. Prerequisite: CIS 149 or Consent of Instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture

CIS 252 (3)  Course ID: 000270
C++ Programming II
A continuation of CIS 155. File manipulation, sending output to printers, using network connections, using threads, and the development of event-driven applications by the use of object-oriented techniques. Prerequisite: CIS 155 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

CIS 255 (4)  Course ID: 005466
C++ Game Development I
Explores Game Development using the C++ Programming language. Creates 2-Dimensional games for both single user and multi-user environments. Explores Server Administration including controlling player communication. Prerequisite: CIS 155 or consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture

CIS 258 (3)  Course ID: 002352
Visual BASIC III: Distributed Applications
Provides students with the knowledge and skills to design, develop, and implement distributed Visual Basic applications designed to utilize data and other resources located throughout the enterprise. Lecture: 2 hours; Laboratory: 2 hours. Prerequisite: Visual Basic II or consent of instructor.
Components: Laboratory, Lecture

CIS 260 (4)  Course ID: 005225
Java Game Development II
A continuation of CIS 250 creating three-dimensional games including adding texture, lighting, three-dimensional objects, linking to external scripts. Distributing games including bandwidth issues, protecting code and testing games. Prerequisite: CIS 250 or Consent of Instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture

CIS 265 (4)  Course ID: 005467
C++ Game Development II
Improves 2-Dimensional Game Development techniques using the C++ Programming language. Incorporates sound and animation for more sophisticated games. Prerequisite: CIS 255 (C++ Game Development I) or consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture

CIS 270 (3)  Course ID: 000272
Database Management Systems
This course familiarizes students with the basic models and capabilities of standard DBMS packages. Discussions review the capabilities of three major types of data models—hierarchical, network, and relational—as they apply to theoretical sets of data objects. Experiences include the creation of a logical design and translation into a physical database using the relational model. Lecture: 3 hours. Prerequisite: CIS 147 and CIS 220.
Components: Lecture

CIS 280 (1 - 6)  Course ID: 000273
Instructor Consent Required Internship
Provides on-the-job experiences in data processing, requiring a minimum of 120 clock hours of appropriate experience approved by the faculty member (40 clock hours per credit). Learning Contract, signed by student, faculty member, and supervisor, is required. Offered on a pass-fail basis only. Independent Study: Prerequisite: Completion of at least 15 hours of IT/CIS coursework and consent of instructor.
Components: Discussion

CIS 1001 (0.6)  Course ID: 005830
Word Processing Level 1
Examines the use of an operating system and explores basic common program functions of Word Processing Level 1. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIS 1002 (0.6)  Course ID: 005831
Spreadsheets Level 1
Examines the use of an operating system and explores basic common program functions of Spreadsheets Level 1. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIS 1003 (0.6)  Course ID: 005832
Databases Level 1
Examines the use of an operating system and explores basic common program functions of Databases Level 1. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIS 1004 (0.4)  Course ID: 005833
Presentation Software Level 1
Examines the use of an operating system and explores basic common program functions of Presentation Software Level 1. Lecture: 0.4 credits (6 contact hours).
Components: Lecture

CIS 1005 (0.8)  Course ID: 005834
Computing Fundamentals and Living Online
Familiarizes students with various types of computer hardware and software including the use of an operating system. Teaches online skills and concepts including networking, electronic mail, Web browsing, and Internet research. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIS 1201 (0.6)  Course ID: 005835
Basic Program Logic
Includes basic computer logic in the development of a program to solve a stated problem. Prerequisite: Computer literacy course and MT 120 or MT 122 or consent of instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

CIS 1202 (0.6)  Course ID: 005836
File Manipulation
Provides knowledge to apply the proper file, record, and field structures to business applications. Prerequisite: CIS 1201 or consent of instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

CIS 1203 (0.6)  Course ID: 005837
Structured Methods
Provides knowledge to apply structured methods of program design. Prerequisite: CIS 1202 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIS 1204 (0.6)  Course ID: 005838
Program Development Approaches
Provides knowledge to apply approaches to the development of a program to solve a stated problem. Prerequisite: CIS 1203 or consent of instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

CIS 1205 (0.6)  Course ID: 005839
Programming Techniques
Includes principles of current programming techniques to develop complex arrays. Prerequisite: CIS 1204 or consent of instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

CIS 1301 (0.9)  Course ID: 005840
Word Processing Level 2
Instructs in the use of microcomputer and word processing including the thesaurus and spell checker. Includes requirements, capabilities, limitations, and applications of word processing. Prerequisite: (CIS 100 or CIS 1001 or Equivalent) or consent of instructor. Lecture: 0.9 credit (13.5 contact hours).
Components: Lecture

CIS 1302 (0.9)  Course ID: 005841
Spreadsheets Level 2
Instructs in the use of microcomputer and spreadsheets. Includes requirements, capabilities, limitations, and applications of spreadsheets. Prerequisite: (CIS 100 or CIS 1002 or Equivalent) or consent of instructor. Lecture: 0.9 credits (13.5 contact hours).
Components: Lecture

CIS 1303 (0.9)  Course ID: 005842
Databases Level 2
Instructs in the use of microcomputer and databases. Includes requirements, capabilities, limitations, and applications of databases. Prerequisite: (CIS 100 or CIS 1003 or Equivalent) or consent of instructor. Lecture: 0.9 credits (13.5 contact hours).
Components: Lecture

CIS 1304 (0.3)  Course ID: 005843
Presentation Software Level 2
Instructs in the use of microcomputer and presentation software. Includes requirements, capabilities, limitations, and applications of Presentation Software Level 2. Prerequisite: (CIS 100 or CIS 1004 or Equivalent) or consent of instructor. Lecture: 0.3 credit (4.5 contact hours).
Components: Lecture

CIS 1481 (0.6)  Course ID: 005844
Introduction to the Visual Basic Environment
Introduces students to Visual Basic environment and the design of a Visual Basic application. Prerequisite: CIS 1250 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIS 1482 (0.8)  Course ID: 005845
Variables, Input, Decisions and Documentation
Incorporates variables, decisions, and documentation in a Visual Basic application. Prerequisite: CIS 1481 or consent of instructor. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

CIS 1483 (0.8)  Course ID: 005846
Loops and Arrays
Designs Visual Basic applications using loops and arrays. Prerequisite: CIS 1482 or consent of instructor. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

CIS 1484 (0.8)  Course ID: 005847
Classes and Data Files
Incorporates classes and the use of data files in Visual Basic applications. Prerequisite: CIS 1483 or consent of instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIS 1551 (0.6)  Course ID: 006386
C/C++ Fundamentals
Introduces the concepts and techniques involved in developing C/C++ applications including how to install and configure a C/C++ compiler, create source code files and create variables, assign data types, perform arithmetic operations, and run applications. Prerequisite: CIS 120 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

CIS 1552 (0.6)  Course ID: 006387
C/C++ Control Structures
Introduces concepts of how to make decisions with structure fields such as if, if-else, nested if, switch, while, for, and do-while statements. Prerequisite: CIS 1551 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

CIS 1553 (0.6)  Course ID: 006388
C/C++ Arrays
Provides skills for creating and searching different types of arrays. Introduces pointers as well as methods on how pointers can be used in place of an array name. Prerequisite: CIS 1552 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture
CIT 1554 (0.6) Course ID: 006389
C/C++ Functions
Provides skills for writing functions, returning values from functions, and passing values to functions. Addresses function parameter and overloading. Prerequisite: CIT 1553 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

CIT 1555 (0.6) Course ID: 006390
C/C++ File Input and Output
Provides an overview on how to read and write to files including the use of correct methods for opening/closing files and error handling and addresses how to use the stdin/stdoutstream functions and manipulators. Prerequisite: CIT 1554 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

CIT 2301 (0.9) Course ID: 005848
Word Processing Level 3
Uses advanced functions of word processing. Includes working with complex documents and creating and preparing data for distribution on the Web. Prerequisite: (CIS 130 or CIS 1301) or consent of instructor. Lecture: 0.9 credit (13.5 contact hours).
Components: Lecture

CIT 2302 (0.9) Course ID: 005849
Spreadsheet Level 3
Uses advanced functions of spreadsheets. Includes working with complex spreadsheets and the creation and preparation of data for distribution on the Web. Prerequisite: (CIS 130 or CIS 1301) or consent of instructor. Lecture: 0.9 credits (13.5 contact hours).
Components: Lecture

CIT 2303 (0.9) Course ID: 005850
Databases Level 3
Uses advanced functions of databases. Includes working with complex databases and the creation and preparation of data for distribution on the Web. Prerequisite: (CIS 130 or CIS 1301) or consent of instructor. Lecture: 0.9 credit (13.5 contact hours).
Components: Lecture

CIT 2304 (0.3) Course ID: 005851
Presentation Software Level 3
Uses advanced functions of presentation software. Includes working with complex presentations and the creation and preparation of data for distribution on the Web. Prerequisite: (CIS 130 or CIS 1303) or consent of instructor. Lecture: 0.3 credit (4.5 contact hours).
Components: Lecture

CIT 105 (3) Course ID: 004710
Introduction to Computers
Provides an introduction to the computer and the convergence of technology as used in today's global environment. Introduces topics including computer hardware and software, file management, the Internet, e-mail, the social web, green computing, security and computer ethics. Presents basic use of application, programming, systems, and utility software. Basic keyboarding skills are strongly recommended. Prerequisite: RDG 20 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Computer Literacy

CIT 110 (3) Course ID: 004711
Operating Systems Concepts
A conceptual and practical overview of operating systems is covered. Topics include: user interfaces such as graphical user interfaces and command syntax interfaces; task management; file systems; network connectivity and resource sharing; and operating systems installation and maintenance. Students will be expected to use multiple operating systems. Hands-on experience with hardware and software is provided. Prerequisite: CIS/CIT 105 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
CAMPUS: BLC

CIT 111 (4) Course ID: 006189
Computer Hardware and Software
Presents a practical view of computer hardware and client operating systems. Covers computer hardware components; troubleshooting, repair, and maintenance; operating system interfaces and management tools; networking components; computer security; and operational procedures. Prerequisite: CIT 105 AND MAT 085 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

CIT 120 (3) Course ID: 004712
Computational Thinking
Promotes understanding of computer programming and logic by teaching students to "think like a computer." Covers skills needed to develop and design language-independent solutions to solve computer-related problems. Covers development and design basics including use of variables, control and data structures, and principles of command-line and object-oriented languages. Prerequisite: MAT 085 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

CIT 125 (3) Course ID: 006901
Introduction to GIS
Provides basic theories and concepts of geographical information systems including basic GIS capabilities, data collection, data types, GPS, and basic mapping concepts. Introduces GIS software using industry-specific applications and technology to provide a conceptual base to build expertise in GIS. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 130 (3) Course ID: 004713
Productivity Software
Utilizes current word processing, spreadsheet, database, and presentation application software to solve common business problems. Covers basic features of each software application. Prerequisite: CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 140 (3) Course ID: 004714
JavaScript I
Provides students with an overview of the JavaScript scripting language. Includes coding, testing, and debugging JavaScript programs; using variables, operators, and data types; creating dynamic web pages using JavaScript; controlling the behavior of forms, buttons, and text elements; and using control structures, pattern matching, objects, and application scripts. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 141 (3) Course ID: 005037
PHP I
Explores the fundamentals of PHP, with emphasis on syntax, structure, and current usage. Includes dynamic generation of web pages, fluid forms, and web security. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 142 (3) Course ID: 006902
C++ I
Introduces students to fundamental programming concepts using the C++ programming language. Includes data types, control structures, single data structures, error-handling, modular programming, event-driven programming, and file processing. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

CIT 143 (3) Course ID: 006247
COBOL I
Code and execute error-free programs in the COBOL language, a level I programming language, including proper documentation. Use orderly, structured methodology for program development. Involve sequential input/output, report formatting, editing of data, numeric calculations, single level control breaks, and processing tables. Prerequisite: CIT 120 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

CIT 144 (3) Course ID: 006190
Flash Programming with ActionScript I
Provides students with the knowledge and skills necessary to program Flash animations with actions, video, audio, and end-user interactivity using the ActionScript programming language. Provides an equally balanced effort regarding the two main threads of the course: the theory of Flash ActionScript programming syntax, style, documentation, correctness, and efficiency; and the practice of Flash ActionScript program design, implementation, debugging, and testing. Requires students to complete a number of programming assignments. Prerequisite: (CIT 105 and CIT 111 and CIT 120 and CIT 130 and CIT 150) or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

CIT 145 (3) Course ID: 004715
Perl I
Provides students with an overview of the PERL scripting language. Includes coding, testing, and debugging PERL programs; using variables, operators, and data types; and using control structures, pattern matching, objects, and application scripts. Prerequisite: CIT 120 OR Consent of the Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 147 (3) Course ID: 006903
Programming I: Language
Introduces students to fundamental programming concepts using an industry-specific or emerging programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, information and file processing, and uniqueness of the language used in the course. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 148 (3) Course ID: 004716
Visual Basic I
Introduces students to fundamental programming concepts using the Visual Basic programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, event-driven programming, graphical user interfaces, and file processing. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 149 (3) Course ID: 004717
Java I
Introduces students to fundamental programming concepts using the Java programming language. Includes data types, control structures, simple data structures, error-handling, object-oriented programming, graphical user interfaces, and modular programming. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 150 (3) Course ID: 004718
Internet Technologies
Provides students with a study of traditional and emerging Internet technologies. Covers topics including Internet fundamentals, Internet applications, Internet delivery systems, and Internet client/server computing. Provides a hands-on experience and some rudimentary programming in an Internet environment. Prerequisite: (CIT 105 AND CIT 120) OR Consent of the Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

CIT 155 (3) Course ID: 006904
Web Page Development
Introduces web page design through the use of HTML and CSS. Uses text and/or web editors to create web documents with various formats and page layouts,
multimedia, tables and forms. Emphasizes W3C web design and accessibility standards. Pre-requisite: CIT 150 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 157 (3) Course ID: 006905
Web Site Design and Production
Introduces web site production processes with particular emphasis on design involving layout, navigation, interactivity, and using web production software. Pre-requisite: CIT 150 OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture

CIT 160 (4) Course ID: 004719
Intro to Networking Concepts
Introduces technical level concepts of non-vendor specific networking including technologies, media, topologies, devices, management tools, and security. Provides the basics of how to manage, maintain, troubleshoot, install, operate, and configure basic network infrastructure. Pre-requisite: MAT 065 OR Consent of Instructor. Pre-requisite Or Co-requisite: CIT 111 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture

CIT 161 (4) Course ID: 006906
Network Fundamentals
Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. Provides the opportunity to build simple LAN topologies by applying principles of cabling; performing basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. (This is the first course in the Cisco Exploration sequence.) Pre-requisite: MT 065 OR Consent of instructor. Pre-requisite or Co-requisite: CIT 111 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture

CIT 162 (4) Course ID: 006907
Home and Small Office Networks
Introduces the skills to install home and small office networks. Develops skills needed by network technicians, computer technicians, cable installers, and help desk technicians. Provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small office environments. (This is the first course in the Cisco Discovery sequence.) Pre-requisite: MAT 065 OR Consent of instructor. Pre-requisite or Co-requisite: CIT 111 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture

CIT 163 (4) Course ID: 006908
Small-Medium Business or ISP
Prepares students for jobs as network technician. Develops additional skills required for computer technicians and help desk technicians. Provides a basic overview of routing and remote access; addressing, security, and covers servers that provide e-mail services, Web space, and authenticated access. (This is the second course in the Cisco Discovery sequence.) Pre-requisite: CIT 162 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture

CIT 164 (4) Course ID: 006909
Intro to Routing and Switching
Familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks, IP Telephony requirements, and security. Introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. (This is the third course in the Cisco Discovery sequence.) Pre-requisite: CIT 163 OR Consent of Instructor. Pre-requisite: CIT 163 OR Consent of Instructor. Components: Lecture

CIT 165 (4) Course ID: 006910
Network Design and Support
Provides a student with the organizational and technical skills necessary for gathering network requirements, designing basic networks, establishing proof-of-concept, and performing project management tasks through a variety of case studies and role-playing exercises. Presents lifecycle services, including upgrades, competitive analyses, and system integration in the context of pre-sale support. (This is the fourth course in the Cisco Discovery sequence.) Pre-requisite: CIT 164 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture

CIT 170 (3) Course ID: 004720
Database Design Fundamentals
Provides an overview of database and database management system concepts, internal design models, normalization, network data models, development tools, and applications. Pre-requisite: CIT 105 AND (Completion of a mathematics course on the approved Quantitative Reasoning general education course list for the AAS, AA, or AS.) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 171 (3) Course ID: 004721
SQL I
Provides students with an extensive introduction to database manipulation techniques. Introduces students to SQL, will create and maintain database objects; and store, retrieve, and manipulate data using SQL. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 180 (3) Course ID: 006191
Security Fundamentals
Introduces basic computer and network security concepts and methodologies. Covers principles of security; compliance and operational security; threats and vulnerabilities; network security; application, data, and host security; access control and identity management; and cryptography. Pre-requisite: (CIT 105 AND (CIT 160 OR CIT 161 OR CIT 162)); OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 182 (3) Course ID: 006911
Perimeter Defense
Provides information and skills required to secure computers and networks from attacks with an emphasis on configuration of firewalls and intrusion-detection systems. Pre-requisite: CIT 180 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 184 (3) Course ID: 006912
Attacks and Exploits
Provides knowledge and skills necessary to understand a variety of attacks and exploits against computers and networks. Teaches effective defensive techniques against real attacks. Pre-requisite: CIT 180 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 210 (4) Course ID: 006913
Routing Protocols and Concepts
Provides students with the skills necessary to understand and apply advanced networking concepts. Covers TCP/IP addressing and subnetting, router configuration, routed and routing protocols. Completes one of a series of four courses that helps prepare students for the Cisco Certified Network Associate (CCNA) certification exam. (This is the second course in the Cisco Exploration sequence.) Pre-requisite: CIT 161 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture

Components: Lecture

CIT 211 (4) Course ID: 004722
LAN Switching and Wireless
Provides students with the skills necessary to understand and apply advanced networking concepts. Covers local area network (LAN) switching, virtual local area networks (VLANS), advanced network design concepts, advanced router configuration and advanced network management projects. (This is the third course in the Cisco Exploration sequence.) Prerequisite: CIT 161 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture

CIT 212 (4) Course ID: 004723
Accessing the WAN
Provides students with the skills necessary to understand and apply advanced principles and applications in deploying networking hardware. Covers WAN design, WAN connectivity protocols such as PPP, ISDN and Frame Relay, as well as advanced network management projects. (This is the fourth course in the Cisco Exploration sequence.) Prerequisite: (CIT 210 AND CIT 211) OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture

CIT 213 (3) Course ID: 006192
MS Client/Server Config
Covers installation and configuration of Microsoft Windows client and server operating systems. Helps prepare students for exams in the Microsoft certification exam series. Prerequisite: CIT 111 AND (CIT 160 OR CIT 161 OR CIT 162) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 214 (3) Course ID: 006914
Server Infrastructure Admin
Provides students with the knowledge and skills to configure and administer a network server infrastructure including DNS, WINS, DHCP and RRAS Servers. Covers how to implement and configure secure network access and implement fault tolerant storage technologies, network technologies most commonly used with Windows Servers and IP-enabled networks, and secure servers and maintain update compliance. Assist in preparing students for the Microsoft certification exam series. Pre-requisite: CIT 213 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 217 (3) Course ID: 004724
UNIX/Linux Administration
Developed in 1969, the UNIX operating system shaped the development of the Internet and is still used extensively in servers, workstations, and mobile devices. Learn the fundamental skills necessary to install UNIX/Linux and maintain a UNIX/Linux system on a day-to-day basis. Prerequisite: (CIT 111 AND CIT 160) OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture

CIT 218 (3) Course ID: 004725
UNIX/Linux Net Infrastructure
Establishing secure networking environments is a key strength of the UNIX/Linux operating system. Explores naming, messaging, file transfer, remote login, routing, address assignment, distributed file systems, web, and email services in a standard UNIX/Linux server environment. Prerequisite: CIT 217 OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture

CIT 219 (3) Course ID: 006915
Internet Protocols
Provides an in-depth exploration of the components of the TCP/IP protocol suite and the associated underlying technologies required to support them. Includes design, installation, configuration, management, and troubleshooting of TCP/IP networks. Pre-requisite: (CIT 160 OR CIT 161 OR CIT162) OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture

CIT 221 (3) Course ID: 006916
Computer Graphics
Introduces basic computer graphics with special emphasis on graphics for games. Pre-requisite: Approved Level I Programming Language OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Components: Lecture
CIT 223 (3)  Course ID: 006917  
Computer Animation  
Introduces basic 2D and 3D computer animation methods. Develops and applies traditional animation techniques using existing computer software and develops their own animation applications using a high-level programming language. Explores engineering, visualization, advertising, simulation, and multimedia applications of computer animation. Pre-requisite: (CIT 221 AND Approved Level I Programming Language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 225 (3)  Course ID: 006918  
GIS Software Tools  
Explores Geographical Information System extensions. Introduces and identifies popular advanced extensions used for network analysis, spatial analysis, and 3D analysis. Pre-requisite: (CIT125 AND CIT117) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 229 (3)  Course ID: 006919  
Selected Topics in GIS  
Explores selected topics in Geographical Information Systems such as homeland security, agriculture, government applications, remote sensing, spatial modeling, GPS techniques, or cartography. (Course may be repeated with different topics to a maximum of six credit hours.) Pre-requisite: CIT 125 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 232 (3)  Course ID: 006193  
Help Desk Operations  
Introduces a variety of tools and techniques to provide user support in help desk operations. Explores help desk concepts, customer service skills, troubleshooting problems, writing for end users, help desk operations and software, needs analysis, facilities management, and other topics related to end user support. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 234 (3)  Course ID: 004727  
Advanced Productivity Software  
Uses advanced functions of word processing, presentation, and email software. Includes working with complex documents creating and preparing data distribution on the web. Pre-requisite: CIT 130 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 236 (3)  Course ID: 004728  
Adv Data Organization Software  
Uses advanced functions of databases and spreadsheets. Explores complex databases and spreadsheets for the creation and preparation of data distribution on the Web. Pre-requisite: CIT 130 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 241 (3)  Course ID: 006920  
PHP II  
Explores the dynamic features of PHP and how it can interact to form spontaneous websites and dynamic feature rich content. Pre-requisite: CIT 141 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 242 (3)  Course ID: 006921  
C++ II  
Introduces students to advanced programming concepts using C++. Includes advanced data structures, concurrency, innovative algorithms, advanced file processing, and topics that are unique to C++. Pre-requisite: CIT 142 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 245 (3)  Course ID: 005038  
Perl II  
Continues CIT 145, with this Level II programming language course focuses on the use of the Perl programming language in a Web server environment. Covers topics including ethics and the Web, advanced Perl programming constructs including objects and modules, Web form processing using Perl, security issues, and applications to e-commerce. Pre-requisite: (CIT 145 and CIT 150) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 246 (3)  Course ID: 006922  
2-D Game Development: Language  
Explores with students an introduction to two-dimensional game creation. Includes the creation of a two-dimensional game using an industry-specific or emerging programming language. This course may be repeated with a different language. Pre-requisite: Level I Programming Language (using the same programming language) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 247 (3)  Course ID: 006923  
Programming II: Language  
Introduces students to advanced programming concepts using an industry-specific or emerging programming language. Includes advanced features of the language studied, such as, advanced data structures, concurrency, innovative algorithms, advanced file processing, and topics that are unique to the language studied. Pre-requisite: CIT 147 (for the same programming language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 248 (3)  Course ID: 006924  
Visual Basic II  
Provides students with an extensive overview of designing advanced computer applications using the Visual Basic programming language. Includes graphical user interfaces, event-driven programming, modular programming, object-oriented programming, advanced data types and structures, input validation, error-handling, and file and database processing. Pre-requisite: CIT 148 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 249 (3)  Course ID: 005208  
Java II  
Continues CIT 149, by focusing on Java client/server programming for the Internet. Provides students with an extensive overview of designing and developing advanced object-oriented applications using the Java programming language. Includes input and output streams (file processing), polymorphism, inheritance, multithreading, recursion, mobile computing, and other advanced topics. Pre-requisite: CIT 149 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 253 (3)  Course ID: 005039  
Data Driven Web Pages: Topic  
Provides students with the knowledge and skills to design, implement, and manage a database-driven web site. Includes the study of databases and web servers in e-commerce, transaction processing, and client-side and server-side Web scripting. Includes the creation of a database-driven Web site. Pre-requisite: (CIT 150 AND CIT 170 AND Approved Level I Programming Language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 255 (3)  Course ID: 005104  
Web Server Administration  
Provides an in-depth study of the functions required to run a safe and stable web server. Considers multiple web services on multiple platforms from installation, to configuration, availability, and security. Requires hands-on experiences with web services. Pre-requisite: (CIT 150 AND CIT 213 AND CIT 261) OR (CIT 217 AND CIT 218) AND CIT 219 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 257 (3)  Course ID: 006925  
Applied Internet Technologies  
Provides a framework for integrating the content of the Internet Technologies Web Programming track into a complete and functioning web site. Creates a portfolio of a fully functional web site to aid in student employment within the Web Programming field. Pre-requisite: (CIT 140 AND CIT 171 AND CIT 253) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 258 (3)  Course ID: 005211  
Internet Technologies Seminar  
Explores selected topics in Geographical Information System extensions. Introduces and identifies popular advanced extensions used for network analysis, spatial analysis, and 3D analysis. Pre-requisite: (CIT125 AND CIT117) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 260 (3)  Course ID: 004730  
Network Hardware Installation and Troubleshooting  
Provides students with the knowledge and skills necessary to design, install, configure, and troubleshoot cabling systems and equipment used to connect a local area network. Pre-requisite: CIT 160 or consent of instructor Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).  
Components: Laboratory, Lecture  

CIT 261 (3)  Course ID: 005209  
MS Active Directory Services  
Provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Directory Services. Focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. Assists in prepping students for exams in the Microsoft certification exam series. Pre-requisite: CIT 213 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

Attributes: Course Also Offered in Modules  

CIT 262 (3)  Course ID: 005210  
MS Network Infrastructure  
Provides students with the knowledge and skills necessary to install, configure, manage, and support a network infrastructure using a Microsoft Windows server operating system. Assists in prepping students for exams in the Microsoft certification exam series. Pre-requisite: (CIT 213 AND CIT 219) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  

CIT 263 (1 - 6)  Course ID: 006246  
Advanced Topics in Microsoft Windows: Topic  
Covers concepts and/or skills from special areas of interest in Microsoft Windows operating systems. Focus on specific topics that will vary from semester to semester at the discretion of the instructor. Pre-requisite: CIT 213 or consent of instructor. Lecture: 1-6 credits (15-30 contact hours).  
Components: Lecture  

CIT 264 (3)  Course ID: 006194  
MS Server Administration  
Focuses on planning a Microsoft server infrastructure as well as managing the server operating system, file and directory services, software distribution and updates, and troubleshooting. Pre-requisite: (CIT 261 AND CIT 262) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 265 (3)  Course ID: 006195  
MS Application Servers  
Focuses on the deployment, configuration and management of Microsoft servers that support users and applications, especially web servers, Remote Desktop servers, SharePoint servers and file servers. Pre-requisite: CIT 213 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

CIT 266 (3)  Course ID: 006196  
MS Enterprise Administration  
Focuses on Windows server administration at the enterprise level. Covers planning networks and services,
designing core identity and access management components, implementing a public key infrastructure, planning for restructuring forests and domains, and designing a virtualization strategy. Prerequisite: (CIT 261 AND CIT 214 OR CIT 262)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 269 (3) Course ID: 004731
Internet Protocols
Provide students with the knowledge and skills to install, configure, manage and troubleshoot internetworks using TCP/IP and its associated protocols. Prerequisite: CIT 111 and CIT 160) or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

CIT 271 (3) Course ID: 004732
SQL II
Provides an extensive overview of SQL using programming to create, query, manage and maintain databases. Uses advanced features of SQL, including stored procedures and triggers, to design and interface with a database and other applications. Prerequisite: CIT 171 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 276 (3) Development: Language Course ID: 006926 3-D Game Development: Language Provides students with an introduction to three-dimensional game development. Includes the creation of a three-dimensional game development using an industry-specific or emerging programming language. Pre-requisite: CIT 246 (using the same programming language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 277 (3) Programming III: Language Course ID: 006927 Programming III: Language Introduces students to complex programming concepts using an industry-specific or emerging programming language. Includes complex features of the language not previously covered in Programming I and Programming II. Comprehensive projects will be developed that model work performed in a corporate environment. Pre-requisite: CIT 247 (for the same programming language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 278 (3) Visual Basic III Course ID: 006928 Visual Basic III Provides students with the knowledge and skills to design, develop, and implement distributed and Web client applications using the Visual Basic programming language. Includes advanced application and user interface design, custom libraries, ActiveX Objects, stored procedures, and distributed applications. Pre-requisite: CIT 248 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 281 (4) Course ID: 004736 Routing Routing Provides students with the skills necessary to understand and apply concepts related to networking hardware. Covers advanced TCP/IP concepts such as IP addressing and subnetting, beginning router configuration, routed and routing protocols. Completes one of a series of four courses that prepares students for the Cisco Certified Network Associate (CCNA) certification exam. Prerequisite: CIT 160 or consent of instructor. Lecture: 4 credits (60 contact hours).

Components: Lecture

CIT 282 (4) Course ID: 004737 Switching Switching Provides students with the skills necessary to understand and apply advanced networking concepts. Covers local area network (LAN) switching, virtual local area networks (VLANs), advanced network design concepts, advanced router configuration, and advanced network management projects. Completes one of four courses that prepares students for the Cisco Certified Network Associate (CCNA) certification exam. Prerequisite: CIT 160 or consent of instructor. Lecture: 4 credits (60 contact hours).

Components: Lecture

CIT 283 (4) Course ID: 004738 Wide Area Network Design and Management Provides students with the skills necessary to understand and apply advanced principles and applications in deploying networking hardware. Covers WAN design, WAN connectivity protocols such as PPP, ISDN, and Frame Relay, as well as advanced network management projects. Completes the final of four courses that prepares students for the Cisco Certified Network Associate (CCNA) certification exam. Prerequisite: (CIT 281 and CIT 282) or consent of instructor. Lecture: 4 credits (60 contact hours).

Components: Lecture

CIT 284 (3) Course ID: 006929 Computer Forensics Computer Forensics Provides basic knowledge on methods and processes for computer forensics, intrusion detection, evidence collection, disk imaging, and report writing. Pre-requisite: CIT 180 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 285 (3) Course ID: 006930 MS Windows OS Security MS Windows OS Security Provides students the knowledge and skills necessary to secure the Windows operating system. Pre-requisite: CIT 180 AND CIT 214 OR CIT 262) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 286 (3) UNIX/Linux OS Security UNIX/Linux OS Security Provides students the knowledge and skills necessary to secure the UNIX/Linux operating system and to utilize the UNIX/Linux operating system for security functions. Emphasizes use of freely available security tools. Pre-requisite: (CIT 180 AND CIT 217) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 287 (3) Cisco OS Security Cisco OS Security Provides students with comprehensive understanding of network security concepts. Includes installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Covers implementation of hosts and perimeter edge device firewalls and defense in-depth prevention systems. Pre-requisite: (CIT 165 OR CIT 212) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 288 (3) Network Security Network Security Provides students with the knowledge and skills necessary to understand and defend against a variety of computer and network attacks. Focuses on both the offensive techniques used to launch attacks and the defensive techniques required to defend computers and networks. Pre-requisite: (CIT 180 AND Level 1 Network Technologies Specialization Sequence) OR Consent of Instructor. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

Attributes: Course Also Offered in Modules

CIT 290 (3) Course ID: 004733 Instructor Consent Required Internship Instructor Consent Required Internship Provides on-the-job experience in computer and information technologies, requiring a minimum of 120 clock hours of appropriate experience approved by the faculty member (40 clock hours per credit); requires a learning contract, signed by the student, faculty member, and supervisor. Note: Course is offered on pass-fail basis only. Prerequisite: Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CIT 291 (3) Course ID: 006198 System Design and Implementation System Design and Implementation Apply acquired techniques, knowledge, and skills to successfully analyze, design, and plan a CIT project. Develop key project management and system analysis deliverables in a portfolio. Prerequisite: 36 credit hours of CIT Courses OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Course Also Offered in Modules

CIT 295 (1 - 3) Course ID: 004741 Independent Problems in CIT: Topic Independent Problems in CIT: Topic Explores concepts and/or skills from special areas of interest in Computer & Information Technologies. Topics vary from semester to semester. May be repeated up to two times with different topics to a maximum of 6 credit hours. Pre-requisite: Consent of Instructor. Lecture: 1.0 - 3.0 credits (15-45 contact hours).

Components: Lecture

CIT 299 (1 - 3) Special Topics in CIT Special Topics in CIT Explores concepts and/or skills from special areas of interest in computer and information systems. May be repeated with different topics to a maximum of 6 credit hours. Pre-requisite: Consent of Instructor. Lecture: 1.0 - 3.0 credits (15-45 contact hours).

Components: Lecture

CIT 1051 (0.5) Course ID: 006972 Computer Basics Computer Basics Provides an introduction to the computer and the convergence of technology including computer hardware and software, the social web, green computing, security and computer ethics. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture

CIT 1052 (0.6) Course ID: 006973 System and Utility Software System and Utility Software Introduces file management and presents basic use of systems and utility software. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.6 credits (9.0 contact hours).

Components: Lecture

CIT 1053 (0.8) Course ID: 006974 Internet, Email, and Networks Internet, Email, and Networks Introduces the Internet, e-mail, course management systems and networking. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).

Components: Lecture

CIT 1054 (0.5) Course ID: 006975 Globalization and the Cloud Globalization and the Cloud Introduces globalization and impact and use of cloud computing. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture

CIT 1055 (0.6) Course ID: 006976 Software Basics Software Basics Presents basic use of application and programming software. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

CIT 1111 (0.8) Course ID: 007091 Computer Hardware Essentials Computer Hardware Essentials Provides a practical view of hardware components. Pre-requisite: (CIT 105 AND MAT 085) OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).

Components: Lecture

CIT 1112 (0.8) Course ID: 007092 Computer Maintenance Computer Maintenance Provides a practical view of troubleshooting, repair, and maintenance. Pre-requisite: CIT 1111 or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).

Components: Lecture
CIT 1113 (1) Course ID: 007093
Operating Systems and Tools
Provides a practical view of operating system interfaces and management tools. Pre-requisite: CIT 1112 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1114 (0.8) Course ID: 007094
Networking and Security
Provides a practical view of networking components and computer security. Pre-requisite: CIT 1113 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1115 (0.6) Course ID: 007095
Operational Procedures
Provides a practical view of operational procedures. Pre-requisite: CIT 1114 OR Consent of Instructor. Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture

CIT 1201 (1) Course ID: 006977
Basic Program Logic
Presents an introduction to computer programming and logic including program flow, data types and variables, and design tools. Pre-requisite: MAT 120 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1202 (1) Course ID: 006978
Control and Data Structures
Provides development and design basics to appropriately select control and data structures. Pre-requisite: CIT 1201 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1203 (1) Course ID: 006979
Computer Program Application
Develops and design language-independent solutions, or computational thinking, to solve computer-related problems. Pre-requisite: CIT 1202 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1301 (0.8) Course ID: 006980
Word Processing Applications
Utilizes word processing application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1302 (0.8) Course ID: 006981
Spreadsheet Applications
Utilizes spreadsheet application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1303 (0.8) Course ID: 006982
Database Applications
Utilizes database application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1304 (0.6) Course ID: 006983
Presentation Software Apps
Utilizes current presentation software application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1401 (0.6) Course ID: 006984
JavaScript Basics
Provides an overview of the JavaScript language. Introduces variables, operators, and data types. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1402 (0.8) Course ID: 006985
Input/Output Processes
Introduces input and output statements using JavaScript. Identifies errors and code efficiency. Pre-requisite: CIT 1401 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1403 (0.8) Course ID: 006986
Control Structures/Patterns
Introduces control structures and application scripts using JavaScript. Identifies errors and code efficiency. Pre-requisite: CIT 1402 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1404 (0.8) Course ID: 006987
JavaScript Objects/Scripts
Introduces objects and application scripts using JavaScript. Identifies errors and code efficiency. Pre-requisite: CIT 1403 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1421 (0.6) Course ID: 006988
C++ Overview
Introduces fundamental programming concepts using the C++ programming language. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1422 (0.8) Course ID: 006989
C++ Control Structures
Introduces control structures for the C++ language. Identifies errors and code efficiency. Pre-requisite: CIT 1421 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1423 (0.8) Course ID: 006990
C++ Functions
Introduces functions for the C++ language. Identifies errors and code efficiency. Pre-requisite: CIT 1422 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1424 (0.8) Course ID: 006991
C++ Arrays and Pointers
Introduces arrays and pointers for the C++ language. Identifies errors and code efficiency. Pre-requisite: CIT 1423 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1481 (0.6) Course ID: 006992
Visual Basic Overview
Introduces fundamental programming concepts using the Visual Basic programming language. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1482 (0.8) Course ID: 006993
VB Control Structures
Introduces control structures for the VB language. Identifies error-handling and code evaluation. Pre-requisite: CIS 1481 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1483 (0.8) Course ID: 006994
VB Arrays
Introduces arrays and object oriented programming for the VB language. Identifies error-handling and code evaluation. Pre-requisite: CIS 1482 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1484 (0.8) Course ID: 006995
VB File Processing
Presents modular programming and file processing for the VB language. Identifies error-handling and code evaluation. Pre-requisite: CIS 1483 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1501 (0.6) Course ID: 006996
Internet Technologies
Presents traditional and emerging Internet technologies including Internet fundamentals and governing organizations for the web. Pre-requisite: CIT 105 AND CIT 120 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1502 (0.6) Course ID: 006997
Internet Tools
Provides an overview of Internet Technologies and protocols across the Internet. Pre-requisite: CIT 1051 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1503 (0.8) Course ID: 006998 eCommerce
Presents practical eCommerce strategies for publishing on the web including core connectivity, naming conventions, and web registration. Pre-requisite: CIT 1502 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1504 (1) Course ID: 006999
Web Programming
Creates basic web content using HTML and client/server applications to publish to the web. Pre-requisite: CIT 1503 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1601 (1) Course ID: 007000
Networking Basics
Introduces non-vendor specific technical level networking concepts. Pre-requisite: MAT 065 OR Consent of instructor. Pre-requisite OR Co-requisite: CIT 111 OR Consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1602 (1) Course ID: 007001
Network Media and Technologies
Introduces non-vendor specific networking concepts such as the media, technologies, topologies, and devices. Pre-requisite: CIT 1601 OR Consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1603 (1) Course ID: 007002
Network Management
Presents the basics of how to manage, maintain, troubleshoot, install, operate, and configure basic network infrastructure. Pre-requisite: CIT 1602 OR Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1604 (1) Course ID: 007003
Network Tools and Security
Introduces the tools used to troubleshoot and secure networks. Pre-requisite: CIT 1603 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1621 (1) Course ID: 007004
Hardware and Operating Systems
Provides concepts about PC hardware and operating systems. Pre-requisite: MAT 065 OR Consent of instructor. Pre-requisite OR Co-requisite: CIT 111 OR Consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1622 (1) Course ID: 007005
Network Connections & Resources
Presents concepts and skills for connecting computer hardware to a network. Provides overview of network addressing, services, and security. Pre-requisite: CIT 1621 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1623 (1) Course ID: 007006
Network Troubleshooting
Provides concepts and techniques for troubleshooting errors and issues on a network. Pre-requisite: CIT 1622 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
CIT 1624 (1) Course ID: 007007
Network Planning
Provides skills for planning and implementing a small network. Pre-requisite: CIT 1623 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1631 (1) Course ID: 007008
Internet Communications
Provides a basic overview of the Internet, network models, and ISP troubleshooting. Develops skills for computer technicians, network and help desk technicians. Pre-requisite: CIT 162 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1632 (1) Course ID: 007009
Planning/Upgrading Networks
Provides a basic overview of networks including planning and upgrades. Develops skills required for computer technicians, network and help desk technicians. Pre-requisite: CIT 1621 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1633 (1) Course ID: 007010
Configuring Networks
Provides a basic overview of routing, remote access, and servers that provide e-mail services. Develops skills required for computer technicians, network and help desk technicians. Pre-requisite: CIT 1623 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1634 (1) Course ID: 007011
Maintaining Networks
Provides a basic overview of network monitoring, recovery procedures, and troubleshooting. Develops skills required for computer technicians, network and help desk technicians. Pre-requisite: CIT 1633 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1701 (0.6) Course ID: 007013
Database Concepts
Provides an overview of database and database management systems. Pre-requisite: CIT 105 AND (Completion of a mathematics course on the approved Quantitative Reasoning general education course list for the AAS, AA, or AS.) OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1702 (1) Course ID: 007014
Database Modeling and Design
Provides an overview of database internal design models, normalization, and data model data. Pre-requisite: CIT 1701 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1703 (0.8) Course ID: 007015
Database Implementation
Provides an overview of designing a database model and implementation. Introduces Structured Query Language (SQL). Pre-requisite: CIT 1702 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1704 (0.6) Course ID: 007016
Database Admin and Management
Provides an overview of optimization strategies and methods including administration, performance tuning, backup, and recovery. Pre-requisite: CIT 1703 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1801 (0.8) Course ID: 007017
Security Concepts
Introduces basic security concepts and methodologies. Pre-requisite: CIT 105 and (CIT 160 OR 161 OR 162). OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1802 (0.8) Course ID: 007018
Threats and Vulnerabilities
Introduces threats and vulnerabilities in relation to computer and network devices. Pre-requisite: CIT 1801 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1803 (0.8) Course ID: 007019
Network Security
Introduces basic network security concepts and methodologies including application, data, and host security, access control, and identity management. Pre-requisite: CIT 1801 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1804 (0.6) Course ID: 007020
Cryptography
Introduces cryptography, tools, and management of keys and certificates. Pre-requisite: CIT 1803 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
Same As Offering: CIT 1804
Campus: HZC

CIT 1821 (0.8) Course ID: 007021
Security Defense and Protocols
Presents information and skills required to secure computers and networks from attacks. Pre-requisite: CIT 1820 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1822 (0.8) Course ID: 007022
Firewalls
Presents information and techniques for configuring and using firewalls to secure computers and networks. Pre-requisite: CIT 1821 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1823 (0.6) Course ID: 007023
Perimeter Testing
Performs methods and skills for conducting perimeter defense testing against attacks. Pre-requisite: CIT 1822 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1824 (0.8) Course ID: 007024
Intrusion Detection
Presents information and techniques for configuring intrusion-detection systems to secure computers and networks. Pre-requisite: CIT 1823 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1841 (0.8) Course ID: 007025
Ethical Hacking concepts
Presents concepts about ethical hacking. Pre-requisite: CIT 180 OR consent of instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1842 (1) Course ID: 007026
Computer/Network Attacks
Presents various types of attacks and exploits against computers and networks. Pre-requisite: CIT 1841 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1843 (0.8) Course ID: 007027
Malicious Software and Defense
Presents effective defensive techniques against real attacks. Pre-requisite: CIT 1842 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1844 (0.4) Course ID: 007028
Incident Handling
Provides concepts and techniques for proper incident handling and documentation. Pre-requisite: CIT 1843 OR Consent of Instructor. Lecture: 0.4 credits (6 contact hours).
Components: Lecture

CIT 2131 (0.6) Course ID: 007029
Window OS Installation & Setup
Provides concepts and skills for installation and setup of Microsoft Windows client and server operating systems. Pre-requisite: [CIT 111 and (CIT 160 or CIT 161 or CIT 162)] OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2132 (0.6) Course ID: 007030
Group and User Accounts
Provides concepts and skills for configuring accounts and resource access in Microsoft Windows client and server operating systems environment. Pre-requisite: CIT 2131 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2133 (0.6) Course ID: 007031
System & Resource Configs
Provides concepts and skills for configuring disks, file systems, and file resources in Microsoft Windows client and server operating systems environment. Pre-requisite: CIT 2132 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2134 (0.6) Course ID: 007032
OS Configurations and Security
Provides concepts and skills for configuring printers, security, and the Windows environment. Pre-requisite: CIT 2133 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2141 (1) Course ID: 007096
OS Server Concepts & Installs
Presents an overview of network concepts such as TCP/IP addressing and subnetting. Provides concepts and skills to install and setup Windows Server. Pre-requisite: CIT 2133 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2142 (1) Course ID: 007097
Server Role, File, & Print Services
Provides concepts and skills to configure and administer a networks server infrastructure including mobile computing, and disaster planning. Pre-requisite: CIT 2134 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2143 (1) Course ID: 007098
Maintaining The Network
Explains concepts and develops skills related to network and remote technologies most commonly used with Windows Servers and IP-enabled networks. Explains how to secure servers and maintain update compliance in Windows Server environments. Pre-requisite: CIT 2142 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2171 (0.8) Course ID: 007034
Intro to UNIX/Linux
Introduces basic Unix/Linux concepts. Pre-requisite: [CIT 111 AND CIT 160] OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 2172 (0.8) Course ID: 007035
Accounts, Resources, & Editors
Provides Unix/Linux commands to manage accounts, file systems and resources. Introduces editors for creating text files. Pre-requisite: CIT 2171 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture
CIT 2173 (1.4)  Course ID: 007036
File Processing and Lab
Introduces commands and scripts for file processing. Pre-
requisite: CIT 2172 OR Consent of Instructor. Lecture: 0.4
credits (6 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Lecture
CIT 2611 (0.75)  Course ID: 007099
Win Directory Services Overview
Provides knowledge and skills to configure and implement
directory services, domains, and user accounts. Pre-
requisite: CIT 213 OR Consent of Instructor. Lecture: 0.75
credits (11.25 contact hours).
Components: Lecture
CIT 2612 (0.75)  Course ID: 007100
Directory Objects & Publishing
Focuses on creation and management of directory objects,
trees, and objects and publishing resources. Pre-requisite:
CIT 2611 OR Consent of Instructor. Lecture: 0.75 credits
(11.25 contact hours).
Components: Lecture
CIT 2613 (0.75)  Course ID: 007101
Dir Services Group Policy
Explains how to configure group policy settings to manage
directory services such as user, desktop environment,
software, and security settings. Pre-requisite: CIT 2612 OR
Consent of Instructor. Lecture: 0.75 credits (11.25 contact
hours).
Components: Lecture
CIT 2641 (0.75)  Course ID: 007037
Windows Server Deployment
Plan infrastructure deployment and services including
server roles, access control, and group policy. Pre-
requisite: (CIT 261 AND CIT 214 OR CIT 262) OR
Consent of Instructor. Lecture: 0.5 credits (7.5 contact
hours). Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture
CIT 2642 (0.75)  Course ID: 007038
Planning Directory Services
Plan application, file, and print services. Pre-requisite: CIT
2641 OR Consent of Instructor. Lecture: 0.5 credits (7.5
contact hours). Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture
CIT 2643 (0.75)  Course ID: 007044
Server Management Strategies
Design and manage infrastructure and server strategies.
Pre-requisite: CIT 2642 OR Consent of Instructor. Lecture:
0.5 credits (7.5 contact hours). Lab: 0.25 credits (7.5
contact hours).
Components: Laboratory, Lecture
CIT 2644 (0.75)  Course ID: 007039
Windows Server Security
Provides management and monitoring of windows servers
including security. Pre-requisite: CIT 2643 OR Consent of
Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab:
0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture
CIT 2841 (0.6)  Course ID: 007040
Computer Forensics Overview
Provides a computer forensics overview and presents
concepts about forensics investigations. Pre-requisite:
CIT 180 or consent of instructor. Lecture: 0.6 credits (9
contact hours).
Components: Lecture
CIT 2842 (0.4)  Course ID: 007041
Forensics Lab Setup
Provides concepts and skills for setting a computer
forensics lab and data acquisition. Pre-requisite: CIT 2841
OR Consent of Instructor. Lecture: 0.4 credits (6 contact
hours).
Components: Lecture
CIT 2843 (1)  Course ID: 007042
Digital Evidence Procurement
Provides basic knowledge on methods and processes for
collection and analyzing digital evidence. Pre-requisite:
CIT 2842 OR Consent of Instructor. Lecture: 1.0 credit (15
contact hours).
Components: Lecture
CIT 2844 (1)  Course ID: 007043
Investigations and Reporting
Provides basic knowledge on methods and processes for
investigations and reporting. Pre-requisite: CIT 2843
OR Consent of Instructor. Lecture: 1.0 credit (15 contact
hours).
Components: Lecture
CIT 2881 (1)  Course ID: 007103
Network Security Basics
Identifies importance of computer ethics in relation to
hacking and defending against computer and network
attacks. Pre-requisite: (CIT 180 AND Level 1 Network
Technologies Specialization Sequence) OR Consent of
Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
CIT 2882 (1)  Course ID: 007104
Network Attacks & Lab
Provides students with the knowledge and skills necessary
to identify and proactively defend against computer and
network attacks. Focuses on the offensive techniques used to launch
attacks. Pre-requisite: CIT 2881 OR Consent of Instructor.
Lecture: 0.5 credits (7.5 contact hours). Lab: 0.5 credit (15
contact hours).
Components: Laboratory, Lecture
CIT 2911 (1)  Course ID: 007106
Project Management Concepts
Introduces basic project management and systems
analysis concepts. Pre-requisite: 36 hours of CIT courses
OR Consent of Instructor. Lecture: 1.0 credit (15 contact
hours).
Components: Lecture
CIT 2912 (0.8)  Course ID: 007107
Project Planning
Applies acquired techniques, knowledge, and skills to
successfully analyze, design, and plan a CIT project.
Pre-requisite: CIT 2911 OR Consent of Instructor. Lecture:
0.8 credits (12 contact hours).
Components: Lecture
CIT 2913 (0.6)  Course ID: 007108
Project Implementation
Applies acquired techniques, knowledge, and skills to
successfully implement a CIT project. Pre-requisite:
CIT 2912 OR Consent of Instructor. Lecture: 0.6 credits
(9 contact hours).
Components: Lecture
CIT 2914 (0.6)  Course ID: 007109
Project Evaluation
Develops and presents key project management and
system analysis deliverables in a portfolio including
evaluation of project. Pre-requisite: CIT 2913 OR Consent
of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
CLA 131 (3)  Course ID: 000274
Medical Terminology from Greek and Latin
Latin and Greek roots, prefixes, and suffixes as found in
medical terminology. Primarily for pre-medical, pre-dental,
pre-nursing, and pre-Veterinary students, but others will be
admitted for help in vocabulary building.
Components: Lecture
CLA 205 (3)  Course ID: 004181
Clinical Microbiology I
Application of microbiological principles to clinical
laboratory practice is introduced. Topics include safety and
use of personal protective equipment, staining, selection and use of
media, specimen processing, cultivation and identification of
bacteria, and antimicrobial susceptibility testing. Pre-
requisite: CIT 101, and either CLT 130 or BIO 225,
and admission into the CLT program, or permission of the
CLT program director/coordinator. Lecture: 2.0 credits (30
contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
CLA 206 (2)  Course ID: 004182
Clinical Microbiology II
Mycology, parasitology, virology, and mycobacteriology
are included in this course. Prerequisite: CLT 205 or
permission of the CLT program coordinator/director.
Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30
contact hours).
Components: Laboratory, Lecture
CLA 207 (2)  Course ID: 000282
Introduction to Clinical Diagnostic Microbiology
Reviews the basic concepts of bacterial cell structure,
physiology, nomenclature and classification. Emphasizes
safety in the microbiology department of the laboratory.
Introduces specimen processing as it relates to the
microbiology department in the clinical laboratory.
Introduces the practical importance of identifying microorganisms through morphology on culture media, appearance on gram stain, and biochemical reactions. Prerequisite: Admission into the CLT program or permission of the CLT Program Director/CLT Clinical Coordinator. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

CLT 208 (3)  Course ID: 006399
Clinical Diagnostic Microbiology I
Discusses theoretical concepts, disease processes, identification of microorganisms, diagnostic characteristics, biochemical reactions, susceptibility testing, and isolation techniques of gram positive and gram negative microorganisms associated with infections diagnosed in the clinical laboratory microbiology department. Prerequisite: CLT 207 or permission of the CLT Program Director/CLT Clinical Coordinator. Lecture: 2.0 credit (30 contact hours). Lab: 1.0 credit (45 contact hours).

Components: Lecture

CLT 209 (2)  Course ID: 006400
Clinical Diagnostic Microbiology II
Exposes the student to a study of anaerobes, spore forming gram positive bacilli, vireology, mycobacterium, mycoplasma, spirochetes, mycology and parasitology with focus on the clinical diseases and diagnostic procedures in the microbiology department of the clinical laboratory. Prerequisite: (CLT 206 and Admission into the CLT program) OR permission of the CLT Program Director/CLT Clinical Coordinator. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Lecture

CLT 215 (4)  Course ID: 004183
Hematology I
A study of hematopoiesis and classic methodologies of standard hematology procedures. The principles of various automated hematology analyzers, histograms and scattergrams. Students perform basic hematology and coagulation procedures, correlate laboratory data to aid in diagnosis, describe methodology of procedures and their clinical significance. Includes mechanisms of coagulation, routine coagulation testing, disease states associated with coagulation abnormalities, platelet evaluation, fibrinolysis and anticoagulant therapy. Prerequisite: CLT 101 and admission into the CLT program, or permission by CLT program coordinator. Lecture: 3.0 credits (45 contact hours). Laboratory: 1.0 credit (60 contact hours).

Components: Laboratory, Lecture

CLT 216 (3)  Course ID: 004184
Hematology II
This course continues the study of hematology. It includes a study of anemias, leukemias, lymphomas, miscellaneous abnormal white blood cell disorders, body fluid analysis and other special hematological procedures. Prerequisite: (CLT 215 or CLT 217) OR permission of CLT Program Director/CLT Clinical Coordinator. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Lecture

CLT 225 (2)  Course ID: 004185
Immunohematology I
This course introduces the principles of immunology in relation to blood banking, blood group systems, donor processing and screening, antibody screening, and blood components. Prerequisite: CLT 101 or permission of the CLT program director/coordinator. Lecture: 1.0 credit (15 contact hours). Laboratory: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture

CLT 226 (2)  Course ID: 004186
Immunohematology II
This course introduces antibody screening and panel interpretation, compatibility testing, viral markers and related disease states, hemolytic disease, and HLA markers. Prerequisite: CLT 225 or permission of the CLT program director/coordinator. Lecture: 1.0 credit (15 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

CLT 227 (4)  Course ID: 004570
Clinical Chemistry I
A review of basic inorganic chemistry and organic chemistry principles and types of instrumentation commonly used in a medical laboratory are taught. Also included is the study of carbohydrates, non-protein nitrogen compounds, proteins, lipids and enzymes as related to clinical diagnosis. In addition, the student will be introduced to quality control procedures, including statistical calculations for graph preparation and interpretation of gathered data. Prerequisite: CLT 101 and admission into the CLT program or permission of the CLT Clinical Coordinator or CLT Program Director. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (75 contact hours).

Components: Laboratory, Lecture

CLT 235 (3)  Course ID: 004187
Clinical Chemistry II
The physiology and testing of liver function, hormones, electrolytes and acid-base metabolism are presented. Also included are the toxicity and therapeutic drug monitoring, tumor markers, and special chemistries. Prerequisite: CLT 235 or permission of the CLT program director/coordinator. Lecture: 1.0 credit (15 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

CLT 236 (2)  Course ID: 004188
Clinical Chemistry III
This course introduces a student to basic principles of hematology and coagulation in the clinical setting. It also covers the techniques used in clinical settings to assess hematologic changes and correlate laboratory data to diagnosis. Additional topics include body fluids and other special hemato logical procedures. Prerequisite: CLT 215 or permission of the CLT program director/coordinator. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

CLT 237 (3)  Course ID: 006403
Introduction to Clinical Chemistry
Introduces the student to a variety of automated instrumentation and methodologies of selected chemistry test procedures. Exposes student to the basic principles as well as the techniques used in clinical chemistry to assess carbohydrates, non-protein nitrogen compounds, amino acids and proteins, lipids and lipoproteins, and enzymes as related to clinical diagnosis. Acquaints the student with basic laboratory mathematics and quality assurance procedures utilized in the clinical laboratory department. Prerequisite: Admission into CLT program OR permission of the CLT Clinical Coordinator/CLT Program Director. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Lecture

CLT 238 (3)  Course ID: 006404
Advanced Clinical Chemistry
Continues the study of clinical chemistry. Presents a study of lipids and lipoproteins, acid-base balance, electrolytes, endocrine system, liver, gastrointestinal and pancreatic function, therapeutic drug monitoring, and toxicology. Prerequisite: CLT 237. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Lecture

CLT 275 (1)  Course ID: 006831
Clinical Experience
Familiarizes the student with the clinical laboratory environment as it relates to phlebotomy and front office responsibilities. This would include blood collection procedures, handling and answering internal phone calls, communication with and registration of patients, insurance filing and data entry. Prerequisite: admission into the CLT program or permission of the CLT program director or coordinator. Clinical: 1.0 credit (30 contact hours).

Components: Clinical

CLT 280 (4 - 5)  Course ID: 004253
Practicum I
Practicum I is designed to develop performance skills and professional attitudes in the student in assigned areas of the clinical laboratory, utilizing and depending upon external institutions to insure adequate clinical education and training. The CLT Program Director will provide a prescribed schedule of rotations for each student. Prerequisite: CLT 101, or Admission into CLT program; or permission by CLT program director/coordinator. Lecture: 0 hours. Laboratory: 16-20 hours.

Components: Practicum
Attributes: Course Also Offered in Modules

CLT 280 (4 - 5)  Course ID: 004254
Practicum II
Practicum II is designed to develop career entry-level performance skills and professional attitudes in the student in assigned areas of the clinical laboratory, utilizing and depending upon external institutions. This course enhances the student's transition to the clinical laboratory profession by providing more responsibility and independence in a supervised clinical setting. Prerequisite: CLT 101; OR admission into CLT program; OR permission by CLT program director/coordinator. Lecture: 0 hours. Laboratory: 16-20 hours.

Components: Practicum
Attributes: Course Also Offered in Modules

CLT 1301 (1.5)  Course ID: 005338
Applied Laboratory Part 1
Prepares the CLT student for clinical rotation into the major areas of the laboratory. Includes practical application in Hematology, Clinical Microbiology, Urinalysis. Prerequisite: CLT 101 and admission to the program. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture

CLT 1302 (1.5)  Course ID: 005339
Applied Laboratory Part 2
Prepares the CLT student for clinical rotation into the major areas of the laboratory. Includes practical application in Clinical Microbiology, Immunohematology, Serology, and Clinical Chemistry. Prerequisite: CLT 1301. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture

CLT 2801 (2 - 2.5)  Course ID: 005340
Practicum I Part 1
Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in all assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the CLT program director. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Prerequisite: CLT 101 or admission to the program. Practicum: 2 - 2.5 credits (120-150 contact hours).

Components: Practicum
CLT 2902 (2 - 2.5) Course ID: 005343
Practicum II Part 2
Develops career entry level performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Provides an opportunity for more responsibility and independence with previously learned procedures. Enhances the student’s transition to the world of work by providing work experiences in a clinical setting. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments in the laboratory for each individual student by the CLT program director. Prerequisite: CLT 101 or Admission to the CLT program. Practicum: 2 - 2.5 credits (120-150 contact hours).
Components: Practicum

CMM Computerized Manufacturing and Machining

CMM 110 (3) Course ID: 001812
Fundamentals of Machine Tools - A
Provides the basic principles needed for a solid foundation in machine tool technology. Covers shop safety, bench work, drill press, power saw, measurement, and mills. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture

CMM 112 (4) Course ID: 001813
Fundamentals of Machine Tools - B
Provides the basic principles needed for a solid foundation in machine tool technology. Includes shop safety, bench work, drill press, power saw, measurement, and lathes. Prerequisite: (CMM 110 with a grade of C or greater) or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture

CMM 114 (7) Course ID: 001814
Fundamentals of Machine Tools
Provides the skills and knowledge that is needed to progress through the machine tool program. Includes safety and bench work. Introduces the basic power equipment and machine tools that are used in the machine trades which includes: drill presses, power saws, measurement instruments, mills and lathes. Lecture: 3.0 credits (45 contact hours). Lab: 4.0 credits (120 contact hours/30:1 ratio).
Components: Laboratory, Lecture

CMM 118 (2) Course ID: 001815
Metrology/Control Charts
Provides the basic principles in using precision measurement instruments and their application to inspection and quality control. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture

CMM 120 (3) Course ID: 001816
Applied Machining I
Consists of intermediate level skills using machining machines and surface grinders. Includes the selection of grinding wheels. Prerequisite: (CMM 110 and 112) or (CMM 114) with a grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture

CMM 122 (3) Course ID: 001817
Applied Machining II
Carries the student to higher levels in the operation of machine tools. Prerequisite: (CMM 120 with a grade of C or greater) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

CMM 124 (6) Course ID: 001818
Applied Machining
Allows the student to begin performing skills that will combine the use of different types of machine and begin to give them a complete picture of the machine tool career. Prerequisite: ((CMM 110 and CMM 112) or (CMM 114)) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (180 contact hours).
Components: Lecture

CMM 130 (3) Course ID: 001819
Manual Programming
Introduces the students to CAD/CAM and computer-aided design and manufacturing. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture

CMM 132 (3) Course ID: 001820
CAD/CAM/CNC
Introduces the student to CAD/CAM/CNC systems which includes CAM software. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture

CMM 134 (6) Course ID: 001821
Manual Programming CAD/CAM/CNC
Introduces the student to CAD/CAM/CNC systems, CNC format, the Cartesian Coordinate System, CNC codes and programming, set-up and operation of CNC machine tool. Prerequisite: ((CMM 110 and CMM 112) or (CMM 114)) with a grade of C or greater) or Consent of Instructor. Lecture: 2.0 credits (30 contact hours); Laboratory: 4.0 credits (120 contact hours/30:1 ratio).
Components: Laboratory, Lecture

CMM 138 (6) Course ID: 006243
Intro. to Programming & CNC Machines
Introduces CAD/CAM and CNC equipment. Covers programming and set up operations used on a variety of machining tools including tools like waterjet and plasma cutting. Prerequisite: ((CMM 110 and CMM 112) or (CMM 114)) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours) (30:1 Ratio Lab).
Components: Laboratory

CMM 150 (2) Course ID: 005089
Shop Theory
Covers shop theory, processes, and basic concepts of machine tool operations utilized in the tool and die field. Includes areas and machine concepts: safety, measurement, layout work, bench work, saws, drills, drilling machines, mills and lathes. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

CMM 151 (3) Course ID: 005090
Machinery's Handbook and Metallurgy
Introduces the Machinery’s Handbook as a reference source for solving manufacturing problems and provides a working knowledge of the principles and concepts contained in the Handbook. Explores processes involved in heat-treating steels to a specific hardness, toughness, wear capability. Covers the identification, classification, application, and processing of Tool Steels. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CMM 152 (3) Course ID: 005091
Jigs, Fixtures and Gaging Lab
Introduces jigs, fixtures and work holding devices, including separate uses and principles. Applies machining processes to design jigs and fixtures. Uses print knowledge to identify part datums for gaging points. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CMM 153 (3) Course ID: 005092
Mold Theory
Prepares mold-making including thermoplastic and thermostetting materials, compression mold, transfer mold, injection molds and mold components, the heating and cooling of molds and the methods of producing cores and cavities. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CMM 154 (3) Course ID: 005093
Die Theory
Prepares basic die making including die sets, punch presses, blanking dies, piercing dies, screw and dowel holes, punch and punch blocks, die life, bending dies, pliers, die block construction, stock strippers, stock guides, progressive dies, stock strips and secondary operations of notch, trim, and shave. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CMM 155 (2) Course ID: 005527
Jigs, Fixtures and Gaging Lab
Provides practical experience in construction and application of jigs, fixtures and work holding devices. Includes applying metrology equipment to fixtures in part and stamping evaluation. Prerequisite: CMM 152. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory

CMM 160 (4) Course ID: 005355
Basic Bench and Machine Processes
Provides skills and knowledge needed to progress through the machine tool program. Includes safety and bench work. Applies knowledge to a tool and die environment. Introduces the basic power equipment and machine tools used in a tool and die shop. Lab: 4.0 credits (120 contact hours).
Components: Laboratory

CMM 210 (3) Course ID: 001822
Industrial Machining I
Covers the classification of metals, identification of tool steels and their applications. Requires the student to perform advanced milling machine operations that simulate industry standards. Prerequisite: ((CMM 122 or 124) with a grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture

CMM 212 (3) Course ID: 001823
Industrial Machining II
Permits the student to receive instruction in any area where advanced work is needed or an area where there is student interest. Prerequisite: CMM 210 with a grade of C or greater) or Consent of Instructor. Lecture: 3.0 credits (90 contact hours).
Components: Laboratory

CMM 214 (6) Course ID: 001824
Industrial Machining
Covers the classification of metals, identification of tool steels and their applications. The student to perform advanced milling machine operations that simulate industry standards. Includes special projects in this course so the student will receive instruction in a specific area. Prerequisite: (CMM 122 or CMM 124) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (165 contact hours).
Components: Lecture
CMM 218 (8)  Course ID: 005530
Advanced Machining Techniques for Manufacturing
Allows for construction of sinker electrodes in the production of die and mold forms. Includes wire electrodischarge machines (edm) machining of die sections, punch retainers, stripper plates, punch forms and use of cylindrical grinder ID and OD and angular grinding on die and mold components. Prerequisite: CMM 215 with a grade of C or greater. Lecture: 2.0 credits (30 contact hours). Laboratory: 6.0 credits (180 contact hours). Components: Laboratory, Lecture

CMM 220 (4)  Course ID: 001825
Advanced Industrial Machining I
Allows for construction of electrodes and the production of parts by the use of an Electrical Discharge machine. (National Standards require EDM and cylindrical grinder training. Colleges lacking this equipment can only present theory only. KCTCS is presently trying to acquire EDM and cylindrical grinders.) Prerequisite: (CMM 130 and CMM 132) or (CMM 134 and CMM 214) with a grade of C or greater) or Consent of Instructor. Laboratory: 4 credits (120 contact hours/30:1 ratio).
Components: Laboratory

CMM 222 (2)  Course ID: 001826
Advanced Industrial Machining II
Advances students to a higher level of industrial standards by exposing them to additional tasks using a cylindrical grinder. **National Standards require EDM and cylindrical grinder training. Those programs lacking this equipment can only present theory only. KCTCS is presently trying to acquire EDM and cylindrical. Prerequisite: (CMM 212 or CMM 214 with a Grade of C or greater) or Consent of Instructor. Laboratory: 2 credits (60 contact hours/30:1 ratio).
Components: Laboratory

CMM 224 (6)  Course ID: 001827
Advanced Industrial Machining
Designed to allow for the construction of electrodes and the production of parts by the use of an Electric Discharge Machine (EDM), cylindrical grinder, and other type of grinders. **National Standards require EDM and cylindrical grinder training. Colleges lacking this equipment can only present theory. KCTCS is presently trying to acquire EDM and cylindrical grinders. Prerequisite: (CMM 134 and (CMM 212 or CMM 214) with a grade of C or greater) or Consent of Instructor. Lab: 2 credits (60 contact hours or 270 Clinical Contact).
Components: Laboratory

CMM 230 (6)  Course ID: 001828
Instructor Consent Required Conversational Programming
Introduces the student to conversational programming of CNC machine tools. Prerequisite: Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

CMM 234 (6)  Course ID: 006244
CNC Machines & Coding Practices
Introduces the student to conversational programming of CNC machine tool to include conversational setup and run options found on a CNC water jet machine. Prerequisite: (CMM 130 and CMM 132) (or CMM 134 or CMM 138) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours). (30:1 Ratio Lab).
Components: Lecture

CMM 240 (6)  Course ID: 001829
Introduction to 3-D Programming
Introduces 3-D Programming using CAM systems to effect engineering changes that enhance productivity. Uses CAM system to create and produce complex 3-D parts. Prerequisite: (CMM 130 and CMM 132) or (CMM 134 or CMM 138) with a grade of C or greater) or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 4.0 credits (120 contact hours or 180 clinical contact).
Components: Lecture
Attributes: Course Also Offered in Modules

CMM 244 (6)  Course ID: 006245
Advance Programming/Setup Practices
Uses CAM systems to effect engineering changes that enhance productivity to create and produce complex shapes on the CNC mill, lathe, EDM and water jet machines. Prerequisite: ((CMM 2301 and CMM 2302) or (CMM 230) with a grade of C or greater) or consent of instructor. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture

CMM 298 (1)  Course ID: 001830
Instructor Consent Required Practicum
Provides supervised on-the-job work experience related to the student’s educational objectives. (Students participating in the Practicum do not receive compensation.) Prerequisite: Permission of the Instructor. Practicum: 1.0 credit (75 contact hours).
Components: Practicum

CMM 299 (1)  Course ID: 001831
Instructor Consent Required Cooperative Education Program
Provides supervised on-the-job work experience related to the student’s educational objectives. (Students participating in the coop do receive compensation.) Prerequisite: Permission of Instructor. Co-Op: 1.0 credit (75 contact hours).
Components: Co-Op

CMM 2301 (3)  Course ID: 005085
Instructor Consent Required Introduction to Conversational Programming
Introduces students to conversational programming guidelines which will include program preparation, conversational input, and minor editing. Prerequisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2302 (3)  Course ID: 005086
Conversational Editing and Subroutines
Introduces students to performing editing routines, to subroutines, and to programs that contain loops. Requires students to interpret error messages from the control. Prerequisite: CMM 2301 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2401 (3)  Course ID: 005087
Introduction to 3D Code Sequencing and Tool Path Production
Introduces students to creation of 3D models and allows use of those models to be used in creation of tool paths for CNC machine tools. Prerequisite: (CMM 130 and CMM 132) or (CMM 134 and CMM 138) with a grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2402 (3)  Course ID: 005088
Advanced 3D Code Sequencing and Macro Systems
Introduces 3-D Programming using CAM systems to effect engineering changes that enhance productivity. Uses the CAM system to create and produce complex 3-D parts. Prerequisite: ((CMM 130 and CMM 132) or (CMM 134 or CMM 138) and (CMM 2401) with a Grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMS Communications

CMS 105 (3)  Course ID: 000292
Multimedia Production and Applications I
Students are introduced to the technologies and applications of multimedia systems including production, presentation, and transmission of video, voice, and data.
Components: Laboratory, Lecture

CMS 120 (1)  Course ID: 000293
Employability Skills Seminar
This course will focus on those skills necessary for job securityment such as self-assessment, resume writing, interview techniques, job search, job marketing strategies, and desired attributes for on-the-job success.
Components: Laboratory, Lecture

CMS 141 (1 - 4)  Course ID: 000294
Communications Practicum
Student works a minimum of two hours each week with the college radio station or TV station.
Components: Independent Study

CMS 142 (1 - 4)  Course ID: 000295
Communications Practicum
Student works a minimum of two hours each week with the college newspaper. Practicum: 1-4 credit hours (30-120 contact hours). Course may be repeated for a total of 4 credit hours.
Components: Practicum

CMS 154 (1 - 4)  Course ID: 000299
Telecommunication Internship
On-the-job experience will be provided to the student. A minimum of 40 clock hours of appropriate experience per credit hour will be required and must be approved by the faculty. Laboratory: varies. Prerequisite: CMS 105 and a minimum cumulative 2.0 GPA.
Components: Independent Study, Laboratory

CMS 155 (3)  Course ID: 006257
Introduction to Broadcasting
Introduces the history of the broadcast media in the United States and to current operating practices including Internet distribution. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CMS 157 (3)  Course ID: 000300
Basic Photography
Photographic techniques such as composition, lighting, exposure control, and skills needed by a photojournalist. Other topics may include using digital cameras, digital file formats, enhancing the digital image, and structuring the digital image. Lab component may include the use of a computer with photo imaging software and/or a darkroom using film cameras and enlargers. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

CMS 266 (3)  Course ID: 006258
Basic Television Production
Introduces the principles and techniques of field and studio video production and provides practical application in general broadcast station operations. Lecture: 2.0 credits (30 contact hours); Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture

COE Cooperative Education

COE 199 (1 - 8)  Course ID: 000309
Cooperative Education: (Associate in Applied Science Degree, Diplomas, and Certificate Programs)
Cooperative Education is a planned and evaluated work experience related to the student’s educational objective for which the student receives both financial remuneration and academic credit. One credit hour is awarded for completion of additional required activities. While the maximum amount of credit granted for cooperative education experience varies by curriculum, the amount may never exceed eight hours in an Associate in Applied Science Degree, diploma or certificate program. This course is available only to students enrolled in Associate in Applied Science Degree, diploma and certificate program that list Cooperative Education as an approved course. Co-op: 1-8 hours. Prerequisite: Completion of at least 12 credit hours in the Associate in Applied Science Degree, diploma or certificate program of study and/or marketable skills in the area in which the student is enrolled, and minimum cumulative grade point average (GPA) of 2.0.
Components: Co-Op

COED Cooperative Education

COED 198 (1 - 9)  Course ID: 005265
Instructor Consent Required Practicum
Provides a planned and evaluated work experience related to the student’s educational objective for which the student receives academic credit but no financial remuneration. Practicum: 1-9 credits (45-405 contact hours). Prerequisite: Consent of Instructor.
Components: Practicum
Cooperative Education I
Cooperative education is a planned and evaluated work experience related to the students' educational objective. The student receives both financial and remuneration and academic credit for this class. One credit hour is awarded for successful completion of 60 hours of approved work experience. Prerequisite/Corequisite: Permission of instructor
Components: Co-Op

Cooperative Education II
Cooperative education is a planned and evaluated work experience related to the student's educational objective for which the student receives both financial remuneration and academic credit. One credit hour is awarded for which the student successfully completes 60 hours of approved work experience. Prerequisite/Corequisite: Permission of instructor
Components: Independent Study

COM Communications

COM 101 (3) Course ID: 000310
Introduction to Communications
Introduces the process of communication as a critical element in human interaction and in society. Enhances effective communication and informed use of the mass media. Pre-requisite: Current placement scores for college level reading established by KCTCS, or completion of DRE 030 or RDG 030 or CMS 185 AND (current placement scores for college level writing established by KCTCS or completion of ENC 091)) OR consent of instructor.
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Communications

COM 184 (1) Course ID: 000313
Intercollegiate Debating
Preparation for and participation in intercollegiate debating. May be repeated to a maximum of two credits.
Components: Lecture
Attributes: OC - Oral Communication, OC - Oral Communication

COM 249 (3) Course ID: 000314
Mass Media and Mass Culture
Examines the interplay between the technology and content of the mass communications media and culture. Prerequisite: COM 101 or SOC 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: SOC 249
Attributes: SB - Social Behavior Science, SB - Communications

COM 252 (3) Course ID: 000315
Introduction to Interpersonal Communication
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Requires participation in written and oral activities designed to develop and improve interpersonal skills. Includes perspective-taking, relationship and conversation management, effective listening, conflict management, communication climate, communication anxiety, and cultural/gender differences in interpersonal communication. Prerequisite: ((Current placement scores for college level reading established by KCTCS, or completion of DRE 030 or RDG 030 or CMS 185) AND (current placement scores for college level writing established by KCTCS or completion of ENC 091)) OR consent of instructor.
Components: Lecture
3 credits (45 contact hours).

COM 2522 (1) Course ID: 005801
Communicating and Responding
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Topics include both verbal and nonverbal elements affecting communication between individuals in setting ranging from the family, peer groups, and work contexts. Prerequisite: COM 2521. Lecture: 1 credit (15 contact hours).
Components: Lecture

COM 2523 (1) Course ID: 005802
Looking at Relational Dynamics
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Includes the basic needs in developing interpersonal relationship with emphasis on the types of relations and the components involved in such relationships including compliance-gaining and conflict resolution. Prerequisite: COM 2521 and 2522. Lecture: 1 credit (15 contact hours).

Components: Lecture

COED 199 (3) Course ID: 001203

COED 299 (3) Course ID: 001204

COM 254 (3) Course ID: 004552
Introduction to Intercultural Communication
Introduces intercultural communication with an emphasis on the relationships between culture and communication, and social/psychological variables, verbal/nonverbal language systems, intercultural communication perceptions, and conflict resolution. Includes the practical application of contemporary issues in cross-cultural interaction, media representation, and simple social interactions to intercultural communication concepts. Prerequisite: ((Current placement scores for college level reading established by KCTCS, or completion of DRE 030 or RDG 030 or CMS 185) AND (current placement scores for college level writing established by KCTCS or completion of ENC 091)) OR consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science, SB - Communications

COM 281 (3) Course ID: 000316
Communication in Small Group
Examines communication processes in small group situations including conflict, leadership, and decision making. Includes participation in group discussion and the development of skills in analyzing group performance. Prerequisite: Current placement scores for college level reading established by KCTCS, or completion of DRE 030 or RDG 030 or CMS 185 AND (current placement scores for college level writing established by KCTCS or completion of ENC 091)) OR consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication, OC - Oral Communication

COM 284 (1) Course ID: 002198
Intercollegiate Debating
Preparation for and participation in intercollegiate debating. May be repeated to a maximum of four credits.
Components: Lecture

COM 287 (3) Course ID: 000317
Persuasive Speaking
Examines the processes involved in attitude change, with emphasis on the preparation and delivery of persuasive messages. Prerequisite: COM 181. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication, OC - Oral Communication

COM 288 (3) Course ID: 000318
Oral Interpretation
Analyzes prose and poetry for oral interpretation. Helpful to those who plan to teach literature. Prerequisite: ((ENGL ACT 16 and RDG ACT 18 or a comparable score on the SAT I or COMPASS) or (RDG 030 or CMS 185 or DRE 030) and ENC 091)). Lecture: 3 credits (45 contact hours).
Components: Lecture

COM 299 (3) Course ID: 004257
Special Topics in Communication
A sophomore level study of a selected topic in communication. Prerequisite: COM 181 or COM 252 or consent of instructor. Lecture: 3 hours.
Components: Lecture

COM 2521 (1) Course ID: 005800
Looking In
Examines basic verbal and nonverbal concepts affecting the interpersonal process. Includes both verbal and nonverbal elements affecting communication between individuals in settings ranging from the family, peer groups, and work contexts. Prerequisite: ((Current placement scores for college level reading established by KCTCS, or completion of DRE 030 or RDG 030 or CMS 185) AND (current placement scores for college level writing established by KCTCS or completion of ENC 091)) OR consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

Comos Cosmetology

COS 101 (18) Course ID: 003949
Cosmetology I, 1-1
This course is designed to cultivate proper attitude and behavior patterns needed to create a successful cosmetologist. Kentucky statutes and regulations, safety, microbiology, sanitation, infection control, first aid treatments, structure and disorders of the nail are studied. Basic fundamentals of hair, skin and nail care, hair styling and shaping, manicures and pedicures, chemical and thermal services, and wigs are introduced. The student, in developing manipulative skills and practicing procedures, utilizes mannequins and classmates. After 300 hours students begin to apply procedures on clients under the direct supervision of the instructor.
Components: Laboratory, Lecture

COS 105 (17) Course ID: 005534
Esthetician I
Covers the history of esthetics, today's career opportunities, and professional image. Includes Kentucky statutes and regulations, analysis of skin types for facial products, massage techniques, and hair removal. Provides guidelines that prevent the contamination of products, implements, and equipment for the prevention of disease. Includes the study of structure, composition, and function of the skin, skin conditions, disorders and diseases, and those treatable by the esthetician. Covers treatments related to skin and skin disorders. Prerequisite: (High school diploma or equivalent) and admission to esthetician program. Lecture/Lab: 17.0 credit hours (495 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

COS 114 (14) Course ID: 001213
Cosmetology I, 6-1
This course is designed to cultivate proper attitude and behavior patterns needed to create a successful Cosmetologist. Kentucky Statutes and regulations, safety, bacteriology, sanitation, infection control, first aid treatment, structure and disorders of the nail are studied. An introduction to the basic fundamentals of hair, skin and nail care, hair styling and shaping, manicures and pedicures, chemical and thermal services, and wigs. The student in developing manipulative skills and practicing procedures utilizes mannequins and classmates. After 300 hours student begin to apply procedures on clients under the direct supervision of the instructor.
Components: Lecture
Attributes: Course Also Offered in Modules

COS 116 (14) Course ID: 001214
Cosmetology II, 6-2
A study of basic chemistry with emphasis placed on the physical and chemical properties of cosmetic materials. Electricity and light therapy are discussed and an in-depth study of anatomical structures affected by cosmetological services including disorders of the skin, scalp, hair, and
nals. The instructor gives the students progressively more difficult assignments with close supervision.

Components: Lecture
Attributes: Course Also Offered in Modules

COS 135 (1-8)  Course ID: 001223  Instructor Consent Required Individual Requirements I
Provides additional lecture/laboratory time to meet licensure requirements of 1800 clock hours. Prerequisite: Consent of Instructor. Lecture: 1.0 - 8.0 credit hours (15 -120 contact hours). Laboratory: 1.0 - 8.0 credit hours (30 - 240 contact hours).

Components: Laboratory, Lecture

COS 150 (13)  Course ID: 001224  Basic Nail Tech
Provides knowledge of the art and science of nail technology including the rules and regulations of the State Board of Cosmetology as they apply to the salon. Includes bacteriology and infection control through the practice of sanitation procedures, the study of the cells, structure of the hand, arm, nail and their diseases and disorders, and the study of beauty salon management including the practice of interacting with clients, co-workers, and supervisors. (Students practice on classmates and progress to work on clients.) Lecture: 5 credits (75 contact hours). Laboratory: 8 credits (240 contact hours).

Components: Laboratory, Lecture

COS 152 (13)  Course ID: 001225  Applied Nail Technology
Continues the study of nail technology. Includes a comprehensive written and practical exam in preparation for state board and licensure. Prerequisite: COS 150. Lecture: 5 credits (75 contact hours). Laboratory: 8 credits (240 contact hours).

Components: Laboratory, Lecture

COS 205 (12)  Course ID: 005540  Esthetician II
Provides a study of Kentucky State Board of Hairdressers and Cosmetologists rules and regulations and anatomy and physiology as it relates to esthetics, and organic/ inorganic chemistry and cosmetic ingredients. Covers facial enhancements through the use of make-up artistry and application. Includes hair removal procedures and applications. Prerequisite: COS 105 or Consent of Instructor. Lecture/Lab: 12.0 credit hours (330 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

COS 210 (13)  Course ID: 001233  Student Teaching I
Introduces teaching methods used in training cosmetology and nail technology students. Inclusive of theory, class methods of lecture, media use and testing methods. Introduces methods used to teach the practical application of skills. Prerequisite: Cosmetologist’s License; One year work experience, apprentice cosmetologists instructor’s license. Lecture: 3 credits (45 contact hours). Laboratory: 10 credits (300 contact hours).

Components: Laboratory, Lecture

COS 212 (13)  Course ID: 001234  Student Teaching II
Expands the apprentice instructor’s ability to apply various methods used to train cosmetology and nail technology students. Prerequisite: COS 210. Lecture: 3 credits (45 contact hours). Laboratory: 10 credits (300 contact hours).

Components: Laboratory, Lecture

COS 214 (13)  Course ID: 001235  Student Teaching III
Provides preparatory work to prepare the apprentice instructor for the Kentucky Board of Hairdressers instructor exam. Prerequisite: COS 212. Lecture: 3 credits (45 contact hours). Laboratory: 10 credits (300 contact hours).

Components: Laboratory, Lecture

COS 218 (14)  Course ID: 001215  Cosmetology III, 6-3
Provides knowledge of the structure and function of the human body, including the interaction of all the body systems in maintaining homeostasis. All phases of beauty salon management are studied, including interacting with clients, co-workers and supervisors. Laboratory experience is advanced with performance expectations set at a higher level.

Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

COS 220 (12)  Course ID: 001216  Cosmetology IV, 6-4
This course is designed for a total review of the cosmetology curriculum. A comprehensive written and practical exam is given in preparation for the State Board Licensure exam. Students implement their own judgement of procedures and solutions to be used on clients with supervision.

Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

COS 235 (1-8)  Course ID: 004413  Instructor Consent Required Individual Requirements II
Provides additional lecture/laboratory time to meet licensure requirements of 1800 clock hours. Prerequisite: Consent of Instructor. Lecture/Lab: 1.0 - 8.0 credit hours (15 -120 contact hours).

Components: Laboratory, Lecture

COS 275 (13)  Course ID: 005545  Esthetician III
Covers procedures for business and management, the practice of esthetic setup, sanitation, application techniques, advanced esthetics which include peels, deep pore cleansing, clinical skin care, aroma therapy, and spa/ body treatments. Provides for the study of the functions and benefits of electrotherapy including pre- and post- operative care for physician treatments and the application of various cosmeceutical products. Prerequisite: COS 205 or Consent of Instructor. Lecture/Lab: 13.0 credit hours (205 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

COS 1051 (1)  Course ID: 005535  Skin Care History/Opportunities/Professional Image
Covers the history of esthetics, today’s career opportunities, and professional image. Includes Kentucky statutes and regulations. Prerequisite: (High school diploma or equivalent) and admission to esthetician program. Lecture: 1.0 credit hour (15 contact hours).

Components: Lecture

COS 1052 (7)  Course ID: 005536  Basic Facials
Provides an analysis of skin types for facial products, massage techniques, and hair removal. Prerequisite: (High school diploma or equivalent) and admission to esthetician program. Lecture/Lab: 7.0 credit hours (265 contact hours).

Components: Lecture

COS 1053 (1)  Course ID: 005537  Sanitation and Disinfection
Provides guidelines that prevent the contamination of products, implements, and equipment for the prevention of disease. Prerequisite: (High School Diploma or equivalent) and admission to esthetician program. Lecture: 1.0 credit hour (15 contact hours).

Components: Lecture

COS 1054 (3)  Course ID: 005538  Physiology and Histology of the Skin
Provides a study of the structure, composition, and function of the skin. Prerequisite: (High School Diploma or equivalent) and admission to esthetician program. Lecture: 3.0 credit hours (45 contact hours).

Components: Lecture

COS 1055 (5)  Course ID: 005539  Skin Diseases and Disorders
Provides a study of skin conditions, disorders and diseases, and those treatable by the esthetician. Treatments related to skin and skin disorders. Prerequisite: (High School Diploma or equivalent) and admission to esthetician program. Lecture/Lab: 5.0 credit hours (135 contact hours).

Components: Laboratory, Lecture

COS 1143 (3)  Course ID: 00496  Principles of Hair Design
Provides design elements and principles of hairstyling. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).

Components: Lecture

COS 1144 (1)  Course ID: 00497  Cosmetology Skills A
Focus on developing design elements of hair. Laboratory: 1 credit (45 contact hours).

Components: Laboratory

COS 1145 (1)  Course ID: 00498  Hair Structure, Disorders and Diseases
Focuses on the structure, diseases, and disorders of hair. Lecture: 1 credit (15 contact hours).

Components: Lecture

COS 1146 (1)  Course ID: 004999  Cosmetology Skills B
Provides basic principles of hair design and safety. Laboratory: 1 credit (45 contact hours).

Components: Laboratory

COS 1147 (1)  Course ID: 005000  Nail Structure: Diseases and Disorders
Focuses on nail structure, diseases and disorders. Lecture: 1 credit (15 contact hours).

Components: Lecture

COS 1148 (1)  Course ID: 005001  Skin Structure, Disorders and Diseases
Focuses on skin structure, diseases and disorders. Lecture: 1 credit (15 contact hours).

Components: Lecture

COS 1161 (3)  Course ID: 005002  Introduction to Cosmetic Chemistry
Basic study of cosmetic chemistry. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).

Components: Laboratory, Lecture

COS 1162 (3)  Course ID: 005003  Chemical Services
Basic chemical services. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).

Components: Laboratory, Lecture

COS 1163 (3)  Course ID: 005004  Massage Techniques
Study of massage techniques. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).

Components: Laboratory, Lecture

COS 1165 (1)  Course ID: 005006  Electricity & Light Therapy for Cosmetology
Study of electricity and light therapy. Lecture: 1 credit (15 contact hours).

Components: Lecture

COS 1166 (1)  Course ID: 005007  Intermediate Hair Design Lab
Continues the application of hair design theory and skills. Laboratory: 1 credit (45 contact hours).

Components: Laboratory
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>COS 1167 (1)</td>
<td>Facials</td>
</tr>
<tr>
<td>COS 1168 (1)</td>
<td>Makeup and Hair Removal</td>
</tr>
<tr>
<td>COS 2051 (1)</td>
<td>Kentucky State Board Rules and Regulations</td>
</tr>
<tr>
<td>COS 2052 (5)</td>
<td>Make-Up/Hair Removal</td>
</tr>
<tr>
<td>COS 2053 (3)</td>
<td>Anatomy/Physiology for the Esthetician</td>
</tr>
<tr>
<td>COS 2054 (3)</td>
<td>Cosmetic Chemistry</td>
</tr>
<tr>
<td>COS 2181 (3)</td>
<td>Anatomy for Cosmetology I</td>
</tr>
<tr>
<td>COS 2182 (3)</td>
<td>Anatomy for Cosmetology II</td>
</tr>
<tr>
<td>COS 2184 (1)</td>
<td>Intermediate Chemical Services Lab</td>
</tr>
<tr>
<td>COS 2186 (1)</td>
<td>Client Services Lab</td>
</tr>
<tr>
<td>COS 2187 (1)</td>
<td>Intermediate Hair Shaping</td>
</tr>
<tr>
<td>COS 2188 (1)</td>
<td>Cosmetology Trends and Issues</td>
</tr>
<tr>
<td>COS 2201 (3)</td>
<td>Advanced Cosmetology I</td>
</tr>
<tr>
<td>COS 2203 (1)</td>
<td>Advanced Lab I</td>
</tr>
<tr>
<td>COS 2205 (3)</td>
<td>Advanced Lab II</td>
</tr>
<tr>
<td>COS 21886 (1)</td>
<td>Hair Enhancements</td>
</tr>
<tr>
<td>COS 2189 (1)</td>
<td>Client Services Lab</td>
</tr>
</tbody>
</table>

**Course Descriptions:**

- **Facials:** Theory of facials. Lecture: 1 credit (15 contact hours).
- **Makeup and Hair Removal:** Provides the theoretical base for application of makeup. Hair removal principles and techniques. Lecture: 1 credit (15 contact hours).
- **Kentucky State Board Rules and Regulations:** Provides a study of Kentucky Board of Hairdressers and Cosmetologists rules and regulations. Prerequisite: COS 105 or Consent of Instructor. Lecture: 1.0 credit hour (15 contact hours).
- **Make-Up/Hair Removal:** Covers facial enhancements through the use of make-up artistry and application. Includes hair removal procedures and applications. Prerequisite: COS 105 or Consent of Instructor. Lecture: 5.0 credit hours (165 contact hours).
- **Anatomy/Physiology for the Esthetician:** Provides a study of anatomy/physiology as it relates to esthetics. Prerequisite: COS 105 or Consent of Instructor. Lecture: 3.0 credit hours (45 contact hours).
- **Cosmetic Chemistry:** Provides a study of organic/inorganic chemistry and cosmetic ingredients. Prerequisite: COS 105 or Consent of Instructor. Lecture/Lab: 3.0 credit hours (105 contact hours).
- **Anatomy for Cosmetology I:** Study of the structures and functions of the human body. Application of these studies in cosmetology services. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
- **Anatomy for Cosmetology II:** Study of the interaction of all body systems and the maintenance of homeostasis. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
- **Intermediate Chemical Services Lab:** The study of the interaction of all the body systems in maintaining homeostasis. Application of these studies in cosmetology services. Prerequisite: COS 1161 and COS 1162 and COS 1163 and COS 1164 and COS 1165 and COS 1166 and COS 1167 and COS 1168 or COS 116 with a grade of C or greater. Laboratory: 1 credit (45 contact hours).
- **Hair Enhancements:** Study of artificial hair. Lecture: 1 credit (15 contact hours).
- **Intermediate Hair Shaping:** Hair shaping techniques for the intermediate practitioner. Lecture: 1 credit (15 contact hours).
- **Cosmetology Trends and Issues:** Trends and issues of cosmetology are covered. Lecture: 1 credit (15 contact hours).
- **Advanced Cosmetology I:** Processes and procedures for client services. Implementation of cosmetology processes and procedures on clients. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
- **Advanced Lab I:** Practice all lab application techniques. Laboratory: 1 credit (45 contact hours).
- **Advanced Lab II:** Practice all lab application techniques. Laboratory: 1 credit (45 contact hours).
- **Salon/Spa Business and Management:** Covers procedures for business management. Prerequisite: COS 205 or Consent of Instructor. Lecture: 4.0 credit hours (60 contact hours).
- **Esthetic Practices:** Covers esthetic setup, sanitation, and application techniques. Provides for the application of various cosmeceutical products. Prerequisite: COS 205 or Consent of Instructor. Lecture/Lab: 5.0 credit hours (105 contact hours).

**Additional Courses:**

- **CPR (Cardiopulmonary Resuscitation):** Provides an introductory understanding of private security and firearms. The course is designed for the entry-level users and satisfies the computer literacy requirement. Lecture: 3 credits (45 contact hours).
- **CPU 150 (Computers):** Develops skills in using operating systems and includes applications software including word processing, database, spreadsheet, the Internet and electronic mail, computer hardware, methods to help solve common software and printing problems, ethical issues concerning electronic communication, and the impact of computers and the Internet on society. (As of July 1, 2008, this course does not meet computer literacy requirement.) Lecture: 3 credits (45 contact hours).
- **CRJ 102 (Introduction to Corrections):** Provides an introduction to the development of correctional systems, and the processes, procedures, and issues of current correctional systems, both juvenile and adult. Prerequisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) Lecture: 3.0 credit hours (45 contact hours).
- **CRJ 107 (Introduction to Firearms):** Provides a working knowledge of the use, care, and safety of firearms. The course is designed to teach current emergency techniques relative to cardiac and/or respiratory arrest, as put forth by the American Heart Association, National Safety Council, American Red Cross, American Heart Association, National Safety Council, or American Red Cross standardized course qualifies a student for certification of cardiopulmonary resuscitation.
CRJ 201 (3) 
**Course ID:** 000899
**Introduction to Criminalistics**
Provides a basic knowledge of crime scene protection, collection, preservation, and identification of evidence, including proper search, dusting latent prints, casting fingerprint classification, and use of crime laboratory in crime detection and prosecution. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 202 (3) 
**Course ID:** 004196
**Issues and Ethics in Criminal Justice**
Provides an understanding of the issues and ethical dilemmas confronting practitioners within the criminal justice system. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 203 (3) 
**Course ID:** 004197
**Community Corrections: Probations & Parole**
Provides an in-depth study of the history and current processes and procedures of probation, parole, and intermediate sanctions that makes up community corrections. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 204 (3) 
**Course ID:** 004198
**Criminal Investigations**
Provides the fundamentals of crime scene investigations, which includes searching and recording of the scene, collection and preservation of physical evidence, interviews and interrogation of victims, witnesses, and suspects, report writing and case preparation. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 208 (3) 
**Course ID:** 004199
**Delinquency and the Juvenile Justice System**
Provides an introduction of the origins and theories associated with juvenile delinquency, and a comprehensive analysis of the environmental issues that influence delinquency, plus a thorough overview of the juvenile justice system processes. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 210 (3) 
**Course ID:** 004200
**Physical Security Technology & Systems**
Introduces facility security with the use of environmental design and integrated electronic technology (cameras, monitors, and alarms). Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 211 (3) 
**Course ID:** 004201
**Liability & Legal Issues**
Provides an overview of legal aspects of security, which includes but is not limited to civil and criminal law, liability of asset protection, use of force, false imprisonment, negligent security, and invasion of privacy. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND (CRJ 100 or Consent of Instructor). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 215 (3) 
**Course ID:** 004202
**Introduction to Law Enforcement**
Provides an introduction to the study of law enforcement. Introduces the historical developments of law enforcement, police operations and programs. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 216 (3) 
**Course ID:** 004203
**Criminal Law**
Provides an overview of the definitions and functional components of criminal law in the field of criminal justice. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 217 (3) 
**Course ID:** 004204
**Criminal Procedures**
Provides an overview of the different criminal procedural laws by examining the specific Amendments that outline the guidelines of the administration of substantive laws. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 218 (3) 
**Course ID:** 004193
**Police Supervision**
Provides an overview of the administrative, supervisory, and leadership roles that are required within a law enforcement agency. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND CRJ 100 or CRJ 215 and Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 220 (3) 
**Course ID:** 005220
**Introduction to Computer Forensics for Criminal Justice**
Introduces the study of cybercrime with an emphasis on planning, detection, and response with the goals of countering and overcoming hacker attacks and computer-related offenses. Malicious activities will be logged and forensic tools will be used to gather court-admissible evidence. Pre-requisite: Completion of an approved Computer Literacy Course with a grade of C or greater, or computer literacy demonstrated by competency exam; AND (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 222 (3) 
**Course ID:** 004205
**Prison & Jail Administration**
Introduces the correctional procedures and administration of jails and prisons by focusing on historical and current perspectives of penology, administrative responsibilities of correctional leaders, and correctional staff responsibilities. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 230 (3) 
**Course ID:** 006233
**Criminal Justice Courtroom Procedures**
Covers research, study, and discussion of current and emerging topics, issues, and trends in courtroom procedures. Includes basic courtroom procedures and the rules of the key personnel within the courtroom setting. Includes practical preparation procedures for witness presentation of testimony. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND CRJ 100 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 231 (3) 
**Course ID:** 006234
**Legal Aspects of Corrections**
Covers research, study, and discussion of current and emerging topics, issues, and trends in corrections. Introduces legal aspects of corrections. Includes a historical perspective, as well as applicable case law, in the areas of corrections operations, practices, and procedures. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 240 (3) 
**Course ID:** 006102
**Introduction to Corporate & Industrial Security**
Includes research, study, and discussion of current and emerging topics, issues, and trends in corporate and industrial security. Covers basic corporate and industrial security procedures and the roles of the key personnel within the private security arena. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 245 (3) 
**Course ID:** 006222
**Introduction to Business and Industrial Fraud**
Includes research, study, and discussion of current and emerging topics, issues and trends in business and industrial fraud. Covers basic concepts of occupational fraud and abuse and the roles of the key personnel within the criminal justice system. Includes practical procedures for defining, identifying, and investigating business and industrial fraud. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 277 (3) 
**Course ID:** 006804
**Introduction to Criminology**
Provides an introduction to the understanding of criminal behavior by focusing on crime trends and patterns, the amount of crime, and the theories of crime. Theories of crime will include the biological, psychological, sociological, and integrated explanations of behavior. Theories of crime will be utilized to address the procedures and administration of criminal justice in society. Pre-requisite: If yes, list: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 279 (3) 
**Course ID:** 005781
**Terrorism and Political Violence**
Provides an introduction to the study of terrorism and terrorist organizations. Introduces the student to the diverse definitions of terrorism and the social and political consequences of varying definitions, behavioral aspects of terrorist and the various justifications for terrorist activities. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

CRJ 290 (3) 
**Course ID:** 004206
**Internship in Criminal Justice**
Allows the criminal justice student the opportunity to broaden their educational experience through observation and work assignments at a recognized criminal justice agency. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND Sophomore Standing and completion of at least 12 semester hours of Criminal Justice work. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
CRJ 299 (1 - 3)  
Course ID: 004207  
Instructor Consent Required  
Selected Topics in Criminal Justice  
Introduces specialized topics in the field of criminal justice to meet current trends and investigations of contemporary topics in the discipline. The topics of the course and the number of credit hours determined are at the discretion of the instructor and college providing the course. This course may be repeated to a maximum of 6 credit hours. Prerequisite: Consent of Instructor. Co-Op: 1.0 - 8.0 credit hours. Components: Co-Op

CRT 230 (6)  
Course ID: 000936  
Structural Analysis and Damage Repair  
Provides practical experience in the diagnosis, repair, and/or replacement of suspension, steering, electrical, brake, drivetrain, fuel, exhaust, and restraint systems. Includes demonstration of theories and concepts of heating and air conditioning systems. Involves live work on automobiles. Requisite or Co-requisite: CRT 250. Lab: 6.0 credits (180 - 270 contact hours). Components: Laboratory

CRT 250 (6)  
Course ID: 000938  
Mechanical and Electrical Components Lab  
Provides practical experience in the diagnosis, repair, and/or replacement of suspension, steering, electrical, brake, drivetrain, fuel, exhaust, and restraint systems. Includes demonstration of theories and concepts of heating and air conditioning systems. Involves live work on automobiles. Requisite or Co-requisite: CRT 250. Lab: 6.0 credits (180 - 270 contact hours). Components: Laboratory

CRT 260 (2)  
Course ID: 000920  
Introduction to Collision Repair  
Introduces the student to safety, sandy, grinding, pulling, roughing and filling: the use of tools and equipment; and preparing and priming automotive panels through lectures and demonstrations. Lecture: 2.0 (30 contact hours).

CRT 231 (6)  
Course ID: 002345  
Non-Structural Analysis and Damage Repair Lab  
Provides practical experience in the repair and replacement of non-structural components by aligning, welding, cutting and drilling through demonstrations and lectures. Includes instruction on how to repair plastic, fiberglass, SMC and flexible automobile parts. Lecture: 6.0 credits (90 contact hours).

CRT 232 (6)  
Course ID: 000942  
Special Projects II  
Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Prerequisite: Consent of Instructor. Lab: 2.0 credits (150 contact hours).

CRT 233 (2)  
Course ID: 000941  
Special Projects I  
Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Prerequisite: Consent of Instructor. Lab: 1.0 credit (45 contact hours).

CRT 239 (2)  
Course ID: 000640  
Special Projects  
Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Prerequisite: Consent of Instructor. Lab: 2.0 credits (90 contact hours).

CRT 249 (2)  
Course ID: 000493  
Instructor Consent Required Advanced Practicum  
Provides supervised on-the-job work experience related to the students’ educational objectives. (Students participating in the practicum do not receive compensation.) Prerequisite: Consent of Instructor. Practicum: 1.0 - 8.0 credit hours.

CRT 299 (1 - 8)  
Course ID: 000933  
Instructor Consent Required Cooperative Education  
Provides supervised on-the-job work experience related to the students’ educational objectives. (Students participating in the Co-op Education program receive compensation for their work. May be taken for 1 - 8 credits.) Prerequisite:
### Culinary Arts

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 100 (2)</td>
<td>Introduction to Culinary Arts</td>
<td>2 credits</td>
<td>30</td>
</tr>
<tr>
<td>CUL 105 (2)</td>
<td>Applied Introduction to Culinary Arts</td>
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<td>30</td>
</tr>
<tr>
<td>CUL 200 (2)</td>
<td>Sanitation and Safety</td>
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<td>30</td>
</tr>
<tr>
<td>CUL 211 (4)</td>
<td>Basic Food Production</td>
<td>4 credits</td>
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</tr>
<tr>
<td>CUL 215 (4)</td>
<td>Basic Baking</td>
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<tr>
<td>CUL 220 (4)</td>
<td>Advanced Baking &amp; Pastry Arts</td>
<td>4 credits</td>
<td>60</td>
</tr>
<tr>
<td>CUL 225 (4)</td>
<td>Professional Confection and Pastry Arts</td>
<td>4 credits</td>
<td>60</td>
</tr>
<tr>
<td>CUL 230 (3)</td>
<td>Basic Nutrition</td>
<td>3 credits</td>
<td>45</td>
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<tr>
<td>CUL 240 (4)</td>
<td>Meats, Seafood, &amp; Poultry</td>
<td>4 credits</td>
<td>60</td>
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<tr>
<td>CUL 260 (4)</td>
<td>International &amp; Classical Cuisine</td>
<td>4 credits</td>
<td>60</td>
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<td>CUL 280 (4)</td>
<td>Cost and Control</td>
<td>4 credits</td>
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<td>CUL 290 (4)</td>
<td>Front of the House-Catering</td>
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<tr>
<td>CUL 295 (3)</td>
<td>Doing Business as a Personal Chef</td>
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<td>CUL 297 (1 - 6)</td>
<td>Selected Topics in Culinary Arts</td>
<td>1 - 6 credits</td>
<td>15 - 90</td>
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<td>CUL 298 (2 - 3)</td>
<td>Culinary Arts Practicum Experience</td>
<td>2 - 3 credits</td>
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### DAH Dental Hygiene

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<td>Dental Hygiene</td>
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<tr>
<td>DAH 111 (3)</td>
<td>Dental Sciences</td>
<td>3 credits</td>
<td>45</td>
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<tr>
<td>DAH 121 (3)</td>
<td>Materials in Dentistry</td>
<td>3 credits</td>
<td>45</td>
</tr>
<tr>
<td>DAH 131 (3)</td>
<td>Dental Materials</td>
<td>3 credits</td>
<td>45</td>
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<tr>
<td>DAH 135 (2)</td>
<td>Oral Radiology</td>
<td>2 credits</td>
<td>30</td>
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<tr>
<td>DAH 235 (1)</td>
<td>Practice Management</td>
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DAS Dental Assisting

DAS 120 (6) Course ID: 001253 Dental Assisting I Stresses the preclinical/clinical application of foundational dental assisting skills. Prerequisite: Admission to the Dental Assisting Integrated Program. Lecture: 2.0 credits (30 contact hours), Lab: 2.0 credits (60 contact hours). Clinical: 2.0 credits (120 contact hours). Components: Clinical, Laboratory, Lecture

DAS 130 (2) Course ID: 006812 Seminar I Emphasizes leadership, management, decision-making, judgment skills and professional values to facilitate the transition of the student to a professional dental assistant. Provides the opportunity for the application of critical thinking skills in the care of a diverse patient population in the dental setting. Pre-requisite: Admission into the Dental Assisting Integrated program. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Clinical, Laboratory, Lecture

DGD DGD 230 (1) Course ID: 006813 Digital Game and Simulation Design Seminar I Provides the opportunity to discuss clinical experiences and prepare to sit for the Dental Assisting National Board (DANB). Provides students the opportunity to further develop professional growth plan. Pre-requisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, DAS 120, and DAS 130. Lecture: 3.0 credits (45 contact hours). Laboratory: 2.0 credits (60 contact hours). Clinical: 4.0 credits (240 contact hours).

Components: Clinical, Laboratory, Lecture

DGD 234 (3) Course ID: 005475 3D Animation Introduces basic techniques to animate 3D characters and objects using constraints, manipulation, pivot point rotation, motion scripting, and motion flow. Prerequisite: DGD 132 or consent of instructor. Lecture: 3.0 credits (45 contact hours). Components: Lecture

DGD 235 (3) Course ID: 007069 3D Special Effects Introduces digital 3D special effects including the four fundamental elements of air, fire, earth, and water. Prerequisite: DGD 231 or consent of instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

DGD 236 (3) Game Engines I Introduces students to configuring and using a multiplayer game engine to build 3D games and simulations. Pre-requisite: DGD 132 or consent of instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

DGD 237 (3) Game Engines II Use a game engine to build an interactive, 3D graphics-based application that incorporates scripting, collision detection, optimized real-time rendering, and export & deployment support across multiple platforms. Prerequisite: DGD 230 or consent of instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

DHG Dental Hygiene

DHG 120 (3) Course ID: 000337 Pre-Clinical Dental Hygiene Stresses basic assessment and clinical skills, related theory, and professional role and responsibilities of the dental hygienist as a member of the dental health team. Prerequisite: Admission into the Dental Hygiene Integrated Program. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (120 contact hours).

Components: Laboratory, Lecture

DHG 130 (3) Course ID: 000338 Clinical Dental Hygiene I Focuses on preparing the student to provide patient treatment that includes preventive and therapeutic procedures to maintain oral health and assist the patient in achieving oral health goals. Prerequisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 1.5 credits (22.5 contact hours). Lab: 0.5 credits (60 contact hours). Clinical: 1.0 credit (120 contact hours).

Components: Clinical, Laboratory, Lecture

DHG 132 (2) Course ID: 004331 Pharmacology Examines the disciplines of pharmacology and therapeutics as related to dental hygiene. Prerequisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

DHG 134 (2) Course ID: 006811 Dental Nutrition Presents basic principles of nutrition with emphasis on nutritional counseling in relationship to dental health, determination of patient nutritional status, and application to oral health and effects of nutritional deficiencies. Prerequisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

DHG 136 (1) Course ID: 000340 Periodontontology Focuses on the clinical, histological, and radiographic differences between healthy and unhealthy periodontal tissues. Prerequisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 1.0 credit (15 contact hours).

Components: Lecture

DHP Dental Hygiene

DHP 120 (4) Course ID: 004859 Dental Hygiene I Includes basic assessment and clinical skills, related theory, professional role and responsibilities of the dental hygienist as a member of the dental health team. Prerequisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalent; and CPR certification. BIO 137 and BIO 139 or equivalent, with a grade of “C” or better. Lecture: 2.5 credits (37.5 contact hours); Clinical: 1.5 hours (180 contact hours).

Components: Clinical, Laboratory, Lecture

Campus: BLC

DHP 121 (3) Course ID: 004860 Oral Biology I Includes oral histology and embryology, regional head and neck anatomy, and dental anatomy applicable to the practice of dental hygiene. Prerequisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalent; and CPR certification. BIO 137 and BIO 139 or equivalent, with a grade of “C” or better. Lecture: 2.0 credits (30 contact hours); Laboratory: 1.0 credit (60 contact hours).

Components: Laboratory, Lecture

Campus: BLC

DHP 122 (2) Course ID: 006832 Dental Nutrition Presents basic principles of nutrition with emphasis on nutritional counseling in relationship to dental health, determination of patient nutritional status, and application to oral health and effects of nutritional deficiencies. Prerequisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalent; and CPR certification.
BIO 137 and BIO 139 or equivalent, with a grade of 'C' or better. Lecture: 2.0 credits (30 contact hours).

**Components:** Lecture

**Course:** DHP 131 (5)  
**Course ID:** 004863  
**Course Name:** Dental Radiology  
Covers the role of the dental hygienist in the recognition of Nitrous Oxide are also included. This elective course satisfies the Kentucky State Dental Practice Act regarding "delegation of block and infiltration anesthesia and nitrous oxide anesthesia to dental hygienists." Prerequisite: (DHP 130 and DHP 131 and DHP 135 and DHP 136) with a grade of 'C' or better. Lecture: 1.5 credits (22.5 contact hours). Laboratory: 0.5 credit (30 contact hours).

**Components:** Laboratory, Lecture

**Campus:** BLC

DIT 120 (3)  
**Course ID:** 001273  
**Course Name:** Mechanical Principles  
Provides opportunities to practice hands on skills of measuring with precision measurement tools such as micrometers, dial indicator sand caliper. This class also provides opportunities for the student to practice drilling and tapping. Proper rigging techniques are illustrated and practice to ensure that the student will know how to safely lift large and awkward items. Laboratory: 1.0 credit (45 contact hours).

**Components:** Laboratory

**Course:** DIT 111 (2)  
**Course ID:** 001275  
**Course Name:** Diesel Engine Repair  
Covers fundamentals of the operation of two-and four-stroke diesel and gasoline engines. Includes basic engine components and their functions, engine performance terminology, two- and four-stroke operation, combustion principles, and engine disassembly with basic hand tools. Corequisite: DIT 111. Lecture: 3 credits (45 contact hours).

**Components:** Lecture

DIT 112 (3)  
**Course ID:** 001276  
**Course Name:** Diesel Engine Repair Lab  
Instructor Consent Required Independent Study in  
Introduction To Diesel Engines  
Provides practical experience of concepts from DIT 110. Corequisite: DIT 110. Laboratory: 2 credits (90 contact hours).

**Components:** Laboratory

DIT 103 (1)  
**Course ID:** 0006815  
**Course Name:** Diesel Technology  
Introduction to Diesel Engines  
Provides practical experience of concepts from DIT 110. Corequisite: DIT 110. Laboratory: 2 credits (90 contact hours).

**Components:** Laboratory

DIT 101 (3)  
**Course ID:** 0001274  
**Course Name:** Diesel Technology  
Introduction To Diesel Engines  
Provides practical experience of concepts from DIT 110. Corequisite: DIT 110. Laboratory: 2 credits (90 contact hours).

**Components:** Laboratory

DIT 110 (3)  
**Course ID:** 0001275  
**Course Name:** Diesel Technology  
Introduction To Diesel Engines Lab  
Provides practical experience of concepts from DIT 110. Corequisite: DIT 110. Laboratory: 2 credits (90 contact hours).

**Components:** Laboratory

DIT 100 (3)  
**Course ID:** 0006815  
**Course Name:** Diesel Technology  
Introduction To Diesel Engines  
Provides practical experience of concepts from DIT 110. Corequisite: DIT 110. Laboratory: 2 credits (90 contact hours).

**Components:** Laboratory

DIT 112 (3)  
**Course ID:** 0001276  
**Course Name:** Diesel Engine Repair Lab  
Instructor Consent Required Independent Study in  
Introduction To Diesel Engines  
Provides practical experience of concepts from DIT 110. Corequisite: DIT 110. Laboratory: 2 credits (90 contact hours).

**Components:** Laboratory

DIT 113 (2)  
**Course ID:** 0001277  
**Course Name:** Diesel Engine Repair Lab  
Introduction to Maintenance Welding  
This course provides training in the identification, inspection and maintenance of welding electrodes. Training will be given in the principles and processes of welding plates and pipes. Instruction will be given in lab safety and basic oxy fuel cutting.

**Components:** Lecture

DIT 120 (3)  
**Course ID:** 0001278  
**Course Name:** Diesel Technology  
Introduction To Diesel Engines  
Provides practical experience of concepts from DIT 110. Corequisite: DIT 110. Laboratory: 2 credits (90 contact hours).

**Components:** Laboratory
DIT 121 (3) Course ID: 001279
Introduction to Maintenance Welding Lab
Provides laboratory experiences in which students acquire the manipulative skills needed to weld surface, fillet, and groove welds in flat and horizontal positions. The students will perform oxy fuel cutting operations. Lab: 3.0 credits (135 contact hours).

Components: Laboratory

DIT 122 (3) Course ID: 001280
Undercarriage
Students learn the theory and operation of undercarriage systems and their components. These components include endless track, roller track, roller frames, idlers, rollers, supports, and mainframes. Corequisite: DIT 123: Lecture: 3 credits (45 contact hours).

Components: Lecture

DIT 123 (3) Course ID: 001281
Undercarriage Lab
Provides opportunities to troubleshoot and repair some parts of undercarriage systems and their components. These components include endless track, roller track, roller frames, idlers, roller supports, and mainframes. Lab: 3.0 credits (135 contact hours).

Components: Laboratory

DIT 140 (3) Course ID: 001282
Hydraulics
Covers theory and operation of a complete hydraulic system. Corequisite: DIT 141. Lecture: 3 credits (45 contact hours).

Components: Lecture

DIT 141 (2) Course ID: 001283
Hydraulics Lab
Provides for practical application of concepts taught in DIT 140. Corequisite: DIT 140. Laboratory: 2 credits (90 contact hours).

Components: Laboratory

DIT 150 (3) Course ID: 001284
Power Trains
Covers theory and principles of power train systems, diagnosis and repair of components. Corequisite: DIT 151. Lecture: 3 credits (45 contact hours).

Components: Lecture

DIT 151 (2) Course ID: 001285
Power Trains Lab
Provides for practical application of concepts taught in DIT 150. Corequisite: DIT 150. Laboratory: 2 credits (90 contact hours).

Components: Laboratory

DIT 152 (3) Course ID: 001286
Powertrain for Construction Equipment
Students learn the theory and principles of the operation of power transmissions. They learn to diagnose and repair power train units including torque connectors, standard and automatic transmissions.

Components: Lecture

DIT 153 (2) Course ID: 001287
Powertrain for Construction Equipment Lab
Students troubleshoot, disassemble, evaluate parts and reassemble components of a power train system, such as torque connectors, standard and automatic transmissions, and drive lines.

Components: Laboratory

DIT 160 (3) Course ID: 001288
Steering and Suspension
Covers theory and operation of steering and suspension systems. Corequisite: DIT 161. Lecture: 3 credits (45 contact hours).

Components: Lecture

DIT 161 (2) Course ID: 001289
Steering and Suspension Lab
Provides for practical application of concepts taught in DIT 160. Corequisite: DIT 160. Laboratory: 2 credits (90 contact hours).

Components: Laboratory

DIT 180 (3) Course ID: 001290
Brakes
Covers theory and operation of air and hydraulic braking. Corequisite: DIT 181. Lecture: 3 credits (45 contact hours).

Components: Lecture

DIT 181 (2) Course ID: 001291
Brakes Lab
Provides practical experience of concepts from DIT 180. Corequisite: DIT 180. Laboratory: 2 credits (90 contact hours).

Components: Laboratory

DIT 190 (3) Course ID: 001292
Electrical Systems for Diesel Equipment
Explores theory and operation of wiring circuits and battery service. Corequisite: DIT 191. Lecture: 3 credits (45 contact hours).

Components: Lecture

DIT 191 (2) Course ID: 001293
Electrical Systems for Diesel Equipment Lab
Provides practical experience of concepts from DIT 190. Corequisite: DIT 190. Laboratory: 2 credits (90 contact hours).

Components: Laboratory

DIT 198 (1) Course ID: 001297
Instructor Consent Required Practicum
The Practicum provides supervised on-the-job work experience related to the student's education objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Permission of Instructor
Components: Practicum

DIT 298 (2) Course ID: 001299
Instructor Consent Required Practicum
The Practicum provides supervised on-the-job work experience related to the student's education objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Permission of Instructor
Components: Co-Op

DLT 101 (2) Course ID: 004871
Dental Laboratory Technology
Dental Morphology
The anatomical characteristics and dental terminology of the permanent human dentition are detailed. Other topics include dento-osseous structures, oral musculature, and the development of teeth. Waxing exercises of selected teeth are performed in the laboratory as a means of understanding tooth form and the development of manual dexterity. Prerequisite: Admission into the DLT Program or consent of instructor. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

DLT 111 (2) Course ID: 004872
Dental Materials I
The major content of this course includes an introduction to the study of dental materials including basic concepts in chemistry. Emphasis is placed on the chemical and physical properties of gypsum, resin, and wax used in dentistry. Basic manipulation of these materials is included in order to prepare the student for future use in the dental laboratory. Prerequisite: Admission into the DLT Program or consent of instructor. Lecture: 2 credits (30 contact hours).

Components: Lecture

DLT 112 (2) Course ID: 004874
Dental Materials II
This course emphasizes the metallurgy of dental alloys including the mechanism of crystallization, strain hardening and the chemical process of corrosion. Materials associated with fabricating metal prostheses are studied and include impression materials, cast alloys and wrought alloys. Hazard and infection control procedures in the dental laboratory are presented as well as basic study of applicable physics and unit conversion. Prerequisite: DLT 111 or consent of instructor. Lecture: 2 credits (30 contact hours).

Components: Lecture

DIT 121 (2) Course ID: 004875
Complete Dentures I
The basic principles of complete denture prosthodontics is presented including the fundamentals of arranging and contouring artificial dentures. Identification of oral landmarks and changes that occur in the edentulous patient are discussed. Emphasis is placed on identifying the purpose and use of custom trays, baseplates and occlusion rims. Laboratory procedures include fabricating custom trays, baseplates, occlusion rims, and a complete set of dentures. Prerequisite: Admission into the DLT Program. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

DIT 122 (2) Course ID: 004876
Complete Dentures II
Advanced principles of complete denture prosthodontics are presented including balanced, monolayered and linguazoided occlusion. Emphasis is also placed on the considerations in the oral cavity that effect the success of removable prosthetic treatment. Laboratory procedures include denture repairs, selective grinding and incorporating complete dentures. Prerequisite: DIT 121. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

DIT 131 (2) Course ID: 004877
Removable Partial Dentures I
The basic principles of removable partial denture prosthodontics are presented. Emphasis is placed on the fabrication procedures and understanding of the basics of survey and design. Detailed information about the various major and minor connectors is discussed as well as learning the Kennedy Classification system. Laboratory procedures include fabricating two removable partial dentures including the attachment of artificial denture teeth. Prerequisite: Admission into the DLT Program. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

DIT 132 (2) Course ID: 004878
Removable Partial Dentures II
Advanced principles of removable partial denture prosthodontics is presented with emphasis on design principles. Detailed information about direct retainers, indirect retainers, rests and bases is discussed. Laboratory procedures involve fabricating three removable partial dentures including the attachment of artificial denture teeth. Prerequisite: DIT 131. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

DIT 142 (2) Course ID: 004879
Occlusion
Theories of occlusion; interarch and intraarch relationships; the temporomandibular joint and its movements; articulators, interocclusal records, and face-bow transfer; occlusal schemes; and restorative considerations in occlusal therapy are discussed and/or put to practical application in this course. Prerequisite: Admission into the Dental Laboratory Program. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

DIT 151 (2) Course ID: 004880
Fixed Prosthodontics I
The basic principles of crown and bridge fixed prosthodontics are presented including the fabrication of both single and multi-unit full metal restorations. Emphasis is placed on preparing and evaluating working casts, waxing anatomical tooth patterns, spraying, investing, burnout, casting, and polishing. Additional laboratory procedures include fabricating restorations on various types of articulators, developing functional occlusion, and...
soldering. Prerequisite: Admission into the DLT Program. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

DMS 105 (13) Course ID: 005941
Introduction to Cardiology
Provides an overview of anatomy and physiology and the electrophysiology of the cardiovascular system. Includes theory and application of the 12-lead electrocardiogram, holter monitor, and stress test. Covers cardiac pharmacology, medical terminology, medical law and ethics, and patient care. Includes Cardiac Catheterization lab, Vascular Sonography, and Respiratory Care.
Prerequisite: Admission to Cardiac Sonography Program. Lecture: 10.0 credits (150 contact hours). Clinical: 3.0 credits (180 contact hours).

Components: Lecture, Clinical, Diagnostic Medical Sonography

DMS 109 (7) Course ID: 004392
Department Consent Required Sonography I
Provides a study of diagnostic foundations of clinical medicine pertinent to abdominal, superficial structures, musculoskeletal and non-cardiac chest sonography. Includes related clinical symptoms and laboratory test, pathophysiologic effects of disease, related clinical signs and symptoms, sectional anatomy, and normal/abnormal sonographic patterns. Includes a laboratory component for the practice and application of normal sonographic patterns, basic scanning techniques and protocol. Prerequisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture: 5.0 credits (75 contact hours); Laboratory: 2.0 credits (90 contact hours) (45:1 Ratio).

Components: Laboratory, Lecture

DMS 111 (7) Course ID: 006259
Abdominal Sonography
Provides a study of diagnostic foundations of clinical medicine pertinent to abdominal, superficial, musculoskeletal and non-cardiac chest sonography. Includes obtaining the clinical history, interpretation of clinical laboratory test, the pathophysiologic effects of disease, related clinical signs and symptoms, sectional anatomy, and normal/abnormal sonographic patterns. Includes a laboratory component for the practice and application of normal sonographic patterns, basic scanning techniques and protocol. Prerequisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture: 5.0 credits (75 contact hours) Lab: 2.0 credits (90 contact hours) (45:1 Ratio).

Components: Laboratory, Lecture

DMS 112 (2) Course ID: 006795
Patient Care Concepts in Sonography
Provides an introduction to patient care in the sonography department, including instruction received in required nursing assistant course. Includes information about healthcare settings, professionalism, methods of credentialing, as well as legal and ethical considerations in patient care. Pre-requisite: Admission to DMS program, completion of CPR and minimum 75 hour nursing assistant course. Lecture: 1.0 credit hour (15 contact hours). Lab: 1.0 credit hour (30 contact hours).

Components: Laboratory, Lecture

DMS 115 (6) Course ID: 004395
Instructor Consent Required Sonography II
Covers the study of the clinical applications within the sonographic specialties of obstetrics, gynecology, female breast, and neurosonography. Includes related clinical symptoms and laboratory test, pathophysiologic effects of disease and anomalies, and normal/abnormal sonographic patterns. Includes basic scanning techniques and protocol. Covers the application of normal sonographic patterns, basic scanning techniques and protocol. Includes the demonstration of clinical applications of theoretical principles and concepts. Prerequisite: Admission to Diagnostic Sonography Program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture: Lab: 2.0 credits (90 contact hours) (45:1 Ratio).

Components: Laboratory, Lecture

DMS 116 (6) Course ID: 006260
OB/GYN Sonography
Covers the study of the clinical applications within the sonographic specialties of obstetrics and gynecology. Includes related clinical symptoms and laboratory test, pathophysiologic effects of disease and anomalies, and normal/abnormal sonographic patterns. Includes basic scanning techniques and protocol. Designed for the student to utilize the laboratory facilities to demonstrate clinical applications of theoretical principles and concepts. Prerequisite: Admission to Diagnostic Medical Sonography Program; Computer Literacy; CPR certification; NAA 100 or equivalent. Lecture/Lab: 6.0 credits (150 contact hours).

Components: Lecture, Clinical

DMS 117 (7) Course ID: 006261
Vascular Sonography
Provides a study of diagnostic foundations of clinical medicine pertinent to vascular sonography. Includes obtaining the clinical history, interpretation of clinical laboratory test, the pathophysiologic effects of disease, related clinical signs and symptoms, sectional/vascular anatomy, and normal/abnormal sonographic patterns. Includes laboratory component for the practice and application of normal sonographic patterns, basic scanning techniques and protocol. Prerequisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture/ Lab: 7.0 credits (165 contact hours).

Components: Lecture

DMS 118 (6) Course ID: 006262
Vascular Sonography II
Covers the study of the clinical applications of peripheral venous, peripheral arterial and abdominal vasculature within the sonographic vascular concentration. Includes related clinical symptoms and laboratory test, pathophysiologic effects of disease and anomalies, and normal/abnormal sonographic patterns. Includes basic scanning techniques and protocol. Designed for the student to utilize the laboratory facilities to demonstrate clinical applications of theoretical principles and concepts. Prerequisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture/Lab: 6.0 credits (150 contact hours).

Components: Lecture

DMS 119 (6) Course ID: 004393
Department Consent Required Ultrasonic Physics and Instrumentation
Consists of lectures and related laboratory exercises covering the areas of ultrasonic propagation principles, transducer parameters, interactive properties of ultrasound with human tissue, possible biologic effects, basic equipment types, instrumentation and quality control procedures, hemodynamics and basic Doppler. Prerequisite: Consent of Program Coordinator. Lecture: 6.0 credits (90 contact hours).

Components: Lecture

DMS 121 (6) Course ID: 006263
Department Consent Required Sonography Physics and Instrumentation
Consists of lectures and related laboratory exercises covering the areas of ultrasonic propagation principles, transducer parameters, interactive properties of ultrasound with human tissue, possible biologic effects, basic equipment types, instrumentation and quality control procedures, hemodynamics, and basic Doppler. Prerequisite: Consent of Program Coordinator. Lecture: 6.0 credits (90 contact hours).

Components: Lecture

DMS 126 (3-4) Course ID: 004394
Clinical Education I
Includes observation of all clinical duties performed in the ultrasound department. Covers basic instruction and scanning experience in abdomen, superficial structures, non-cardiac chest, and abdominal structures with basic competences to be performed. Prerequisite: Minimum grade of "C" in (DMS 109 and DMS 115) or (DMS 111 and DMS 116), Clinical: 3.0 - 4.0 credits (180 - 240 contact hours).

Components: Clinical

DMS 136 (4) Course ID: 006264
Vascular Clinical Education I
Includes observation and practice of all clinical duties performed in the vascular lab with basic instruction and scanning experience under the supervision of a credentialed Vascular Sonographer. Prerequisite: DMS 117 with minimum "C" grade. Clinical: 4.0 credits (240 contact hours).

Components: Clinical

DMS 145 (12) Course ID: 005942
Cardiac Sonography I
Covers the identification of structures and the correct technique to obtain images of the heart. Includes the fundamentals of ultrasound physics and instrumentation required to perform echocardiograms. Prerequisite: Admission to Diagnostic Medical Sonography Program; Computer Literacy; Minimum grade of "C" in BIO 135 or (BIO 137 and BIO 139) and (PHY 151 or PHY 152 or PHY 171) and MAT 150 and CHE 140. Lecture/Lab: 12.0 credits (225 contact hours).

Components: Lecture
DMS 199 (1)  
Course ID: 005936  
**Online Physics Review**  
Includes a review of basic ultrasound physics, transducers, bioeffects, artifacts, quality assurance and principles of Doppler techniques. Prerequisite: DMS 219 with minimum 'C' grade or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).  
Components: Lecture

DMS 201 (1)  
Course ID: 005937  
**Online Abdomen Review**  
Provides a review of abdominal sonography to prepare the student for the related registry. Includes obtaining a clinical history, interpretation of clinical laboratory tests, pathologic basis for disease, related clinical signs and symptoms, sectional anatomy, and normal/abnormal sonographic patterns. Prerequisite: DMS 109 with minimum 'C' grade or Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours).  
Components: Lecture

DMS 202 (1)  
Course ID: 005938  
**Online OB/GYN Review**  
Provides a review of related clinical signs and symptoms, laboratory tests, and normal/abnormal sonographic patterns in preparation for the related Ob/Gyn registry. Prerequisite: DMS 115 with minimum 'C' grade or Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours).  
Components: Lecture

DMS 204 (2)  
Course ID: 006266  
**Department Consent Required Online Vascular Review**  
Provides a review of vascular sonography to prepare the student for the ARDMS certification examination. Includes activities and quizzes related to cerebrovascular, intracranial, peripheral venous, peripheral arterial and abdominal vascular sonography. Prerequisite: Consent of Program Coordinator. Lecture: 2.0 credits (30 contact hours).  
Components: Lecture

DMS 205 (6)  
Course ID: 005943  
**Cardiac Sonography II**  
Provides content related to the more advanced cardiovascular diseases. Includes how to correlate Doppler findings and measurements. Covers transeosophageal echocardiography, stress echocardiography, Intensive Care Unit patient and Operative/Perioperative applications. Prerequisite: (DMS 145 with a minimum 'C' grade) or Consent of Program Coordinator. Lecture/Lab: 6.0 credits (270 contact hours)  
Components: Lecture

DMS 206 (3)  
Course ID: 006267  
**Online Vascular Sonography III**  
Covers the various test, miscellaneous conditions encountered in vascular sonography. Emphasizes the importance of quality measurements and safety practices. Prerequisite: Admission to Diagnostic Medical Sonography Program; Computer Literacy: NAA 100 or equivalent, CPR certification. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture

DMS 215 (6)  
Course ID: 005944  
**Cardiac Sonography III**  
Covers the basic embryology of the heart, fetal and postnatal circulation, and basic types of congenital heart defects found in the adult. Includes how systemic disease affects the heart and basic clinical problem solving techniques used in echocardiography. Prerequisite: DMS 205 with minimum 'C' grade. Lecture/Lab: 6.0 credits (270 contact hours).  
Components: Lecture

DMS 217 (3)  
Course ID: 006702  
**Basic Cardiac Ultrasound Technology**  
Provides review and practical application of ultrasound and Doppler physics; cardiac anatomy, physiology, and pathophysiology; cardiac imaging: 2D, M-mode, Spectral and Color Doppler; and exam protocols. Pre-requisite: Applicants must be RDMS credentialed or graduate of an accredited sonography program or consent of a sonography program coordinator. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture

DMS 230 (5 - 8)  
Course ID: 004396  
**Clinical Education II**  
Includes interaction in all clinical duties performed in all ultrasound departments. Covers abdomen, superficial structures, non-cardiac chest, embryo/fetus, and the gravid and non-gravid pelvic structures with performance of basic and advanced competencies to be performed. Prerequisite: SONO 126 with minimum grade of 'C'. Clinical: 5.0 - 8.0 credits (300 - 480 contact hours).  
Components: Clinical

DMS 236 (8)  
Course ID: 006268  
**Vascular Clinical Education II**  
Includes experience in clinical applications of cerebrovascular, intracranial, peripheral arterial, peripheral venous, and abdominal vascular sonographic examinations. Requires the performance of competencies with the rate of progress dependent upon the student's ability to comprehend and perform assignments. Prerequisite: DMS 136 with minimum 'C' grade. Clinical: 8.0 credits (480 contact hours).  
Components: Clinical

DMS 237 (5)  
Course ID: 006269  
**Vascular Clinical Education III**  
Provides a more active clinical role in assisting the practicing vascular Sonographer and performing sonographic duties under direct supervision. Requires the performance of competencies with the rate of progress dependent upon the student's ability to comprehend and perform assignments. Prerequisite: Minimum 'C' grade in DMS 136 and DMS 236. Clinical: 5.0 credits (300 contact hours).  
Components: Clinical

DMS 240 (5 - 8)  
Course ID: 004398  
**Clinical Education III**  
Continues the clinical experience by student assuming a more active role in assisting the practicing sonographer and performing sonographic duties under direct supervision with the rate of progress dependent upon the student's ability to comprehend and perform assignments. Prerequisite: DMS 230 with Minimum 'C' grade. Clinical: 5.0 - 8.0 credits (300 - 480 contact hours).  
Components: Clinical

DMS 245 (6)  
Course ID: 005945  
**Cardiac Sonography IV**  
Provides a comprehensive overview of program content with clinical applications. Prerequisite: DMS 145 with minimum 'C' grade. Pre-requisite Or Co-requisite: DMS 205 with minimum 'C' grade. Lecture/Lab: 6.0 credits (270 contact hours).  
Components: Lecture

DMS 255 (6)  
Course ID: 005939  
**Vascular Technology**  
Prepares the student for the ARDMS certification examination. Includes experience in all vascular clinical duties performed in all ultrasound departments. Covers the basic embryology of the heart, fetal and postnatal circulation, and basic types of congenital heart defects found in the adult. Includes how systemic disease affects the heart and basic clinical problem solving techniques used in echocardiography. Prerequisite: DMS 205 with minimum 'C' grade. Lecture/Lab: 6.0 credits (270 contact hours).  
Components: Lecture

DRE 19 (3)  
Course ID: 000411  
**Individual Growth in Human Relations**  
A discussion course in which students are encouraged to investigate their own motives for being in school, their career plans, and any dysfunctions which they feel may interfere with successful accomplishment of their personal goals. Lecture: 3 hours.  
Components: Lecture

ECE 252 (3)  
Course ID: 005759  
**Introduction to Electrical Engineering**  
Reviews electrical quantities, definitions and laws, as applied to DC and AC circuits. Covers vectors, complex numbers, linear equations, and steady-state solutions of linear networks, impedance concepts, the Phasor Transform for AC Analysis, complex AC Power, diode applications, and operational Amplifiers. Discusses electrical safety. Prerequisite: PHY 222, MA 214. Lecture: 3 credits (45 contact hours).  
Components: Lecture

Campus: ECTC

ECO 101 (3)  
Course ID: 000445  
**Contemporary Economic Issues**  
Covers contemporary economic issues such as inflation, poverty and affluence, globalization, and environmental pollution. Lecture: 3 credits (45 contact hours).  
Components: Lecture

Attributes: SB - Economics, Course Also Offered in Modules

ECO 150 (3)  
Course ID: 006703  
**Introduction to Global Economics**  
Covers the causes and issues of global economic interdependence, with particular emphasis on cross-cultural implications of globalization. Includes global economic issues such as economic development, global economic governance, changing demographics, health care, world poverty, changing patterns of food production, global energy use, and the economic consequences of global environmental issues. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, SB - Social Behavior Science, SB - Economics

ECO 201 (3)  
Course ID: 000447  
**Principles of Microeconomics**  
Covers the allocation of scarce resources from the viewpoint of individual economic units. Topics include supply and demand, elasticity, costs, and markets. Lecture: 3 credits (45 contact hours).  
Components: Lecture

Attributes: SB - Economics, Course Also Offered in Modules

ECO 202 (3)  
Course ID: 000449  
**Principles of Macroeconomics**  
Covers how society's needs are satisfied with the limited resources available. Includes issues such as inflation, unemployment, economic growth, globalization, and fiscal and monetary policy. Lecture: 3 credits (45 contact hours).  
Components: Lecture

Attributes: SB - Economics, Course Also Offered in Modules
ECO 1011 (1) Course ID: 005925
How Markets Work
Covers the foundations of contemporary economic issues emphasizing scarcity, choice, benefits, costs, and supply and demand. Lecture: 1 credit (15 contact hours).
Components: Lecture

ECO 1012 (1) Course ID: 005926
Markets and Macroeconomic Goals
Covers contemporary economic issues such as price indices, efficiency, equity, poverty and welfare. Prerequisite: ECO 1011. Lecture: 1 credit (15 contact hours).
Components: Lecture

ECO 1013 (1) Course ID: 005927
Meets and Regulation
Covers contemporary economic issues such as externalities, market failure, globalization, and environmental pollution. Prerequisite: ECO 1012. Lecture: 1 credit (15 contact hours).
Components: Lecture

ECO 2011 (0.75) Course ID: 005928
The Role of Economics
Covers allocation of scarce resources from the viewpoint of individual economic units. Topics include the circular flow of resources in the economy, the production possibilities frontier, and opportunity cost. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2012 (0.75) Course ID: 005929
How Markets Work
Covers the allocation of scarce resources from the viewpoint of individual economic units. Includes supply and demand and government intervention in markets. Prerequisite: ECO 2011. Lecture: 0.75 (11.25 contact hours).
Components: Lecture

ECO 2013 (0.75) Course ID: 005930
Markets and Welfare
Covers the allocation of scarce resources from the viewpoint of individual economic units. Includes consumer and producer decision making and the equity and efficiency of markets. Prerequisite: ECO 2012. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2014 (0.75) Course ID: 005931
Firm Behavior and Market Structures
Covers allocation of scarce resources from the viewpoint of individual economic units. Includes competitive and non-competitive markets. Prerequisite: ECO 2013. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2021 (0.75) Course ID: 005932
Measuring Macroeconomic Outcomes
Covers how society's needs are satisfied with the limited resources available. Includes national income accounting, inflation, and unemployment. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

EDP 202 (3) Course ID: 000452
Human Development and Learning
Presents theories and concepts of human development, learning, and motivation and applies them to interpreting and explaining human behavior and interaction in relation to teaching across the developmental span from early childhood to adulthood. Requires field experience of a minimum of 15 clock hours in instructor-approved educational agencies. Prerequisite: ECO 1012. Lecture: 3 credits (45 contact hours).
Components: Lecture

EDP 203 (3) Course ID: 000453
Teaching Exceptional Learners in Regular Classrooms
Introduces the characteristics and instructional needs of exceptional learners with an overview of principles, procedures, methods, and materials for adapting educational programs to accommodate the integration of exceptional children in regular classrooms, when appropriate. Requires field experience of a minimum of 12 clock hours in instructor-approved educational agencies. Prerequisite: ECO 2013. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

EDU 100 (3) Course ID: 004441
Orientation to Education
Introduces the roles and responsibilities of both the paraeducator and the classroom teacher. Covers legal and ethical issues that might be encountered in the classroom, instructional support strategies that might be implemented by paraeducators, universal health and safety procedures, and the importance of communication and teamwork in the instructional environment. Introduces the design of learning environments that encourage active participation in individual and group settings. Requires 10 hours of field work. Lecture: 3 credits (45 contact hours).
Components: Lecture

EDU 110 (3) Course ID: 004451
Introduction to Elementary Education
Designed to introduce program competencies and curriculum to create a cumulative portfolio to demonstrate professional abilities. Requires 150 hours of field work. Prerequisite: All program courses or Consent of Instructor. Lecture: 1.0 credit (15 contact hours); Practicum/Co-op: 2.0 credits (150 contact hours).
Components: Lecture

EDU 120 (3) Course ID: 004450
Child and Adolescent Development
Acquaints the student with the cognitive, social, moral, language, emotional, and physical development of children and adolescents. Addresses the application of these theories in the modern classroom. Requires 10 hours of field work. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

EDU 130 (3) Course ID: 004449
Introduction to Special Education
Introduces methods on the creation of a learning environment, basic classroom management theories, key principles and practices of special education, and the similarities and differences of individuals with and without exceptional learning needs. Requires 10 hours of field work. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

EDU 140 (3) Course ID: 004448
Introduction to Behavior Management
Introduces the student to strategies of classroom and behavior management that create a positive learning environment encouraging student self-advocacy, increased independence, and improved communication skills. Introduces behavior management strategies that encourage respect and value individual differences among children, youth, and adults and how consequences should be used to motivate positive student behavior. Includes focus on chronic behavior problems. Requires 10 hours of field work. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

EDU 204 (3) Course ID: 004547
Orientation to Education
Covers allocation of scarce resources from the viewpoint of individual economic units. Includes consumer and producer decision making and the equity and efficiency of markets. Prerequisite: ECO 2012. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

EDU 205 (3) Course ID: 004548
Firm Behavior and Market Structures
Covers allocation of scarce resources from the viewpoint of individual economic units. Includes competitive and non-competitive markets. Prerequisite: ECO 2013. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

EDU 206 (3) Course ID: 004549
Basic Macroeconomic Relationships
Covers allocation of scarce resources from the viewpoint of individual economic units. Includes consumer and producer decision making and the equity and efficiency of markets. Prerequisite: ECO 2012. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

EDU 207 (3) Course ID: 004550
Measuring Macroeconomic Outcomes
Covers allocation of scarce resources from the viewpoint of individual economic units. Includes consumer and producer decision making and the equity and efficiency of markets. Prerequisite: ECO 2011. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

EDU 210 (3) Course ID: 004444
Introduction to Special Education
Introduces methods on the creation of a learning environment, basic classroom management theories, key principles and practices of special education, and the similarities and differences of individuals with and without exceptional learning needs. Requires 10 hours of field work. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

EDU 211 (4) Course ID: 000454
Circuits I
Fundamental laws, principles and analysis techniques for DC and AC linear circuits whose elements consist of passive and active components used in modern engineering practice including the determination of steady state and transient responses. Prerequisite: MA 114. Prerequisite or concurrent: PHY 232, PHY 242.
Components: Lecture
Electronics

EES 101 (2)  Course ID: 001332  
**Basic Electronics**  
Provides the foundation for further study in technologies related to electricity or electronics. Addresses the following areas: basic electrical components and their properties, quantities, and units of measurement; calculation of voltage, current, resistance, energy, and power using Ohms Law; construction and analysis of series, parallel, and series/parallel circuits; principles of magnetism and electromagnetism; alternating current and voltage; reactive components; construction and analysis of RC, RL, and RLC circuits; sinusoidal and other waveforms. Lecture/Lab: 2.0 credits (60 contact hours).

Components: Lecture

EES 225 (4)  Course ID: 001336  
**Programmable Logic Controllers**  
This course introduces the student to the basics of PLC’s. It focuses on the underlying principles of how PLC’s work and provides practical information about installing, programming, and maintaining a PLC system. The student will be instructed in the skills needed to program, apply and install programmable controllers in industry. This course concentrates on familiarization, operation, programming and application. The topics include relay ladder logic, PLC logic ladders, hardware, programming devices, software, number systems and codes, instruction sets, analog and discrete I/O, determining specifications, installation and startup. PLC safety procedures and considerations are stressed throughout the course. System troubleshooting procedures and techniques are taught. Students are instructed in how to analyze PLC problems in a systematic manner. Prerequisite: EES 175. Corequisite: 202.

Components: Lecture

EET 148 (3)  Course ID: 001354  
**Electronic Drafting**  
Prepares drafting techniques applicable to electronics equipment, and provides a review of electrical/electronic symbols and the devices that the symbols represent. Layout and drafting for printed circuits are stressed. The focus is on producing final drawings from engineering sketches and from the actual layout of printed circuit boards.

Components: Lecture

EET 150 (2)  Course ID: 001355  
**Transformers**  
Focuses on the operation, installation and application of AC single-phase and three-phase transformers. Testing and maintaining transformer equipment is emphasized, with safety integrated as a core component of the study. Prerequisite: [ENGT 110 and ENGT 114] with a minimum of C] or Consent of Electrical Technology program advisor(s). Corequisite: EET 151. Lecture: 2 credits (30 contact hours).

Components: Lecture

EET 151 (1)  Course ID: 001356  
**Transformers Lab**  
Focuses on the operation, installation and application of AC single-phase and three-phase transformers. Testing and maintaining transformer equipment is emphasized, with safety integrated as a core component of the study. Prerequisite: [ENGT 110 and ENGT 114] with a minimum of C] or Consent of Electrical Technology program advisor(s). Corequisite: EET 151. Laboratory: 1 credit (30 contact hours).

Components: Laboratory

EET 154 (2)  Course ID: 001358  
**Electrical Construction I**  
Involves the study of materials and procedures used in construction wiring. Corequisite: EET 155. Laboratory: 1 credit (30 contact hours).

Components: Lecture

EET 155 (2)  Course ID: 001359  
**Electrical Construction I Lab**  
Designed to give hands-on experiences with electrical materials and equipment in construction wiring. Corequisite: EET 154. Laboratory: 2 credits (60 contact hours).

Components: Laboratory

EET 198 (2)  Course ID: 001361  
**Instructor Consent Required Practicum**  
The practicum provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum Education program do not receive compensation for their work. Prerequisite: Consent of Instructor

Components: Practicum

EET 250 (4)  Course ID: 001410  
**National Electrical Code**  
Emphasizes the importance of the National Electrical Code as it applies to electrical installations: electrical safety issues; prevention of fire due to the use of electrical energy; prevention of loss of life and property from the hazards that might arise from the use of electrical energy; and proper selection of electrical equipment for hazardous and non-hazardous environments. A learning resource in the preparation for electrical licensing examinations. Prerequisite: [(EET 154 and EET 155) and EET 252 and EET 253] or (EET 254 and EET 255) with minimum grade of C] or consent of Electrical Technology program advisor(s). Lecture: 4 credits (60 contact hours).

Components: Lecture

EET 252 (2)  Course ID: 001411  
**Electrical Construction II**  
Expands the knowledge and skills needed to work in commercial and industrial construction wiring. Prerequisite: Consent of Instructor or EET 154. Corequisite: EET 253.

Components: Lecture

EET 253 (2)  Course ID: 001412  
**Electrical Construction II Lab**  
Provides hands-on experiences needed to work in commercial and industrial construction wiring. Corequisite: EET 252. Laboratory: 2 credits (60 contact hours).

Components: Laboratory

EET 254 (3)  Course ID: 001413  
**Electrical Construction Lab**  
This course involves the study of materials and procedures and expands the knowledge and skills needed to work in commercial and industrial construction wiring. Corequisite: EET 255.

Components: Laboratory

EET 258 (2)  Course ID: 001416  
**Manufactured Housing**  
This course addresses the special requirements of manufactured home wiring. Manufactured homes incorporate the usual wiring practices learned there, but there are some notable exceptions. Special considerations are required for the services, grounding, and self-contained devices having odd panels and outlet locations. The electrical standards for manufactured homes are found in the current NEC, Article 550 and 24 CFR Ch xx (4-1-87 Edition). When there is conflict, the CFR takes precedence. Prerequisite: EET 108

Components: Lecture

EET 264 (2)  Course ID: 001419  
**Rotating Machinery**  
Focuses on the underlying principles of rotating electrical equipment including DC and AC motors and generating equipment construction, operating applications, and the maintenance of DC and AC motors and generating equipment. Prerequisite: [(ENGT 110 and ENGT 114] with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 265. Lecture: 2 credits (30 contact hours).

Components: Lecture

EET 265 (2)  Course ID: 001420  
**Rotating Machinery Lab**  
Focuses on the principles of operation, application and maintenance of single-phase and three-phase AC motors and AC alternators, DC motors, DC generators. A study of and compliance with the National Electrical Code standards. Prerequisite: [ENGT 111 and ENGT 113 and ENGT 115 and ENGT 117] with a minimum grade of C] or greater] or consent of Electrical Technology program advisor(s). Corequisite: EET 264. Laboratory: 2 credits (60 contact hours).

Components: Laboratory

EET 266 (3)  Course ID: 001421  
**Rotating Machinery and Transformers**  
Focuses on the principles of operation and application of single-phase and three-phase AC transformers to include: analysis of voltage, current and power parameters and connection configurations. Gives an in-depth study of direct and alternating current rotating machinery that produces and utilizes electrical energy. Prerequisite: [(ENGT 110 and ENGT 114] with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 267. Lecture: 3 credits (45 contact hours).

Components: Lecture

EET 267 (3)  Course ID: 001422  
**Instructor Consent Required Rotating Machinery and Transformers Lab**  
Provides the principles of operation, application and maintenance of single-phase and three-phase AC transformers, motors and alternators, and DC motors and generators. A study of compliance with the current National Electric Code standards will insure safe installation methods. Prerequisite: [(ENGT 111 and ENGT 113 and ENGT 115 and ENGT 117] with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 266. Laboratory: 3 credits (90 contact hours).

Components: Laboratory

EET 268 (3)  Course ID: 001423  
**Rotating Machinery and Motor Controls I**  
This course focuses on the construction, operation and maintenance of DC motors and generators and AC motors and alternators. This course addresses the diversity of control devices and applications used in industry today. Safety and electrical lockouts are also included. Prerequisite: Consent of Instructor or EET 108. Corequisite: EET 269.

Components: Lecture

EET 269 (4)  Course ID: 001424  
**Rotating Machinery and Motor Controls I Lab**  
Provides practical experience in the use of control devices and their applications in industry today. Provides experience in the construction, operation and maintenance of AC motors and alternators, and DC motors and generators. Safety and electrical lockouts are included. Prerequisite: [(ENGT 111 and ENGT 113 and ENGT 115 and ENGT 117] with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 269. Laboratory: 4 credits (120 contact hours).

Components: Laboratory

EET 270 (2)  Course ID: 001425  
**Electrical Motor Controls I**  
This course addresses the diversity of control devices and applications used in industry today. Safety and electrical lockouts are also included. Prerequisite: Consent of Instructor or EET 108. Corequisite: EET 271.

Components: Lecture

EET 271 (2)  Course ID: 001426  
**Electrical Motor Controls I Lab**  
Provides practical experience in the use of control devices and their applications in industry today. Safety and electrical lockouts are included. Corequisite: EET 270. Laboratory: 2 credits (60 contact hours).

Components: Laboratory

EET 272 (2)  Course ID: 001427  
**Electrical Motor Controls II**  
This course provides advanced study of motor controls in industry. The course addresses solid state relays, hall effect sensors, proximity detectors and photo detectors. Tasks include sketching, installing and troubleshooting the following: three phase controls, variable speed drives, using relays as well as solid state devices, and introduction to programmable controls. Prerequisite: EET 270. Corequisite: EET 273.

Components: Lecture
EET 273 (2) Course ID: 001428
Electrical Motor Controls Lab II
This course provides hands-on experience in advanced studies in electrical controls used in industry including three-phase motor control and variable speed control using solid state devices and programmable controls. Prerequisite: EET 270. Corequisite: EET 272.
Components: Laboratory

EET 274 (3) Course ID: 001429
Electrical Motor Controls
This course addresses the diversity of control devices and applications used in industry today. Safety and electrical lockouts are also included. This course provides advanced study of motor controls in industry. The course addresses solid state relays, call effectors, proximity detectors and photo detectors. Tasks include sketching, installing and troubleshooting the following: three phase controls, variable speed controls, automatic relays as well as solid state devices, and introduction to programmable controls. Prerequisite: Consent of Instructor or EET 108. Corequisite: EET 275.
Components: Lecture

EET 275 (4) Course ID: 001430
Electrical Motor Controls Lab
Provides practical experience in the use of control devices and their applications in industry today. Safety and electrical lockouts are included. Provides hands-on experience in advanced studies in electrical controls used in industry including three-phase motor control and variable speed control using solid state devices and programmable controls. Prerequisite: [ENG 111 and ENG 113 and ENGT 115 and ENGT 117] with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 274. Laboratory: 4 credits (120 contact hours).
Components: Laboratory

EET 276 (2) Course ID: 001431
Programmable Logic Controllers
Underlying principles and applications of programmable logic controllers including installation, logic fundamentals, and numbering systems; basic programming of inputs, outputs, timers, and counters, comparators, basic data manipulation, and safety circuits of industrial PLCs. Prerequisite: [ENG 110 and ENG 114 and EET 270 and EET 272] or (EET 274) minimum grade of C or consent of Electrical Technology program advisor(s). Corequisite: EET 277. Lecture: 2 credits (30 contact hours).
Components: Lecture

EET 277 (2) Course ID: 001432
Programmable Logic Controllers Lab
Provides practical applications of programmable logic controllers including installation, logic fundamentals, and numbering systems; basic programming of inputs, outputs, timers, and counters, comparators, basic data manipulation, and safety circuits of industrial PLCs. Prerequisite: [ENG 111 and ENG 113 and ENGT 115 and ENGT 117 and EET 265 and EET 271 and EET 273] with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 276. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

EET 281 (1) Course ID: 001435
Instructor Consent Required Special Problems I
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory

EET 283 (2) Course ID: 001436
Instructor Consent Required Special Problems II
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory

EET 285 (3) Course ID: 001437
Special Problems III
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory

EET 286 (2) Course ID: 004627
Programmable Logic Controllers II
Focuses on sequencer instructions, shift registers, process control instructions, networking, communications, human to machine interfaces, and troubleshooting techniques used with programmable logic controllers. Prerequisite: [EET 276 and EET 277] with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 287. Lecture: 2 credits (30 contact hours).
Components: Lecture

EET 287 (2) Course ID: 004628
Programmable Logic Controllers II Lab
Provides hands-on lab applications dealing with sequencers, shift registers, networks, communication software, human to machine interfaces, analog devices, and troubleshooting. Prerequisite: ([EET 276 and EET 277] with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 286. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

EET 298 (1 - 8) Course ID: 001438
Practicum
The Practicum provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. (This course may be taken for 1 - 8 credits)
Components: Practicum

EGY 120 (4) Course ID: 006821
Outside Plant Communications
Introduces students to the technologies used in energy efficiency and analysis. Covers the design and installation of grid connected, stand-alone, and hybrid photovoltaic (PV) systems, and involves hands-on work with PV systems and equipment. Emphasizes the importance of personal financial planning, the relationship between employment opportunities and financial security, and other aspects of being successful and productive workers, consumers, and citizens.
Components: Lecture

EGY 120 (4) Course ID: 006825
Solar / Photovoltaic Technologies
Introduces students to the technologies used in energy efficiency and analysis. Covers the design and installation of grid connected, stand-alone, and hybrid photovoltaic (PV) systems, and involves hands-on work with PV systems and equipment. Emphasizes the importance of personal financial planning, the relationship between employment opportunities and financial security, and other aspects of being successful and productive workers, consumers, and citizens.
Components: Lecture

EGY 250 (4) Course ID: 006826
Wind/ Turbine Technologies
Introduces students to the technologies used in energy efficiency and analysis. Covers the design and installation of grid connected, stand-alone, and hybrid photovoltaic (PV) systems, and involves hands-on work with PV systems and equipment. Emphasizes the importance of personal financial planning, the relationship between employment opportunities and financial security, and other aspects of being successful and productive workers, consumers, and citizens.
Components: Lecture

ELT 102 (2) Course ID: 000526
Blueprint Reading Technology
A comprehensive study of current drafting standards and blueprint reading techniques are included. Topics include standard lines and symbols, sketching techniques, orthographic projection, auxiliary views, detail and assembly drawings, dimensions, tolerances, sectional views, title block information, machining, specifications, and specialized forms of engineering drawings.
Components: Lecture
Course Equivalents: BRX 120
ELT 103 (3) Course ID: 005443  
**Introduction to Engineering**  
Provides an introduction to the engineering profession, engineering disciplines, and technology. Emphasizes a 'problem-solving' approach, engineering design process, and teamwork. Includes an introduction to engineering graphics. Intended for students of all majors. Prerequisite or Corequisite: Current Placement Scores for College Level Quantitative Reasoning or Consent of Instructor.  
Lecture: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture

ELT 105 (3) Course ID: 005591  
**Computer Maintenance Essentials**  
Introduces basic computer hardware and operating systems, covering skills such as installing, building, upgrading, repairing, configuring, troubleshooting, optimizing, diagnosing and preventive maintenance, with additional elements of soft skills and security. Emphasizes objectives that map closely to the CompTIA A+ Essentials national examination that validates the basic skills needed by any entry-level computer service technician. Prerequisite: Computer literacy or Consent of Instructor.  
Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

ELT 106 (2) Course ID: 000529  
**Mechanical Engineering Graphics**  
Introduces basic drafting principles through the use of basic drafting tools and techniques. Emphasizes design, construction, and troubleshooting of simple DC and AC circuits. Includes application of basic circuit analysis techniques. Prerequisite: MAT 065 or equivalent placement level.  
Lecture: 2.0 credits (30 contact hours). 

Components: Laboratory, Lecture

ELT 107 (4) Course ID: 000533  
**Computer Applications for Technicians**  
Introduces computer applications commonly used in technical occupations. Covers circuit analysis, computational, analytical, and other software packages. Prerequisite: MAT 150 or MAT 110) or consent of instructor.  
Lecture: 2.0 credits (30 contact hours). Laboratory: 0.5 credits (15 contact hours).

Components: Laboratory, Lecture

ELT 110 (5) Course ID: 004631  
**Circuits I**  
Introduces application of basic DC and AC circuits, including circuit analysis techniques with discussion of introductory magnetism and transformer principles. Emphasizes design, construction, and troubleshooting of simple DC and AC laboratory exercises. Prerequisite: MAT 065 or equivalent placement level or Consent of Instructor.  
Lecture: 3.0 credits (45 contact hours). Laboratory: 2.0 credits (60 contact hours). 

Components: Laboratory, Lecture

ELT 114 (5) Course ID: 004634  
**Circuits II**  
Addresses theory and application of complex alternating current and direct current circuits. Emphasizes impedance, reactance, power and electrical energy, electrical measurement instruments, and circuit analysis. Prerequisite: ELT 110 with a grade of C or greater or Consent of Instructor.  
Lecture: 3.0 credits (45 contact hours). Laboratory: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture

ELT 118 (3) Course ID: 000566  
**Computer Numerical Control**  
Introduces computer numerical control technology, covering programming and metal removal techniques. Includes topics of controllable machine components, tools, programmable functions, control system components, physics of metal cutting, metal cutting data, coordinate systems, NC related dimensioning, and CNC programming. Prerequisite: Consent of Instructor.  
Lecture: 2.0 credits (30 contact hours), Lab: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

ELT 120 (3) Course ID: 004637  
**Digital I**  
Introduces theory and application of digital logic methods. Includes Boolean algebra, combinational logic theory, sequential circuits, number systems and codes, and design and troubleshooting of digital logic circuits. Prerequisite: (MAT 065 or equivalent placement level) or Consent of Instructor.  
Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

ELT 122 (3) Course ID: 000573  
**Mechanical Power Transmission Systems**  
Introduces industrial mechanical systems and devices, which are commonly associated with Millwright and Industrial Maintenance functions. Includes topics of belt drives, gear drives, chain drives, couplings, seals, bearings, mechanical fasteners, pipe fittings, pumps, and valves. Prerequisite: ELT 124.  
Lecture: 3.0 credit (45 contact hours).

Components: Lecture

ELT 124 (1) Course ID: 000578  
**Mechanical Power Transmission Systems Lab**  
Introduces mechanical systems and devices common to the Millwright and Industrial Maintenance trades. Includes topics of belt drives, gear drives, chain drives, couplings, seals, bearings, mechanical fasteners, pipe fittings, pumps, and valves. Co-requisite: ELT 122.  
Lecture: 2.0 credits (30 contact hours).

Components: Laboratory

ELT 210 (4) Course ID: 000603  
**Statics and Strength of Materials**  
Introduces static equilibrium involving forces, moments, couples, and equivalent systems. Explores stresses, strains and deflections associated with trusses, frames, beams, columns, and joints. These devices are subjected to various loadings and environments, and are made of standard construction materials. Prerequisite: (MAT 150 and MAT 155 or MAT 110) or Consent of Instructor.  
Lecture: 2.0 credits (30 contact hours). Laboratory: 2.0 credits (30 contact hours).

Components: Laboratory, Lecture

ELT 215 (3) Course ID: 005592  
**Advanced Computer Maintenance**  
Introduces advanced tasks such as installing, building, repairing, configuring, troubleshooting, optimizing diagnosing and preventive maintenance in the context of the field service or enterprise environment. This course is appropriate for those who work, or plan to work, in a mobile or corporate environment, or hold a position characterized by a high-level of in-person customer interaction. This course maps closely to the CompTIA A+ application examination. Prerequisite: ELT 105 or IT 105.  
Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

ELT 216 (4) Course ID: 000608  
**Thermodynamic Applications**  
Introduces thermodynamic laws and their application to devices operating on the basis of thermodynamic principles. Commonly used cycles and fluids are identified. Prerequisite: PHY 211 or consent of instructor.  
Lecture: 3.0 credits (45 contact hours).

Components: Lecture

ELT 220 (3) Course ID: 004645  
**Digital II**  
Provides theory and application of advanced digital logic methods. Includes small and medium scale integrated circuits logic families, interfacing techniques, arithmetic circuitry, programmable devices, and an introduction to microprocessors. Prerequisite: ELT 120 with a grade of C or greater or Consent of Instructor.  
Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

ELT 222 (3) Course ID: 004647  
**Instructor Consent Required Mechanics of Telephony**  
Provides an overview of concepts needed to complete the duties of a telecommunications service technician and provide the foundational skills and knowledge required to effectively perform the installation and maintenance job duties and functions. Introduces fiber optic transmissions and cable repair. Prerequisite: Consent of Instructor.  
Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture

ELT 224 (3) Course ID: 000623  
**Computer Software Maintenance**  
Includes maintenance of the personal computer with an emphasis on installation, upgrading, and configuration of the operating system. Covers memory management, boot sequences, printing subsystem, application software and networking with troubleshooting as a main focal point including viruses. When combined with ELT 234, this course will help prepare students to take CompTIA A+ certification tests. Prerequisite: Computer literacy course or demonstrate competency or consent of instructor.  
Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

ELT 234 (3) Course ID: 000521  
**Computer Hardware Maintenance**  
Covers maintenance of the personal computer with an emphasis on installation, upgrading, and configuration of computer hardware. Covers network and Internet access, internal addressing, architecture, interrupts complete PC construction and basic troubleshooting. When combined with ELT 232, this course will help prepare students to take CompTIA A+ certification tests. Prerequisite: Computer literacy course or demonstrate competency or consent of instructor.  
Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture
ELT 1143 (1) Course ID: 005645
RC, RL and RLC Circuits
Addresses theory and application of complex alternating current and direct current circuits. Emphasizes impedance, reactivity, power and electrical energy. Prerequisite: (ELT 1141 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 1144 (1) Course ID: 005646
Resonance and Filters
Addresses theory and application of complex alternating current and direct current circuits. Emphasizes resonance and filters. Prerequisite: (ELT 1143 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 1145 (1) Course ID: 005647 3-Phase Circuits
Addresses theory and application of complex alternating current and direct current circuits. Emphasizes 3-phase circuits. Prerequisite: (ELT 1143 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 1201 (1) Course ID: 005648
Instructor Consent Required: Digital Basics
Introduces basic digital circuits and logic families. Emphasizes system and input output functions of gates and circuits. Prerequisite: Consent of Instructor. Lecture: 0.66 credits (10 contact hours). Lab: 0.34 credits (10 contact hours).
Components: Laboratory, Lecture

ELT 1202 (1) Course ID: 005649
Logic Circuit Design
Introduces design methods for basic digital circuits. Prerequisite: (ELT 1201 with a grade of C or better) or Consent of Instructor. Lecture: 0.67 credits (10 contact hours). Lab: 0.33 credits (10 contact hours).
Components: Laboratory, Lecture

ELT 1203 (1) Course ID: 005650
Logic Circuit Components and Troubleshooting
Covers construction, troubleshooting and testing of logic circuits. Prerequisite: (ELT 1201 with a grade of C or better) or Consent of Instructor. Lecture: 0.67 credits (10 contact hours). Lab: 0.33 credits (10 contact hours).
Components: Laboratory, Lecture

ELT 2101 (0.2) Course ID: 005651
Semiconductor basics
Covers devices, specifically basic semiconductor theory. Prerequisite: (ELT 1110 with a grade of C or better) or Consent of Instructor. Lecture: 0.2 credits (3 contact hours).
Components: Lecture

ELT 2102 (1.25) Course ID: 005652
Diode circuits and power supplies
Covers devices, specifically: diodes, zener diodes, basic diode circuits, and power supplies. Prerequisite: (ELT 2101 with a grade of C or better) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

ELT 2103 (1.5) Course ID: 005653
Transistors and Amplifiers
Covers devices, specifically: transistors, amplifiers and their characteristics, amplifier classes, and modeling of active devices. Prerequisite: (ELT 2102 with a grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

ELT 2104 (1.05) Course ID: 005654
Design of Electronic Circuits
Covers devices, specifically circuit design, modify, and troubleshoot prototype circuits. Prerequisite: (ELT 2103 with a grade of C or greater) or Consent of Instructor. Lecture: 0.8 credits (12 contact hours). Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

ELT 2141 (0.3) Course ID: 005655
Thyristors
Covers devices, specifically thyristor circuits. Prerequisite: (ELT 2101 or 2104) with a C or greater) or Consent of Instructor. Lecture: 0.2 credits (3 contact hours). Lab: 0.1 credits (2 contact hours).
Components: Laboratory, Lecture

ELT 2142 (0.8) Course ID: 005656
Op Amps
Covers devices, specifically op amp circuits and feedback. Prerequisite: (ELT 2101 or 2104) with a C or greater) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.2 credits (6 contact hours).
Components: Laboratory, Lecture

ELT 2143 (0.8) Course ID: 005657
FET Circuits
Covers devices, specifically FET and MOSFET circuits. Prerequisite: (ELT 2101 or 2104) with a C or greater) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.2 credits (6 contact hours).
Components: Laboratory, Lecture

ELT 2144 (0.7) Course ID: 005658
Advanced Transistor Amplifier Circuits
Covers devices, specifically single and multi-stage transistor amplifier circuits. Prerequisite: (ELT 2143 with a C or greater) or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.2 credits (6 contact hours).
Components: Laboratory, Lecture

ELT 2145 (0.7) Course ID: 005659
Power Supply Regulator Circuits
Covers devices, specifically power supply regulator circuits. Prerequisite: (ELT 2141 or 2104) with a C or greater) or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.2 credits (6 contact hours).
Components: Laboratory, Lecture

ELT 2146 (0.7) Course ID: 005660
Oscillators
Covers devices, specifically oscillators. Prerequisite: (ELT 2142 or 2144) with a C or greater) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.1 credits (3 contact hours).
Components: Laboratory, Lecture

ELT 2201 (0.8) Course ID: 005661
Medium Scale Integrated Circuits
Covers digital circuits, specifically medium scale integrated circuits such as counters, simple ALUs, and registers. Prerequisite: [(ELT 1201 or ELT 1202 and 1203) with a grade of C or better] or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.3 credits (9 contact hours).
Components: Laboratory, Lecture

ELT 2202 (0.5) Course ID: 005662
Interfacing of Digital Circuits
Covers digital circuits, specifically common interfacing techniques used with digital circuits. Prerequisite: [(ELT 1201 or ELT 1202 and 1203) with a grade of C or better] or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours). Lab: 0.2 credits (6 contact hours).
Components: Laboratory, Lecture

ELT 2203 (0.2) Course ID: 005663
Logic Families
Covers digital circuits, specifically the different logic families. Prerequisite: [(ELT 1201 or ELT 1202 and 1203) with a grade of C or better] or Consent of Instructor. Lecture: 0.2 credits (3 contact hours).
Components: Lecture

ELT 2204 (0.7) Course ID: 005664
Programmable Devices
Covers digital circuits, specifically common programmable devices. Prerequisite: [(ELT 1201 or ELT 1202 and 1203) with a grade of C or better] or Consent of Instructor. Lecture: 0.5 credits (7.4 contact hours). Lab: 0.2 credits (6 contact hours).
Components: Laboratory, Lecture

ELT 2205 (0.8) Course ID: 005665
Microprocessors
Covers digital circuits, specifically microprocessors and basic programming. Prerequisite: (ELT 2201 with a grade of C or better) or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.3 credits (9 contact hours).
Components: Laboratory, Lecture

ELT 2601 (1) Course ID: 005709
Instructor Consent Required: Fundamentals of Robots
Introduces the theory of robots. Covers robot types, systems, history, geometry and basic robot safety. Prerequisite: Consent of instructor. Lecture: 0.8 (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 2602 (1) Course ID: 005710
Robot Programming
Introduces the theory of robots. Covers on-line and off-line robot programs and preventive maintenance. Pre-requisite: (ELT 2601 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 2603 (1) Course ID: 005711
Automated Work-cells
Introduces the theory of robots. Covers sensors and basic work-cells. Prerequisite: (ELT 2602 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 2604 (1) Course ID: 005712
Flexible Manufacturing
Introduces the theory of robots. Covers the theory and operation of flexible and computer-integrated manufacturing and control systems. Prerequisite: (ELT 2603 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 2605 (1) Course ID: 005713
Manufacturing Applications
Introduces the theory of robots. Covers manufacturing applications of robotic systems including case studies and cost/benefit analysis. Prerequisite: (ELT 2604 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

EM Engineering Mathematics

EM 221 (3) Course ID: 000462
Statics
Study of forces on bodies at rest. Vector algebra; study of force systems; equivalent force systems; distributed forces; internal forces; principles of equilibrium; application to trusses, frames and beams; and friction. Prerequisite or concurrent: MA 213.
Components: Lecture

ENC English Composition

ENC 90 (3) Course ID: 000464
Foundations of College Writing I
Introduces students to writing as a process with an emphasis on paragraph-length assignments and writing in response to reading. Stresses basic conventions of standard English as these apply to students' own work as well as the use of technology to produce and share writing. Pre-requisite: Placement by KCTCS assessment and placement policy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

Attributes: Course Also Offered in Modules

ENC 91 (3) Course ID: 000465
Foundations of College Writing II
Applies writing as a process with instruction in intermediate writing skills and technology. Stresses organization, idea development through critical thinking, and editorial improvement through multi-paragraph writings. Introduces basic research and documentation through writing in
response to reading. Pre-requisite: Placement by KCTCS Assessment and Placement policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

ENC 92 (1) Course ID: 000466
Writing Laboratory
The writing laboratory may supplement the concurrent composition course. It is designed to provide individual assistance in meeting students’ specific writing needs. Laboratory: 2 hours.

Components: Laboratory

ENC 99 (1) Course ID: 002355
Writing Lab for English 101
ESL Students
The writing lab will supplement the ENG 101 writing/grammar course. It is designed to provide more time to meet the grammar/writing needs of ESL students. Pre-requisite: ENC 097 or assessment placement.

Components: Lecture

ENC 901 (1) Course ID: 006746
Sentence Basics
Introduces the basic conventions of standard English as these apply to students’ own writing. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 1.0 credit (15 contact hours)

Components: Lecture

ENC 902 (0.25) Course ID: 006747
Writing With Computers
Introduces the use of technology to produce and share writing. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0901. Lecture: 0.25 credits (3.75 contact hours)

Components: Lecture

ENC 903 (0.75) Course ID: 006748
Writing Paragraphs
Introduces the writing process with an emphasis on paragraph-length assignments. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0902. Lecture: 0.75 credits (11.25 contact hours)

Components: Lecture

ENC 904 (1) Course ID: 006749
Pathway to Writing
Provides practice in the writing process and stresses effective paragraphs with emphasis placed on writing in response to reading. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0903. Lecture: 1.0 credit (15 contact hours)

Components: Lecture

ENC 911 (0.75) Course ID: 006750
Intermediate Grammar
Introduces intermediate writing skills and editorial improvement, stressing the conventions of standard written English. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0903. Lecture: 0.75 credits (11.25 contact hours)

Components: Lecture

ENC 912 (1) Course ID: 006751
Composition Strategies
Provides practice in the writing process, stressing organization, idea development, and editorial improvement. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0911. Lecture: 1.0 credit (15 contact hours)

Components: Lecture

ENC 913 (0.25) Course ID: 006752
Introduction to Research
Introduces basic research and documentation through writing in response to reading. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0912. Lecture: 0.25 credits (3.75 contact hours)

Components: Lecture

ENC 914 (1) Course ID: 006753
Writing as Process
Provides practice in the writing process, stressing organization, idea development, and editorial improvement.
ENG 231 (3) Course ID: 004902
Literature and Genre (Subtitle required)
Explores one or two different literary forms or genres, i.e. the formal categories into which literary works are placed, including the conventions of each genre and related sub-genres. Considers student writing. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 232 (3) Course ID: 004903
Literature and Place (Subtitle required)
Explores a number of selected literary texts with special attention to the author's connection to place and how the author's sense of place influences representations of experience. Considers student writing. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 233 (3) Course ID: 004904
Literature and Identities (Subtitle required)
Explores a number of selected literary texts, with special attention to the construction of personal, ethnic, racial, or national identity and considers how race, class, sexuality, and/or nationality influence representations of experience. Includes attention to student writing. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 234 (3) Course ID: 004905
Introduction to Women's Literature
Introduces students to the rich body of women's writing. Explores common and differing themes, attitudes, cultural norms, and gender identity evident in multiethnic, diverse societies through analysis and discussion of texts by women writers. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 251 (3) Course ID: 000483
Survey of American Literature I
An analysis of significant texts in U.S. literature from the Colonial era to the Civil War focusing on social, political, and cultural contexts. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 252 (3) Course ID: 000485
Survey of American Literature II
An analysis of significant texts in U.S. literature from the post-Civil War era to the present focusing on its social, political, and cultural contexts. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 261 (3) Course ID: 000487
Survey of Western Literature from 1660 to the Present
Studies the works of major Western authors from the Bible and Ancient Greek literature through the Renaissance. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 262 (3) Course ID: 000489
Survey of Western Literature from 1660 to the Present
Studies the works by major Western authors from mid-17th century to the present. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 264 (3) Course ID: 000490
Major Black Writers
Provides a cross-cultural and historical approach to written and oral works by major Black authors of Africa, the Caribbean, and the United States. Includes writers such as Chinua Achebe (Africa), Wilson Harris (Caribbean), and Tony Morrison (USA). Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities

ENG 270 (3) Course ID: 000491
The Old Testament as Literature
Surveys the major types of Old Testament literature in English translation. Examines historical backgrounds while emphasizing careful analysis of literary forms and techniques. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities

ENG 271 (3) Course ID: 000493
The New Testament as Literature
Surveys the major types of New Testament literature in English translation. Examines historical backgrounds while emphasizing careful analysis of literary forms and technique. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 281 (3) Course ID: 000495
Introduction to Film
Introduces the study of movies as a narrative art and a cultural document. Requires viewing of films outside of class. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HUM 281
Attributes: AH - Arts and Humanities, AH - Humanities

ENG 282 (3) Course ID: 005429
International Film Studies
Enhances student awareness of how cinema has been used as a multicultural tool for observing/analyzing various aspects of a broad range of societies. Includes critical analysis and interpretation of films from various cultures. Explores the films' countries of origin and the cinematic impacts upon the society and the world. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HUM 282
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities

ENG 299 (1 - 3) Course ID: 005345
Special Topics in English
Examines selected topics in English. Includes, but not limited to, individual authors, specified genres, and defined eras. Prerequisite: ENG 101 or consent of instructor. Lecture: 1 - 3 credits (15-45 contact hours).
Components: Lecture

ENG 1011 (0.75) Course ID: 005787
Writing a Personal Essay
Focuses on academic writing. Provides instruction in reading critically, thinking logically, and responding to texts as a means of planning, drafting and revising essays that express thoroughly developed ideas in Standard English. Prerequisite: ACT score of 18, COMPASS score of 70 or ENC 091. Lecture: 0.75 credits.
Components: Lecture

ENG 1012 (0.75) Course ID: 005788
Writing a Profile Essay
Focuses on academic writing. Provides instruction and practice in drafting, revising and editing essays which address specific audiences and employ Standard English. Prerequisite: ENG 1011. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

ENG 1014 (0.75) Course ID: 005790
Writing with Sources
Focuses on academic writing. Provides instruction in reading critically, thinking logically, responding to texts, addressing specific audiences, researching and documenting sources. Prerequisite: ENG 1013. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

ENG 1021 (1) Course ID: 005791
The Language of Argument
Emphasizes argumentative writing. Provides further instruction in argumentation strategies and concepts, leading to the planning and drafting of a preliminary argumentative essay. Prerequisite: ENG 101 or ENG 1014. Lecture 1.0 credits (15 contact hours).
Components: Lecture

ENG 1022 (1) Course ID: 005792
Argument Style and Design
Emphasizes argumentative writing. Provides instruction and practice in the primary elements of academic writing style, including word choice, evidence selection and organization. Prerequisite: ENG 1021. Lecture: 1 credit (15 contact hours).
Components: Lecture

ENG 1023 (1) Course ID: 005793
Research and Argument
Emphasizes argumentative writing. Provides instruction in researching, proposing and revising an argumentative position, gathering and synthesizing research findings in support and documenting sources appropriately. Prerequisite: ENG 1022. Lecture: 1 credit (15 contact hours).
Components: Lecture

ENV Environmental Technology

ENV 110 (4) Course ID: 001442
Introduction to Environmental Technology
Introduction to Environmental Technology provides a background in the historical and current developments in environmental problems, solutions, strategies, and regulations. Students explore the various aspects of water, land, and air pollution, pollution prevention and control, and the role of regulation at the local, state, and federal level.
Components: Lecture

EQM Equine Management

EQM 100 (3) Course ID: 004755
Introduction to Equine Studies
The intent of this course is to give students a general overview and basic understanding of the horse, its care and management. Course topics include identification, anatomy, health, nutrition, facility and equipment management. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

EQM 120 (3) Course ID: 004756
Introduction to Commercial Breeding Practices
Introduces prospective horse farm personnel to the breeding farm environment. Includes topics that relate to commercial breeding farm management and the necessary record keeping requirements. Prerequisite: EQM 100 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

EQM 140 (2) Course ID: 004757
Equine Business Management I
Course in equine management that serves to introduce the student to private and commercial horse farm operations, economic trends in the horse industry, international marketplace, capital, credit and risk associated with the equine industry. Prerequisite: EQM 100 and BA 160, or consent of instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture

EQM 240 (2) Course ID: 004852
Equine Business Management II
This course is a continuation of Equine Business Management I. Topics of discussion include types of farm ownership, structure of the horse farm as a business,
EQM 246 (1)  
Course ID: 004759

Current Trends in the Equine Industry
Seminar course in the horse industry designed to provide students with the opportunity to investigate, evaluate and debate key issues confronting horse owners and horse industry participants. Students are encouraged to analyze controversial circumstances in the equine industry and provide insight and logical conclusion. Seminar topics may include such issues as equine adoption, slaughter, transport, medications, account wagering, and public image. Prerequisite: EQM 242 or consent of instructor. Lecture 1 credit (15 contact hours).

Components: Lecture

EQM 250 (3)  
Course ID: 004760

Equine Practicum
A supervised, field-based learning experience in the equine industry, including observation and proactive participation in affiliated environments. Students are required to analyze their experiences throughout the semester to develop career objectives and strong interpersonal, communication and leadership skills. Prerequisite: EQM 240, EQM 242, and concurrent enrollment in or successful completion of EQM 246. Practicum: 3 credits (180 contact hours).

Components: Practicum

EOS Equine Studies

EOS 103 (3)  
Course ID: 005349

Racehorse Care
Introduces principles of care for racehorses in a race barn training environment with students learning industry accepted standards and techniques while providing daily care for one or two racehorses. Lecture/Lab: 3.0 credits (105 contact hours).

Components: Lecture

EOS 110 (3)  
Course ID: 005350

Basic Equine Physiology
Continues the study of equine care begun in EQM 100 examining the anatomy and physiology of equine body systems and applications of this knowledge to the raising, training and management of horses in general and racehorses in particular. Includes identification of three muscle fiber types; types, causes and symptoms of colic; thermoregulation; blood components and flow; upper and lower respiratory disease and infectious and neurological diseases. Prerequisite: EQM 100 or permission of instructor. Corequisite: EOS 100. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture

EOS 111 (1)  
Course ID: 005351

Introduction to Riding Racehorses
Covers requirements for becoming a licensed professional jockey including physical, mental and emotional components, regulatory agency requirements and necessary life management skills. Includes the history of race riding, identification of important riders in history and noteworthy current riders. Lecture: 1 credit (15 contact hours).

Components: Lecture

EOS 112 (3)  
Course ID: 005352

Instructor Consent Required Racehorse

EQS 121 (1)  
Course ID: 005497

Introduction to Breaking and Training Racehorses
Introduces the basic requirements for becoming a licensed racehorse trainer or other equine care worker. Includes historical contributions of prominent owners, breeders, trainers and racehorses that significantly impacted the history of their respective breed. Pre-requisite or Co-requisite: EOS 100. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).

Components: Laboratory, Lecture

EQS 122 (3)  
Course ID: 005498

Instructor Consent Required Yearling Breaking and Management
Introduces the basics of managing and training weanling and yearling racehorses including conformation, movement, pedigree analysis; pre-purchase examinations and practical application of pressure-release techniques of breaking and training young racehorses. Prerequisite: EOS 121 and permission of instructor. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (90 contact hours).

Components: Laboratory, Lecture

EQS 123 (3)  
Course ID: 005499

Breeding and Prepping Two-Year Olds
Covers basics of managing racehorses through their yearling to 2-year old transition. Includes acquiring yearlings and/or two-year olds, breeding, prepping for in-trainings sales and/or racing, concepts of nutrition for growing equine athletes, cardiovascular conditioning, muscle fitness, sale presentation and injuries of two-year olds in race training. Pre-requisite or Co-requisite: EQS 203. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).

Components: Lecture

EQS 130 (3)  
Course ID: 005334

Introduction to the Racing Industry
Introduces students to racing industry organizations, personnel, facilities and the rules of racing. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture

EQS 200 (3)  
Course ID: 005500

Lameness in Racehorses
Expands basic equine anatomy with emphasis on normal function of front and rear legs and methods of evaluating deviations from normal function presented as lameness in racehorses. Also discusses response to injury, forms of therapy and training methods for horses returning from injury. Prerequisite: EOS 110 or permission of instructor. Corequisite: Concurrent enrollment in EOS 110. Lecture: 3 credits (45 contact hours).

Components: Lecture

EQS 203 (4)  
Course ID: 005502

Instructor Consent Required Racing Stable Operations
Continues the experience of daily caring for a racehorse in training and adds development of a racing stable training routine and participation in the daily exercise and training of racehorses. Prerequisite: EOS 103. Lecture/Lab: 4.0 credits (150 contact hours).

Components: Lecture

EQS 212 (3)  
Course ID: 005503

Instructor Consent Required Racehorse Riding Principles
Builds on basic skills learned in EOS 113 and adds principles of riding racehorses on a training track in company of other horses and riders, teaching horses to pass others, working in company, proper use of riding crop and breaking from a starting gate. Prerequisite: EOS 113 and permission of instructor. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (90 contact hours).

Components: Laboratory, Lecture

EQS 213 (3)  
Course ID: 005504

Instructor Consent Required Racehorse Riding Techniques
Teaches advanced fundamentals of race riding. In this final riding course in the jockey pathway students increase their range of skills to knowledgeable horse owners and coaches about training methods and jockey principles. Requires students to develop a training plan for assigned horses at the Racing Academy (NARA) racehorses, supervise first year NARA student “employees,” participate in NARA training races and develop a plan to communicate with owners regarding the status of horses in training. Prerequisite: EOS 123. Lecture/Lab: 4.0 credit (150 contact hours).

Components: Lecture

EQS 223 (4)  
Course ID: 005507

Instructor Consent Required Life Skills for Jockeys
Prepares students for life as a professional jockey. Includes integration of principles of nutrition into an eating plan that will maintain weight and health. Introduces concepts of practical financial management, insurance and retirement planning on a jockey’s salary. Teaches students with the opportunity to investigate, evaluate and debate key issues confronting horse owners and horse industry participants. Students are encouraged to analyze controversial circumstances in the equine industry and provide insight and logical conclusion. Seminar topics may include such issues as equine adoption, slaughter, transport, medications, account wagering, and public image. Prerequisite: EQM 242 or consent of instructor. Lecture 1 credit (15 contact hours).

Components: Lecture

EQS 299 (1 - 9)  
Course ID: 005626

Equine Studies Cooperative Education
Provides a planned and evaluated work experience related to the student's educational objective for which the student receives both financial remuneration and academic credit. The maximum amount of credit granted for Equine cooperative education experience varies by curriculum. The amount may not exceed nine hours in Associate in Applied Science degree, diploma, or certificate program. Is available only to students enrolled in Associate of Applied Science in Equine Studies, Equine Studies Diploma and certificate program that list Equine Cooperative Education as an approved course. Prerequisite: Consent of Instructor. Co-op: 1.0 - 9.0 credits (90 - 540 contact hours).

Components: Co-Op

Campus: BLC
Components: Lecture

Campus: BLC

ESL 12 (4)  Course ID: 005230
Intermediate Listening and Speaking
Low-intermediate level ESL students will improve comprehension and communication in English on a variety of everyday topics and in the academic setting. Students will develop and practice techniques for greater composure and confidence in oral expression. Practice will also be provided in pronunciation and intonation. Students will be recommended to this course based on the ESL placement examination or through completion of ESL 11. Lecture: 4 credits (60 contact hours).

Components: Lecture

ESL 13 (4)  Course ID: 005307
Advanced Listening and Speaking
Intermediate-level ESL students will improve comprehension and communication in both social and academic settings. Instruction will include improving listening skills for academic note taking and small group discussion. Students will be expected to lead and share in class discussions based on reading and authentic listening materials. Students will also present orally in front of the class. Students will be recommended to this course based on the ESL placement examination or through completion of ESL 12. Lecture: 4 credits (60 contact hours).

Components: Lecture

ESL 20 (4)  Course ID: 005216
Reading Improvement and Vocabulary Development for Low-Intermediate Non-Native English Speakers
Low-intermediate level students will review fundamental reading skills, learn and practice higher order reading skills, expand vocabulary and increase reading efficiency as they interact with level-appropriate texts. Prerequisite: Placement test. Lecture: 4 credits (60 contact hours).

Components: Lecture

ESL 30 (4)  Course ID: 005078
College Reading and Vocabulary Development for High-Intermediate Non-Native English Speakers
High-intermediate level ESL students will master fundamental reading skills, improve critical reading, and further vocabulary development. Students will be introduced to a variety of genres, such as newspaper articles and essays, poems, short stories, charts, graphs and college-level content textbooks. Through the selected readings, this course will foster cultural awareness, comprehension, and interaction. The readings and activities introduced in the course will allow students to engage in meaningful dialogue, and in the process, refine their English skills. Prerequisite: ESL 020 or placement test.

Components: Lecture

ESL 31 (3)  Course ID: 004037
Beginning Conversation for Non-Native English Speakers
Beginning level ESL students will learn basic conversation and practice basic sounds and intonation patterns.

Components: Lecture

ESL 32 (3)  Course ID: 004038
Low-Intermediate Conversation Non-Native English Speakers
Low intermediate level ESL students will continue to acquire basic conversational basic/diomatic vocabulary and continue to have practice in the pronunciation of basic sounds and intonation patterns. Prerequisite: ESL 31 or placement test.

Components: Lecture

ESL 33 (3)  Course ID: 004039
High-Intermediate Conversation for Non-Native English Speakers
High-intermediate level ESL students will acquire the most practical and widely used American idioms and verbal phrases. In addition, students will become more familiar with North American culture and will be able to prevent cultural misunderstandings. Non-native English speakers will continue to improve reading, listening comprehension and pronunciation skills. Prerequisite: ESL 032 or placement test.

Components: Lecture

ESL 41 (3)  Course ID: 004040
Beginning Vocabulary for Non-Native English Speakers
Beginning-level ESL students will learn new vocabulary systematically, through presentation and practice of terms grouped in lexical sets, and will develop a problem-solving approach to vocabulary learning.

Components: Lecture

ESL 42 (3)  Course ID: 004041
Low-Intermediate Vocabulary Non-Native English Speakers
Low-Intermediate level ESL students continue to learn new vocabulary pertaining to a wide range of contexts. Systematic approach to vocabulary learning is applied: grammatical knowledge and sensitivity to collocations and usage are incorporated. Prerequisite: ESL 41 or placement test.

Components: Lecture

ESL 43 (3)  Course ID: 004042
High-Intermediate Vocabulary for Non-Native English Speakers
High-intermediate students will expand receptive and productive vocabulary as they read, listen to, summarize, paraphrase, respond to, and discuss items from newspapers and other media. Prerequisite: ESL 42 or placement test.

Components: Lecture

ESL 51 (3)  Course ID: 004043
Introduction to College Reading for Non-Native English Speakers
Beginning-level students will acquire or strengthen fundamental reading skills and expand vocabulary as they interact with level-appropriate texts.

Components: Lecture

ESL 52 (3)  Course ID: 004044
Improved College Reading for Low-Intermediate Non-native English Speakers
Intermediate-level students will review fundamental reading skills, learn and practice higher order reading skills, expand vocabulary and increase reading efficiency as they interact with level-appropriate texts. Prerequisite: ESL 51.

Components: Lecture

ESL 53 (3)  Course ID: 004045
High-Intermediate Reading for Non-Native English Speakers
High-intermediate level ESL students will master fundamental reading skills. They will be introduced to a variety of genres, such as newspaper articles and essays, poems, short stories, charts, graphs and many other. In addition, this course will foster cultural awareness, understanding and interaction. Through the readings and activities introduced in the course the students will engage in meaningful dialogue, and in the process, refine their English skills. Prerequisite: ESL 052 or placement test.

Components: Lecture

ESL 60 (4)  Course ID: 004046
Foundations of College Writing I for Non-Native English Speakers
Beginning level ESL students are introduced to composition with an emphasis on clarity, organization, development and correctness. Comprehensive review of mechanics, grammar and spelling as these apply to their own writing is also addressed in this course.

Components: Lecture

ESL 62 (4)  Course ID: 004047
Foundations of College Writing II for Non-Native English Speakers
Low-intermediate level ESL students continue to enhance their composition skills by receiving instruction in the following: the writing process, organization, multi-paragraph writings, editing, and critical reading. Grammar instruction focuses on key structures and provides a springboard for expanding students' abilities in all language skills. Prerequisite: ESL 61.

Components: Lecture

ESL 63 (4)  Course ID: 004048
Foundations of College Writing III for Non-Native English Speakers
ESL 63 is designed to help students prepare for ENG 101. High-intermediate level ESL students continue to work on the writing process, editorial improvement and critical reading. Grammar instruction includes advanced grammatical points, such as modal auxiliaries, gerunds, infinitives, adjective and noun clauses. Prerequisite: ESL 62 or placement test.

Components: Lecture

ESP 101 (3)  Course ID: 005324
Introduction to Energy Systems
Introduces energy generating systems including solar, wind, bioenergy, geothermal, hydroelectric, hydrogen-based, petroleum-based, coal, and nuclear. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

ESP 110 (2)  Course ID: 005491
Petroleum Based Fuels
Introduces the major petroleum based fuels including energy content, uses, availability, distribution methods, storage, and future impact of each fuel. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

ESP 120 (3)  Course ID: 005492
Power Plant Chemistry
Introduces chemical processes relating to power plant operations including basic chemical principles and specific chemistry of fuels, boiler and cooling water, steam, water treatment and environmental controls. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
EST 150 (4) Course ID: 004744
Environmental Science Technology
Introductory Ecology
This course introduces the students to the basic concepts in ecology and application of those concepts to current environmental issues. Topics include: the relationships between organisms and the environment; factors that influence distribution and abundance of organisms; population structure and regulation; energy flow, nutrient cycling, and community development, structure, and response to disturbance. A weekly 2 hour laboratory will provide field and laboratory experiences for the students. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours). Prerequisite: BIS 103 and BIS 121 or equivalent.
Components: Laboratory, Lecture
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science

EST 160 (3) Course ID: 004745
Hydrological Geology
This course provides an introduction to geology and hydrology with an emphasis on understanding natural processes and the effects of human activities. Major topics covered include: plate tectonics; formation and classification of rocks and minerals; the processes affecting the hydrologic cycle; soil formation and classification; subsurface geology and groundwater movement; stream formation and flow; floods; and human impacts to stream hydrology and morphology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

EST 170 (2) Course ID: 004746
Environmental Sampling Laboratory
A laboratory course which provides the fundamentals in evaluating and designing sampling approaches for different situations and different media. The course will provide students with field experience in sampling soil, surface water, groundwater, and benthic invertebrates. Laboratory: 2 credits (60 contact hours). Prerequisite: EST 150 or consent of instructor.
Components: Laboratory

EST 225 (3) Course ID: 005054
Freshwater Invertebrates
An overview of the morphology, life history and ecology of freshwater invertebrates and their habitats as well as their importance and role in stream protection and restoration. Students will learn how to collect, preserve and identify freshwater invertebrates. Students will learn how to calculate and analyze biometrics used to infer stream quality. Prerequisite: EST 150.
Components: Lecture

EST 230 (2) Course ID: 004748
Aquatic Chemistry Laboratory
This course provides focused study on the chemistry of water. The course will provide students with laboratory experience in analyzing surface, ground, and drinking waters for a variety of chemical constituents. Laboratory: 2 credits (60 contact hours). Prerequisite: CHE 105, CHM 105, and prerequisite or concurrent EST 220.
Components: Laboratory

EST 240 (4) Course ID: 004749
Sources and Effects of Air Pollution
This course provides an introduction to the study of ambient and indoor air pollution with an emphasis on sources, dispersion, and health and welfare effects of the major pollutants. Both regulatory and engineering controls of stationary and mobile sources are explored. A laboratory provides experience with sampling and analysis of air pollutants. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: EST 150 and CIT 130, or equivalent, or consent of instructor.
Components: Laboratory, Lecture

EST 250 (3) Course ID: 004750
Solid and Hazardous Waste Management
This course examines methods of managing solid and hazardous waste, with an emphasis on pollution prevention. Topics covered include relevant legislation, recycling, incineration, landfill operations, management of radioactive waste, remediation of waste sites and site worker health and safety. Prerequisite: EST 150 and EST 160, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

EST 260 (2) Course ID: 004751
Environmental Analysis Laboratory
This course provides an introduction to the fundamentals of analyzing environmental media. The course will provide students with laboratory experience in analyzing soil, surface water, groundwater, air and microbial samples. Laboratory: 2 credits (60 contact hours). Prerequisite: CHE 105, CHM 105 and prerequisite or concurrent EST 170.
Components: Laboratory

EST 270 (3) Course ID: 004752
Environmental Law and Regulation
This course is structured to provide the student with a basic understanding of major current federal and state environmental legislation and regulation with an emphasis on those portions that affect the regulated community. The course will also include an examination of the role of common law and the branches of government in environmental protection. Prerequisite or concurrent: EST 220, EST 240, and EST 250 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

EST 280 (1) Course ID: 004753
Environmental Trends Seminar
This course provides an examination of current approaches used to address a variety of environmental problems. Students will hear and critique presentations from professionals in the environmental field. Students will also research and give a presentation on a specific method to minimize or eliminate a current environmental problem. Prerequisite or concurrent: EST 160, EST 150, COM 181 or COM 252, EST 170, EST 220, EST 260, and EST 250 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

EST 299 (1 - 3) Course ID: 004754
Instructor Consent Required Selected Topics in Environmental Science Technology
A special project or experience in Environmental Science Technology will be selected to accommodate individual student need. Students having completed ETE 240 are encouraged to enroll in this course. Prerequisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture

ET 245 (3) Course ID: 000646
Electrical Machinery
A study of the various types of electric motors, generators, transformers, and specialized electrical machines used in industry. Emphasis is placed on applications, text procedures, and troubleshooting techniques. Lecture: 2 hours; Laboratory: 2 hours. Prerequisite: ET 111.
Components: Laboratory

ETE 295 (1 - 4) Course ID: 005041
Instructor Consent Required Independent Projects
A problem or special project, approved by instructor, which provides an opportunity for independent study for electrical engineering technology students. This course may be repeated four times or to a maximum of 6 credit hours. Prerequisite: Consent of instructor. Lecture: variable, laboratory: variable.
Components: Laboratory, Lecture
CAMPUS: BLC
ETT 110 (4) Course ID: 004231
Voice & Data Installer Level I
A comprehensive orientation to the telecommunication industry. Provides entry-level telecommunications cabling installers with the background, knowledge, and basic skills needed to function effectively on the job. Designed for those with little or no telecommunication installation experience. Prerequisite: Basic physics/electricity courses are recommended but not required. Lecture: 4 credits (75 contact hours).
Components: Laboratory, Lecture
ETT 111 (3) Course ID: 004232
Basic Electrical Theory: Telecommunications
Introduces the theory of electricity, magnetism, and the relationship of voltage, current, resistance, and power in electrical circuits as related to telecommunications. Designed to develop an understanding of alternating and direct current fundamentals. Students will apply formulas to analyze the operation of AC and DC circuits. Lecture: 3 credits (45 contact hours).
Components: Lecture
ETT 113 (1) Course ID: 004233
Basic Electrical Theory Lab
Allows the student to do hands-on applications of the theories and fundamentals learned in ETT 112. Corequisite: ETT 112. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
ETT 114 (4) Course ID: 004234
Voice & Data Installer Level II
Designed for experienced telecommunications installers who wish to expand knowledge of the industry, learn new skills, and continue to advance professionally. The Installer Level 2 course requires two to five years of recent, verifiable telecommunications/low voltage cabling experience. In addition, several sections from the Installer Level 1 course will be covered comprehensively in this course. Prerequisite: ETT 110 with a grade of C or greater. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
ETT 116 (3) Course ID: 004235
Fiber Optics Systems
Provides a technical level of understanding in the areas of networking connectivity, data communications concepts and communication protocols. Communications and networking concepts including hardware, software, and transmission media; access methods and protocols; and network configurations are addressed. Emphasis is on local area networks, and students will install a basic network. Prerequisite: ETT 110 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
EX 196 (1 - 6) Course ID: 000747
Instructor Consent Required Experiential Education
A planned and evaluated learning work experience for which the student receives academic credits and may receive financial remuneration. The work experience may be related to the student's major or may be exploratory in nature. One credit may be awarded for each 40 hours of work experience. The course may be repeated for a maximum of 6 credits and is available on a Pass/Fail basis only. This course is open only to transfer, nondegree and undecided students. Lecture: Variable; Laboratory: Variable. Prerequisite: Consent of instructor.
Components: Laboratory, Lecture
FAM 252 (3) Course ID: 000662
Introduction to Family Science
Introduces the scientific study of the family, including important theoretical frameworks in family science, historical trends in marriage and family life, gender role theory, family life theory, parenthood, communication, economics of family life, conflict, divorce, step-families and step-parenting, and family strengths. Analyzes contemporary family issues and requires informed, written positions on those issues. Prerequisite: 3 hours of social or behavioral science or consent of instructor.
Components: Lecture
Attributes: SB - Social Behavior Science, Social Interaction Family Studies
FAM 253 (3) Course ID: 000666
Human Sexuality: Development, Behavior, and Attitudes
Studies human sexuality, including the process of gender and attitudes, sexual response patterns, sexual behavior, and attitudes. Prerequisite: 3 hours in social or behavioral science or consent of instructor.
Components: Lecture
Attributes: SB - Social Behavior Science, Social Interaction Family Studies
FAM 255 (3) Course ID: 000599
Child Development
Overviews various aspects of development (physical, social, emotional, intellectual) for children ages birth through adolescence. Emphasizes techniques of directed observation. Prerequisite: 3 hours of social or behavioral science or consent of instructor.
Components: Lecture
FNS 101 (2) Course ID: 006947
Introduction to Funeral Service
Introduces the history, principles, and practices of funeral service with attention to the fundamental skills, knowledge, ethics, aptitudes, and obligations of a funeral service professional in the United States. Pre-requisite: Admission to Funeral Service Program or consent of instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
FNS 110 (2) Course ID: 006948
Funeral Service Management and Merchandising
Surveys law and the judicial system as these relate to the operation of a business, focusing on those statutes and regulations pertinent to funeral directors and morticians. Pre-requisite: Admission to the Funeral Service Program. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
FNS 115 (3) Course ID: 006949
Funeral Service Directing
Covers the funeral service procedures, practices and customs of various religions and groups in the United States, as well as the techniques and considerations needed in conducting such services. Pre-requisite: Admission to the Funeral Service Program. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
FNS 120 (2) Course ID: 006950
Funeral Service Counseling
Examines psychological concepts in the areas of grief, bereavement, and mourning with particular emphasis on the roles of the funeral director in relation to these concepts as well as a facilitator of the funeral service, crisis intervener, and after care counselor. Pre-requisite: Admission to the Funeral Service Program. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
FNS 130 (2) Course ID: 006951
Business and Mortuary Law
Surveys law and the judicial system as these relate to the operation of a business, focusing on those statutes and regulations pertinent to funeral directors and morticians. Pre-requisite: Admission to the Funeral Service Program. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
FNS 131 (3) Course ID: 006952
Funeral Service Ethics, Regulations, and Statutes
Surveys general principles of mortuary and business law. Emphasis is on ethical practice. Compliance with pre-need and at-need regulatory agencies included. Pre-requisite: Admission to the Funeral Service Program. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
FNS 150 (3) Course ID: 006953
Pathology
Investigates pathological changes related to disease processes. Discusses the effect of physical and chemical trauma on the human body, particularly manifestations relevant to mortuary science. Surveys the major diseases. Pre-requisite: Admission to the Funeral Service Program and BIO 225 or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
FNS 165 (2) Course ID: 006954
Sociology of Funeral Service
Surveys social phenomena that affect all elements of funeral service, including family and social structure and other factors that relate to funeral service. Pre-requisite: Admission to the Funeral Service Program. PSY 110 or
FPX 1010 Fluid Power Lab
Provides practical experiences in the study of fluid power theory, hydraulics and pneumatics component identification, schematic reading, and basic calculations related to hydraulic and pneumatic systems and their operations. Corequisite: FPX 100 or Consent of Instructor. Lab: 2 credits (60 contact hours).
Components: Laboratory

FPX 1010 Fluid Power
Includes fluid power theory, component identification and application, schematic reading, and basic calculations related to pneumatic and hydraulic systems and their operations. Corequisite: FPX 100 or Consent: Lecture: 3 credits (45 contact hours).
Components: Lecture

FPX 1010 Fluid Power
Same As Offering: FPX 100
Attributes: Course Also Offered in Modules

FPX 1001 Introduction to Fluid Power
Introduces the basic concepts of fluid power and provides an opportunity to discuss the application of those concepts in the development of hydraulic and pneumatic systems. Corequisite: FPX 101 or Consent: Lecture: 3 credit (45 contact hours).
Components: Lecture

FPX 1001 Introduction to Fluid Power
Same As Offering: FPX 101
Attributes: Course Also Offered in Modules

FPX 1001 Introduction to Fluid Power
Course ID: 005625

FPX 1003 Introduction to Pneumatic System Maintenance
Introduces pneumatic system maintenance. Covers the methodologies required when servicing a typical hydraulic system. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1010 or Consent: Lecture: 0.3 credit (45 contact hours).
Components: Lecture

FPX 1003 Introduction to Pneumatic System Maintenance
Course ID: 005675

FPX 1004 Hydraulic System Components and Applications
Introduces the basic fundamentals of hydraulic component, system design, and operation. Covers higher level schematic layout and design as well as the specifics involved with the actual component selection. Provides an opportunity to design and build actual hydraulic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1014 or Consent: Lecture: 1 credit (15 contact hours).
Components: Lecture

FPX 1004 Hydraulic System Components and Applications
Course ID: 006542

FPX 1005 Pneumatic Systems and Components
Introduces the basic fundamentals of pneumatic components and operation. Covers higher level schematic layout and design as well as the specifics involved with the actual component selection. Provides the opportunity to design and build actual pneumatic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion on the safe working practices required with fluid power systems. Co-requisite: FPX 1015 or Consent: Lecture: 1 credit (15 contact hours).
Components: Lecture

FPX 1005 Pneumatic Systems and Components
Course ID: 006543

FPX 1007 Introduction to Hydraulic System Maintenance Lab
Provides practical experience in embalming and funeral preparation systems. Includes a general discussion of the safe working practices required with fluid power systems. Corequisite: FPX 1003 or Consent: Lab: .3 credit (9 contact hours).
Components: Laboratory

FPX 1007 Introduction to Hydraulic System Maintenance Lab
Same As Offering: FPX 1012
Attributes: Course Also Offered in Modules

FPX 1007 Introduction to Hydraulic System Maintenance Lab
Course ID: 005678

FPX 1008 Introduction to Pneumatic System Maintenance Lab
Introduces pneumatic system maintenance. Covers the skills required to service modern pneumatic and air preparation systems. Includes a general discussion of the safe working practices required with fluid power systems. Corequisite: FPX 1005 or Consent: Lab: .3 credit (9 contact hours).
Components: Laboratory

FPX 1008 Introduction to Pneumatic System Maintenance Lab
Same As Offering: FPX 1013
Attributes: Course Also Offered in Modules

FPX 1008 Introduction to Pneumatic System Maintenance Lab
Course ID: 005644

FPX 1009 Restorative Arts
Introduces the basic fundamentals of fluid power and provides an opportunity to discuss the application of those concepts in the development of hydraulic and pneumatic systems. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1001 or Consent: Lab: .3 credit (9 contact hours).
Components: Laboratory

FPX 1009 Restorative Arts
Same As Offering: FPX 1011
Attributes: Course Also Offered in Modules

FPX 1009 Restorative Arts
Course ID: 005766

FPX 1010 Fluid Power Lab
Introduces basic concepts of fluid power and discusses the application of those concepts in the development of hydraulic and pneumatic systems. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1001 or Consent: Lab: .3 credit (9 contact hours).
Components: Laboratory

FPX 1010 Fluid Power Lab
Course ID: 005676
FRE 101 (3) Course ID: 001466
Introduction to Fire Service
This course includes fire department organization, fire behavior, firefighter safety, personal protective equipment, portable fire extinguishers, fire hose, appliance and streams.

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 102 (3) Course ID: 001467
Firefighters Basic Skills I
Includes ropes, ladders, aircraft rescue, forcible entry, first aid, bloodborne pathogens, emergency disaster planning, and CPR. Prerequisite: FRE 101 or Consent of Instructor.
Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 103 (3) Course ID: 001468
Firefighters Basic Skills II
Includes building construction, wildland fire behavior, fire control, and ventilation. Prerequisite: FRE 102 or Consent of Instructor.
Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 104 (3) Course ID: 001469
Firefighters Intermediate Skills I
Includes water supply, foam fire streams, fire alarms and communications, hazardous materials awareness, hazardous materials operations, sprinklers, and salvage and overhaul. Prerequisite: FRE 103 or Consent of Instructor.
Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 105 (3) Course ID: 001470
Firefighters Intermediate Skills II
Includes fire department organization, fire behavior, personal protective equipment, fire hose, appliances and streams, ropes, forcible entry. Prerequisite: FRE 103 or Consent of Instructor.
Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 201 (3) Course ID: 001471
Firefighters Advanced Skills I
Includes pump operations II, drivers training, overhaul, fire alarms and communications, sprinklers, and prcactum. Prerequisite: FRE 202 or Consent of Instructor.
Lecture: 3 credits (90 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 203 (3) Course ID: 001473
Firefighters Advanced Skills III
Includes pump operations II, drivers training, overhaul, fire alarms and communications, sprinklers, and prcactum. Prerequisite: FRE 202 or Consent of Instructor.
Lecture: 3 credits (90 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 204 (3) Course ID: 001474
EMT First Responder
EMT First Responder includes first responder (EMS).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 205 (5) Fire Officer I
Includes incident safety officer, haz-mat tech, fire prevention, public education and fire cause determination II. Prerequisite: FRE 202 or Consent of Instructor.
Lecture: 5 credits (75 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 206 (4) Fire Officer II
Includes EMT, managing company tactical operations, decision making, and instructional techniques for company officers. Prerequisite: FRE 203 or Consent of Instructor.
Lecture: 4 credit hours (180 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 207 (6) Fire Officer III
Includes company officer, incident command system (ICS), leadership strategies for company success, and fire/arsion detection. Prerequisite: FRE 203 or Consent of Instructor.
Lecture: 6 credits (90 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

FRE 211 (0.7) Fire Department Organization
Includes an overview of fire department organization, the role of department members, the mission of the department, standard operating procedures, rules and regulations, components of management, introduction to the Incident Command System and the roles of other agencies. Lecture: 0.7 credits (10 contact hours).

Components: Lecture

FRE 212 (0.3) Fire Behavior I
Explores the aspects of the behavior of fire in its various forms. Covers the classification of fuel, products of combustion, and safety issues related to life hazards. Explains the three physical states of matter in which fuels are commonly found. Lecture: 0.3 credits (4 contact hours).

Components: Lecture

FRE 213 (0.4) Firefighter Safety
Introduces the concept of safety in all phases of fire department operations. Covers station safety in normal day to day fire department operations as well as emergency response. Lecture: 0.4 credits (6 contact hours).

Components: Lecture

FRE 214 (0.8) Personal Protective Equipment
Addresses the nomenclature, use, maintenance, and documentation relevant to the personal protective equipment including protective clothing and self-contained breathing apparatus. Prerequisite: (FRE 102 and FRE 103) or consent of instructor.

Components: Laboratory, Lecture

FRE 215 (0.2) Portable Fire Extinguishers
Covers types, classification and use of fire extinguishers including the definitions utilized in rating each type and the selection of a given extinguisher in attacking a particular class of fire.

Components: Laboratory, Lecture

FRE 216 (0.6) Fire Hose, Appliances and Streams
Introduces the student to the types, uses and operations of fire hose, appliances and streams used in the fire service. Prerequisite: FRE 104 or Consent of Instructor.

Components: Laboratory, Lecture

FRE 221 (0.2) CPR
Provides the knowledge and skills for administering care for respiratory or cardiac arrest including airway, breathing, and circulation assessment and the procedures to eliminate blockage of the airway, provide breathing assistance, and cardiac compressions.

Components: Lecture
FRS 1031 (0.7) Course ID: 003905
Building Construction
Improves the ability of students to assess building stability and resistance to fire. Teaches to protect the lives of firefighters and community residents, while improving operational effectiveness through more complete and accurate 'size-ups.' Upgrades the skills of our nation’s fire service.
Components: Lecture
FRS 1032 (0.5) Course ID: 003956
Introduction to Wildland Fire Behavior
Familiarizes firefighters with wildland fires. Includes familiarization with the fire triangle, how environmental factors influence wildland fires, and the ability to recognize situations that indicate problem or extreme wildland fire behavior. Lecture: 0.5 credits (8 contact hours).
Components: Lecture
FRS 1033 (1.4) Course ID: 003906
Fire Control I
Teaches the student to control or extinguish stacks of Class A materials, combustible liquids, vehicle fires, exterior dumpster/trash bin, and Class A combustible materials within a structure. Prerequisite: (FRS 1011 and FRS 1016 and FRS 1028) or Consent of Instructor.
Corequisite: FRS 1033 or Consent of Instructor
Components: Laboratory, Lecture
FRS 1034 (0.4) Course ID: 003907
Ventilation I
Involves the study of the principles of ventilation, including the methods of removing heated air, smoke and gases from a structure. Includes a review of roof structures and their effects on ventilation procedures. Prerequisite: FRS 1022 or Consent of Instructor Corequisite: FRS 1033 or Consent of Instructor
Components: Laboratory, Lecture
FRS 1041 (0.4) Course ID: 003941
Water Supply I
Provides the firefighter with a general understanding of water systems. Broadens the base of understanding of a water supply system and how it works. Covers hydrant systems as well as static water sources for determining their value as a firefighter water supply source. Prerequisite: (FRS 1012 and FRS 1016) or Consent of Instructor
Components: Laboratory, Lecture
FRS 1042 (0.2) Course ID: 003942
Foam Fire Streams I
Teaches the student in foam performance, extinguishing properties and types of foam used in the fire service today. Prerequisite: (FRS 1012 and FRS 2023) or Consent of Instructor
Components: Laboratory, Lecture
FRS 1043 (0.3) Course ID: 003943
Salvage I
Reviews salvage methods and operating procedures that further reduce fire, water, and smoke damage during and after fires. Prerequisite: FRS 1033 or Consent of Instructor.
Components: Lecture
FRS 1044 (0.1) Course ID: 003944
Overhaul I
Provides the firefighter with a general understanding of the purpose and scope of overhaul, including recognition of hidden fires and methods used to separate, remove, and relocate charred materials. Prerequisite: (FRS 1028 and FRS 1034) or Consent of Instructor
Components: Lecture
FRS 1045 (0.2) Course ID: 003945
Fire Alarms and Communications I
Covers basic information pertaining to fire alarms and communications including radio operations, alarm receiving equipment, and dispatching procedures. Lecture: 0.2 credits (3 contact hours).
Components: Lecture
FRS 1046 (0.5) Course ID: 003946
Hazardous Materials Awareness
Introduces the student to the principles of recognizing hazardous materials presence, protecting themselves from hazardous materials and calling for training/personnel, and securing the area safety. Lecture: 0.5 credits (8 contact hours).
Components: Lecture
FRS 1047 (1.1) Course ID: 003947
Hazardous Materials Operations
Involves training to meet Federal Occupational Safety and Health Administration (OSHA), local occupational health and safety regulations and, U.S. Environmental Protection (EPA) requirements. Prerequisite: (FRS 1014 and FRS 1046) or Consent of Instructor. Lecture: 1.1 credits (16 contact hours).
Components: Lecture
FRS 1048 (0.2) Course ID: 003948
Sprinklers I
Gives the firefighter a basic understanding of how sprinkler systems are designed and how they operate. Prerequisite: FRS 1041 or Consent of Instructor. Lecture: 0.2 credits (3 contact hours).
Components: Lecture
FRS 1051 (0.3) Course ID: 003908
Fire Department Organization II
Involves an overview of an advanced fire department member’s role within the organization and the member’s responsibilities relative to the transfer of command. Prerequisite: FRS 1011 or Consent of Instructor
Components: Lecture
FRS 1052 (0.4) Course ID: 003909
Fire Behavior II
Describes the chemistry and behavior of fire. Looks at finely divided fuel, flash point, ignition temperatures and heat sources. Prerequisite: FRS 1012 or Consent of Instructor
Components: Lecture
FRS 1053 (0.5) Course ID: 003910
Personal Protective Equipment II
Addresses the nomenclature, use, maintenance, and documentation relative to the personal protective equipment including protective clothing and self-contained breathing apparatus. Prerequisite: FRS 1014 or Consent of Instructor
Components: Laboratory, Lecture
FRS 1054 (0.6) Course ID: 003911
Fire Hose, Appliances and Streams II
Covers the selection, maintenance and testing of fire hose, nozzles and appliances. Prerequisite: FRS 1033 or Consent of Instructor
Components: Laboratory, Lecture
FRS 1055 (0.7) Course ID: 003912
Ropes II
Addresses rope size, strength, type and length of rope to accomplish a firefighting or rescue task. Prerequisite: FRS 1021 or Consent of Instructor
Components: Laboratory, Lecture
FRS 1056 (0.5) Course ID: 003913
Forcible Entry II
Identifies materials and construction features of doors, windows, walls, and door and window locking devices. Teaches forced entry through at least three different types of doors, windows, and walls. Discusses maintenance of tools and equipment used for forced entry and safety factors involved. Prerequisite: FRS 1028 or Consent of Instructor
Components: Laboratory, Lecture
FRS 2023 (1.1) Course ID: 003922
Pump Operations I
Includes the minimum requirements of professional competence of fire service pump operators. Prerequisite: FRS 1041 or Consent of Instructor
Components: Laboratory, Lecture
FRS 2024 (0.1) Course ID: 003923
Foam Fire Streams II
Involves an advanced course designed to instruct the student in the proper use of foam, the equipment used to make foam, and the hydraulics used in creating foam. Prerequisite: FRS 2023 or Consent of Instructor. Lecture: 0.1 credits (1 contact hour).
Components: Lecture
FRS 2025 (0.1) Course ID: 003924
Salvage II
Covers, at an advanced level, salvage methods and operating procedures that further reduce fire, water, and smoke damage during and after fires. Prerequisite: FRS 1043 or Consent of Instructor. Lecture: 0.1 credits (1 contact hour).
Components: Lecture
FRS 2026 (0.3) Course ID: 003916
Rescue II
Addresses the techniques and procedures to follow relative to specific rescues, the equipment required for each and their proper use and the extraction of trapped victims. Prerequisite: FRS 1024 or Consent of Instructor
Components: Laboratory, Lecture
FRS 2014 (0.3) Course ID: 003917
Ventilation II
Includes an advanced level study in ventilating procedures. Reviews mechanical ventilation systems and their use in fire ground operations. Prerequisite: FRS 1034 or Consent of Instructor. Lecture: 0.3 credits (4 contact hours).
Components: Lecture
FRS 2015 (0.6) Course ID: 003918
Fire Control II
Provides an advanced course to teach the student to control or extinguish live fires involving combustible liquids of at least 100 sq. ft. using foam, fire in an elevated location, hidden fires inside walls and crawl spaces, fire involving energized electrical components and fire involving a flammable gas cylinder. Prerequisite: FRS 1033 or Consent of Instructor. Lecture: 0.6 credits (8 contact hours).
Components: Lecture
FRS 2021 (0.1) Course ID: 003920
Portable Fire Extinguishers II
Addresses classification and use of fire extinguishers including the definitions utilized in rating each type and the selection of a given extinguisher in attacking a particular class of fire. Prerequisite: FRS 1015 or Consent of Instructor. Lecture: 0.1 credits (2 contact hours).
Components: Lecture
FRS 2022 (0.8) Course ID: 003921
Water Supply II
Includes information pertaining to water supply including water distribution systems, hydrant operation and apparatus, equipment and appliances required to provide water for fire extinguishment. Prerequisite: FRS 1041 or Consent of Instructor
Components: Laboratory, Lecture
FRS 2027 (0.3) Course ID: 003927
Fire Control II
Provides an advanced course to teach the student to control or extinguish live fires involving combustible liquids of at least 100 sq. ft. using foam, fire in an elevated location, hidden fires inside walls and crawl spaces, fire involving energized electrical components and fire involving a flammable gas cylinder. Prerequisite: FRS 1033 or Consent of Instructor. Lecture: 0.6 credits (8 contact hours).
Components: Lecture
FRS 2026 (0.8) Course ID: 003957  
Fire Prevention, Public Education and Fire Cause Determination I  
Covers basic information pertaining to the causes of fire and their prevention, fire inspections, and public fire education. Prerequisite: FRS 1043 or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).  
Components: Lecture  
FRS 2031 (0.5) Course ID: 003925  
Pump Operations II  
Includes the minimum requirements of professional competence of fire service pump operators. Prerequisite: FRS 2023 or Consent of Instructor. Lecture: 0.5 credits (8 contact hours).  
Components: Lecture  
FRS 2032 (0.8) Course ID: 003926  
Driver's Training  
Includes the minimum requirements of professional competence required for service as a fire apparatus driver. Prerequisite: FRS 2011 and FRS 2013 and Valid Driver License.  
Components: Laboratory, Lecture  
FRS 2033 (0.2) Course ID: 003927  
Overhaul II  
Includes information pertaining to overhaul including safety precautions, indicators of structural instability, the preservation of evidence and the procedures for restoration of the fire premises. Prerequisite: FRS 1044 or Consent of Instructor. Lecture: 0.2 credits (3 contact hours).  
Components: Lecture  
FRS 2034 (0.3) Course ID: 003928  
Fire Alarms and Communications II  
Discusses the policies and procedures concerning ordering and transmitting of multiple alarms and supervisory alarm equipment. Prerequisite: FRS 1045 or Consent of Instructor. Lecture: 0.3 credits (5 contact hours).  
Components: Lecture  
FRS 2035 (0.5) Course ID: 003929  
Sprinklers II  
Promotes increased knowledge of various types of sprinkler systems and the working of these systems. Prerequisite: FRS 1048 or Consent of Instructor. Lecture: 0.5 credits (7 contact hours).  
Components: Lecture  
FRS 2036 (0.7) Course ID: 003930  
Practicum  
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the practicum do not receive compensation. Prerequisite: FRS 101 and FRS 102 and FRS 103 and FRS 104.  
Components: Practicum  
FRS 2041 (3) Course ID: 003931  
First Responder (EMS)  
Covers selected aspects of trauma care as outlined by the national standard created by federal guidelines, and considered to be the responsibilities services with emergency medical response missions, consisting of classroom and laboratory instructions. Involves typical anatomy and physiology; patient assessment, care for respiratory and cardiac emergencies; control of bleeding, application of dressing and bandages, treatment for traumatic shock; care for fractures, dislocation, sprains and strains; medical emergencies; emergency childbirth; burns and heat emergencies; environmental emergencies; principles of vehicle rescue; transportation of patient, and general operations of emergency medical services. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
FRS 2052 (1.1) Course ID: 003958  
Firefighter Survival & Rescue  
This intensive training course was developed in response to the tragic deaths of many firefighters across the nation in the past several years. Many of those who perished did so because they did not get out of the fire building or area where they were working. We train our firefighters in confined space, hazardous materials, infectious disease control, and incident command but until now there was no training course that taught our firefighters how to save their own lives. The firefighter Survival and Rescue course is designed to fill this void by reviewing conditions and situations which may pose a risk to firefighters and by teaching firefighters how to help themselves in emergency situations. Prerequisite: FRS 1024 or Consent of Instructor. Lecture: 1.1 credits (16 contact hours).  
Components: Lecture  
FRS 2053 (3.4) Course ID: 003933  
Hazardous Materials Technician  
Provides the required training for Federal Occupational Safety and Health Administration (OSHA), Kentucky Occupations Health and Safety regulation and U.S. Environmental Protection Agency (EPA) requirements. Covers responding to releases or potential releases of hazardous materials for the purpose controlling the release and using specialized chemical-protective clothing and specialized control equipment. Prerequisite: FRS 1047 or Consent of Instructor.  
Components: Laboratory, Lecture  
FRS 2061 (6) Course ID: 003934  
Emergency Medical Technician (EMT)  
Covers all knowledge aspects of trauma care as outlined by national standards, created by federal guidelines, considered to be the responsibilities of ambulance operations. Involves typical anatomy and physiology, patient assessment, care for respiratory and cardiac emergencies, control of bleeding, application of dressing and bandages; treatment for traumatic shock; care for fractures, dislocation, sprains and strains; medical emergencies; emergency childbirth; burns and heat emergencies; environmental emergencies; principles of vehicle rescue; transportation of patients and general operations of ambulance systems. Prerequisite: Consent of Instructor.  
Components: Lecture  
FRS 2062 (1) Course ID: 003935  
Managing Company Operations: Decision Making  
Meets the needs of fire officers and crew leaders with responsibilities to manage the operations of one or more companies in structural firefighting operations. Includes preparation for response, decision making, and tactical operations. Includes, as the foundation of the course, an extensive unit of simulation to provide application of concepts and the development of skills. Provides an effective approach to command decision making and organization. Focuses on a review of the command sequence and an overview of incident command for structural firefighting. Prerequisite: Consent of Instructor. Lecture: 1 credit (15 hours).  
Components: Lecture  
FRS 2063 (1) Course ID: 003936  
Instructional Techniques for Company Officers  
Designed for company officers and other fire or rescue service personnel with the responsibility for conducting periodic company level or small unit training. Introduces the participant to basic instructional concepts and techniques. Emphasizes teaching principles and techniques applicable to fire and rescue service training. Includes effective communication, teaching from lesson plans, methods of instruction with emphasis on skills training, and adult learning. Prerequisite: (FRS 101 and FRS 102 and FRS 103 and FRS 104 and FRS 105 and FRS 201 and FRS 202 and FRS 203) or Consent of Instructor.  
Components: Laboratory, Lecture  
FRS 2071 (3.5) Course ID: 003937  
Company Officer  
Involves information and activities needed to meet the minimum standards of Fire Service Company Officers in practicing competencies relative to administrative and incident resolution consistent with National Fire Protection Association Code 1021. Prerequisite: (FRS 101 and FRS 102 and FRS 103 and FRS 104 and FRS 105 and FRS 201 and FRS 202 and FRS 203) or Consent of Instructor. Lecture: 3.5 credits (52 contact hours).  
Components: Lecture  
FRS 2072 (0.9) Course ID: 003938  
Incident Command System (ICS)  
Meets the needs of fire officers and managers with responsibilities to use, deploy, implement and/or function within a departmental Emergency Management Systems. Addresses the need for incident management systems, an overview of the structure and expandability of ICS, an understanding of the command skills needed by departmental officers to effectively use ICS, guidelines and scenario practice on how to apply ICS, and guidelines and resource information for implementing a departmental ICS. Lecture: 0.9 credits (14 contact hours).  
Components: Lecture  
FRS 2073 (0.8) Course ID: 003939  
Leadership I: Strategies for Company Success  
Designed to meet the needs of the company officer. Provides the participant with basic skills and tools needed to perform effectively as a leader in the fire service environment. Addresses techniques and approaches to problem-solving, identifying and assessing the needs of the company officers subordinates, running meetings effectively in the fire service environment, and decision-making for the company officer. Prerequisite: FRS 101 and FRS 102 and FRS 103 and FRS 104 and FRS 105 and FRS 201 and FRS 202 and FRS 203) or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).  
Components: Lecture  
FRS 2074 (0.8) Course ID: 003940  
Fire/Arson Detection (Arson I)  
Designed for fire officers and firefighters to improve their skills in determining fire causes at the fire scene. Begins with the study of the motivation of the arsonist and progresses through to the prosecution of the crime of arson. Includes the goal of providing appropriate training to the firefighter and fire officer so as to make an impact in reducing arson throughout the nation. Prerequisite: (FRS 101 and FRS 102 and FRS 103 and FRS 104 and FRS 105 and FRS 201 and FRS 202 and FRS 203) or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).  
Components: Lecture  
FRT Fire/Rescue Training  
FRT 93 (0.1 - 6) Course ID: 005311  
Selected Topics in Homeland Security  
Examines special topics in Homeland Security offered in response to needs of citizens and emergency response personnel. Outlines and course competencies will be located in the Academic Dean's office. Lecture: 0.1 - 6.0 credits (1.5 - 90 contact hours).  
Components: Lecture  
FRT 95 (0.2 - 6) Course ID: 004167  
Special Topics in Industrial Fire Protection  
This course includes subjects related to the provision of fire protection in the industrial setting, to include but not limited to: fire extinguisher operations, fire alarm systems, fire protection systems, incident command, and structural fire brigade operations.  
Components: Lecture  
FRT 96 (0.2 - 6) Course ID: 004166  
Special Topics in Hazardous Materials  
This course includes subjects related to the response to hazardous materials incidents, to include but not limited to: hazardous materials awareness, hazardous materials operations, hazardous materials technician, and hazardous materials continuing education.  
Components: Lecture  
FRT 97 (0.2 - 6) Course ID: 004165  
Special Topics in Emergency Medical Services  
This course includes subjects related to the provision of emergency medical services, to include but not limited to: CPR, first aid, first responder medical, emergency medical technician (EMT), and EMS continuing education.  
Components: Lecture
FRT 98 (0.2 - 6) Course ID: 004164
Special Topics in Rescue
This course includes subjects related to technical rescue services, to include but not limited to: vehicle rescue, confined space rescue, high angle rescue, water rescue, and farm rescue.
Components: Lecture
FRT 99 (0.2 - 6) Course ID: 004163
Special Topics in Firefighting
This course includes subjects related to fire department services, to include but not limited to: fire prevention, fire suppression, company officer leadership, communications, building construction, and cause and origin investigations.
Components: Lecture

GBS 290 (3) Course ID: 005514
Instructor Consent Required Global Studies Capstone Course
Integrates knowledge and concepts from the Global Studies core courses, study abroad experience, guided research and independent reading through a culminating project such as a research report, portfolio, or exhibition and a formal presentation. Prerequisite: Consent of Instructor: Lecture: 3.0 credits (45 contact hours).

GEN General College Studies

GEN 91 (3) Course ID: 006892
Foundations of Information Literacy
Introduces information literacy concepts. Focused on skills related to determining information needs, finding sources, using information to solve problems, organization and presenting information and evaluation. Prerequisite: COMPASS Reading Score of 60+ or English Score of 39+. Lecture: 3.0 credits (45 contact hours).

GEN 100 (1)
Introduction to College
Introduces new students to college and college life, support services provided by the college, techniques for academic success, and career exploration. Lecture: 1.0 credit hour (15 contact hours).
Components: Lecture

GEN 102 (3)
Foundations of Learning
Presents strategies which promote academic and personal success in college, including utilizing campus resources, learning and memory, self-management, critical reading, critical thinking, classroom skills, and career exploration. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 103 (1) Course ID: 005328
Instructor Consent Required Principles of Peer Mentoring
Focuses on the study of issues, topics, and strategies related to mentoring first-year students. Relevant student development theory is highlighted. Prepares peer mentors to assist in teaching a section of GEN 100. Prerequisite: Sophomore status and consent of instructor: Lecture: 1 credit (15 contact hours).
Components: Lecture

GEN 104 (2) Course ID: 005329
Instructor Consent Required Applied Principles of Peer Mentoring
Offers academic credit to peer mentors who assist teaching a section of GEN 100 with a faculty member. Prepares peer mentors for helping plan course content, meeting with first-year students, and assisting with other course-related responsibilities as determined by the GEN 100 faculty member. Prerequisite: GEN 103 and consent of GEN 100 instructor and Sophomore status. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

GEN 120 (3) Course ID: 003864
Service Learning
Engages students directly in structured, community-based activities to acquaint them with community opportunities, services, and needs. Integrates concepts from the classroom with community service allowing student to practice concepts while developing an appreciation of service. Lecture: 3 credits (45 contact hours).
Components: Lecture

GEN 122 (1)
Course ID: 003871
The Exemplary Tutor
Trains college students to be effective tutors by introducing ethics and philosophy of tutor-tutee relationships and concepts of questioning, learning styles, problem solving, active listening, goal setting, and critical thinking. Can be taken 1 time for a total of 1 credit. Lecture: 1 credit (15 contact hours).
Components: Lecture

GEN 123 (1 - 3)
Course ID: 003872
The Exemplary Reading Tutor
Provides credit for students wishing to tutor in reading or reading based courses as related to the reading expectations in the KDE Core Curriculum. Grants credit of 1 hour for 45 hours of tutoring, 2 credits for 90 hours of tutoring, and 3 hours for 120 hours of tutoring. May be repeated for a total of 6 credits. Pass/Fail. Prerequisite: GEN 122
Components: Lecture

GEN 130 (3) Course ID: 005055
Introduction to Information Resources
Provides an introduction to information resources and research concepts as used to evaluate and identify information from various sources. Lecture: 3 credits (45 contact hours).
Components: Lecture

GEN 131 (1)
Course ID: 005524
Basic Library Research and Resources
Introduces students to effective and efficient use of information resources through development of search statements/strategies, location and evaluation of information and information resources, and review and revision of search strategies as needed. Introduces students to the library catalog, print resources, databases, web resources and to the evaluation of information. Lecture: 1 credit (15 contact hours).
Components: Lecture

GEN 140 (3)
Instructor Consent Required Development of Leadership
Prerequisites: completion of the course. Provides credit for students wishing to tutor in career and test-taking. May be repeated for a total of 6 credits. Pass/Fail. Prerequisite: Consent of instructor: Lecture: 3.0 credits (45 contact hours).
Components: Lecture

GEN 150 (1) Course ID: 000589
Basic Computer Skills
Provides an introduction to commonly-used computing functions, emphasizing information processing, hands-on experience, and software packages. (This course does not meet the KCTCS computer literacy requirement.). Components: Laboratory, Lecture

GEN 175 (3) Course ID: 006594
Career and Life Skills Development
Investigates the importance of appropriate social behavior and interaction in the workplace. Presents skills necessary for job search, self-management, and life and work transitions for adapting to changing demands and expectations. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 225 (3) Course ID: 006601
Lifelong Learning Applications
Develops and identifies overall life skills in complex systems as a whole to interact and communicate with others to produce successful outcomes. Prerequisite: GE 175 or Consent of Instructor: Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - General Education, Course Also Offered in Modules

GEN 276 (1) Course ID: 004489
Employment and Professional Skills
Presents the process of effective career planning and develops the skills necessary for obtaining and maintaining employment. Lecture: 1 credit (15 contact hours).
Components: Lecture

GEN 1021 (1) Course ID: 007078
College Basics & Learning Styles
Presents an overview of campus resources and online resources, policies, and procedures including diversity. Presents strategies for identifying personal learning, self-management, and career exploration tools. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GEN 1022 (1) Course ID: 007079
Critical Reading and Thinking
Presents strategies and tools to promote critical reading and thinking. Lecture: 1 credit (15 contact hours).
Components: Lecture

GEN 1023 (1) Course ID: 007080
Classroom Skills and Test-taking
Presents strategies and tools to promote classroom and test-taking skills. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GEN 1251 (1) Course ID: 006591
Transmission Connections
Introduces various forms of communication. Provides skills for understanding verbal and nonverbal communication and reflection on experiences. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 1252 (1) Course ID: 006592
Learning Skills Application
Provides skills for thinking critically and creatively, connecting prior learning, using reciprocal relationships, and interpreting information. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 1253 (1) Course ID: 006593
Effective Decision Making
Provides skills to analyze and evaluate judgments, ethical considerations, and new and diverse perspectives and points of view. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 1751 (0.4)
Career Planning Using Technology
Explores career search and selection enhanced by the development of an electronic portfolio. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture

GEN 1752 (0.4)
Exploring Employment Strategies
Explores elements of the pre-employment process. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture
GEN 1753 (0.4)  
Course ID: 006597  
**Business Basics**  
Prepares basic business, math, and communication skills for the workplace. Lecture: 0.4 credits (6.0 contact hours).  
Components: Lecture

GEN 1754 (0.4)  
Course ID: 006598  
**Customer Service**  
Prepares basic approaches for effective customer service skills. Lecture: 0.4 credits (6.0 contact hours).  
Components: Lecture

GEN 1755 (1)  
Course ID: 006599  
**Workplace Transitions**  
Prepares employment and life skills including social interaction through workplace diversity, problem solving, working in teams, business procedures, and performance processes. Lecture: 1.0 credit (15 contact hours).  
Components: Lecture

GEN 1756 (0.4)  
Course ID: 006600  
**Workplace Skills**  
Explains the importance of lifelong learning, flexibility, adaptability, and positive employment behaviors. Lecture: 0.4 credits (6.0 contact hours).  
Components: Lecture

GEN 2251 (0.4)  
Course ID: 006602  
**Acquiring Digital Skills**  
Access, manage, integrate, evaluate, and create digital technology and information. Pre-requisite: GE 175 or Consent of Instructor. Lecture: 0.4 credits (6 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules

GEN 2252 (0.6)  
Course ID: 006603  
**Project / Time Management Basics**  
Identify project and time management strategies to set appropriate goals and timelines. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules

GEN 2253 (0.3)  
Course ID: 006604  
**Leadership Overview**  
Provides an overview of leadership responsibility and the ethical considerations that impact decisions. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules

GEN 2254 (0.4)  
Course ID: 006605  
**Global Awareness**  
Provides skills for reasoning, open dialogue with diverse cultures, and complex systems. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.4 credits (6 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules

GEN 2255 (0.3)  
Course ID: 006606  
**Financial Literacy**  
Provides skills for managing financial resources and making appropriate economic choices. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules

GEN 2256 (0.3)  
Course ID: 006607  
**Civic Engagement**  
Develops students' community service by enabling knowledge about civic engagement and government processes. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules

GEN 2257 (0.4)  
Course ID: 006608  
**Social Respect and Collaboration**  
Provides knowledge about cultural differences, value of diverse teams, and social respect. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.4 credits (6 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules

GEN 2258 (0.3)  
Course ID: 006609  
**Self-directed Learning**  
Identifies skills and strategies for being a self-learner through life and presents the importance of lifelong learning. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules

GEO Geography

GEO 130 (3)  
Course ID: 000351  
**Earth's Physical Environment**  
A course exploring the fundamental characteristics of earth's physical environment. Emphasis is placed on identifying interrelationships between atmospheric processes involving energy, pressure, and moisture; weather and climate; and terrestrial processes of vegetative biomes, soils, and landscape formation and change. Fulfills elementary certification requirements in education, and USP cross-disciplinary requirement.  
Components: Lecture  
Attributes: SN - Science, SN - Science

GEO 152 (3)  
Course ID: 000398  
**Regional Geography of the World**  
Introduces regional geography with a focus on the world's physical and human landscapes. Emphasizes connections between regions and how each region affects and is affected by global issues such as economic restructuring, food production, and environmental change. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
Attributes: Cultural Studies, SB - Social Behavior Science, SB - General Education

GEO 160 (3)  
Course ID: 000422  
**Lands and Peoples of the Non-Western World**  
Provides a geographic study of world regions defined conceptually and historically as non-Western. Includes global patterns of social, cultural, economic and political differences between the West and Non-West and the processes key to making the Non-Western world, such as colonialism and imperialism. Considers significant current issues including sustainable development, environment, human rights, and gender relations.  
Components: Lecture  
Attributes: Cultural Studies, SB - Social Behavior Science, SB - General Education

GEO 172 (3)  
Course ID: 000158  
**Human Geography**  
Presents a study of the spatial distributions of significant elements of human occupancy of the earth's surface including basic concepts of diffusion, population, migration, settlement forms, land utilization, and impact of technology on human occupancy of the earth. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
Attributes: SB - Social Behavior Science, SB - General Education

GEO 210 (3)  
Course ID: 000610  
**Pollution, Hazards, and Environmental Management**  
An introduction to environmental systems such as weather and climate, vegetation, land forms and soils, and how the quality of these systems is modified by human use. Resource issues discussed include: atmospheric pollution and global warming; groundwater, flooding, and floodplain management; volcanic activity and earthquakes; and biophysical processes associated with deforestation and lake eutrophication. Case studies based upon important environmental problems illustrate how human activity and environmental systems interact. Fulfills USP Cross-Disciplinary requirement.  
Components: Lecture  
Attributes: SB - Social Behavior Science, SB - General Education

GER German

GER 101 (4)  
Course ID: 000884  
**Elementary German I**  
Includes fundamentals of German with development of the four basic skills: reading, writing, listening, and speaking.  
Components: Lecture  
Attributes: Cultural Studies, AH - Foreign Language

GER 102 (4)  
Course ID: 000759  
**Elementary German II**  
Continues the fundamentals of GER 101 with further development of the four basic skills: reading, writing, listening, and speaking. Prerequisite: GER 101 or Consent of Instructor.  
Components: Lecture  
Attributes: Cultural Studies, AH - Foreign Language

GER 201 (3)  
Course ID: 000880  
**Intermediate German I**  
Includes the systematic review of grammar and furthering of reading, writing, listening, and speaking skills based upon cultural and literary materials. Prerequisite: GER 201, or equivalent or placement test.  
Components: Lecture  
Attributes: Cultural Studies, AH - Foreign Language

GER 202 (3)  
Course ID: 000820  
**Intermediate German II**  
Continues the study of intermediate German through grammar, reading, and oral practice. Prereq: GER 201 or equivalent or placement test.  
Components: Lecture  
Attributes: Cultural Studies, AH - Foreign Language

GIS Geographic Information Systems

GIS 110 (3)  
Course ID: 004761  
**Spatial Data Analysis and Remote Sensing Techniques**  
Introduces spatial analysis, the interpretation of map data, and the use of handheld Global Positioning Systems to collect data. Intended for those interested in a career in civil engineering or surveying. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (15 contact hours).  
Components: Laboratory

GED 222 (3)  
Course ID: 000482  
**Cities of the World**  
Focuses on the historical development, contemporary character, and alternative futures of cities in both developing and developed regions. Emphasizes the spatial, social, economic, and political processes of major world cities. Includes a specific focus on contemporary urban problems.  
Components: Lecture  
Attributes: SB - Social Behavior Science, SB - General Education

GED 240 (3)  
Course ID: 000434  
**Geography and Gender**  
Presents a geographic approach to the study of gender relations, emphasizing the role of space and place in shaping the diversity of gender relations throughout the world. Stresses the importance of gender relations in understanding a variety of issues through the application of case study analysis. Includes the design and use of urban and rural environments, “Third World” development, regional economic restructuring, changing political geographies, and migration.  
Components: Lecture  
Attributes: SB - Social Behavior Science, SB - General Education

GED 251 (3)  
Course ID: 000659  
**Weather and Climate**  
A survey of the atmospheric controls associated with local, regional, and global weather and climate variability. Includes fundamental coverage of the physics and chemistry of energy, gases, pressure and moisture, with a goal of promoting understanding of general weather analysis and forecasting, severe storms, atmospheric pollution, descriptive climatology, and global climate change. Prerequisite: GEO 130 or consent of instructor.  
Components: Lecture  
Attributes: SN - Science, SN - Science
GLY 101 (3) Course ID: 000878
Physical Geology
Introduces the principles of physical geology, including study of minerals and rocks, volcanoes and earthquakes, plate tectonics, and the landforms of Earth’s surface. Requires concurrent enrollment in GLY 111.
Components: Lecture
Attributes: SN - Science, SN - Science

GLY 102 (3) Course ID: 000757
Historical Geology
Covers the history of the Earth: its origin as part of the solar system, and subsequent evolution of the atmosphere, continents, seas, and life as interpreted from the rock record. Includes in addition to lecture illustrations, field trips and out-of-class exercises. Gives attention to the development of the basic principles used in interpretation. Prerequisite: GLY 101 and GLY 111 or consent of the instructor. Corequisite: GLY 112
Components: Lecture
Attributes: SN - Science, SN - Science

GLY 110 (3) Course ID: 002218
Environmental Geology
Introduces and applies basic geological concepts to current environmental issues including the availability and use of water and soil resources, pollution causes, effects and solutions, and causes and prediction of environmental hazards including floods, landslides, subsidence, earthquakes and volcanoes. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

GLY 111 (1) Course ID: 000544
Physical Geology Laboratory
Identifies minerals and rocks in hand specimens, interpret landscape features as shown on topographic maps, and study geologic maps. Corequisite: GLY 101. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

GLY 112 (1) Course ID: 000548
Historical Geology Laboratory
Interprets geologic maps and cross-sections, and study important invertebrate fossil groups. Requires one field trip. Prerequisite: GLY 101 and GLY 111 or consent of the instructor. Corequisite: GLY 102. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

GLY 130 (3) Course ID: 003781
Dinosaurs and Disasters: A Brief History of the Vertebrates
Examines dinosaurs’ interactions with their environment, their indirect influence on mammals, and implications for human kind. Traces the history of dinosaurs from early vertebrate ancestors to their final extinction, and surveys the evolutionary, paleogeographic, environmental, and possible extraterrestrial causes for their rise to dominance and sudden fall. Lecture: 3 hours.
Components: Lecture
Attributes: SN - Science, SN - Science

GLY 220 (4) Course ID: 000847
Principles of Physical Geology
Learn how the Earth works: an integrated course in physical geology, covering the physical, chemical and biological processes that combine to produce geological processes. Focuses on plate tectonics, earth surface processes, and properties and formation of earth materials. Lab exercises emphasize identification and interpretation of geologic materials, geologic maps and cross sections. Lecture: 3 credits (45 contact hours); Laboratory: 1 credits (30 contact hours).
Components: Lecture
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science

HEO Heavy Equipment Operation

HEO 100 (12) Course ID: 001519
Heavy Equipment Operations I
This course is designed to instruct students in the operation of heavy equipment such as bulldozers, backhoes, front end loaders, graders, and scrapers. Instruction in digging, ditching, sloping, stripping, grading, backfilling, clearing trees and rubble, and foundation excavating is provided, as well as instruction in the proper care and maintenance of equipment. Prerequisite: DIT 103
Components: Lecture

HEO 105 (4) Course ID: 001521
Utility Tractor Loader Operator
Provides a broad base of skills required to operate heavy equipment with an emphasis on safety. Focuses on job awareness and industry requirements. Prerequisites: DIT 103. Laboratory: 4 credits (180 contact hours).
Components: Laboratory

HEO 109 (2) Course ID: 001523
Power Shovel Backhoe Operator
This course covers a broad base of skills required to operate heavy equipment with an emphasis on safety. Students will learn how to operate a dump truck and power shovel backhoe. Prerequisite: DIT 103
Components: Laboratory

HEO 111 (7) Course ID: 001524
Bulldozer Operator
This course covers a broad base of skills required to operate heavy equipment with an emphasis on safety. Students will learn how to operate a dump truck and a bulldozer. Prerequisite: DIT 103
Components: Laboratory

HEO 115 (7) Course ID: 004571
Hydraulic Excavator Operator
Covers a broad base of skills required to operate heavy equipment safely. Students will learn how to operate a hydraulic excavator safely. Prerequisite: HEO 100
Components: Laboratory, Lecture

HEO 125 (3) Course ID: 001525
Special Problems I
The course will be designed to provide students with the opportunity to satisfactorily complete and/or enhance their skills in performing the tasks of a Heavy Equipment Operator.
Components: Laboratory

HIM 102 (3) Course ID: 004303
Archives Studies: Characteristics & Overview
This course provides an introduction to the profession of archives studies. In addition to the history, development, and nature of work in the profession, the basics of collections management and development, intellectual control, preservation, conservation, and technological applications will be presented.
Components: Lecture

HIM 104 (3) Course ID: 004304
Museum Studies: Characteristics & Overview
This course provides an introduction to the profession of museum studies. Course topics include the history, development, and nature of work in the profession; the basics of collections management and development; intellectual control; exhibit design; preservation; and technological applications.
Components: Lecture

HIM 106 (3) Course ID: 004305
Records Management: Characteristics & Overview
This course provides an introduction to the profession of records management. In addition to the history, development, and nature of work in the profession, the course will present the basics of files and forms management, records inventory and analysis, scheduling and reprography, electronic records and record center operation.
Components: Lecture

HIM 210 (3) Course ID: 004306
Archives Studies: Appraisal & Accessioning
This course provides an in-depth examination of the information appraisal and accession process in archives work. Topics covered include intellectual content, documentation strategies, appraisal theories, and accessioning practices. Students are expected to complete an accession record, including records transmittal form, deed of gift, and accession form. Prerequisite: HIM 102.
Components: Lecture
HIM 212 (3)  Course ID: 004307
Archives Studies: Arrangement & Description
This course is designed to provide students with a thorough understanding of arrangement and description practices in an archival setting. Topics covered include provenance, original order, arrangement practices, media specific description fields, MARC and EAD formatting, and indexing. Students are expected to complete archival descriptions for several collections and media types. Prerequisite: HIM 102.
Components: Lecture

HIM 214 (3)  Course ID: 004308
Archives Studies: Preservation & Conservation
This course provides an in-depth analysis of the conservation and preservation issues confronting archive staff. Included in this course are the impact of environmental conditions upon collections, problems associated with various records media and formats, conservation and working with conservators, security, and emergency mitigation and response procedures. Each student is expected to prepare an archives emergency response plan. Prerequisite: HIM 102.
Components: Lecture

HIM 216 (3)  Course ID: 004309
Archives Studies: Automation & Electronic Records
This course is designed to provide students with an in-depth understanding of automation practices for archives. Topics covered in this course include database theory, design and development, as well as data field content and structure as they relate to archives automation. In addition to creating a complete archival catalog record, students will generate an automated accession report, collection description with appended image, and catalog list. Prerequisite: HIM 102.
Components: Lecture

HIM 230 (3)  Course ID: 004310
Museum Studies: Collections Care & Management
This course provides an in-depth analysis of the curatorial needs of museum collections. Topics covered include collection policies and development, accessioning, registration, preservation, exhibiting and ethical consideration regarding deaccessioning and collection sales. Prerequisite: HIM 104.
Components: Lecture

HIM 232 (3)  Course ID: 004311
Museum Studies: Conservation and Preservation
This course provides an in-depth analysis of the conservation and preservation issues confronting museum staff. Included in this course are the impact of environmental condition upon collections, problems associated with historic structures, artifact conservation and working with conservators, security, and emergency mitigation and response procedures. Each student is expected to prepare a museum emergency response plan. Prerequisite: HIM 104.
Components: Lecture

HIM 234 (3)  Course ID: 004312
Museum Studies: Exhibits
This course provides an extensive analysis of the issues presented in the display of a museum's collections. Topics covered include exhibit planning, design, fabrication, installation, and interpretation. Ethical considerations and cultural sensitivity issues regarding the presentation of artifacts will also be addressed. Prerequisite: HIM 104.
Components: Lecture

HIM 236 (3)  Course ID: 004313
Museum Studies: Automation
This course examines the significant role played by automated information management systems in museum management. Topics include: collection management, the application and use of databases in fiscal management, inventory control, retail management promotion, web-presence and virtual museum presentation. Prerequisite: HIM 104.
Components: Lecture

HIM 250 (3)  Course ID: 004314
Records Inventory & Analysis
This course provides in-depth coverage of the process of records identification and analysis. Topics covered in the course include records inventory and vital records discovery, records information content and value, and disaster mitigation and response. Prerequisite: HIM 106.
Components: Lecture

HIM 252 (3)  Course ID: 004315
Electronic Records Management
This course provides in-depth coverage of the process by which electronic records are created and managed. Topics covered in the course include identification and analysis of electronic records for scheduling, and the use of database systems for monitoring compliance with scheduling and disposition of electronic and paper-based records. Students will be expected to design, develop, and implement a database for tracking records schedule compliance. Prerequisite: HIM 106.
Components: Lecture

HIM 254 (3)  Course ID: 004316
Records Reproduction & Imaging Systems
This course provides in-depth analysis of information reproduction systems for the management, preservation, and access of records. Students will master the appropriate use of a variety of image reproduction formats, quality control standards associated with each format, and the cost/benefit considerations appropriate for each image reproduction format. Prerequisite: HIM 106.
Components: Lecture

HIS 101 (3)  Course ID: 004493
World Civilization I
Presents a multicultural survey of world cultures and global issues from ancient to medieval times. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Heritage

HIS 102 (3)  Course ID: 004675
World Civilization II
Presents a multicultural survey of world cultures and contemporary global issues from 1600 to the present. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Heritage

HIS 103 (3)  Course ID: 000860
A History of Europe Through the Mid-Seventeenth Century
Surveys the development of European politics, society, and culture from the beginnings of civilization through the Age of Religious Conflict. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

HIS 104 (3)  Course ID: 000860
A History of Europe Through the Mid-Seventeenth Century
Surveys the development of European politics, society, and culture from the Age of Absolutism to the present. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

HIS 105 (3)  Course ID: 000834
A History of Europe from the Mid-Seventeenth Century to the Present
Surveys the development of European politics, society, and culture from the Age of Absolutism to the present. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

HIS 106 (3)  Course ID: 000532
Western Culture: Science and Technology I
Surveys the interactions of science and technology with the social and cultural development of Western civilization to the Industrial Revolution. Emphasizes the values in scientific inquiry as compared with other kinds of inquiry and the importance of science and technology in modifying social organization and human expectations.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

HIS 107 (3)  Course ID: 000535
Western Culture: Science and Technology II
Surveys the interactions of science and technology with the social and cultural development of Western civilization since the Industrial Revolution. Emphasizes the values in scientific inquiry as compared with other kinds of inquiry and the importance of science and technology in modifying social organization and human expectations.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

HIS 108 (3)  Course ID: 000542
History of the United States Through 1865
Examines key political, economic, and social topics that have significantly influenced the American experience from the pre-colonial period through the Civil War era. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage, Course Also Offered in Modules

HIS 109 (3)  Course ID: 000171
History of the United States Since 1865
Examines key political, economic, and social topics that have significantly influenced the American experience from Reconstruction through the contemporary era. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage, Course Also Offered in Modules

HIS 110 (3)  Course ID: 003873
Instructor Consent Required Special Topics History for Study Abroad
Involves both traditional classroom learning and experiential learning opportunities in an international setting. Covers particular historical topics, periods, personalities or problems. Varies according to student and faculty interest and in relation to study abroad locations and opportunities. Will not count toward History major or minor at Murray State University. Prerequisite: Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage, Course Also Offered in Modules

HIS 120 (3)  Course ID: 000348
The World at War, 1939-45
Covers a global overview of the events of the Second World War, including consideration of the conflicts military, political, social, and economic dimensions.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

HIS 202 (3)  Course ID: 000828
History of British People to the Restoration
Surveys the major political, social, economic, and cultural developments in British history from the pre-Roman era through the Stuart Dynasty. Includes examination of such topics as the Norman conquest, the Plantagenet Dynasty, the Hundred Years War, War of the Roses, the Tudors, Monarchs, the Protestant Reformation, the Stuarts, Kings, Puritan Revolution, and the Restoration.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

HIS 203 (3)  Course ID: 000516
History of the British People Since the Restoration
Surveys the major political, social, economic, and cultural developments in British history from the Stuart period to the present. Includes examination of such topics as the Glorious Revolution, Imperial Wars, American Revolution, Napoleonic Wars, Industrial Revolution, Imperialism, World War I, Great Depression, World War II, Cold War, Decolonization, Post-War Britain, and the European Union.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

HIS 206 (3)  Course ID: 002219
History of Colonial Latin America
Surveys the social, economic, political and cultural development of Latin America from the fifteenth century to 1830 with an emphasis on pre-Columbian societies, the Iberian kingdoms in the Age of Expansion, the conquest and colonization of the indigenous cultures of the New World, the establishment of Spanish and Portuguese institutions, the relations between the Church and the State, the encomienda and the hacienda, slavery and the impact of the Bourbon Reform in Latin America.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Heritage
History Modern Latin America, 1810 to Present
Covers the history of the Latin American nations focusing on their social, economic, political and cultural development. Emphasizes the history of the independence movements, nation building, the struggle for modernization, dependency and the phenomenon of revolution since 1810.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Heritage

History of Kentucky
Surveys the chief periods in Kentucky's growth and development from 1790 to the present focusing on the social, economic, cultural, and political trends of each region.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

History of Islam and Middle East Peoples, 500-1250 A.D.
Surveys the origins and development of the Islamic civilization from the time of the Prophet Muhammad to 1250, with special emphasis on the role of the Arab, Iranian, and Turkic peoples.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Heritage

History of Sub-Saharan Africa
Surveys the major social, religious, cultural, economic, and political trends in Sub-Saharan African history since the 16th century. Includes the impact of the Atlantic slave trade, European imperialism, and 20th century wars on Sub-Saharan Africa.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Heritage

African History to 1865
Studies the African American experience through the Civil War. Examines African heritage, slavery, and growth of African American institutions.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Heritage

African-American History 1865 - Present
Examines the African American experience from Reconstruction to the present, with emphasis on the rise of segregation, the Civil Rights Movement, and race relations into the twenty-first century.
Components: Lecture
Attributes: Cultural Studies, AH - Heritage

History of Women in America
Surveys the history of American women, with particular emphasis on the mid-19th century to the present. Includes the major themes of family, work, social ideas about women, and feminism. Prerequisite: HIS 109 or consent of instructor.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Heritage

History of American Women to 1920
Emphasizes the fight for women's suffrage to 1920. Includes American women, immigrant women, the changing nature of the family and work, and societal ideas about women.
Components: Lecture

History of American Women from 1920
Emphasizes equal rights and the civil rights movements. Includes the rejection of feminism in the 1920s, and 1970s, the changing nature of the family and work, and societal ideas about women.
Components: Lecture

History of Sub-Saharan Africa
Surveys European history from the fourth century through the fifteenth century. Lecture: 3 credits (45 contact hours).
Prerequisite: Sophomore standing.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Heritage

History of Asia I
Surveys the major civilizations of Asia. Focuses on the key political, social and cultural developments of the major peoples from the beginnings of western influence in Asia to the present. Prerequisite: Sophomore standing or consent of instructor. Lecture: 3 credits (45 contact hours).

History of Asia II
Examines key political, economic, and social topics from the pre-colonial period through settlement and colonization that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).

Instructor Consent Required Special Topics in History: (Topic)
Provides an in-depth study of a selected topic/area in History. Lecture: 1-3 credits (15-45 contact hours).
Prerequisite: Sophomore standing or Consent of Instructor.
Components: Lecture

Colonial America
Examines key political, economic, and social topics from the pre-colonial period through settlement and colonization that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).

The Early National Period
Examines key political, economic, and social topics from the Revolution through the early national period that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).

Growth and Prosperity
Examines key political, economic, and social topics during the Antebellum period that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).

Secessionism and Civil War
Examines key political, economic, and social topics from sectional conflict through the Civil War that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).

History of the United States from the Twenties to the Present
Examines key political, economic, and social topics from the Cold War and Civil Rights through the Rise of Conservatism that have significantly influenced the American experience. Prerequisite: HIS 1092. Lecture: 0.75 credit (11.25 contact hours).

Health Information Technology
Introduction to Health Information Technology
Includes history, organization, financing and delivery of health care services within a variety of settings. Explores the roles of a health information professional, an introduction to legal aspects of insurance billing and the role of the State Insurance Commission. Covers information on the generic components of the content, structure, collection, maintenance, and dissemination of health care data and how these components relate to record systems and documentation standards. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or Release of Information Data Specialist Certificate or by special permission of the Program Coordinator and Computer Literacy. Pre-requisite Or Co-requisite: [(BIO 135 or BIO 137) and (CLA 131 or AHS 115 or MIT 103)]. Minimum grade of C. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

Health Data Content and Structure
Field of health information management. Information on the generic components of the content, structure, collection, maintenance, and dissemination of health care data and how these components relate to record systems and documentation standards. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator and (CLA 131 or AHS 115 or OST 103) and (BIO 137) with a grade of C or better. Lecture: 2 credits (30 contact hours).
Components: Lecture

Pathophysiology of Human Disease
An overview of pathophysiology content and teaching materials as they relate to the health information field. A review of disease terminology, pathology, clinical presentation, surgical and diagnostic procedures and treatment modalities. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator and (CLA 131 or AHS 115 or OST 103) and (BIO 137) with a grade of C or better). Lecture: 3 credits (45 contact hours).
Components: Lecture
HIT 105 (4)  Course ID: 007081  
Pathophysiology / Pharmacology for Health Information Professionals  
Provides an overview of pathophysiology content, review of disease terminology, and clinical presentation with the application of pharmacology to treat human diseases as it relates to the field of health information technology. Pre-requisite or Co-requisite: [HIT 100 and (BIO 135 or BIO 137) and (CLA 131 or AHS 115 or MIT 103)]. Minimum grade of C. Lecture: 4.0 credits (60 contact hours).  
Components: Lecture  

HIT 106 (3)  Course ID: 004263  
Pharmacology for Health Information Professionals  
Application of pharmacology to the treatment of human diseases and disorders as it relates to the field of health information technology. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Minimum grade of C. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

HIT 108 (3)  Course ID: 004264  
Clinical Classification Systems I  
Introduces the current International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) coding system for reimbursement of health care services. Students will use a microcomputer and software to apply medical coding procedures. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator (and (CLA 131 or AHS 115 or OST 103) and (BIO 137) with a grade of C or better). Lecture: 2 credits (30 contact hours).  
Components: Lecture  

HIT 109 (4)  Course ID: 007083  
Clinical Classification Systems II  
Applies current government-mandated diagnosis and procedure coding systems in a health care setting. Pre-requisite: HIT 105. Minimum grade C. Pre-requisite or Co-requisite: BIO 139 (if BIO 137 taken), Minimum grade C. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).  
Components: Lecture, Laboratory  

HIT 110 (2)  Course ID: 004265  
Legal & Ethical Issues in Health Information  
Includes legal principles and issues that govern health information management and patient medical records. Covers ethical issues as they relate to the security and dissemination of patient health information and corporate compliance programs. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or Release of Information Data Specialist or by special permission of the Program Coordinator. Pre-requisite Or Co-requisite: HIT 100. Minimum grade of C. Lecture: 2.0 credits (30 contact hours).  
Components: Lecture  

HIT 112 (3)  Course ID: 004266  
Reimbursement Methodologies  
Introduces the uses of coded data and health information reimbursement and payment systems appropriate to all health care settings including managed care. Includes a history of major U. S. insurance developments. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate or by special permission of the Program Coordinator. [Computer/Digital Literacy and (BIO 135 or BIO 137) and HIT 100 and HIT 105]. Minimum grade of C, Pre-requisite Or co-requisite. BIO 139 (if BIO 137 was taken). Minimum grade of C. Lecture: 2.5 credits (37.5 contact hours). Lab: 0.5 credits (15 contact hours).  
Components: Lecture, Laboratory  

HIT 114 (2)  Course ID: 004267  
Clinical Practicum I  
Introduces the clinical practice of medical records review and documentation within a health information department. Provides students with the opportunity to assist personnel in the legal and ethical collection and dissemination of health care data including the use of registries and indexes. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Computer Literacy and [BIO 139 and HIT 100 and HIT 104 and HIT 106) with a grade of 'C' or better. Practicum: 2.0 credits (90 contact hours).  
Components: Practicum  

HIT 200 (3)  Course ID: 004268  
Information Systems in Health Care  
Covers the use of computer technology related to the healthcare industry and the tools and techniques for collecting, storing, retrieving, and analyzing health care data. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or by special permission of the Program Coordinator and (HIT 109 and HIT 110 and HIT 112). Minimum grade of C'. Pre-requisite Or Co-requisite: (CIT 130 or OST 240). Minimum grade of C'. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credits (15 contact hours).  
Components: Laboratory, Lecture  

HIT 202 (2)  Course ID: 004269  
Clinical Classification Systems II  
Includes Current Procedural Terminology (CPT) coding system and the study of hospital based reimbursement issues. Uses a microcomputer and software to apply medical coding procedures. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or by special permission of the Program Coordinator. (Computer/Digital Literacy and HIT 109), Minimum grade of C. Pre-requisite Or Co-requisite: (BIO 139 if HIT 137 was taken). Minimum grade of C. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).  
Components: Laboratory, Lecture  

HIT 204 (2)  Course ID: 004270  
Quality Assessment In Health Information  
Principles of quality assessment as they relate to health information technology. Includes data collection, analysis, implementation of quality improvement processes, and a review of regulatory and accrediting organization requirements. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Successful completion of HIT 108 and HIT 110 and HIT 112 and HIT 114) with a grade of C or better. Lecture: 2 credits (30 contact hours).  
Components: Lecture  

HIT 205 (3)  Course ID: 007084  
Quality Mgmt & PI - Health Info  
Examines principles of performance improvement as it relates to health information technology. Integrates data collection, analyses, evidence-based care, implementation of performance improvement processes, and examines regulatory, accrediting organization, and payor requirements including payment. Pre-requisite or Co-requisite: HIT 109 and HIT 110. Minimum grade of C. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

HIT 206 (2)  Course ID: 004271  
Clinical Classification Systems III  
This course introduces the advanced application of clinical classification systems in the reimbursement for health care services. Included in the course will be a review of fraud, abuse and regulatory agency requirements relating to coding and billing. Pre-requisite: HIT109 and HIT 202. Minimum grade of C'. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).  
Components: Lecture, Laboratory  

HIT 208 (1)  Course ID: 004272  
Clinical Coding Practicum  
Introduces the student to the clinical practice of medical record coding procedures. Provides an opportunity to observe professional and ethical behavior standards within a health information department, code medical records for reimbursement, and practice appropriate security measures. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Successful completion of HIT 108, HIT 110, HIT 112, HIT 202, HIT 206, HIT 208, and HIT 209 (a grade of C' or better. Practicum: 1.0 credits (90 contact hours).  
Components: Practicum  

HIT 210 (2)  Course ID: 004273  
Health Care Statistics  
Use, collection, arrangement, presentation and verification of health care data. Fundamental concepts of descriptive statistics, data validity, reliability and the appropriate use and interpretation of applied health care statistics. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. (MT 110 or HIT 130) and (OST 130 or OST 240) and (HIT 200 and HIT 202 and HIT 204) with a grade of C). Lecture: 2 credits (30 contact hours).  
Components: Lecture  

HIT 211 (3)  Course ID: 007086  
Health Care Management and Statistics  
Introduces the principles of organization, supervision, leadership, motivation, and team building within the health information environment. Applies concepts of descriptive statistics, data validity, reliability, and the appropriate use and interpretation of applied health care statistics including the use, collection, arrangement, analysis, presentation and verification of health care data. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Successful completion of HIT 200, HIT 202, and HIT 204 with a grade of C or better. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  

HIT 212 (2)  Course ID: 004274  
Health Care Organization and Supervision  
This course introduces the principles of organization, supervision, leadership, motivation, and team building within the health information environment. Included in the course will be a review of financial performance, ergonomics, contracts, marketing, education, and training. Prerequisite: Admission to the Health Information Technology Program or by special permission of the Program Coordinator. Successful completion of HIT 200, HIT 202, and HIT 204 with a grade of C or better. Lecture: 2 hours.  
Components: Lecture  

HIT 214 (3)  Course ID: 004275  
Clinical Practicum II  
This course introduces the student to the clinical practice of medical records review, documentation, and supervision within a health information department. The student will observe and assist personnel in all areas of job responsibility within the Health Information Management department. Prerequisite: Admission to the Health Information Technology Program or by special permission of the Program Coordinator. Successful completion of HIT 208, HIT 202, and HIT 204 with a grade of C or better. Laboratory: 8 hours.  
Components: Practicum  

HIT 215 (4)  Course ID: 007087  
Clinical Practicum  
Introduces the student to the clinical practice of health information review, documentation and supervision within a health information management (HIM) department. Observes and assists personnel in assigned areas of job responsibility within the HIM Department. Prerequisite: Provides student with onsite project. Exposes student to HIM roles in other departments (e.g., quality, CDMS, Cancer Registry,
HMS 101 (3) Course ID: 000901
Human Services Survey
Examines community human service agencies regarding their organization, service delivery system, staffing patterns, and funding sources. Explores the origin and development of the social welfare system as well as social welfare policy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HMS 102 (3) Course ID: 000777
Values of Human Services in a Contemporary Society
Examines the values and ethics of human service professions. Encourages a personal philosophy of client intervention, including the development of a professional value base, achieved through the examination of major social problems and issues. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HMS 103 (3) Course ID: 000202
Theories and Techniques in Human Services
Introduces philosophies, theories for intervention, and the problem-solving process. Emphasizes the development of a skill base used in counseling techniques and client intervention. Encourages interpersonal relationship skills through knowledge of communication techniques. Provides activities in which the student will apply this knowledge and these skills. Prerequisite: HMS 101 and HMS 102 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HMS 104 (3) Course ID: 000867
Group Dynamics for Human Services
Covers group techniques in clinical or agency settings based on various theoretical models with emphasis on the leadership role, phases of group development, and interaction within the group. Prerequisite: HMS 103 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HMS 200 (3) Course ID: 000784
Dynamics of Human Behavior
Includes an historic view of theories of personality development, maladaptive behavior, knowledge of treatment, techniques of adjustment and social implications. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HMS 210 (3) Course ID: 000617
Drugs, Society, & Human Behavior
Covers the nature and progression of chemical abuse and dependency, and effects on the individual, family, and society. Includes strategies for prevention, intervention, and treatment. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HMS 211 (3) Course ID: 005583
Introduction to Addictions
Provides an overview of approaches to understanding addictions with emphasis on the bio-psycho-social model. Analyzes the etiology, progression, and processes involved in change. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HOS 160 (3) Course ID: 002366
Security for the Hospitality Industry
Analyzes modern security concerns for the protections of assets unique to the hospitality industry, including loss prevention techniques and the application of law for lodging, retailing, clubs, restaurants, lounges and hospitality properties. Examines topics such as industrial safety, disaster control techniques, emergency action planning, and crisis communications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HOS 200 (3) Course ID: 002367
Cultural Heritage Tourism
Examines the range of cultural and heritage assets that can become viable tourism attractions and looks at ways of linking quality cultural heritage tourism to community development from effective planning and marketing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HOS 100 (3) Course ID: 002365
Introduction to Hospitality Management
Introduces an overview of the hospitality industry. Examines the historical perspective and tracks current events. Examines the structure of the industry including chains, franchising, ownership, and management. Explores the inner workings of various components of hospitality properties. Examines topics such as industrial safety, disaster control techniques, emergency action planning, and crisis communications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HON 201 (3) Course ID: 000889
The Early and Modern World
From the development of the modern scientific method through mid-19th century industrialism: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

HON 202 (3) Course ID: 000832
The Contemporary World
The contemporary world: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

HON 101 (3) Course ID: 000892
The Ancient World
From Greek and Roman antiquity to the early Christian centuries: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

HON 102 (3) Course ID: 000766
The Medieval and Renaissance World
From the Middle Ages through the Reformation: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Written assignments required. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

HIT 200 and HIT 202 Minimum grade of C) or Consent of Program Coordinator. Practicum: 2.0 credits (90 contact hours).

HIT 212 (3) Course ID: 000585
Crisis Intervention
Focuses on crisis intervention theory, suicide prevention, and risk assessment techniques. Covers risk assessment protocols, crisis triage, de-escalation and referral. Introduces clinical, ethical and legal aspects. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: SWK 255

HIT 201 (3) Course ID: 005583
Introduction to Addictions
Provides an overview of approaches to understanding addictions with emphasis on the bio-psycho-social model. Analyzes the etiology, progression, and processes involved in change. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HIT 211 (3) Course ID: 005585
Crisis Intervention
Focuses on crisis intervention theory, suicide prevention, and risk assessment techniques. Covers risk assessment protocols, crisis triage, de-escalation and referral. Introduces clinical, ethical and legal aspects. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HIT 202 (3) Course ID: 005584
Dynamics of Human Behavior
Includes an historic view of theories of personality development, maladaptive behavior, knowledge of treatment, techniques of adjustment and social implications. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HIT 211 (3) Course ID: 005585
Crisis Intervention
Focuses on crisis intervention theory, suicide prevention, and risk assessment techniques. Covers risk assessment protocols, crisis triage, de-escalation and referral. Introduces clinical, ethical and legal aspects. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HIT 215 (2) Course ID: 007089
Clinical Practicum II
Introduces the student to the clinical practice of health information review, documentation and supervision within a health information management (HIM) department. Provides observation and assists personnel in assigned areas of job responsibility within the HIM Department. Prerequisite: HIT 200 and HIT 202 and HIT 204, Minimum grade of C) or Consent of Program Coordinator. Practicum: 2.0 credits (90 contact hours).
Components: Practicum

HOS 202 (3) Course ID: 000832
The Contemporary World
The contemporary world: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

HOS 201 (3) Course ID: 000889
The Early and Modern World
From the development of the modern scientific method through mid-19th century industrialism: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Written assignments required. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

HOS 202 (3) Course ID: 000832
The Contemporary World
The contemporary world: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

HNR Honors

HNR 101 (3) Course ID: 004909
Intro to Contemporary Thought
Introduces the development and impact of contemporary social, scientific, and philosophical thought from an interdisciplinary perspective. Gives attention to various historical and modern figures, relating their ideas and theories to our contemporary understanding of a variety of issues. Prerequisite: Admission in the Honors program.
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

Introduction

Components: Lecture
<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Description</th>
<th>Components</th>
<th>Prerequisite</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>002368</td>
<td>HOS 210 (3) Front Office Operations</td>
<td>Identifies principles required to organize and operate hotel and motel front office guest needs, to have effective salesmanship, and to create procedures for different types of front office operations. Lecture: 3.0 credits (45 contact hours).</td>
<td>Lecture</td>
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<tr>
<td>002370</td>
<td>HOS 282 (3) Tourism Marketing</td>
<td>Examines how and why tourists make destination choices, and learns how to develop a strategic marketing system that emphasizes your destination's distinctive appeal. Answers questions of how to assess visitor markets, gather and analyze data, reduce risk and gain competitive advantages, and turn analysis into sound decisions. Applies knowledge from case studies, and practical tips for stretching marketing dollars through better monitoring, cost controls, and evaluation. Lecture: 3.0 credits (45 contact hours).</td>
<td>Lecture</td>
<td>HPT 100 (3) Introduction to Historic Preservation</td>
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<tr>
<td>006324</td>
<td>HPH 100 (3) Health Physics I</td>
<td>Introduces the fundamentals of atomic and nuclear physics, algebra, unit analysis, and team dynamics required within an organization that handles radioactive substances. Lecture: 3.0 credits (45 contact hours).</td>
<td>Lecture</td>
<td>HPH 101 (3) Introduction to Historic Preservation</td>
<td></td>
</tr>
<tr>
<td>000888</td>
<td>HPH 101 (3) Health Physics II</td>
<td>Introduces the principles of health physics to include atomic and nuclear physics, radioactivity, and ionizing radiation and its biological effects. Pre-requisite: (MAT 150 and PHY 152) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).</td>
<td>Lecture</td>
<td>HPH 102 (3) Analytical Chemistry I</td>
<td></td>
</tr>
<tr>
<td>000762</td>
<td>HPH 102 (3) Analytical Chemistry I</td>
<td>Introduces internal and external dosimetry, shielding, radiation detection, and environmental monitoring. Pre-requisite: HPH 101. Lecture: 3.0 credits (45 contact hours).</td>
<td>Lecture</td>
<td>HPH 103 (3) Nuclear Instrumentation and Measurement I</td>
<td></td>
</tr>
<tr>
<td>000346</td>
<td>HPH 120 (3) Radiation Biology</td>
<td>Examines the cellular response, pathology, and short- and long-term effects of ionizing radiation on living tissue. Prerequisite: (BIO 112 and BIO 113) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).</td>
<td>Lecture</td>
<td>HPH 201 (4) Nuclear Instrumentation and Measurement I</td>
<td></td>
</tr>
<tr>
<td>000885</td>
<td>HPH 201 (4) Nuclear Instrumentation and Measurement I</td>
<td>Introduces the principles of operation and use of portable radiation survey instruments, counting room instrumentation including GM and proportional counters, and liquid scintillation. Introduces gamma ray spectroscopy. Pre-requisite: HPH 102. Lecture/Lab: 4.0 credits (90 contact hours).</td>
<td>Lecture/Lab</td>
<td>HPH 202 (4) Nuclear Instrumentation and Measurement I</td>
<td></td>
</tr>
<tr>
<td>000824</td>
<td>HPH 202 (4) Nuclear Instrumentation and Measurement II</td>
<td>Introduces multi-channel analyzers in alpha, beta and gamma spectroscopy. Involves techniques to identify and quantify radioactive materials. Prerequisite: HPH 201. Lecture/Lab: 4.0 credit hours (90 contact hours).</td>
<td>Lecture/Lab</td>
<td>HPH 246 (2) Environmental Law</td>
<td></td>
</tr>
<tr>
<td>000515</td>
<td>HPH 246 (2) Environmental Law</td>
<td>Surveys federal and state environmental legislation, the role of governmental agencies responsible for implementation of statutes, and simulations of regulation enforcement situations. Lecture: 2.0 credits (30 contact hours).</td>
<td>Lecture</td>
<td>HRS 101 (3) Instructor Consent Required An Integrated Survey of Western Civilization I</td>
<td></td>
</tr>
<tr>
<td>000895</td>
<td>HRT 101 (3) Instructor Consent Required An Integrated Survey of Western Civilization I</td>
<td>An honors course designed to provide an opportunity for the interested student to study the development of Western Civilization as reflected in the literary, artistic, musical, philosophical, political, and economic developments and movements of the major western cultures from ancient times through the Roman Empire. Lecture: 3 hours. Prerequisite: Consent of instructor.</td>
<td>Lecture/Lab</td>
<td>HRS Honors</td>
<td></td>
</tr>
</tbody>
</table>
HRT 140 (3)  Course ID: 001541
Greenhouse Construction
This course focuses on building a greenhouse. Topics include cost determination, site selection and construction techniques. Skills to be developed include the calculation of the size of heating, ventilation and cooling systems. Students also calculate profit/loss for various crops. Methods of storing, grading and marketing various greenhouse crops are identified.
Components: Lecture
HRT 141 (1)  Course ID: 001542
Greenhouse Construction Lab
To be written by instructors.
Components: Laboratory
HRT 150 (3)  Course ID: 001543
Horticulture Business Management
This course introduces various career opportunities in a garden center and focuses on salesmanship and business practices utilized in this environment. Identification of characteristics, usage and care of woody ornamentals, annual and perennial plants, as well as use and care information needed by the consumer are included. Assisting customers in choosing chemical pesticides and plant related products is discussed.
Components: Lecture
HRT 160 (4)  Course ID: 005263
Retail Floral Design
Provides information and skills for successful employment in the floral design industry including business management, cost analysis and marketing, materials, containers, tools, and flowers. Lecture: 4 credits (60 contact hours).
Components: Lecture
HRT 161 (2)  Course ID: 005264
Retail Floral Design Lab
Applies design principles and small business operations. Uses fresh and artificial floral products to create displays. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
HRT 210 (4)  Course ID: 001545
Landscape Design
Introduces the basic principles and practices of landscape design including the use of drawing equipment. Topics include the creation of design symbols and the development of a client needs and site analysis plan. Emphasis is placed on the ability to read landscape drawings and install plants from the design plan. Lecture: 4 credits (60 contact hours).
Components: Lecture
HRT 240 (4)  Course ID: 001547
Greenhouse Management
Topics include the identification and function of a plant's leaves, roots and stems; as well as identifying major plant processes and sexual reproduction parts. The 16 essential elements and how they effect plant growth are discussed. Identification of diseases, insects and plant disorders in the greenhouse are included. Development of growing schedules for the following crops are completed: poinsettias, chrysanthemums, Easter lilies, bedding plants and hanging baskets. Injectors are calibrated using various fertilizer and chemical ratios. Prerequisite/Corequisite: HRT 140
Components: Lecture
HRT 241 (2)  Course ID: 001548
Greenhouse Management Lab
This course is an introduction to the tools, equipment, procedures, supplies and safety issues related to greenhouse management. Other tasks are assigned as the season dictates. Prerequisite/Corequisite: HRT 240
Components: Laboratory
HSE 101 (1)  Course ID: 002221
Introduction to Health Sciences
Limited to students contemplating a career in one of the health sciences.
Components: Lecture
HSM 100 (3)  Course ID: 005518
Introduction to Homeland Security
Introduces the history and organizational development of the US Department of Homeland Security. Examines the roles and functions of the components of Homeland Security and their relationships to state and local agencies. Investigates current trends and career opportunities in homeland security. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
HSM 110 (3)  Course ID: 005519
Introduction to Emergency Management
Introduces the field of emergency management and the incident command system, including the terminology and definitions used in emergency and disaster management. Examines the four phases of emergency management and disaster planning: mitigation, response, recovery, and preparedness. Examines legal requirements, responsibilities, and laws pertaining to emergency management. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
HSM 225 (3)  Course ID: 005780
Ethical and Legal Issues in Homeland Security
Examines the ethical and legal issues in the administration of Homeland Security and its efforts to combat terrorism. Examines the legal powers and ethical standards entrusted in the personnel empowered with the implementation of the issues of Homeland Security. Provides an opportunity to demonstrate knowledge of the ethical and legal complexities and dilemmas involved in the establishment and enactment of policies pertaining to Homeland Security. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
HUM 120 (3)  Course ID: 000350
Introduction to the Humanities
Introduces students to at least five disciplines in the humanities, such as art, literature, dance, drama, cinema, philosophy, music, architecture, religion, and mythology. Explores distinctions and relationships between the disciplines through study of their basic methods, themes, and forms. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities
HUM 121 (3)  Course ID: 004906
Peace Studies
This interdisciplinary course is intended as a general introduction to the nature, scope, and methodology of Peace Studies, with a view toward the future. It will explore the history of non-violent movements to effect social change, the role of women in the attainment of peace and protection of life, the tie between social justice and the environment, and the resolution of conflict between individuals, groups, societies, and nations. The course includes the study of activists such as Dr. Martin Luther King, Jr., Gandhi, and Dorothy Day. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities
HUM 135 (3)  Course ID: 000581
Introduction to African Literature
Examines literary texts, memoirs, film, and other artistic expressions of the Holocaust to focus on the cultural and political events that caused the Holocaust; examines how subsequent people represent what happened; explores the consequences of the Holocaust in terms of ethical and human rights issues; examines how issues of racism and religious intolerance occurred prior to and since the Holocaust; addresses the Holocaust in a comparative perspective to prior and subsequent acts of genocide in other countries. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities, SB - Social Behavior Science, SB - Humanities
HUM 160 (3)  Course ID: 007110
Introduction to Holocaust Literature and Film
Examines literary texts, memoirs, film, and other artistic expressions of the Holocaust to focus on the cultural and political events that caused the Holocaust; examines how subsequent people represent what happened; explores the consequences of the Holocaust in terms of ethical and human rights issues; examines how issues of racism and religious intolerance occurred prior to and since the Holocaust; addresses the Holocaust in a comparative perspective to prior and subsequent acts of genocide in other countries. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities, SB - Social Behavior Science, SB - Humanities
HUM 202 (3)  Course ID: 000841
Survey of Appalachian Studies I
Provides an inter-disciplinary introduction to Appalachian history, economy, geography, politics, and culture, primarily through exploration of texts about the region, including fiction, non-fiction, and poetry. Emphasizes geography, Appalachian identity, works, values, and communication. May also include exploration of regional music, traditional arts, drama, photography, film, and, where applicable, community-based explorations of the Appalachian experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities, SB - Social Behavior Science, SB - Humanities
HUM 203 (3)  Course ID: 000518
Survey of Appalachian Studies II
Provides an inter-disciplinary introduction to Appalachian history, economy, geography, politics, and culture, primarily through exploration of texts about the region, including fiction, non-fiction, and poetry. Emphasizes migrations, economy, belief, expression, politics and government, and environment. May also include exploration of regional music, traditional arts, drama, photography, film, and, where applicable, community-based explorations of the Appalachian experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities, SB - Social Behavior Science, SB - Humanities
HUM 204 (3)  Course ID: 000812
Appalachian Seminar
Examines in detail one or more issues pertinent to the Appalachian region. Topics may include but are not limited to: cultural diversity, religious expression, politics and government, trends in Appalachian literature, or trends in regional sociological scholarship. Topics may vary from semester to semester. This course may be repeated once for credit with a different topic. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities, SB - Social Behavior Science, SB - Humanities
HUM 207 (2)  Course ID: 007049
American Seminar: Topics
Examines issues pertinent to American culture and identity through an interdisciplinary and multi-cultural approach. Includes topics such as cultural diversity, religious expression, politics and government, trends in art, literature, and/or music, political life, media representation, trends in social science which may vary from semester to semester. Course may be repeated once for additional credit when the repeat offering covers a different topic than the initial course offering. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
HUM 220 (3)  Course ID: 005532
Historical Perspectives on Peace and War
Provides an introduction to the history of violence and peace movements. Examines the anthropological, political, cultural, technological, and military forces contributing to the frequent occurrence of war throughout history. Explores the history of movements and organizations, both religious and secular, intended to minimize warfare and oppression. Examines literature and visual arts to enhance and elaborate on the themes presented in the anthropological and historical sections of the course. Sophomore standing or consent of instructor. Prerequisite: Sophomore Status. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

HUM 221 (3)  Course ID: 005533
Contemporary Perspectives on Peace and War
Introduces the effects of modern-day warfare and the countervailing trends, actions, and movements to create peace. Focuses on aspects of peace and war such as the role of women, the perspectives of notable scientists, philosophers, perspectives, the role of economic globalization in social justice, the environmental impacts, and conflict resolution. Sophomore standing or consent of instructor. Prerequisite: Sophomore Status. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Humanities

HUM 245 (3)  Course ID: 005537
Seminar in Kentucky Literature
This is an online or computer-assisted seminar course in Kentucky literature recognizing, examining, and studying distinct regional differences and similarities with concentration on major contemporary and traditional Kentucky writers and their texts. Topics will vary, from a group of authors, a historical period or aesthetic movement, to a genre, a theme, or an aspect of literary theory. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: LIT 200
Attributes: AH - Humanities

ICT 185 (1)  Course ID: 000600
Introduction to Industrial Chemical Technology
Using a seminar approach, students are exposed to an overview of chemical processes and local industries. Students will be apprised of the roles and responsibilities of chemical plant operators and laboratory technicians. Local chemical companies will provide operational tours with chemical instructional introductions. Classroom instruction focuses on local plant's chemistry and operations, quality in the chemical process industries, as well as an overview of chemical engineering terms, definitions and unit operations. Basic employability skills such as interviewing, application completion, and resume writing are also reviewed. Lecture: 2 hours.
Components: Lecture
Course Equivalents: ENG 282

ICT 220 (3)  Course ID: 000852
Unit Operations I
Basic principles of chemical process unit operations are studied. Fundamentals of fluid flow and measurement of process variables will be stressed. Elementary laws of fluid transport are presented as well as practical aspects of piping components and designs. Additionally, fluid flow equipment and principles involving pipes, pumps, valves and measurement will be explored. Lecture material corresponds to laboratory applications. Lecture: 2 hours; Laboratory: 2 hours. Prerequisite: ICT 185, MA 108, and corequisite CHE 104 or CHE 105 or consent of instructor.
Components: Laboratory, Lecture

ICT 230 (3)  Course ID: 000377
Health, Safety & Environmental Practices
Basic principles of industrial health and safety are discussed including accident and loss prevention, safety legislation, safety documents, safety management practices, health and safety hazards and control, safe work practices, and fire / explosion hazards. Corresponding field exercises will be performed as appropriate with participating industry representatives. Environmental regulations and their ultimate impact on a chemical facility as regulations will be discussed. An environmental audit will be performed in the field at participating local industries. Lecture: 3 hours. Corequisite: ICT 185, CHE 104 or 105, or consent of instructor.
Components: Lecture

ICT 240 (3)  Course ID: 000441
Unit Operations II
Basic principles of chemical process unit operations are studied. Fundamentals of heat and mass transfer operations will be stressed as well as chemical reaction vessels. Engineering laws and operations of heat and mass transport phenomenon and equipment are presented. Principles are presented in relation to various unit operations. Lecture material corresponds to laboratory applications. Lecture: 2 hours; Laboratory: 2 hours. Prerequisite: ICT 220.
Components: Laboratory, Lecture

IDT 100 (3)  Course ID: 005738
Fundamentals of Design
Introduces the basic drawing skills, elements and principles, color theory, terminology, and guidelines used to solve interactive design problems. Develops the ability and confidence to determine the appropriateness, feasibility and success of a potential design. Explores the integration of typography and visual elements using format structures. Prerequisite or corequisite: Computer literacy course. Lecture: 3 credits (45 contact hours).
Components: Lecture

IDT 120 (4)  Course ID: 005740
Digital Design Tools
Includes the basic skills, terminology, file formats and specifications of visual design within the digital realm through the use of industry standard vector and raster software. Requires file management and project planning. Prerequisite or corequisite: Computer literacy course. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture

IDT 170 (3)  Course ID: 005743
Project Strategy
Introduces marketing and design terms, information gathering, research, and data interpretation. Uses small groups to teach the challenges and rewards of creative
collaboration. Includes group work to plan, prioritize, and set goals for a team project. Prerequisite or corequisite: Computer literacy course. Lecture: 3 credits (45 contact hours).

Components: Lecture

IDT 210 (3)  Course ID: 005744 3D Modeling & Animation II
Covers advanced 3D modeling practices for artists and designers working with animation. Provides deeper knowledge of 3D modeling formats: Polygons, NURBS, and Subdivision Surfaces. Explores issues of integrating a model into an animation production and application of advanced troubleshooting skills. Prerequisite: IDT 110 with a grade of C or greater, or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC Interdisciplinary Early Childhood Education

IEC 101 (3)  Course ID: 004130
Orientation to Early Childhood Education
Introduces information related to designing appropriate environments and curricula for infants, toddlers, and preschoolers. Explores the historical and current influences on early childhood education. Includes 20 hours of required field experience, which may be waived by the IEC program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Prerequisite: IEC 101 or IEC 102 or IEC 130 or permission of IEC program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC 102 (3)  Course ID: 004087
Foundations of Early Childhood Education
Focuses on creating an environment and curricula that support cognitive, physical, creative, language, social, and emotional development of infants, toddlers, and preschoolers. Presents knowledge of appropriate child assessment, ethical decision-making in the early childhood profession, and accommodations for children with disabilities. Includes 20 hours of required field experience, which may be waived by the IEC program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC 120 (3)  Course ID: 004131
Health, Safety and Nutrition
Examines the components and skills necessary for maintaining a healthy and safe environment for young children. Includes 10 hours of required field experience, which may be waived by the IEC program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Lecture: 3 Credits (45 contact hours).

Components: Lecture

IEC 130 (3)  Course ID: 004132
Early Childhood Development
Addresses the physical, language, cognitive, social and emotional development of children beginning with conception. Includes methods of observation that are practiced during field experiences. Includes 10 hours of required field experience, which may be waived by the IEC program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC 170 (3)  Course ID: 005081
Observation and Assessment
Presents the process of observation, documentation, and assessment. Includes assessment skills, identification of appropriate methods and instruments, and linking results to planning, guidance, and instruction. Emphasizes recommended practices, ethical and legal responsibilities for educators, and the role of the family in the process. Includes 20 hours of required field experience, which may be waived by the IEC program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Prerequisite: IEC 101 or IEC 102 or IEC 130 or permission of program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC 180 (3)  Course ID: 004088
Approaches to Early Childhood Education
Curriculum
Introduces theoretical perspectives for curriculum in early childhood programs. Teaches the design of curriculum and examines the societal factors that impact programming for children. Includes 10 hours of required field experience, which may be waived by the IEC program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Prerequisite: IEC 101 or IEC 102 or IEC 130 or permission of IEC program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC 190 (3)  Course ID: 004134
Applied Experiences in Early Childhood Education
Includes participation in supervised teaching experiences in early childhood settings. Covers observing, planning, implementing, assessing and learning experiences based on developmentally appropriate practices. Any 100 level IEC course or permission of program coordinator.

Components: Laboratory, Lecture

IEC 200 (3)  Course ID: 004133
Child Guidance
Examines appropriate methods for guiding children and promoting the development of prosocial behaviors. Includes 10 hours of required field experience, which may be waived by the IEC program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Prerequisite: IEC 101 or IEC 130 or permission of program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC 210 (3)  Course ID: 005580
Families and Communities in Early Childhood Education
Examines community programs that focus on forming partnerships with families to support child development and family well-being. Builds an awareness of family in context of a diverse society to create respect, build reciprocal relationships, and empower families. Required: 10 hours of field experience. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC 216 (3)  Course ID: 004135
Literacy and Language in IEC
Presents the interaction of language therapy and instruction techniques and the resulting effect on language and literacy development. Includes ten (10) hours of required field experience, which may be waived by the IEC program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Prerequisite: IEC 101 or IEC 180 or consent of program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture

IEC 221 (3)  Course ID: 004136
Creative Expressions in IEC
Addresses the role of creativity as it relates to the development of young children. Studies a variety of art music, drama, and movement experiences that encourage creative expression in young children. Includes the implementation of appropriate creative activities in a child-centered environment. Required: 10 hours of field experience. Prerequisite: IEC 101 or consent of program coordinator. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

IEC 230 (3)  Course ID: 004569
Business Administration of ECE Programs
Introduces establishing, operating and/or owning an early childhood program. Includes participation in supervised teaching experiences in early childhood settings where practical skills are applied. Includes observing, planning, implementing and assessing learning experiences based on developmentally appropriate practices. Required: Two hundred twenty-five (225) hours of experience. Prerequisite: Program Coordinator's Approval. Practicum: 3 credits (225 contact hours/ ratio 75:1).

Components: Practicum

IEC 299 (1 - 3)  Course ID: 004142
Department Consent Required Special Topics in Early Childhood Education
An in-depth knowledge of a selected topic in early childhood education is the goal of this course. The topic of study may be the student’s choice per instructor’s approval or an issue or topic developed by an instructor for course presentation. Prerequisite: Coordinator’s Approval. Lecture: 1-3 credits (15-45 contact hours).

Components: Lecture

IES International Exchange Student

IES 233 (1 - 3)  Course ID: 004734
Orientation to International Student Exchange
Prepares students to participate in an international program by examining the components of the culture and the components of the infrastructure of the country to be visited. Lecture: 1-3 credits (15-45 contact hours).

Components: Lecture
Campus: BLC
Attributes: Course Also Offered in Modules

IET 102 (2) Course ID: 007134
Preventive Maintenance
Introduces how routine work is done to keep equipment in good working order and to optimize its efficiency and accuracy. Addresses regular routine cleaning, lubricating, testing, checking for wear and tear and eventually replacing components to avoid breakdown. Introduces students to the various types and styles of predictive and preventive maintenance components, principles, and practices used in industrial applications. Lecture/Lab: 2.0 credits (40.5 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 104 (2) Course ID: 007137
Blueprint Reading/Schematics
Introduces the fundamental information in drafting necessary to retrieve read, manipulate and understand a mechanical part print. Instructs students to recognize, identify, describe, and relate the components used in schematics, along with their symbols and connectors, to describe electrical, electronics, pneumatics, hydraulics, and piping circuits, as well as welding and joining symbols interpretation. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 107 (3) Course ID: 007140
Basic Electricity/Electronics
Introduces the various elements of basic electricity including the identification of electrical symbols as well as interpretation of schematics, cross referencing prints, tracing circuits, interpreting sequential function charts, line drawings and time charts. Introduces the student to electrical measurement instruments, including digital and analog multimeters, clamp-on ammeters, megohmmeters, and the oscilloscope. Concentrates on control logic components and circuit function. Introduces the student to solid state devices and applications. Lecture/Lab: 3.0 credits (67.5 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 108 (5) Course ID: 007145
Mechanical Drive Systems
Introduces safety, maintenance techniques and procedures used to maintain industrial equipment, including industrial couplings, chains, sprockets, belts, bearings, shafts, brakes, clutches, gears and cams. Addresses the principles of power transmission, calculations of speed and force and how they affect a power transmission system. Lecture/Lab: 5.0 credits (112.5 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 109 (3) Course ID: 007152
Safety
Introduces OSHA and the OSHA regulations that apply to the auto manufacturing industry. Introduces safety rules and issues in the use of overhead cranes, hoists, rigging equipment, attachment components, calculating sling angle stresses, and safe lifting and turning loads. Provides the knowledge and skills necessary to help sustain life and minimize the consequences of injury or sudden illness to meet the various training needs of those in workplace, school or community settings. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 110 (4) Course ID: 007181
Welding and Fabrication
Introduces the power sources used in shielded metal arc welding (SMAW) and gas metal arc welding (GMAW), along with equipment and filler metals used to produce a weld joint. Welding principles along with the metallurgy of steel and welding. Covers shielded metal arc welding safety and shielded metal arc welding processes including flat, horizontal, vertical, and overhead welding techniques. Provides knowledge of theory, safety practices, equipment and techniques required for gas metal arc welding including different transfer methods and position welding. Introduces oxy-fuel welding and cutting, including safety, setup and maintenance of oxy-fuel welding and cutting equipment. Includes cutting, brazing, and welding techniques. Lecture/Lab: 4.0 credits (100.5 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 120 (4) Course ID: 007186
Machine Tool Operations
Introduces machining operations, procedures and machines used by multi-skilled industrial maintenance technicians. Introduces the safe and correct operation of lathes, milling machines, drill presses, metal saws and hand and power tools. Requires students to work with various measuring and layout tools found in industrial environments. Lecture/Lab: 4.0 credits (102 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 201 (6) Electrohydraulics/Pneumatics
Examines the fundamental concepts of fluid power and electro-fluid power systems. Covers the principles of fluid power, calculations of physical properties of fluids and their ability to do work. Introduces the various fluid power components, symbols, circuits. Introduces troubleshooting of fluid power components and systems with an emphasis on safety. Addresses fluids, filters, reservoirs, piping, pumps, actuators, accumulators, control valves, and combination circuits. Lecture/Lab: 6.0 credits (120 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 203 (5) Programmable Logic Controllers
Introduces Programmable Logic Controllers (PLC) and elements needed for an automated industrial control system. Introduces memory and project organization within a PLC and provides instruction in basic numbering systems, computer and PLC terminology. Instructs the PLC control functions, program structures, language standards, wiring and troubleshooting methods, as well as, real world communications. Requires the student to program a PLC which may include a combination of ladder logic, structured text, sequential function chart and/or function block languages. Includes various protocols of industrial communications used between PLC controlled machines, PLC to PLC, PLC to computer, and computer to computer. Lecture/Lab: 5.0 credits (105 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 205 (4) Robot Maintenance
Introduces robotics in regard to industrial robotic safety standards, applications, types of classes for industrial robots, basic system components, robotic motion concepts, key programming techniques defined for the user and the communication terms associated with computer integrated manufacturing (CIM) as it relates to robotic cells. Instructs students on the mastering concepts of preventive maintenance techniques required for a robot and its backup systems in addition to routine maintenance. Provides procedures needed to interpret robot error codes and perform a safe recovery start up procedure on robotics equipment, as well as integrating robotic applications in a PLC-controlled, automated system. Lecture/ Lab: 4.0 credits (82.5 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 206 (5) Controls and Instrumentation
Covers the diversity of control devices including: theory of operation, applications in automation control and troubleshooting and repair. Introduces identification, installation, replacement, and troubleshooting of automation controller circuit boards and modules. Includes the installation, maintenance and troubleshooting of common input devices. Provides for discussion of methods of motor controls including on-off, proportional, integral, and derivative including PID loop tuning and quality. Covers automation output devices including AC, DC, and servo motors, variable speed drives, relays, motor starters and sizing of components for various applications. Lecture/ Lab: 5.0 credits (105 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

IET 1021 (0.7) Basic Preventive Maintenance
Introduces how routine work is done to keep equipment in good working order and to optimize its efficiency and accuracy. Addresses regular routine cleaning, lubricating, testing, checking for wear and tear and eventually replacing components to avoid breakdown. Lecture/Lab: 0.7 credits (15 contact hours).

Components: Lecture
Campus: BLC

IET 1022 (1.3) Advanced Technologies
Introduces various types and styles of predictive and preventive maintenance components, principles, and practices used in industrial applications. Lecture/Lab: 1.3 credits (25.5 contact hours).

Components: Lecture
Campus: BLC

IET 1041 (0.9) Drafting Fundamentals
Introduces the fundamental information in drafting necessary to retrieve read, manipulate and understand a mechanical part print. Requires student to be able to identify different types of prints as well as being able to analyze them. Lecture/Lab: 0.9 credits (16.5 contact hours).

Components: Lecture
Campus: BLC

IET 1042 (1.1) Orthographic Interpretation
Instructs the learner to recognize, identify, describe, and relate the components used in schematics, along with their symbols and connectors, to describe electrical, electronics, pneumatics, hydraulics, and piping circuits, as well as welding and joining symbols interpretation. Lecture/Lab: 1.1 credits (21 contact hours).

Components: Lecture
Campus: BLC

IET 1071 (1) Intro to Basic Electricity
Introduces the various elements of basic electricity including the identification of electrical symbols as well as interpretation of schematics, cross referencing prints, tracing circuits, interpreting sequential function charts, line drawings and time charts. Lecture/Lab: 1.0 credit (21 contact hours).

Components: Lecture
Campus: BLC

IET 1072 (0.3) Instruments
Introduces electrical measurement instruments, including digital and analog multimeters, clamp-on ammeters, megohmmeters, and the oscilloscope. Requires hands-on lab time spent with each device type. Emphasizes safe measuring techniques. Covers additional devices such as megohmmeters, and the oscilloscope.
as pressure gauges, chart recorders, heat sensors and chain stretch monitor. Lecture/Lab: 0.3 credits (7.5 contact hours).

Components: Lecture
Campus: BLC

IET 1073 (1) Control Circuits & Components
Course ID: 007143
Concentrates on control logic components and circuit function. Examines combinational and sequential ladder logic designs with great attention to reliability of function. Requires construction of various circuits that demonstrate key component functionality concepts. Requires troubleshooting using analytical techniques, multimeters, chart recorders, and oscilloscopes. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Lecture
Campus: BLC

IET 1074 (0.7) Solid State Devices
Course ID: 007144
Introduces solid state devices and applications. Covers semiconductor theory and operational characteristics of devices such as the diode, bipolar junction transistor (BJT) and field effect transistor (FET). Examines the basic DC power supply in the lab. Addresses concepts such as polarity, biasing, rectification and amplification. Includes discussion of camera-type vision systems, barcode readers and laser etchers. Lecture/Lab: 0.7 credits (16.5 contact hours).

Components: Lecture
Campus: BLC

IET 1081 (0.5) Basic Mechanical Power Systems
Course ID: 007146
Introduces the basic concepts of mechanical power transmission. Addresses the principles of power transmission, calculations of speed and force and how they affect a power transmission systems ability to perform work. Emphasizes the basics of mechanical drawing, safe work practices for working around machinery, common hand tools associated with maintenance work and some of the more common terms and definitions. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture
Campus: BLC

IET 1082 (0.3) Flexible Drives
Course ID: 007147
Introduces various types and styles of flexible belt and chain drives, including V-belts, chains, sprockets, and components. Lecture/Lab: 0.3 credit (7.5 contact hours).

Components: Lecture
Campus: BLC

IET 1083 (2.2) Couplings and Alignment
Course ID: 007148
Introduces types and functions of couplings used in industrial power transmissions, including how to install, align, and maintain shaft couplings. Lecture/Lab: 2.2 credits (55.5 contact hours).

Components: Lecture
Campus: BLC

IET 1084 (1.1) Bearings, Shafts, and Seals
Course ID: 007149
Introduces basic types and functions of bearings, shafts and seals found on mechanical drive systems commonly used in industry. Lecture/Lab: 1.1 credits (24 contact hours).

Components: Lecture
Campus: BLC

IET 1085 (0.2) Brakes and Clutches
Course ID: 007150
Introduces various types and styles of braking systems and clutch components used in industrial applications. Lecture/Lab: 0.2 credits (4.5 contact hours).

Components: Lecture
Campus: BLC

IET 1086 (0.7) Gears and Cams
Course ID: 007151
Introduces various types and styles of gears and cam follower components used in industrial applications. Lecture/Lab: 0.7 credits (13.5 contact hours).

Components: Lecture
Campus: BLC

IET 1091 (0.7) Basic OSHA Safety
Course ID: 007153
Introduces OSHA and the OSHA regulations that apply to the auto manufacturing industry. Lecture/Lab: 0.7 credits (12 contact hours).

Components: Lecture
Campus: BLC

IET 1092 (0.4) Hoists and Cranes
Course ID: 007154
Introduces the basic concepts and safety rules and issues related to the use of overhead cranes and hoists. Lecture/Lab: 0.4 credit (6 contact hours).

Components: Lecture
Campus: BLC

IET 1093 (1.2) Rigging Awareness & Fundamentals
Course ID: 007155
Introduces the basic concepts and safety rules and issues related to the use of rigging equipment, attachment components, calculating sling angle stresses, and safe lifting and turning loads. Lecture/Lab: 1.2 credits (25.5 contact hours).

Components: Lecture
Campus: BLC

IET 1094 (0.7) First Aid, CPR, & AED
Course ID: 007156
Provides knowledge and skills necessary to help sustain life and minimize the consequences of injury or sudden illness until advanced medical help arrives. Includes first aid, CPR and AED lessons to meet the various training needs of those in workplace, school or community settings. Lecture/Lab: 0.7 credits (16.5 contact hours).

Components: Lecture
Campus: BLC

IET 1101 (0.5) Introduction to Arc Welding
Course ID: 007182
Introduces the power sources used in shielded metal arc welding (SMAW) and gas metal arc welding (GMAW), along with equipment and filler metals used to produce a welded joint and welding principles along with the metallurgy of steel and welding. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture
Campus: BLC

IET 1102 (1.6) SMAW/Stick Welding
Course ID: 007183
Introduces shielded metal arc welding (SMAW) safety and shielded metal arc welding (SMAW) processes including flat, horizontal, vertical, and overhead welding techniques. Lecture/Lab: 1.6 credits (45 contact hours).

Components: Lecture
Campus: BLC

IET 1103 (0.9) Gas Metal Arc Welding
Course ID: 007184
Provides knowledge of theory, safety practices, equipment and techniques required for gas metal arc welding (GMAW) including different transfer methods and position welding. Lecture/Lab: 0.9 credits (25.5 contact hours).

Components: Lecture
Campus: BLC

IET 1104 (1) Welding and Fabrication
Course ID: 007185
Introduces oxy-fuel welding and cutting, including safety, setup and maintenance of oxy-fuel welding and cutting equipment. Includes cutting, braze welding and cutting techniques. Lecture/Lab: 1.0 credits (22.5 contact hours).

Components: Lecture
Campus: BLC

IET 1201 (0.1) Intro to Machining Operations
Course ID: 007187
Introduces machining operations. Focuses on the safe application of the most common machining procedures and machines used by multi-skilled industrial maintenance technicians. Lecture: 0.1 credit (1.5 contact hours).

Components: Lecture
Campus: BLC

IET 1202 (0.6) Turning
Course ID: 007188
Introduces safe operation of lathes, primarily engine and tool room lathes. Addresses various types of lathes used in industry, their component parts, and associated safety precautions. Emphasizes the most common lathe operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.6 credits (16.5 contact hours).

Components: Lecture
Campus: BLC

IET 1203 (0.8) Milling
Course ID: 007189
Introduces safe operation of milling machines, primarily vertical milling machines. Addresses the various types of milling machines used in industry, their component parts, and associated safety precautions. Emphasizes the most common milling operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.8 credits (22.5 contact hours).

Components: Lecture
Campus: BLC

IET 1204 (0.5) Drill Press
Course ID: 007190
Introduces safe operation of drill presses, primarily the sensitive drill press. Addresses the various types of drilling machines used in industry, their component parts, and associated safety precautions. Emphasizes the most common drilling operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.5 credits (13.5 contact hours).

Components: Lecture
Campus: BLC

IET 1205 (0.4) Saws
Course ID: 007191
Introduces safe operation of saws, primarily the horizontal and contour band saw. Addresses the various types of metal saws used in industry, their component parts, and associated safety precautions. Emphasizes the most common sawing operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.4 credits (10.5 contact hours).

Components: Lecture
Campus: BLC

IET 1206 (0.7) Hand and Power Tools
Course ID: 007192
Introduces safe and effective use of hand and power tools. Emphasizes the application of the most common tools used by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.7 credits (16.5 contact hours).

Components: Lecture
Campus: BLC

IET 2011 (1) Electrohydraulics/Pneumatics Fundamentals
Course ID: 007179
Explains the fundamental concepts of fluid power. Covers the principles of fluid power, calculations of physical properties of fluids and their ability to do work. Introduces the various fluid power components, symbols, circuits. Introduces troubleshooting of fluid power components and systems with an emphasis on safety. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Campus: BLC

IET 2012 (0.7) Reservoirs, Fluids, Filters
Course ID: 007178
Introduces functions of hydraulic/pneumatic reservoirs and reservoir components. Addresses properties and requirements for fluids, as well as how filters are used to maintain cleanliness in fluid power systems. Lecture/Lab: 0.7 credits (13.5 contact hours).

Components: Lecture
Campus: BLC
IET 2013 (0.4) Course ID: 007177
Hose, Piping, and Tubing
Introduces various types of conductors that carry fluid through a system. Focuses on fittings, hose, and steel tubing used in fluid power systems. Lecture/Lab: 0.4 credits (9 contact hours).
Components: Lecture
Campus: BLC

IET 2014 (0.8) Course ID: 007176
Pumps, Actuators, Accumulators
Introduces the different types of pumps, actuators and accumulators used in fluid power systems which create flow, change fluid power into mechanical power and devises that store energy in the system. Lecture/Lab: 0.8 credits (16.5 contact hours).
Components: Lecture
Campus: BLC

IET 2015 (1.3) Course ID: 007175
Valves
Explains hydraulic and pneumatic directional control, pressure control and flow control valves. Lecture/Lab: 1.3 credits (28.5 contact hours).
Components: Lecture
Campus: BLC

IET 2016 (0.9) Course ID: 007174
Electrohydraulics/Pneumatics
Introduces the fundamentals of electro-fluid power, including basic electrical principles, basic fluid power principles, electro-fluid power limit devices, common electro-fluid power troubleshooting principles and practices. Lecture/Lab: 0.9 credits (18 contact hours).
Components: Lecture
Campus: BLC

IET 2017 (0.9) Course ID: 007173
Systems Troubleshooting
Introduces troubleshooting of hydraulic and pneumatic systems, including tracing out systems, isolating problems, safety testing and inspecting systems that use combination circuits and combined electro-hydraulic/pneumatic systems. Lecture/Lab: 0.9 credits (19.5 contact hours).
Components: Lecture
Campus: BLC

IET 2031 (0.6) Course ID: 007171
Introduction to PLCs
Introduces various elements of basic PLCs including the identification of programmable logic control systems as well as an overview of PLC system architectures. Provides instruction in basic numbering systems, computer terminology, PLC functions, program structures, language standards, point addressing basics. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
Campus: BLC

IET 2032 (1.4) Course ID: 007170
Hardware & Software
Introduces memory and project organization within a PLC processor, the installation, wiring and configuration of I/O modules, as well as how to start a new project. Lecture/ Lab: 1.4 credits (31.5 contact hours).
Components: Lecture
Campus: BLC

IET 2033 (1.5) Course ID: 007169
Programming PLCs
Introduces various elements of programming PLCs. Addresses the basic elements of PLC programming and routines. Requires student to program using ladder logic, structured text, sequential function chart, and function block languages. Lecture/Lab: 1.5 credits (34.5 contact hours).
Components: Lecture
Campus: BLC

IET 2034 (1.5) Course ID: 007168
PLC Communication
Introduces various elements of industrial communications using PLCs. Addresses common types of control communications in an industrial environment. Includes discussion of PLC addressing used in communications. Lecture/Lab: 1.5 credits (34.5 contact hours).
Components: Lecture
Campus: BLC

IET 2051 (0.6) Course ID: 007166
Introduction to Robotics
Introduces robotics in regard to industrial robotic safety standards, historic timeline of industrial robots, industrial classification of robots, common industrial applications of robots, basic system components found in industrial robot applications, robotic motion concepts, common terms and definitions used in computer integrated manufacturing (CIM) as it relates to robots. Lecture/Lab: 0.6 credits (10.5 contact hours).
Components: Lecture
Campus: BLC

IET 2052 (1.5) Course ID: 007165
Programming/Editing Robots
Introduces robotic systems and programming. Reviews robot system application, automated system safety, robotic system composition, robotic motion control, fundamental programming commands, and program editing. Emphasizes the fundamentals of robot control. Aids students in electronics, welding, computer technology, and general sciences. Lecture/Lab: 1.5 credits (30 contact hours).
Components: Lecture
Campus: BLC

IET 2053 (0.2) Course ID: 007164
Robot and Preventive Maintenance
Instructs an operator, technician, engineer, programmer, or student to master the preventive maintenance techniques required for a robot and their backup systems. Lecture/ Lab: 0.2 credits (4.5 contact hours).
Components: Lecture
Campus: BLC

IET 2054 (1.1) Course ID: 007163
Error Codes & Troubleshooting
Instructs operators, technicians, engineers, programmers, or students on the basic recovery procedures needed to interpret robot error codes and perform a safe recovery start up procedure on robotics equipment. Lecture/Lab: 1.1 credits (22.5 contact hours).
Components: Lecture
Campus: BLC

IET 2055 (0.6) Course ID: 007162
Integration of PLCs & Robots
Introduces concepts associated with integrating robotic applications in a PLC-controlled, automated system. Includes discussion of the standard safety and interface signals associated with integrated systems, as well as various types of robotic applications along with the interface signals typically associated with each application. Stresses the programming concepts that support optimizing cycle time. Lecture/Lab: 0.6 credits (15 contact hours).
Components: Lecture
Campus: BLC

IET 2061 (0.5) Course ID: 007160
Fundamentals
Introduces identification, installation, replacement, and troubleshooting of automation controller circuit boards and modules. Lecture/Lab: 0.5 credits (10.5 contact hours).
Components: Lecture
Campus: BLC

IET 2062 (0.9) Course ID: 007159
Sensors and Photoeyes
Introduces installation, maintenance and troubleshooting of common input devices. Lecture/Lab: 0.9 credits (18 contact hours).
Components: Lecture
Campus: BLC

IET 2063 (0.6) Course ID: 007158
Calibration and Loop Training
Introduces methods of motor control including on-off, proportional, integral, and derivative including PID loop tuning and quality. Lecture/Lab: 0.6 credits (13.5 credits).
Components: Lecture
Campus: BLC

IET 2064 (3) Course ID: 007157
Final Control Elements
Covers automation output devices including AC, DC, and servo motors, variable speed drives, relays, motor starters and sizing of components for various applications. Lecture/ Lab: 3.0 credits (62 contact hours).
Components: Lecture
Campus: BLC

IEX 291 (1) Course ID: 001575
Instructor Consent Required Special Problems I
This course is designed for the student who has demonstrated specific needs. Prerequisite: Permission of Instructor
Components: Laboratory

IEX 292 (0.5) Course ID: 001576
Instructor Consent Required Special Problems II
This is a course designed for the student who has demonstrated specific needs. Prerequisite: Permission of Instructor
Components: Laboratory

IEX 293 (4) Course ID: 005346
Special Problems IV
Designed for the student who has demonstrated specific special needs. Laboratory: 4 credits (180 contact hours).
Components: Laboratory

IMD 100 (3) Course ID: 004764
Introduction to Information Systems
Essential computer concepts and terminology are introduced in this course. An overview of operating systems software, a graphical user interface environment and multitasking concepts, disk and file management, Internet capabilities, and telecommunications are included. Introduction to word processing, spreadsheets, databases, and the integration of these three applications are included. Lecture: 3 credits (45 contact hours).
Components: Lecture
Campus: BLC

IMD 114 (3) Course ID: 005748
Information Literacy
This course is an introduction to the use of information resources, both traditional print materials and online materials, for academic and professional research. Topics include development of search strategy, evaluation of resources, use of database search techniques, ethical and legal aspects of information management and documentation of sources. Lecture: 3 credits (45 contact hours).
Components: Lecture
Campus: BLC

IMD 115 (3) Course ID: 004765
Introduction to Graphic Design
Introduces theory, concepts and techniques required in graphic design. Includes an introduction to layout, color theory and use; design, photo and illustration techniques; and exploration of media in respect to digital design. Integrates concepts regarding the production process including pre-press, printing, other production techniques and distribution. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Campus: BLC

IMD 117 (3) Course ID: 004767
Keyboarding and Basic Word Processing
Students use a microcomputer and software to develop proper techniques of touch keyboarding. Basic word processing skills are integrated with a thorough study of form, style, and arrangement of business documents.
Speed, accuracy and control are emphasized. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 126 (3) Course ID: 004781
Introduction to Desktop Publishing
This course introduces the use of computers for designing and producing various publications is introduced. Hands-on experience is provided in using desktop publishing software and a laser printer to produce high-resolution publications, such as flyers, brochures, business forms, and newsletters. Students are also introduced to basic design techniques, type and graphics layout, and the related terminology.
Prerequisite: IMD 100 or equivalent skills. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 127 (3) Course ID: 005044
Vector Design with Adobe Illustrator
In this course, students will be introduced to and develop vector (line-based) graphics using industry-standard application(s). Topics covered will include examining the theory behind vector graphics, investigating the advertising and print industry's use of this type of graphic, creation and manipulation of vector-based graphics from simple to increasingly complex, as well as development of a portfolio of vector art. Prerequisite: IMD 115 or concurrent or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 128 (3) Course ID: 005045
Raster Design with Adobe Photoshop
In this course, students will be introduced to and develop raster (photo or pixel-based) graphics using industry-standard application(s). Topics covered will include examining the theory behind raster graphics, investigating the advertising and print industry's use of this type of graphic, creation and manipulation of raster-based graphics from simple to increasingly complex, as well as development of a portfolio of raster art and photo editing and manipulation samples. Prerequisite: IMD 115 or concurrent or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 132 (3) Course ID: 000504
Beginning Web Design
Introduces the creation and publication of a web site and covers extensible hypertext markup language (XHTML) and introductory cascading style sheets (CSS). Covers hand-coding for web design, along with the incorporation of graphics into web sites and publishing. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 180 (3) Course ID: 004786
Intermediate Web Design
Utilizes web design image creation software, used to create professional, aesthetically pleasing, effective, and fully-functional websites. Includes creation of complete websites using industry-standard software; create web graphics such as buttons, borders, and banners, and a comprehensive examination of web design fundamentals. Identifies fundamentals including website layout, navigation, font usage, color schemes, site architecture, with emphasis on creating visually-pleasing websites that effectively communicate the desired content for employers and clients. Prerequisite: IMD 133. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 210 (3) Course ID: 004787
Microsoft Office Applications
Utilizes Microsoft Office applications for the creation, manipulation and integration of information. Includes word processing, spreadsheet, database management, presentation and personal information management.

Components: Lecture

Campus: BLC

IMD 212 (3) Course ID: 005049
Advanced Microsoft Office Application
Students learn advanced Microsoft Office skills utilizing spreadsheet and database management applications through creation, management and integration of documents. Prerequisite: IMD 210 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 226 (3) Course ID: 004791
Advanced Desktop Publishing
Requires the demonstration of vital pre-press and print production knowledge necessary for successful output of commercial graphic design projects. Emphasizes raster image creation, editing, and preparation for output, offset printing processes, color separations, spot color usage and preparation, vector graphic usage, font usages and standards, PDF document creation and preparation, and advanced desktop publishing technologies. Prerequisite: IMD 126 and IMD 127 and IMD 128. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 228 (3) Course ID: 006833
Advanced Photoshop
Introduces advanced techniques for manipulating and editing raster (photo or pixel-based) graphics using industry-standard application(s). Examines new software features, advanced methods for file optimization and color correction, making complex selections and combining multiple images to create works of art, as well as development of a professional portfolio of raster art and photo editing and manipulation samples. Pre-requisite: IMD 115 and IMD 128. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 229 (3) Course ID: 006886
Advanced Illustrator
Introduces advanced techniques for the creation of vector-based (Bezier-geometry-based) artwork, including techniques for high-end illustrative and artistic projects. Emphasizes working with painterly and naturalistic brushes, photo-realistic vector-based image creation, advanced gradient mesh usage, advanced 3D techniques, integration with Adobe Flash, advanced workflow procedures, and other techniques extended for intermediate to advanced Adobe Illustrator users. Pre-requisite: IMD 127. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 230 (3) Course ID: 004793
Advanced Web Design
Explores emerging web technologies through the role of web designers. Covers topics and issues to include modification of prewritten scripts and applets as well as analysis of current client- and server-side technologies including PHP, MySQL and XML. Students will conclude the course via the creation of a comprehensive, database-driven dynamic website utilizing current client- and server-side technologies including PHP, MySQL, and XML. Prerequisite: IMD 180 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 232 (3) Course ID: 004794
Web Design with Adobe Dreamweaver
Utilizes an advanced web authoring software application for design and development. Uses a professional WYSIWYG (what-you-see-is-what-you-get) editor to develop and create web pages, automate production, and manage and maintain entire websites. Builds XHTML, CSS, and web development knowledge to customize features and integrate applications. Prerequisite: IMD 133 or equivalent.

Components: Lecture

Campus: BLC

IMD 235 (3) Course ID: 004795
Advanced Word Processing
Students will learn advanced word processing software from intermediate skills through advanced utilities. Topics include producing customized documents, enhancing the visual display of documents, creating customized desktop publishing documents, organizing text in documents using advanced features, and integrating data utilizing various applications. Emphasis will be on mastering the software for optimal use. Prerequisite: IMD 210 or CIT 130, or equivalent skills. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 240 (3) Course ID: 004796
Web Development with Adobe Flash
Introduces students to designing and delivery of interactive web sites using the professional, industry-standard software Flash. Covers integrating animation into web design, along with increasing interactivity and incorporating video into a web site. Covers integration with other web development applications. Prerequisite: IMD 133 or consent of instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 250 (3) Course ID: 005050
Digital Video Editing with Final Cut Pro
Students will capture and edit digital video using industry-standard desktop video software and export to DVD, VHS, and the Internet for use in entertainment, documentary films, commercials, and newscasts. Students will learn to storyboard, plan, and produce a digital video project from conception to final packaging and explore topics such as composing, alpha channels, and special effects. Prerequisite: IMD 100 or IMD 133 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 260 (3) Course ID: 006834
Integrated Project Management
Introduces a holistic, integrated approach to managing projects, exploring both technical and managerial challenges. Emphasizes individual project execution and also provides a strategic perspective, demonstrating means to manage projects at the program and portfolio levels. Examines concepts that also include techniques utilized for completion of a project schedule within budgeted cost and according to specific scope. Prerequisite: IMD 210 and an accounting course. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 265 (3) Course ID: 006835
Project Management for Information Management & Business
Examines the human relations-based aspect that identifies the significant challenges of managing individuals on project teams represents. Includes the development of team leadership skills and the ability to solve team problems related to human interaction. Develops strategies for effective planning and communications with upper management for successful project implementation. Prerequisite: IMD 260. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Campus: BLC

IMD 267 (3) Course ID: 006836
Microsoft Project Software
Utilizes industry standard project management software for creation, implementation, and completion of projects. Includes how to customize the software to meet individual project needs. Pre-requisite: IMD 260. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
IMD 270 (3)  
Course ID: 005214  
**Professional Practices**  
This course is designed to assist students develop strategies for entering the Information Management & Design profession by editing and refining portfolios and creating a correspondence to meet professional standards, designing resumes and other self-promotional materials, developing a job search strategy, practicing interview techniques and professional presentations. Prerequisite: IMD 210 or IMD 226 or consent of instructor. Lecture: 3 credits (45 contact hours).

**Components:** Lecture  
Campus: BLC

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IMD 271 (1-3)  
Course ID: 004797  
**Instructor Consent Required Internship**  
On-the-job experience will be required of the Information Management & Design student. A minimum of 40 clock hours of appropriate experience per credit hour will be required. The learning plan will be discussed and agreed upon by the student, instructor and site supervisor. Prerequisite: Consent of instructor, 2.0 G.P.A., and the completion of 12 credit hours of IMD course work (including IMD 270). Lecture: 1-3 credits (15-45 contact hours).

**Components:** Lecture  
Campus: BLC

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IMD 275 (3)  
Course ID: 004798  
**Information Management and Communications**  
Introduces management principles and techniques as they apply to various types of businesses. Includes research emphasis on information management, team concepts, personnel management, communications and business plans. Explores concepts within freelance, small business, and corporate entities. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
Campus: BLC

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IMD 277 (3)  
Course ID: 006837  
**Typography**  
Explores the use of typography in the context of graphic design and discover the importance of type as a tool for visual problem solving and communication. Explores origins of typography, font usage, the anatomy and different kinds of type, software used for type manipulation, and how basic principles and elements of design (color, hierarchy, form, rhythm, etc.) are applied to typography. Requires the development of portfolio of individual typography-based designs. Prerequisite: (IMD 115 and IMD 126 and IMD 127 and IMD 128) or consent of instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
Campus: BLC

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IMD 280 (3)  
Course ID: 004799  
**Portfolio Practicum: Graphic Design**  
Provides an opportunity to assemble a comprehensive graphic design portfolio using skills learned within the IMD Graphic Design core courses, which will assess students overall graphic design skills. Provides IMD students with a professional design portfolio to aid in the search for employment. Provides the capstone for students choosing the graphic option. Uses presentation, vector, raster, and desktop publishing software to create design-intensive portfolio pieces. Prerequisite: (IMD 127 and IMD 128 and IMD 185 and IMD 226) or Consent of Instructor. Lecture: 3 credits (45 contact hours).

**Components:** Lecture  
Campus: BLC

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IMD 290 (3)  
Course ID: 005779  
**Photography**  
Teaches students basic photography principles and skills to compose technically proficient photographs. Emphasis is on basic camera operations, with exploration of film speeds, apertures, and shutter speeds. Explores composition and elements of lighting. Uses slide lectures, a brief overview of contemporary photography to acquaint students with past and current photography. Lecture: 3 Credits (45 contact hours).

**Components:** Lecture  
Campus: BLC

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IMD 292 (3)  
Course ID: 005215  
**Portfolio Practicum: Web Design**  
In this capstone course, students will assemble a comprehensive web site design portfolio using skills learned in the IMD Web Design core courses. The purpose of the portfolio will be to assess students' overall skills learned in the web design option. It will also be used to provide IMD students with a professional design portfolio to aid in the search for employment. Students will use Adobe Fireworks, Dreamweaver, Flash, Photoshop, and dynamic scripting languages to assemble the comprehensive design portfolio. Prerequisite: (IMD 133 and IMD 180 and IMD 232) or consent of instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture  
Campus: BLC

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IMD 294 (3)  
Course ID: 005799  
**Seminar IMD Technologies**  
Includes research, study, and discussion of a current or emerging topic, issue, or trend in information management and design technologies. May be repeated with different topic for a maximum of 6 credit hours. Prerequisite: IMD 100 or consent of instructor. Lecture: 3 credits (45 contact hours).

**Components:** Lecture  
Campus: BLC

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IMD 299 (1-3)  
Course ID: 004800  
**Instructor Consent Required Selected Topics in Information Management and Design**  
This course is designed to expand course offerings as new technology is developed, as well as consider contemporary and emerging trends in information management and design. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).

**Components:** Lecture  
Campus: BLC

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**IMG**  
**Radiography**

**IMG 100 (7)**  
Course ID: 004294  
**Radiography I**  
Emphasizes the historical perspective, professional ethics, introductory imaging, x-ray tube, patient management, and the role of the radiographer as a member of the health care team. Applies the principles of human anatomy to the study of fundamental radiographic procedures (exposure factors and patient positioning) used for different age groups. Covers procedures of the chest, abdomen, extremities, shoulder girdle, bony thorax, and pelvic girdle. Prerequisite: BIO 139. Corequisite: IMD 101. Lecture: 6 credits (90 contact hours). Laboratory: 1.0 credit (30 contact hours).

**Components:** Laboratory, Lecture

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**IMG 101 (4)**  
Course ID: 004295  
**Clinical I**  
Provides experience in equipment operation, patient care technical factors for radiographic exposures, and in positioning patients accurately for radiographic exams. Prerequisite: Admission to the Radiography Program. BIO 139 and current CPR certification. Corequisite: IMG 100. Clinical: 4.0 credits (240 contact hours).

**Components:** Clinical

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**IMG 104 (2)**  
Course ID: 005604  
**Introduction to Radiography**  
Introduces radiography with emphasis on the historical perspective, professional requirements, health care environment, cultural diversity, and legal and ethical considerations. Incorporates basic tube function and radiation protection. Prerequisite: BIO 137. Prerequisite or Corequisite: BIO 139. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).

**Components:** Laboratory, Lecture

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**IMG 106 (2)**  
Course ID: 005605  
**Patient Care in Radiography**  
Examines basic concepts of care relative to patient physical circumstances as well as to the needs of patient and family. Includes communication skills, safety considerations, and infection control. Prerequisite: BIO 137, Prerequisite or corequisite: BIO 139. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).

**Components:** Laboratory, Lecture

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**IMG 108 (4)**  
Course ID: 005606  
**Radiographic Procedures I**  
Introduces the principles of human anatomy as applied to fundamental radiographic procedures. Includes exposure factors and patient positioning relative to different age groups and to upper and lower extremities, bony and visceral thorax, and abdomen with consideration given to the evaluation of optimal diagnostic images. Prerequisite: BIO 137. Prerequisite or Corequisite: BIO 139. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

**Components:** Laboratory, Lecture

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**IMG 109 (1)**  
Course ID: 005607  
**Clinical Practice I**  
Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, and abdomen. Prerequisite: BIO 137. Prerequisite or Corequisite: BIO 139. Clinical: 1.0 credit (60 contact hours).

**Components:** Clinical

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**IMG 110 (7)**  
Course ID: 004296  
**Radiography II**  
Emphasizes radiographic imaging, related technical factors, and accessories. Applies human anatomy principles to basic radiographic procedures. Includes study of tomography and procedures used for the basic and complex skull, vertebral column, alimentary canal, and the biliary and urinary systems. Considers special radiographic examinations and equipment. Prerequisite: IMG 100 with a grade of C or greater. Corequisite: IMG 111. Lecture: 6.0 credits (90 contact hours). Laboratory: 1.0 credit (30 contact hours).

**Components:** Laboratory, Lecture

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**IMG 111 (4)**  
Course ID: 004297  
**Clinical II**  
Continues IMG 101 to provide experience with equipment operation, patient care, and procedures for accurate radiographic exposures. Encourages increasing responsibility and autonomy as students build on previously-learned procedures. Prerequisite: IMG 101 with a grade of C or greater. Corequisite: IMG 110. Clinical: 4.0 credits (240 contact hours).

**Components:** Clinical

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**IMG 114 (2)**  
Course ID: 005608  
**Image Production & Acquisition**  
Provides knowledge-base related to image production and acquisition, and practical experience with digital imaging systems. Prerequisite: IMG 104 and IMG 106 and IMG 108 and IMG 109. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).

**Components:** Laboratory, Lecture

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**IMG 116 (2)**  
Course ID: 005609  
**Advanced Patient Care in Radiography**  
Examines the basics concepts of medical emergency response and pharmacology related to radiography. Addresses informed consent practices and the use of imaging contrast agents, venipuncture and IV therapy. Includes familiarization to professional practice standards. Prerequisite: IMG 104 and IMG 106 and IMG 108 and IMG 109. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).

**Components:** Laboratory, Lecture

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**IMG 118 (4)**  
Course ID: 005610  
**Radiographic Procedures II**  
Continues procedures instruction with emphasis on the vertebral column, cranium, gastrointestinal, genitourinary, and special radiographic procedures. Focuses on the evaluation of optimal diagnostic images. Prerequisite: IMG 104 and IMG 106 and IMG 108 and IMG 109. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

**Components:** Laboratory, Lecture
IMG 119 (3) Course ID: 005611
Clinical Practice II Provides structured clinical experience through competency-based assignments focusing on the upper and lower extremities, bony and visceral thorax, and abdomen. Prerequisite: IMG 104 and IMG 106 and IMG 108 and IMG 109. Clinical: 3.0 credits (180 contact hours).
Components: Clinical

IMG 201 (3) Course ID: 004298
Clinical III Continues IMG 111 to provide experience with equipment operation application of patient care, set-up of correct technical factors for radiographic exposures, and positioning patients accurately for radiographic exams. Provides opportunities for more responsibility and independence with previously learned procedures. Requires performance of a critical evaluation of finished radiograph with emphasis on acceptable technical exposure factors and accurate patient and anatomical position. Prerequisite: IMG 111 with a grade of C or greater. Clinical: 3.0 credits (180 contact hours).
Components: Clinical

IMG 209 (3) Course ID: 005612
Clinical Practice III Provides clinical experience through structured sequential competency based clinical assignments to include the upper and lower extremities, bony and visceral thorax, abdomen, vertebral column, cranium, and contrast studies of the digestive, urinary, and central nervous systems, and arthrography. Prerequisite: IMG 114 and IMG 116 and IMG 118 and IMG 119. Clinical: 3.0 credits (180 contact hours).
Components: Clinical

IMG 210 (4) Course ID: 004299
Radiography IV Covers theories and principles involved in the production, control, and application of ionizing radiation in radiography. Emphasizes the development of a quality assurance program, quality control testing of radiographic equipment, and image intensification. Prerequisite: IMG 201 with a grade of C or greater. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture

IMG 211 (6) Course ID: 004300
Clinical IV Continues IMG 210 to provide experience with equipment operation, application of patient care, set-up of correct technical factors for radiographic exposures, and positioning patients accurately for radiographic exams. Provides opportunities for more responsibility and independence with previously learned procedures. Prerequisite: IMG 201 with a grade of C or greater. Clinical: 6.0 credits (360 contact hours).
Components: Clinical

IMG 214 (2) Course ID: 005613
Imaging Equipment Focuses on the types of imaging equipment used in radiography including x-ray imaging systems, fluoroscopy, tomography, screens, film, and automatic processing. Introduces quality management in radiography. Prerequisite: IMG 209. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture

IMG 216 (1) Course ID: 005614
Basic Computed Topography Examines basic computed tomography (CT), including imaging formation, equipment, and terminology, with focus on scanning techniques of the head, neck, chest, abdomen and pelvis, and sectional anatomy. Prerequisite: IMG 209. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

IMG 219 (6) Course ID: 005618
Clinical Practice IV Provides structured clinical experience through competency-based assignments that focus on the extremities, bony and visceral thorax, abdomen, vertebral column, and cranium. Includes arthrography and contrast studies of the digestive, urinary, and central nervous systems, as well as basic CT scanning procedures. Prerequisite: IMG 209. Clinical: 6.0 credits (360 contact hours).
Components: Clinical

IMG 220 (4) Course ID: 004301
Radiography V Introduces equipment and advanced modalities used to complement diagnostic radiology includes principles of radiology bi, radiation protection, pathology and the systematic classifications of disease. Provides for a discussion of professional and legal standards. Prerequisite: IMG 210 with a grade of C or greater. Co-requisite: IMG 221. Lecture: 3.0 credits (45 contact hours) Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture

IMG 221 (6) Course ID: 004302
Clinical V Continues IMG 211 to provide experience with equipment operation, application of patient care, set-up of correct technical factors for radiographic exposures, and positioning patients accurately for radiographic exams. Provides opportunities for more responsibility and independence with previously learned procedures. Prerequisite: IMG 211 with a grade of C or greater. Co-requisite: IMG 220. Clinical: 6.0 credits (360 contact hours).
Components: Clinical

IMG 224 (2) Course ID: 005615
Radiation Protection & Biology Examines principles of radiation protection and measurement, as well as basic radiation biology principles, particularly the effects of various radiation levels on living organisms. Prerequisite: IMG 214 and IMG 216 and IMG 219. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

IMG 226 (1) Course ID: 005616
Radiographic Pathology Examines concepts related to disease and etiology with emphasis on radiographic indicators of disease and their impact on exposure factor selection. Prerequisite: IMG 214 and IMG 216 and IMG 219. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

IMG 228 (2) Course ID: 005619
Radiography Seminar Introduces the format, rules, and regulations regarding certification by the American Registry of Radiologic Technologists (ARRT) and state certification requirements. Prerequisite: IMG 214 and IMG 216 and IMG 219. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

IMG 229 (6) Course ID: 005617
Clinical Practice V Provides structured clinical experience through competency-based assignments that focus on the extremities, bony and visceral thorax, abdomen, vertebral column, and cranium. Includes arthrography and contrast studies of the digestive, urinary, and central nervous systems, as well as basic CT scanning procedures. Prerequisite: IMG 214 and IMG 216 and IMG 219. Clinical: 6.0 credits (360 contact hours).
Components: Clinical

IMG 230 (3) Course ID: 004826
Sectional Anatomy for Advanced Medical Imaging Provides content on computed tomography and magnetic resonance imaging (CT/MRI) procedures including patient care, image acquisition, and cross sectional anatomy. Prerequisite: IMG 201 or IMG 216 or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IMG 240 (3) Course ID: 006617
Pathology for Advanced Medical Imaging Modalities Examines diseases commonly diagnosable via computed tomography (CT) and/or magnetic resonance imaging (MRI). Traces the disease or trauma process from its description, etiology, symptoms, and diagnosis with appearance on CT and/or MRI scans. Prerequisite: IMG 201 or IMG 216 or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IMG 250 (3) Course ID: 004827
Computed Topography Physics & Instrumentation Explores the physical principles and instrumentation involved in computed tomography (CT). Examines the history and evolution of CT, and the physics of radiation and CT. Includes the study of configuration, collimation, functions, processing, and quality of CT systems operations. Prerequisite: IMG 201 or IMG 216 or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IMG 255 (3) Course ID: 004828
Magnetic Resonance Physics & Instrumentation Explores the physical principles and instrumentation involved in magnetic resonance imaging (MRI). Examines the history and evolution of MRI and the physics of radiation and MRI. Includes the study of configuration, collimation, functions, processing, and quality of MRI systems operations. Prerequisite: IMG 201 or IMG 216 or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IMG 260 (3) Course ID: 005332
Computed Topography Imaging Procedures Examines the procedures, positioning, and equipment involved in computed tomography (CT) imaging. Prerequisite: IMG 201 or IMG 216 or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IMG 265 (3) Course ID: 004829
Magnetic Resonance Imaging Technology Focuses on patient care and imaging areas of magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA). Explores topics of image formation, tissue characteristics, resolution, imaging options, and parameters, post processing, and patient characteristics. Discusses specific MRI and MRA exams for image body systems. Prerequisite: IMG 201 or IMG 216 or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IMT Industrial Maintenance Technology

IMT 100 (3) Course ID: 001578
Welding for Maintenance Provides basic instruction needed for student to weld using SMAW (Stick), GMAW (MIG), GTAW (TIG), and Oxy-Fuel processes. Corequisite: (IMT 101 or (IMT 1011 - IMT 1014)) or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Same As Offering: IMT 100
Attributes: Course Also Offered in Modules

IMT 101 (2) Course ID: 001579
Welding for Maintenance Lab Provides application of basic welding skills used in SMAW (Stick), GMAW (MIG), GTAW (TIG) and Oxy-Fuel. Corequisite: IMT 100 or consent. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Same As Offering: IMT 101
Attributes: Course Also Offered in Modules
IMT 110 (3) Course ID: 001580 Industrial Maintenance Electrical Principles
Introduces the theory of electricity and magnetism and the relationship of voltage, current, resistance, and power in electrical circuits. Develops an understanding of alternating and direct current fundamentals. Applies formulas to analyze the operation of AC and DC circuits. Corequisite: IMT 111 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Same As Offering: IMT 110 Attributes: Course Also Offered in Modules

IMT 111 (2) Course ID: 001581 Industrial Maintenance Electrical Principles Lab
Verifies knowledge of basic theory by making measurements in working AC and DC circuits. Provides for the construction of various types of circuits and the measurement of their parameters. Stress uses the use of test equipment, safety, and troubleshooting. Corequisite: IMT 110 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Same As Offering: IMT 111 Attributes: Course Also Offered in Modules

IMT 115 (2) Course ID: 001582 Maintenance Machining
Includes fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Corequisite: IMT 116. Lecture: 2 credits (30 contact hours).
Components: Lecture
Same As Offering: IMT 115 Attributes: Course Also Offered in Modules

IMT 116 (5) Course ID: 001583 Maintenance Machining Lab
Includes the application of fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Corequisite: IMT 116 or Consent. Laboratory: 5 credits (150 contact hours).
Components: Laboratory
Same As Offering: IMT 116 Attributes: Course Also Offered in Modules

IMT 120 (3) Course ID: 001584 Industrial Maintenance Rotating Machinery
Students will learn the basic principles needed for the proper maintenance of AC and DC motors. Prerequisite: Permission of the instructor.
Components: Lecture

IMT 121 (2) Course ID: 001585 Industrial Maintenance Rotating Machinery Lab
Provides practical experience in the construction, operation and maintenance of AC motors and alternators and DC motors and generators. Corequisite: IMT 120 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

IMT 140 (3) Course ID: 005594 Industrial Mechanics
Introduces the fundamental principles of fluid power, mechanical systems, and the relationship between voltage, current, resistance, and power in electrical circuits. Presents a broad range of technical information used in industry today by technicians, mechanics, and maintenance personnel. Corequisite: IMT 141. Lecture: 3 credits (45 contact hours).
Components: Lecture

IMT 141 (1) Course ID: 005595 Industrial Mechanics Lab
Provides laboratory experiences for constructing and adjusting basic fluid power circuits, installing and adjusting mechanical drive components, and taking measurements in operational AC and DC electrical circuits. Stress uses the use of common hand tools, test instruments, safety, and troubleshooting. Corequisite: IMT 140. Lab: 1 credit (30 contact hours).
Components: Laboratory

IMT 150 (3) Course ID: 001588 Maintaining Industrial Equipment I
Introduces the student to maintenance techniques and procedures used to maintain industrial equipment. Corequisite: IMT 151 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Same As Offering: IMT 150 Attributes: Course Also Offered in Modules

IMT 151 (2) Course ID: 001589 Maintaining Industrial Equipment I Lab
Provides the student with lab experience in the maintenance of industrial equipment. Corequisite: IMT 150 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Same As Offering: IMT 151 Attributes: Course Also Offered in Modules

IMT 198 (1 - 8) Course ID: 001590 Instructor Consent Required Practicum
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Permission of Instructor. Practicum: 1-8 credits (75-600 contact hours).
Components: Practicum

IMT 220 (3) Course ID: 001592 Industrial Maintenance Electrical Motor Controls I
Addresses the common symbols used in motor control circuits, the fundamentals of electrical schematics and wiring diagrams, the principles of relays, motor starters, switches, pilot devices, sensing devices, and indicator lights, and introduces the different types and operations of basic motor control circuits. Corequisite: IMT 110, & IMT 111. Corequisite: IMT 221. Lecture: 3 credits (45 contact hours).
Components: Lecture
Same As Offering: IMT 220 Attributes: Course Also Offered in Modules

IMT 221 (2) Course ID: 001593 Industrial Maintenance Electrical Motor Controls I Lab
Includes an application of common symbols used in motor control circuits, fundamentals of electrical schematics and wiring diagrams, principles of relays, motor starters, switches, pilot devices, sensing devices, indicator lights, and the different types and operations of basic motor control circuits. Corequisite: IMT 110, & IMT 111. Corequisite: IMT 221. Lecture: 2 credits (60 contact hours).
Components: Laboratory
Same As Offering: IMT 221 Attributes: Course Also Offered in Modules

IMT 222 (2) Course ID: 006422 Industrial Maintenance Motor Controls II
Provides advanced study of motor controls in industry. Addresses open and closed loop control systems, servo motors, encoders, AC and DC motors and industry standard color coding. Prerequisite: (IMT 110 and IMT 111 and IMT 220 and IMT 221) or consent of instructor. Corequisite: IMT 223. Lecture: 2 credits (30 contact hours).
Components: Lecture
Same As Offering: IMT 222 Attributes: Course Also Offered in Modules

IMT 223 (2) Course ID: 006437 Industrial Maintenance Motor Controls II Lab
Provides advanced study of motor controls in industry. Addresses open and closed loop control systems, servo motors, encoders, AC and DC motors and industry standard color coding. Prerequisite: (IMT 110 and IMT 111 and IMT 220 and IMT 221) or consent of instructor. Corequisite: IMT 222. Laboratory: 2 credits (60 hours).
Components: Laboratory
Same As Offering: IMT 223 Attributes: Course Also Offered in Modules

IMT 230 (5) Course ID: 001594 Industrial Maintenance of PLCs
This course includes the theory of programmable logic controllers to include installation, programming, interfacing, and troubleshooting of industrial PLCs. Prerequisite: IMT 240.
Components: Lecture

IMT 231 (2) Course ID: 001595 Industrial Maintenance of PLC's Lab
Addresses the diversity of PLC control devices and applications used in industry today. Safety and electrical lockouts are also included. Prerequisite: [(IMT 110 and 111) or IMT 130 and 131] with a grade of C or greater or Consent of Instructor. Corequisite: IMT 240 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

IMT 240 (6) Course ID: 001596 Industrial Maintenance Motor Control Concepts
Addresses the diversity of control devices and applications used in industry today with safety and electrical lockouts included. The basic theory of programmable logic controllers is also included. Prerequisite: [(IMT 110 and IMT 111) or (IMT 130 and IMT 131) with a grade of C or greater] or Consent of Instructor. Corequisite: IMT 241 or Consent of Instructor. Lecture: 6 credits (90 contact hours).
Components: Lecture

IMT 250 (3) Course ID: 001598 Maintaining Industrial Equipment II
This class is designed to be an integration of the student's accumulative knowledge from the IMM 150 and 151 courses. Special emphasis will be placed on troubleshooting techniques and applied machine repair situations that require the student to apply learned skills from all areas of the curriculum. Prerequisite: IMT 150, IMT 151.
Components: Lecture

IMT 251 (3) Course ID: 001599 Maintaining Industrial Equipment II Lab
Complements IMT 250 and consists of advanced, specific and assigned machine repair tasks. Prerequisite: [(IMT 150 and 151)] with a grade of C or greater or Consent of Instructor. Corequisite: IMT 250 or Consent of Instructor. Laboratory: 3 credits (90 contact hours).
Components: Laboratory

IMT 260 (7) Course ID: 006546 Presswork and Die Maintenance
Includes the fundamental concepts and machining operations needed by the industrial maintenance technician to be proficient in the field of stamping press and die maintenance. Prerequisite: IMT 100 and IMT 101 and [(IMT 115 & IMT 116) or (MTT 114) or (MTT 110 & MTT 112)] or consent of instructor. Lecture: 2 credits (30 contact hours), Lab: 5 credits (150 contact hours).
Components: Lecture

IMT 280 (3) Course ID: 001600 Advanced Programmable Logic Controllers
Covers advanced theory programmable logic controllers to include designing applications, programming, interfacing and troubleshooting of industrial PLCs. Prerequisite: [(IMT 220 and IMT 221 with a grade of C' or greater) or (equivalent) or Consent of Instructor]. Corequisite: IMT 281 or Instructor Consent.
Components: Lecture

IMT 281 (2) Course ID: 001601 Programmable Logic Controllers Lab
Provides practical applications of the theory in IMT 280 to include installation, programming, interfacing and troubleshooting of industrial PLCs. Prerequisite: [(IMT 220 and 221) with a grade of C or greater] or Consent of Instructor. Corequisite: IMT 280 or Consent of Instructor.
IMT 1102 (0.6) Course ID: 005418
Ohm’s Law and Power
Introduces applications of Ohm’s Law and power formulas as it applies to electricity. Corequisite: IMT 1112 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

IMT 1103 (0.6) Course ID: 005419
Introduction to DC Circuits
Introduces direct current series, parallel and series-parallel resistive as it applies to electricity. Corequisite: IMT 1113 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

IMT 1104 (0.6) Course ID: 005420
Introduction to AC Circuits
Introduces alternating current resistive circuits and capacitance in alternating current circuits. Corequisite: IMT 1114 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

IMT 1105 (0.6) Course ID: 005421
Magnetism, Inductance and Transformer Basics
Introduces magnetism, inductance and transformer basics as applied to electricity. Corequisite: IMT 1115 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

IMT 1111 (0.4) Course ID: 005424
Introduction to Electricity and Basic Test Equipment Lab
Introduces atomic theory and basic test equipment practices as it applies to electricity. Applies these principles during hands on activities. Corequisite: IMT 1101 or Consent of Instructor. Laboratory: 0.4 credits (12 contact hours).
Components: Laboratory

IMT 1112 (0.4) Course ID: 005425
Ohm’s Law and Power Lab
Introduces applications of Ohm’s Law and power formulas as it applies to electricity. Applies these principles during hands on activities. Corequisite: IMT 1102 or Consent of Instructor. Laboratory: 0.4 credit (12 contact hours).
Components: Laboratory

IMT 1113 (0.4) Course ID: 005426
Introduction to DC Circuits Lab
Introduces direct current series, parallel and series-parallel resistive as it applies to electricity. Applies these principles during hands on activities. Corequisite: IMT 1103 or Consent of Instructor. Laboratory: 0.4 credit (12 contact hours).
Components: Laboratory

IMT 1114 (0.4) Course ID: 005427
Introduction to AC Circuits Lab
Introduces alternating current resistive circuits and capacitance in alternating current circuits. Applies these principles during hands on activities. Corequisite: IMT 1104 or Consent of Instructor. Laboratory: 0.4 credit (12 contact hours).
Components: Laboratory

IMT 1152 (0.1) Course ID: 006407
Vertical and Horizontal Bandsaw Operations
Introduces vertical and horizontal bandsaw operations including the selection of feeds and speeds as well as blade welding. Corequisite: IMT 1152 or Consent of Instructor. Lecture: 0.1 credit (1.5 contact hours).
Components: Lecture

IMT 1153 (0.3) Course ID: 006408
Drill Press Operations and Procedures
Introduces drill press operations including the selection of feeds and speeds, layout, drill bit selection and sharpening, and precision drilling operations. Corequisite: IMT 1153 or Consent of Instructor. Lecture: 0.3 credit (4.5 contact hours).
Components: Lecture

IMT 1154 (0.8) Course ID: 006409
Lathe Operations and Procedures
Introduces lathe operations including lathe components, grinding tool bits, the selection of feeds and speeds, turning operations, and threading. Prerequisite: IMT 1151 or Consent of Instructor. Corequisite: IMT 1154 or Consent of Instructor. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

IMT 1155 (0.6) Course ID: 006410
Milling Machine and Surface Grinder Operations and Procedures
Introduces milling and surface grinding operations including vise alignment, selection of feeds and speeds, form tools, dressing grinding wheels. Prerequisite: IMT 1151 or Consent of Instructor. Corequisite: IMT 1155 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

IMT 1161 (0.5) Course ID: 006411
General Shop Knowledge Lab
Includes the application of fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Corequisite: IMT 1161 or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1162 (0.5) Course ID: 006412
Vertical and Horizontal Bandsaw Operations Lab
Introduces vertical and horizontal bandsaw operations including the selection of feeds and speeds as well as blade welding. Corequisite: IMT 1152 or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1163 (0.5) Course ID: 006413
Drill Press Operations and Procedures Lab
Introduces drill press operations including the selection of feeds and speeds, layout, drill bit selection and sharpening, and precision drilling operations. Corequisite: IMT 1153 or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1164 (0.2) Course ID: 006414
Lathe Operations and Procedures Lab
Introduces lathe operations including lathe components, grinding tool bits, the selection of feeds and speeds, turning operations, and threading. Corequisite: IMT 1154 or Consent of Instructor. Laboratory: 0.2 credits (60 contact hours).
Components: Laboratory

IMT 1165 (1.5) Course ID: 006415
Milling Machine and Surface Grinder Operations and Procedures Lab
Introduces milling and surface grinding operations including vise alignment, trammng, selection of feeds and speeds, form tools, dressing grinding wheels. Prerequisite: IMT 1161 or Consent of Instructor. Corequisite: IMT 1155 or Consent of Instructor. Laboratory: 1.5 credit (45 contact hours).
Components: Laboratory
IMT 2201 (1) Course ID: 006416
Introduction to Motor Controls
Addresses the importance of electrical safety and the general fundamentals of motor controls. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2211. Lecture: 1 credit (15 contact hours).

Components: Lecture

IMT 2202 (1) Course ID: 006417
Motor Starters and Pilot Devices
Addresses the diversity of motor starters, control devices, and circuitry. Introduces the different types and operations of basic control circuits while reinforcing the common symbols used in motor control circuits as well as interpreting and drawing electrical schematics and wiring diagrams. Prerequisite: IMT 2201 or Consent of Instructor. Corequisite: IMT 2212. Lecture: 1 credit (15 contact hours).

Components: Lecture

IMT 2203 (1) Course ID: 006418
Motor Control Circuits
Explores aspects of electrical symbols and specialized motor control circuit. Prerequisite: IMT 2202 or Consent of Instructor. Corequisite: IMT 2213. Lecture: 1 credit (15 contact hours).

Components: Lecture

IMT 2211 (0.5) Course ID: 006419
Introduction to Motor Controls Lab
Addresses the importance of electrical safety and the general fundamentals of motor controls. Prerequisite: IMT 2201. Laboratory: 0.5 credit (15 contact hours).

Components: Laboratory

Attributes: Course Also Offered in Modules

IMT 2212 (0.5) Course ID: 006420
Motor Starters and Pilot Devices Lab
Addresses the diversity of motor starters, control devices, and circuitry. Prerequisite: IMT 2211 or Consent of Instructor. Corequisite: IMT 2202. Laboratory: 0.5 credit (15 contact hours).

Components: Laboratory

IMT 2213 (1) Course ID: 006421
Motor Control Circuits Lab
Explores aspects of electrical symbols and specialized motor control circuits. Prerequisite: IMT 2212 or Consent of Instructor. Corequisite: IMT 2203. Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory

Attributes: Course Also Offered in Modules

IMT 2231 (0.5) Course ID: 006434
Principles in Process Control and Automation Lab
Provides the lab component for IMT 2221. Covers open and closed loop systems and how they relate to servo and motor encoders. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2221. Lecture: 0.5 credits (15 contact hours).

Components: Laboratory

Same As Offering: IMT 2231

IMT 2232 (0.5) Course ID: 006435
Industry Standards for Control Circuit Wiring and Troubleshooting Methods Lab
Provides the lab component for IMT 2222. Covers industry standards related to color coding of industrial wiring control cabinets. Provides for troubleshooting techniques using electrical hand tools and developing and interpreting troubleshooting flow charts to determine phase failure and voltage drops. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2222. Laboratory: 0.5 credits (15 contact hours).

Components: Laboratory

Same As Offering: IMT 2232

IMT 2233 (1) Course ID: 006436
Industry Standards for Installing Motors/Electronic Variable Speed Drives II
Provides the lab component for IMT 2223. Covers how to properly evaluate maintenance procedures used for installation of AC and DC motors, proper start up and shut down of electrical systems and fault recovery. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2223. Laboratory: 1 credit (30 contact hours).

Components: Laboratory

IMT 2601 (0.5) Course ID: 006547
Stamping Press Basics
Addresses press and production safety, various types of presses, and press operations. Pre-requisite: (IMT 115 & IMT 116) or (MGT 114) or Consent of Instructor. Lecture: 0.5 (Contact Hours 7.5).

Components: Lecture

Same As Offering: IMT 2601

IMT 2602 (0.5) Course ID: 006548
Stamping Die Basics
Addresses the basics of stamping dies including the production of dies, die safety, rigging and setup of dies, die bolting and clamping, and OSHA die identification. Prerequisite: IMT 2601 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours), Lab: 0.2 credits (6 contact hours).

Components: Lecture

Same As Offering: IMT 2602

IMT 2603 (1.3) Course ID: 006550
Stamping Die Processes
Addresses various stamping die processes such as bending, forming, drawing, squeezing, and coining. Prerequisite: IMT 2602 or Consent of Instructor. Lecture: 1.3 (Contact Hours 36).

Components: Lecture

Same As Offering: IMT 2603

IMT 2604 (0.6) Course ID: 006549
Metallurgy of Die Components
Addresses the characteristics of various tool and die steels, the properties of low carbon steels and cast iron, and die surface coatings and treatments. Prerequisite: IMT 2603 or Consent of Instructor. Lecture: 0.1 credits (1.5 Contact Hours), Lab: 0.5 credits (15 contact hours).

Components: Lecture

Same As Offering: IMT 2604

IMT 2605 (1.2) Course ID: 006551
Anatomy of Stamping Dies
Addresses pads and strippers, spring selection, and the characteristics of nitrogen die pressure systems. Prerequisite: IMT 2604 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture

Same As Offering: IMT 2605

IMT 2606 (1.3) Course ID: 006552
Repair Decisions
Addresses the process for die repair decisions, basic considerations needed when repairing dies, and the control of bend by adjusting pad pressure. Pre-requisite: IMT 2605 or Consent of Instructor. Lecture: 1.3 (Contact Hours 34.5).

Components: Lecture

Same As Offering: IMT 2606

IMT 2801 (0.75) Course ID: 006424
Introduction to Programmable Logic Controllers
Provides an overview of Programmable Controllers, their hardware and functions. Prerequisite: (IMT 220 and IMT221 with a grade of “C” or greater) or (equivalent) or Consent of Instructor). Corequisite: IMT 2811 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).

Components: Lecture

IMT 2802 (0.75) Course ID: 006425
Programming Instructions in PLCs
Provides an overview in Programming Programmable Logic Controller Timers and Counters. Corequisite: IMT 2812 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).

Components: Lecture

IMT 2803 (0.75) Course ID: 006426
Number Systems and Data Manipulation in PLCs
Includes different numbering systems, their transfer from one location to another, comparing, manipulation, and common math instructions used in PLC. Corequisite: IMT 2813 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).

Components: Lecture

IMT 2804 (0.75) Course ID: 006427
Advanced Instructions and Troubleshooting PLCs
Provides an understanding of control instructions, sequencers, shift registers, troubleshooting, and forcing inputs and outputs. Corequisite: IMT 2814 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).

Components: Lecture

IMT 2811 (0.5) Course ID: 006428
Introduction to Programmable Logic Controllers Lab
Provides hands-on experience in programming and addressing basic instructions, internal relays, and latching relays. Includes changing modes of operation. Prerequisite: ((IMT 220 and IMT221 with a grade of C or greater) or (equivalent) or Consent of Instructor). Corequisite: IMT 2801 or Instructor Consent. Lecture: 0.5 credit (15 contact hours).

Components: Laboratory

IMT 2812 (0.5) Course ID: 006429
Programming Instructions in PLCs Lab
Provides practical experience in programming Programmable Logic Controller Timers and Counters. Corequisite: IMT 2802 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).

Components: Laboratory

IMT 2813 (0.5) Course ID: 006430
Number Systems and Data Manipulation in PLCs Lab
Convert numbers systems, perform data manipulation, transfer, and comparison on the numbers as well as program math instructions. Corequisite: IMT 2803 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).

Components: Laboratory
INF 220 (2) Course ID: 001611
Components: Lecture
Introduces property-casualty insurance and is a foundation of the KCTCS Computer Literacy Standards. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Computer Lit/AAS Diploma only, Course Also Offered in Modules

IT 105 (3) Course ID: 005389
Components: Lecture
Attributes: Computer Lit/AAS Diploma only, Course Also Offered in Modules

IT 120 (4) Course ID: 003838
Components: Lecture

IT 121 (4) Course ID: 005887
Components: Lecture

IT 123 (4) Course ID: 005888
Components: Lecture

IT 125 (3) Course ID: 006610
Components: Lecture
Attributes: Course Also Offered in Modules
IT 130 (4)  Course ID: 003824  
Web Site Design and Production  
Overall web site production processes are presented with particular emphasis on design involving layout, navigation and interactivity. The operation of digital video cameras, scanners and sound equipment is presented and the design, layout, and composition of images, animation and video suitable for web site production is stressed. Lecture: 4 hrs.  
Components: Lecture  
IT 132 (3)  Course ID: 004076  
Web Page Development  
Introduces web page design using HTML. Focuses on creating web documents using a simple text editor. Covers how to use a simple web editor. Explores features such as layout, tables, images, frames, frames, and the incorporation of sound and video. Includes developing site specifications and methods to increase the appeal and effectiveness of web sites. Covers preparation of web documents appropriate for use in business and professional web sites. Prerequisite: Computer literacy course or consent of instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules  
IT 134 (3)  Course ID: 004077  
Macromedia Flash  
Introduces creating graphics, animation, text forms, and special effects using Macromedia Flash. Prerequisite: Computer literacy course or consent of instructor. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).  
Components: Laboratory, Lecture  
IT 141 (3)  Course ID: 005889  
Introduction to PHP  
Explores the fundamentals of PHP, with emphasis on syntax, structure, and current usage. Includes dynamic generation of webpages, fluid forms, and web security. Prerequisite: CIS 120. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 147 (3)  Course ID: 003815  
SQL Programming  
This first level programming language course covers SQL, a standard relational query and definition language. The syntax for table creation, modification, and access will be presented, including queries based on relational algebra (projection, selection, join, etc.). A host language interface will be used to design interactive screens, format reports, and embed SQL statements. Lecture: 3 hrs. Prerequisite: CIS 120 and CIS 170 or Consent of Instructor.  
Components: Lecture  
IT 160 (3)  Course ID: 004421  
Introduction to Geographical Information System  
Provides basic theories and concepts of geographical information systems including basic GIS capabilities, data collection, data types, GPS, and basic mapping concepts. Introduces GIS software using industry specific applications and technology to provide a conceptual base to build expertise in GIS. Prerequisite: Computer literacy course or consent of instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 170 (3)  Course ID: 003814  
Introduction to Database Design  
Provides an overview of database management system (DBMS) concepts, internal design models, network communications architectures, development tools, and applications. Prerequisite: Computer literacy course, MT 120 or MT 122, or consent of instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
Attributes: Course Also Offered in Modules  
IT 180 (3)  Course ID: 004629  
IT Project Management  
Introduces practical approach to managing essential resources, people, and real-world challenges required to bring any project in on time, on target, and on budget. Covers skills and concepts of essential project management processes, defining requirements, schedules, risk management assessment, change control, and project management software applications. Provides students with a practical approach to developing projects with opportunities to apply skills and elements by completing activities based upon real-time projects and case studies. Prerequisite: Computer literacy course or consent of instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 205 (3)  Course ID: 005468  
Advanced Computer Maintenance  
Provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Active Directory services. Focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. Prerequisite: IT 105 or Consent of Instructor. Lecture/Lab: 3 credits (60 contact hours).  
Components: Lecture  
Course Equivalents: ELT 205  
Attributes: Course Also Offered in Modules  
IT 210 (3)  Course ID: 005226  
Operating System Support  
Introduces end user support and computer management including skills and knowledge required to support users who run current Windows client operating systems in corporate, small business, or home environments. Includes experience with installing, configuring and troubleshooting Windows client operating systems within Active Directory and groupwork environments. Prerequisite: (IT 105 and IT 205) OR (ET 232 and ET 234) OR current A+ certification. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 215 (3)  Course ID: 005227  
Application Support  
Key concepts of application support focusing on skills and knowledge necessary to provide support to end users running the Microsoft Office suite of desktop applications on the current Microsoft Windows operating systems in corporate, small business, or home environments. Experience in installing, configuring, and troubleshooting computer applications including Microsoft Word, Excel, Power Point, Outlook, Outlook Express and Internet Explorer. Prerequisite: IT 210 and (CIS 130 or ET 107). Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 220 (4)  Course ID: 003839  
LAN Switching and Wireless  
Covers the technologies and protocols needed to design and implement a converged switched network. Teaches the hierarchical network design model and how to select devices for each layer, switch configuration for basic functionality, implement Virtual LANs, VTP, and later, VLAN routing in a converged network and the various implementations of Spanning Tree Protocol in a converged network. Prerequisite: IT 120 or Consent of instructor. Lecture: 4 credits (60 contact hours).  
Components: Lecture  
IT 222 (4)  Course ID: 003840  
Accessing the WAN  
Discusses the WAN technologies and network services required by converged applications in Enterprise Networks. Covers implementation and configuration of common data link protocols and application of WAN security concepts, principles of traffic, access control and addressing services. Teaches how to detect, troubleshoot, and correct common enterprise network implementation issues. Prerequisite: (IT 122 and IT 220) or Consent of Instructor. Lecture: 4 credits (60 contact hours).  
Components: Lecture  
IT 223 (4)  Course ID: 005890  
Introducing Routing and Switching in the Enterprise  
 Familiarizes students with the equipment and protocols installed in enterprise networks, with a focus on switched networks, IP Telephony requirements, and security. Introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Prerequisite: IT 123 or consent of the instructor. Lecture: 4 credits (60 contact hours).  
Components: Lecture  
IT 225 (4)  Course ID: 005891  
Designing and Supporting Computer Networks  
Teaches gathering requirements, designing basic networks, establishing proof-of-concept, and performing project management tasks through a variety of case studies and role-playing exercises. Presents lifecycle services, including upgrades, competitive analyses, and system integration, in the context of pre-sale support. Prerequisite: IT 223 or consent of the instructor. Lecture: 4 credits (60 contact hours).  
Components: Lecture  
IT 230 (3)  Course ID: 003825  
Advanced Web Page Development  
This course is designed to give the student experience with advanced topics in planning and implementing a professional web site. Emerging technologies will be explored in creating interactive web pages that incorporate cascading style sheets, DHTML, javascript, and multimedia and graphics. Issues to be covered will include designing for a cross-browser web site and different monitor resolutions. Prerequisite: IT 132 and a scripting language or consent of instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 233 (3)  Course ID: 005477  
Data-driven Web Design  
Addresses 3D-texturing, shading and special effects including the four fundamental elements. Prerequisite: IT 131 and VCC 166. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 235 (3)  Course ID: 003816  
3-D Texturing and Special Effects for Games  
Explores the dynamic features of PHP and how it can interact to form spontaneous websites and dynamic feature rich content. Prerequisite: IT 141. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 241 (3)  Course ID: 005892  
Intermediate PHP  
Explores the dynamic features of PHP and how it can interact to form spontaneous websites and dynamic feature rich content. Prerequisite: IT 141. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
IT 250 (4)  Course ID: 004418  
Introduction to Security  
Introduces computer and network security. Covers communications, infrastructure, operational, and organizational security and cryptography. Lecture: 4 credits (60 contact hours). Prerequisite: Consent of Instructor or NIS 211 and IT 122 or NIS 213.  
Components: Lecture  
Attributes: Course Also Offered in Modules  
IT 252 (4)  Course ID: 004415  
Attacks and Exploits  
This course is designed to provide students with the knowledge and skills necessary to perform a variety of attacks and exploits against computer systems. Knowledge of these offensive techniques will help the student prepare an effective defense against real attacks. Lecture: 4 credits (60 contact hours). Prerequisite: IT 250 or Consent of Instructor.  
Components: Lecture  
Attributes: Course Also Offered in Modules
IT 254 (4) Course ID: 004422
Firewalls and Perimeter Defense
This course is designed to provide students with the knowledge and skills required to secure computers and networks from attacks. Firewall configuration and intrusion-detection systems will be emphasized. Lecture: 4 credits (60 contact hours). Prerequisite: IT 250 or Consent of Instructor.
Components: Lecture
Attributes: Course Also Offered In Modules

IT 255 (3) Course ID: 004630
Computer Forensics
An introduction to the methods and processes of computer forensics; intrusion detection, evidence collection, disk imaging, and report writing. Prerequisite: IT 250 and an Operating System course or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered In Modules

IT 260 (3) Course ID: 004420
GIS Software Tools
GIS extensions are software modules that plug into the core product to deliver powerful added functionality. This class introduces some of the most popular advanced extensions used for network analysis, spatial analysis, and 3D Analysis. Lecture: 3 credits (45 contact hours). Prerequisite: IT 147 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

IT 268 (3) Course ID: 004419
Selected Topics in Geographical Information Systems
Selected topics in Geographical Information Systems will be offered in this course. Topics may vary from semester to semester at the discretion of the instructor including topics such as but not limited to homeland security, agriculture, government applications, remote sensing, spatial modeling, GPS techniques, or cartography. Course may be repeated with different topics to a maximum of six credit hours. Lecture: 3 credits (45 contact hours). Prerequisite: IT 160 or Consent of Instructor.
Components: Lecture

IT 270 (3) Course ID: 003817
Database Systems - Implementation & Management
This course introduces the student to advanced topics in database design, implementation and management. Students will complete realistic database projects such as data warehousing, web-enabled database access, data import/export conversion tasks, and implementing database access using two- and three-tier architectures. The projects will have documented backup and security plans, as well as data dictionaries. The student will become acquainted with important administrative functions of relational database systems. Lecture: 3 hrs. Prerequisite: IT 170 or Consent of Instructor.
Components: Lecture

IT 272 (3) Course ID: 003818
Oracle Database Fundamentals I
Fundamental knowledge of the key tasks and functions required of a database administrator in a production environment. Students will gain hands-on experience creating, starting-up, and shutting-down a database, managing data, expanding the size of the database, implementing basic security and integrity measures, and granting data access privileges to individual users. In-class lab exercises will reinforce key concepts, and provide students with opportunities to troubleshoot real life business issues. This course helps prepare the student for Oracle certification exams that focus on fundamental database architecture and administration concepts. Prerequisite: IT 147 SQL Programming or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

IT 280 (4) Course ID: 004082
Building Scalable Cisco Internetworks (BSCI)
Covers efficient and expandable enterprise networks by installing, configuring, monitoring and troubleshooting network infrastructure equipment. Includes how to configure multicast routing, IPv6, DHCP, EIGRP, OSPF single and multi-area, IS-IS, and BGP routing protocols. Prerequisite: Current CCNA or Consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture

IT 282 (4) Course ID: 004083
Implementing Secure Converged Wide-area Networks (ISCW)
Describes secure enterprise-class network services for teleworkers and organizational branch sites. Includes telco configuration and access, frame-mode MPLS, site-to-site IPSEC VPN, Cisco EZVPN, strategies used to mitigate network attacks, Cisco device hardening and IOS firewall features. Prerequisite: Current CCNA or Consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture

IT 284 (4) Course ID: 004084
Building Cisco Multi-layer Switched Networks (BCMSN)
Focuses on the selection and implementation of the appropriate Cisco IOS services to build reliable, scalable multi-layer-switched LANs. Includes VLANs, Spanning Tree Protocol, Inter-VLAN Routing, high availability in a campus environment, wireless client access, minimizing service loss and data theft, and configuration of switched networks to support VOP. Prerequisite: Current CCNA or Consent of Instructor Lecture: 4 credits (60 contact hours).
Components: Lecture

IT 286 (4) Course ID: 004085
Optimizing Converged Cisco Networks (ONT)
Focuses on optimizing and providing effective QoS techniques in converged networks operating voice, wireless, and security applications. Includes implementing a VoIP network, implementing QoS on converged networks, specific IP QoS mechanisms for implementing the DiffServ QoS model, AutoQos, wireless security and basic wireless management. Prerequisite: Current CCNA or Consent of Instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture

IT 291 (3) Course ID: 003826
E-commerce Practicum: Site Implementation
This course provides a framework for integrating the content of the e-commerce program into a complete and functioning e-commerce web site. Topics such as site navigation, problem solving, decision-making, transaction processing, strategic business analysis, visual presentation, and data base management serve as key components of effective site implementation. Lecture: 3 hrs. Prerequisite: IT 230 or Consent of Instructor.
Components: Lecture

IT 295 (3) Course ID: 004086
Web Development and Administration Practicum: Site Implementation
This course provides a framework for integrating the content of the web development and administration program into a complete and functioning web site. Topics such as site navigation, network administration, dynamic programming, visual presentation, and database management serve as key components of effective site implementation. Prerequisite: IT 230 (Concurrent) and NIS 270 or consent of instructor.
Components: Practicum

IT 1001 (1) Course ID: 005440
Computing Fundamentals
Introduces students to Computer Fundamentals, a main component of computer literacy. Mirrors the KCTCS Computer Literacy Standards. Lecture: 1 credit (15 contact hours).
Components: Lecture

IT 1002 (1) Course ID: 005441
Key Applications
Introduces students to Key Applications, a main component of computer literacy. Mirrors the KCTCS Computer Literacy Standards. Lecture: 1 credit (15 contact hours).
Components: Lecture

IT 1003 (1) Course ID: 005442
Living Online
Introduces students to Living Online, a main component of computer literacy. Mirrors the KCTCS Computer Literacy Standards. Lecture: 1 credit (15 contact hours).
Components: Lecture

IT 1051 (0.75) Course ID: 005852
Computer Hardware Essentials
Introduces basic tasks related to PC hardware components, installation, configuration, and troubleshooting. Prerequisite: Computer literacy and placement in (MT 120 or MT 125) or Consent of instructor. Lecture: 0.5 credit (7.5 contact hours), Laboratory: 0.25 credit (7.5 contact hours).
Components: Laboratory, Lecture

IT 1052 (0.75) Course ID: 005853
Computer Software Essentials
Introduces basic tasks related to Windows operating system. Prerequisite: IT 1051 or consent of instructor. Lecture: 0.5 credit (7.5 contact hours), Laboratory: 0.25 credit (7.5 contact hours).
Components: Laboratory, Lecture

IT 1053 (0.75) Course ID: 005854
PC Peripherals and Service Essentials
Introduces basic tasks related to PC peripherals, PC security, safety, and communication skills. Prerequisite: IT 1052 or consent of instructor. Lecture: 0.5 credit (7.5 contact hours), Laboratory: 0.25 credit (7.5 contact hours).
Components: Laboratory, Lecture

IT 1251 (0.8) Course ID: 006611
Technology Basics
Introduces types of technology, hardware, software, and digital information. Provides accurate terminology for technology, impact on society, and new and emerging technologies. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

IT 1252 (0.6) Course ID: 006612
Information Literacy
Access, use, evaluate, and manage digital information from diverse sources while considering how to verify and share electronic communication. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

IT 1253 (0.6) Course ID: 006613
Communicating Online
Presents technology tools which can be used to communicate and collaborate effectively and to manage and organize electronic information. Lecture: 0.6 (9 contact hours).
Components: Lecture

IT 1254 (0.6) Course ID: 006614
Technical Diversity
Describe electronic communications and technology tools used across diverse cultures and disciplines and the impact of technology integration in education and work around the world. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

IT 1255 (0.4) Course ID: 006615
Globalization
Introduces globalization including challenges, opportunities, and issues to technological progress facing Global Information Systems and the impact of technological advances. Lecture: 0.4 credits (6 contact hours).
Components: Lecture
IT 1322 (0.9) Course ID: 005858
Creating Web Document Enhancements
Focusing on creating web documents using a simple text editor. Covers how to use a simple web editor. Prerequisite: IT 1321 or consent of instructor. Lecture: 0.9 credit (13.5 contact hours)
Components: Lecture

IT 1324 (0.6) Course ID: 005859
Web Document Development Principles
Applies site specifications development and methods to increase the appeal and effectiveness of web sites. Covers preparation of web documents appropriate for use in business and professional web sites. Prerequisite: IT 1323 or consent of instructor. Lecture: 0.6 credit (9 contact hours)
Components: Lecture

IT 1701 (0.2) Course ID: 005860
Introduction to Database Management Systems
Provides an overview of database management system (DBMS) concepts, internal design models, network communications architectures, development tools, and applications. Prerequisite: Computer literacy course and MT 120 or MT 122 or consent of instructor. Lecture: 0.2 credit (3 contact hours)
Components: Lecture

IT 1702 (1.4) Course ID: 005861
Conceptual Data Modeling
Provides an overview of the database design process. Introduces two methodologies for designing conceptual data models: Entity Relationship Diagrams (ERD) and Unified Modeling Language (UML) Class Diagrams. Focuses on the performance of an in-depth requirements analysis and the creation of a conceptual data model using either the ERD or UML methodology. Prerequisite: IT 1701 or consent of instructor. Lecture: 1.4 credit (21.0 contact hours)
Components: Lecture

IT 1703 (0.4) Course ID: 005862
Logical Data Modeling Using the Relational Model
Focuses on the translation of a conceptual data model into a logical data model for implementation using a relational database management system. Provides coverage of relational database table design normalization, including first, second, and third normal forms to eliminate data modification anomalies. Prerequisite: IT 1702 or consent of instructor. Lecture: 0.4 credit (6 contact hours)
Components: Lecture

IT 1704 (0.4) Course ID: 005863
Physical Database Design and Implementation
Focuses on the translation of a logical data model into a physical database model. Includes coverage of physical database design factors that impact performance and guidelines for creating new database objects and importing data into those objects. Prerequisite: IT 1703 or consent of instructor. Lecture: 0.4 credit (6 contact hours)
Components: Lecture

IT 1705 (0.6) Course ID: 005864
Introduction to Database Application Development
Focuses on the development of a basic, user-friendly database application built upon an existing physical database. Includes coverage of the development of basic queries, forms, reports, and navigational controls, all of which are constructed using graphical tools/wizards, SQL commands, and/or programming language tools/utilities.

Prerequisite: IT 1704 or consent of instructor. Lecture: 0.6 credits (9 contact hours)
Components: Lecture

IT 2051 (0.75) Course ID: 005865
Advanced Hardware Maintenance
Introduces advanced tasks related to PC hardware components, power components, and peripherals. Prerequisite: IT 105 or consent of instructor. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 0.25 credit (7.5 contact hours)
Components: Laboratory, Lecture

IT 2052 (0.75) Course ID: 005866
Advanced Software Diagnostics
Introduces advanced tasks related to diagnostics, PC system utilities, and recovery methods. Prerequisite: IT 2051 or consent of instructor. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 0.25 credit (7.5 contact hours)
Components: Laboratory, Lecture

IT 2053 (0.75) Course ID: 005867
Advanced Software Maintenance
Introduces advanced tasks related to operating system maintenance, device drivers, firmware, and security. Prerequisite: IT 2052 or consent of instructor. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 0.25 credit (7.5 contact hours)
Components: Laboratory, Lecture

IT 2054 (0.75) Course ID: 005868
Advanced Networking Concepts
Introduces advanced tasks related to networking, network protocols, diagnosis, and troubleshooting network connection issues. Prerequisite: IT 2053 or consent of instructor. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 0.25 credit (7.5 contact hours)
Components: Laboratory, Lecture

IT 2501 (1) Course ID: 005869
Security Methodologies
Provides students with introduction to concepts of computer and network security. Prerequisite: Consent of instructor OR NIS 211 AND (IT 122 or NIS 213). Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2502 (1) Course ID: 005870
Basics of Cryptography
Provides students with basic understanding of cryptography. Prerequisite: Consent of instructor OR IT 2501. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2503 (1) Course ID: 005871
Security Infrastructure
Introduces students to the concepts of security infrastructure. Prerequisite: Consent of instructor OR IT 2502. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2504 (1) Course ID: 005872
Operational and Organizational Security
Provides students with an introduction to concepts of operational and organizational security. Prerequisite: Consent of instructor OR IT 2503. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2521 (1) Course ID: 005873
Intrusion Concepts
Introduces students to common threats and incident procedures against computers and networks. Prerequisite: Consent of instructor OR IT 2520. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2522 (1) Course ID: 005874
Intrusion Methodologies
Introduces students to methodologies of detecting and removing malicious software. Prerequisite: Consent of instructor OR IT 2521. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2523 (1) Course ID: 005875
System Attacks and Exploits
Provides students with knowledge and skills of attacks and exploits against computers and networks and preparing an effective defense against common attacks. Prerequisite: Consent of instructor OR IT 2522. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2542 (1) Course ID: 005876
Intrusion Awareness and Defense
Introduces students to intrusion methods and possible defenses. Prerequisite: Consent of instructor OR IT 2523. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2541 (0.6) Course ID: 005877
Perimeter Awareness
Provides students with an understanding of common networks threats. Prerequisite: Consent of instructor OR IT 2520. Lecture: 0.6 credit (9 contact hours)
Components: Lecture

IT 2542 (0.3) Course ID: 005878
Packet Filtering
Introduces students to software tools for capturing packets. Prerequisite: Consent of instructor OR IT 2541. Lecture: 0.3 credit (4.5 contact hours)
Components: Lecture

IT 2543 (0.5) Course ID: 005879
Proxy Servers
Familiarizes students with concepts required to install and configure a proxy server. Prerequisite: Consent of instructor OR IT 2541. Lecture: 0.5 credit (7.5 contact hours)
Components: Lecture

IT 2544 (1) Course ID: 005880
Firewall Configuration
Introduces students to firewall installation and configuration techniques. Prerequisite: Consent of instructor OR IT 2543 AND IT 2542. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2545 (0.6) Course ID: 005881
Perimeter Defense Testing
Provides students with skills to secure computers and networks from attacks. Prerequisite: Consent of instructor OR IT 2544. Lecture: 0.6 credit (9 contact hours)
Components: Lecture

IT 2546 (1) Course ID: 005882
Intrusion Detection
Introduces students to intrusion detection methods. Prerequisite: Consent of instructor OR IT 2545. Lecture: 1 credit (15 contact hours)
Components: Lecture

IT 2551 (0.6) Course ID: 006391
Computer Forensic Basics
Provides a basic knowledge of computer forensics, problems and concerns, professional conduct, and ethical behaviors. Prerequisite: IT 250 and an Operating System course or consent of instructor. Lecture: 0.6 credit (9 contact hours)
Components: Lecture

IT 2552 (0.8) Course ID: 006392
Forensic Lab Setup and Acquisitions
Provides knowledge and skills to setup a computer forensics lab and to select appropriate tools used for data acquisitions. Prerequisite: IT 2551 or consent of instructor. Lecture: 0.8 credit (12 contact hours)
Components: Lecture

IT 2553 (0.8) Course ID: 006393
Forensic Analysis and Validation
Provides knowledge of file structures, disk, imaging, validation, email evidence, and portable device evidence. Prerequisite: IT 2552 or consent of instructor. Lecture: 0.8 credit (12 contact hours)
Components: Lecture

IT 2554 (0.8) Course ID: 006394
Forensic Investigations
Provides a working knowledge of forensic investigations including preparing, collecting and preserving digital evidence, testifying and court preparation, and writing forensic reports. Prerequisite: IT 2552 or consent of instructor. Lecture: 0.8 credit (12 contact hours)
Components: Lecture
ITE Industrial Technology
ITE 233 (3) Course ID: 004618
Statistical Process Control
Introduces students to the principles and methods used for controlling the quality of goods produced. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

ITE 250 (3) Course ID: 004619
Team Dynamics and Problem Solving
Emphasizes the use of a systematic problem-solving model while building skills for team members and leaders. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

ITP Interpreter Training Program
ITP 115 (3) Course ID: 005590
Heritage and Culture of Deaf People
Overview of the psychological, sociological and cultural impacts of deafness upon children and adults. Explores how deafness can affect the individual's development in language, communication, cognition and psychological-emotional growth. Examines historic relations between deaf and hearing communities, community development and that of the hearing world. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Eastern Kentucky University)
Campus: BLC

ITP 210 (3) Course ID: 005757
Application of Fingerspelling and Numbering Systems
This course will focus on aspects of receptive and expressive fingerspelling usage, including lexicalized fingerspelling and various numbering systems within systems. Prerequisite: ASL 201 with a minimum of C or permission of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Eastern Kentucky University)
Campus: BLC

IVC Invasive Cardiology
IVC 140 (16) Course ID: 006576
Invasive Cardiology I
Examines the anatomy and physiology of the cardiovascular system and the diseases found within the system. Introduces the student to radiological procedures and protocols used in the catheterization laboratory and instruction in advanced cardiac life support (ACLS). Includes the use of techniques used by invasive Cardiology Technologists during specific procedures performed in the catheterization laboratory. Discusses the hemodynamics, pharmacology and calculations encountered in the cardiac catheterization lab. Prerequisite: DMS 105. Lecture: 16.0 credits (240 contact hours).
Components: Lecture

IVC 150 (3) Course ID: 006577
Invasive Cardiology II
Addresses radiology principles, scrub and circulating principles and devices used to obtain optimal outcomes in the cardiac catheterization lab. Introduces procedures, such as MRI and CT, used outside of the cardiac catheterization lab for evaluation of the cardiovascular system. Discusses the monitor and electrophysiology principles, ventricular assist devices, coronary artery bypass grafts and cardiac transplantation procedures performed in the catheterization lab. Emphasizes the preparation, protocol and interventional procedures for a pediatric catheterization lab. Prerequisite: DMS 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IVC 160 (6) Course ID: 006578
Invasive Cardiology Clinical Education I
Applies invasive cardiology instruction to the cardiac catheterization laboratory clinical setting. Introduces the responsibilities of the invasive cardiovascular technologist, with emphasis on radiological procedures. Prerequisite: DMS 105. Clinical: 6.0 credits (360 contact hours).
Components: Clinical

IVC 165 (6) Course ID: 006759
Invasive Cardiology Clinical Education II
Applies invasive cardiology instruction to the cardiac catheterization laboratory clinical setting. Participation in the responsibilities of the invasive cardiovascular technologist, with emphasis on scrub and circulating duties. Introduces electrophysiology laboratory procedures. Prerequisite: IVC 160. Clinical: 6.0 credits (360 contact hours).
Components: Clinical

JAT Journalism, Advertising, Telecommunications
JAT 101 (3) Course ID: 002222
Introduction to Communication Media
Lectures, readings, and other materials provide an introductory survey of the journalism, advertising, and telecommunications professions. This course will foster an understanding of the historical development, theory, effects, regulation, practice, and professional opportunities of these three industries. Students will gain an awareness of the possibilities and limitations of evolving communication technologies, preparing them to become intelligent consumers, producers, and managers of communication media. Lecture: 3 credits (45 contact hours).
Components: Lecture

JAT 241 (1 - 4) Course ID: 002223
Communications Practicum
Supervised laboratory work in the media of mass communications, with meetings for evaluation of work, study of techniques, analyses of problems, and reports. May be repeated to a maximum of four credits. Offered in Community College System only. Independent Study 1 credit (15 contact hours).
Components: Independent Study

JOU Journalism
JOU 101 (3) Course ID: 000788
Introduction to Journalism
This course surveys the history and social theories of journalism and introduces students to contemporary journalistic practice. Students will learn about the function and operation of print, electronic and on-line news media. Issues and concepts to be covered include the relationship of government to media; press freedom and controls; media ethics, and the impact of global communications. The course also covers the relationship of journalism to advertising, public relations and telecommunications, particularly with regard to new technologies. Lecture: 3 credits (45 contact hours).
Components: Lecture

JOU 204 (3) Course ID: 000794
Writing for the Mass Media
An introduction to the concepts and techniques of media writing. This course offers hands-on instruction in information gathering, organization, and writing for print, broadcast and on-line media. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60/30:1 ratio contact hours). Prerequisite: JOU 101 or Consent of Instructor.
Components: Laboratory, Lecture

JPN Japanese Language and Literature
JPN 101 (4) Course ID: 003862
Beginning Japanese I
A course in first semester Japanese language. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Foreign Language

JPN 102 (4) Course ID: 003970
Beginning Japanese II
A course in second semester Japanese language. Prerequisite: JPN 101 or equivalent. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Foreign Language

KHP Kinesiology and Health Promotion
KHP 100 (1) Course ID: 002299
Walking
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory

KHP 101 (3) Course ID: 002300
Weightlifting
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory

KHP 103 (1) Course ID: 002302
Art for Senior Citizens
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory

KHP 104 (3) Course ID: 002304
Beginning Swimming
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory

KHP 106 (1) Course ID: 002306
Beginning Bowling
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory

KHP 107 (1) Course ID: 002307
Fitness
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory

KHP 108 (1) Course ID: 002308
Line Dancing
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory

JPN 201 (3) Course ID: 003994
Intermediate Japanese I
Focuses on developing listening, speaking, reading and writing skills in early intermediate level of Japanese. Prerequisite: JPN 102/RAE 121 or equivalent. Lecture: 3 credits (45 contact hours).
Components: Lecture

JPN 202 (3) Course ID: 004208
Intermediate Japanese II
Focuses on developing listening, speaking, reading and writing skills in upper intermediate level of Japanese. Prerequisite: JPN 201. Lecture: 3 credits (45 contact hours).
Components: Lecture
KHP 109 (1) Course ID: 002309  
Dancing  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 115 (1) Course ID: 002315  
Beginning Karate  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 116 (1) Course ID: 002316  
Karate  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 118 (1) Course ID: 002318  
Golf  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 120 (1) Course ID: 002320  
Self Defense  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 121 (1) Course ID: 002321  
Aerobics  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 122 (1) Course ID: 002322  
Low-Impact Aerobics  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 123 (1) Course ID: 002323  
Basketball  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 124 (1) Course ID: 002324  
Conditioning  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 126 (1) Course ID: 002326  
CPR  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 129 (1) Course ID: 002329  
Beginning Weight Training  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 130 (1) Course ID: 002330  
Water Aerobics  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 131 (1) Course ID: 002331  
Intermediate Aerobics  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 132 (1) Course ID: 002332  
Nautilus  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 133 (1) Course ID: 002333  
Safety and First Aid  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 134 (1) Course ID: 002334  
Cross-training  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 135 (1) Course ID: 002335  
Swimming for Fitness  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 136 (1) Course ID: 002336  
Advanced Walking for Fitness  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 137 (1) Course ID: 002337  
Personal Nutrition and Fitness  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 138 (1) Course ID: 003855  
Yoga  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 139 (1) Course ID: 003856  
Lifetime Sports  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 140 (1) Course ID: 002341  
Advanced Weight Training  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 141 (1) Course ID: 002342  
Advanced Aerobics  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 142 (1) Course ID: 002343  
Intramurals  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 143 (1) Course ID: 002343  
Physical Education  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 145 (3) Course ID: 003870  
Concepts of Health and Fitness  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 146 (3) Course ID: 006816  
Personal Health Behavior  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 150 (3) Course ID: 006816  
Personal Nutrition and Fitness  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 190 (2) Course ID: 000029  
First Aid and Emergency Care  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 158 (1) Course ID: 002321  
Yoga  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 159 (1) Course ID: 002322  
Basketball  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 160 (3) Course ID: 006817  
Personal Nutrition and Fitness  
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)  
Components: Laboratory

KHP 298
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KHP 222 (2)</td>
<td>Course ID: 002225&lt;br&gt;<strong>Drug Education</strong>&lt;br&gt;This course is designed to prepare educators to offer drug education in the schools. Emphasis is placed on the prevalence of drug use by youth; physiological, psychological, and social effects of various drugs; effective and ineffective approaches to drug abuse prevention; appropriate teaching strategies; and evaluating drug curricula. Lecture: 2 credits (30 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>2</td>
<td>This course is designed to prepare educators to offer drug education in the schools. Emphasis is placed on the prevalence of drug use by youth; physiological, psychological, and social effects of various drugs; effective and ineffective approaches to drug abuse prevention; appropriate teaching strategies; and evaluating drug curricula. Lecture: 2 credits (30 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
</tr>
<tr>
<td>KHP 225 (3)</td>
<td>Course ID: 006818&lt;br&gt;<strong>Exercise Techniques and Physical Training</strong>&lt;br&gt;Foci on the core components of personal training. Provides information and resources necessary to pass personal fitness trainer certification. Co-requisite: KHP 235. Lecture: 3.0 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This course focuses on the core components of personal training. It provides information and resources necessary to pass personal fitness trainer certification. Lecture: 3.0 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
</tr>
<tr>
<td>KHP 230 (3)</td>
<td>Course ID: 000379&lt;br&gt;<strong>Human Health and Wellness</strong>&lt;br&gt;The study of health promotion, wellness, and disease prevention concepts as applied to individual, familial, and community health.&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This course focuses on the study of health promotion, wellness, and disease prevention concepts as applied to individual, familial, and community health. Lecture: 3 credits.</td>
</tr>
<tr>
<td>KHP 235 (2)</td>
<td>Course ID: 006820&lt;br&gt;<strong>Personal Trainer Practicum</strong>&lt;br&gt;Students will apply personal training principles and techniques and demonstrate skills with clients in various settings under instructor and preceptor supervision. Co-requisite: KHP 225. Practicum: 2.0 credits (60 contact hours).&lt;br&gt;<strong>Components:</strong> Practicum.</td>
<td>2</td>
<td>This course involves the practical application of personal training principles and techniques in various settings. Practicum: 2.0 credits (60 contact hours).&lt;br&gt;<strong>Components:</strong> Practicum.</td>
</tr>
<tr>
<td>KMA 100 (5)</td>
<td>Course ID: 001629&lt;br&gt;<strong>Kentucky Medication Aide</strong>&lt;br&gt;Prepares a Kentucky Medicaid Nurse Aide to administer specific medications in a long term care facility as delegated and supervised by a licensed nurse. Prerequisite: [MMA 100 or NAA 100 or NAA 125] and six months of work experience as a Kentucky Medicaid Nurse Aide or Consent. Lecture/Lab: 2 credits (30 contact hours).&lt;br&gt;<strong>Components:</strong> Laboratory.</td>
<td>5</td>
<td>This course prepares the student to perform medication administration under supervision as a Kentucky Medicaid Nurse Aide. Laboratory: 2 credits (30 contact hours).&lt;br&gt;<strong>Components:</strong> Laboratory.</td>
</tr>
<tr>
<td>LEAD 200 (3)</td>
<td>Course ID: 006761&lt;br&gt;<strong>Introduction to Leadership Studies</strong>&lt;br&gt;The purpose of the course is to provide students a better understanding of leadership from multiple angles and perspectives. Students will explore the different ways leadership has been defined and studied. Students enrolled in this course will read leadership theory, discuss leadership concepts, and discuss cases portraying leaders who exemplify or challenge these theories. Additionally, students will explore the relevance of leadership theory and concepts to the work that will perform as future leaders in their careers and communities. Lecture: 3.0 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This course aims to provide students with a comprehensive understanding of leadership from various perspectives. Students will engage with leadership theories, explore case studies, and apply leadership concepts to their future careers. Lecture: 3.0 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
</tr>
<tr>
<td>LIT 115 (3)</td>
<td>Course ID: 004801&lt;br&gt;<strong>Introduction to Reference Services</strong>&lt;br&gt;This course presents an introduction to library reference sources and services. Reference interview techniques, use of standard print and online reference tools, bibliographic databases, web search engines and subject guides, and online full-text articles, periodicals, documents, and interlibrary loan services are among the topics included. This is a web-based distance course that involves service learning activities. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This course introduces students to library reference services and techniques. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
</tr>
<tr>
<td>LIT 122 (4)</td>
<td>Course ID: 004802&lt;br&gt;<strong>Library Administration</strong>&lt;br&gt;This course provides an introduction to basic principles of library organization and management. Emphasis is on the practical application of management concepts to the effective administration of library systems. This is a web-based distance course. Prerequisite: LIT 115 or consent of instructor. Lecture: 4 credits (60 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>4</td>
<td>This course focuses on the administration of libraries. Lecture: 4 credits (60 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
</tr>
<tr>
<td>LIT 132 (3)</td>
<td>Course ID: 004803&lt;br&gt;<strong>Library Technical Services</strong>&lt;br&gt;This course is an introduction to library technical services. Acquisitions, processing, cataloging and classification are introduced. This is a web-based distance course. Prerequisite: LIT 115 or consent of instructor. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This course introduces students to library technical services. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
</tr>
<tr>
<td>LIT 200 (3)</td>
<td>Course ID: 005218&lt;br&gt;<strong>Seminar in Kentucky Literature</strong>&lt;br&gt;This is an online or computer-assisted seminar course in Kentucky literature recognizing, examining, and studying distinct regional differences and similarities with concentration on major contemporary and traditional Kentucky writers and their texts. Topics will vary, from a group of authors, and historical period or aesthetic movement, to a genre, a theme, or an aspect of literary theory. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This seminar course explores Kentucky literature, focusing on regional differences and similarities. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
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<tr>
<td>LIT 242 (3)</td>
<td>Course ID: 004806&lt;br&gt;<strong>Literature of Western Kentucky</strong>&lt;br&gt;This is an online or computer-assisted introductory survey course in the literature of Western Kentucky which concentrates on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period or aesthetic movement, to a genre, a theme, or an aspect of literary theory. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This course introduces students to the literature of Western Kentucky. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
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<tr>
<td>LIT 243 (3)</td>
<td>Course ID: 004807&lt;br&gt;<strong>Library Services for Children</strong>&lt;br&gt;This course is a study of library services for children. Topics include library programming development and production, children's literature, collection development, Internet resources, and legal issues. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This course focuses on library services for children. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
</tr>
<tr>
<td>LIT 245 (3)</td>
<td>Course ID: 005083&lt;br&gt;<strong>Library Services for Young Adults</strong>&lt;br&gt;This course is a study of library services for young adults from 6th to 12th grades. Topics include programming, collection development, the use of the Internet, and ethical and legal issues. Emphasis is on the development and promotion of young adult library services. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
<td>3</td>
<td>This course provides students with knowledge of library services for young adults. Lecture: 3 credits (45 contact hours).&lt;br&gt;<strong>Components:</strong> Lecture.</td>
</tr>
</tbody>
</table>
LOM 202 (3) Course ID: 006830
Applied Supply Chain Management
Provides an understanding of the importance of individual components (supplies, manufacturers, distributors, and customers) in the operation of a supply chain. Prerequisite: LOM 102. Lecture: 3 credits (45 contact hours).

Components: Lecture

LSI Lockmasters Security Institute

LSI 120 (4) Course ID: 004403
Comprehensive Security Specialist
Training for the security professional in all aspects of security, addressing current trends in policies and procedures, including physical security, crime prevention, security surveys and contingency planning for internal and external threats. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture
Campus: BLC

LSI 130 (4) Course ID: 004404
GSA: Locks, Vaults & Containers Certified Technician Training
Instruction to successfully service, maintain, perform covert and forced entry, and repair GSA approved security containers. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours). Prerequisite: Instruction to successfully service, maintain, perform covert and forced entry, and repair GSA approved security containers.

Components: Laboratory, Lecture
Campus: BLC

LSI 131 (1) Course ID: 004405
GSA: Locks, Vaults & Containers Certified Inspectors Training
Certification instruction for inspector of GSA locks, vaults and containers. Certified inspectors are able to assess and certify the complete functionality of GSA locks, vaults and containers. Lecture: 0.5 credits (8 contact hours); Laboratory: 0.5 credits (15 contact hours). Prerequisite: LSI 130 or consent of instructor.

Components: Laboratory, Lecture
Campus: BLC

LSI 140 (1) Course ID: 004406
Managing Terrorism and Other Crises
An overview of domestic and international terrorist groups, introducing the concept of contingency planning in comparison to other types of operations planning, and providing basic knowledge regarding the management of a bomb threat and identification of explosives and incendiary devices. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 1 credit (15 contact hours).

Components: Lecture
Campus: BLC

LSI 146 (2) Course ID: 005105
Crisis Management/ Contingency Planning
Crisis Management/Contingency Planning. An NIMS approach to a consistent nationwide approach for Federal, State, Local, and Tribal governments to work effectively and efficiently together to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. Lecture: 2 credits (30 contact hours). Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI.

Components: Lecture
Campus: BLC

LSI 150 (4) Course ID: 004407
Professional Locksmithing
Comprehensive hands-on knowledge of locks, providing the student with the information necessary to become a competent technician who can service, maintain, troubleshoot and master any industrial key lock system. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture
Campus: BLC

LSI 151 (1) Course ID: 004659
Basic Penetration of Safes
Techniques and skills that are required to strategically drill into a container and defeat the locking mechanism in order to penetrate a safe or security container. Prerequisite: LSI 153. Lecture: 1 credit (15 contact hours).

Components: Lecture
Campus: BLC

LSI 152 (1) Course ID: 004660
Combination Lock Manipulation
This course is specifically designed for students intending to enroll in a calculus sequence. Topics will include trigonometric functions, exponentials and logarithms, graphs, polar coordinates, conic sections and systems of conics. Students may not receive credit for MA 110 and either of MA 109 or MA 112. This course is not available for credit to students who have received credit in any higher numbered mathematics course except for MA 123, 162, 199, 201 or 202. Credit is not available for special examination. Lecture, three hours; recitation, two hours per week. Pre-requisites: Two years of high school algebra and a Math ACT score of 23 or above, or consent of department. Lecture: 3 credits (45 contact hours). Discussion: 1.0 credit (30 contact hours).

Components: Discussion, Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC

LSI 153 (2) Course ID: 004661
Safe Lock Servicing - Mechanical and Electronic
Instruction in the operation and servicing of mechanical and electronic safe locks. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture
Campus: BLC

LSI 160 (2) Course ID: 004408
Fundamentals of Electricity
Introduction in basic electrical principles, circuit design and application, and electrical components needed to comprehend the principles of electronic security systems. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture
Campus: BLC

LSI 170 (2) Course ID: 004409
Electronic Access Control
Instruction in the latest security technology utilizing electronic access control systems, enabling the technician to design, install, and troubleshoot the latest electronic access control systems. Prerequisite: LSI 160. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture
Campus: BLC

MA 108 (3) Course ID: 006621
Intermediate Algebra
This course is remedial in nature and covers material commonly found in second year high school algebra. Specific topics to be discussed include numbers, fractions, algebraic expression, simplifying, factoring, laws of exponents, linear equations, simple graphs and polynomial algebra. This course is not available for degree credit toward a bachelor’s degree. Credit not available on the basis of special examination. Prerequisite: One year of high school algebra. Recommended for students with a Math ACT score of 18 or less, or consent of department.

Components: Lecture
Attributes: University Course (University of Kentucky)
Campus: BLC

MA 109 (3) Course ID: 005805
College Algebra
Selected topics in algebra. Develops manipulative algebraic skills and mathematical reasoning required for further study in mathematics. Includes brief review of basic algebra, quadratic formula, systems of linear equations, introduction to functions and graphing. This course is not available for credit to persons who have received credit in any mathematics course of a higher number with the exceptions of MA 112, 123, 162, 201 and 202. Credit not available on the basis of special examination. Prerequisite: Two years of high school algebra and a Math ACT score of 21 or above or a Math SAT score of 510 or above, or MA 108R (UK); or appropriate score on the math placement test. Lecture: 3 credits (45 contact hours).

Components: Lecture
Course Equivalents: MAT 150
Attributes: University Course (University of Kentucky)
Campus: BLC

MA 111 (3) Course ID: 004907
Contemporary Mathematics
An introduction to concepts and applications of mathematics, with examples drawn from such areas as voting methods, apportionment, consumer finance, graph theory, tilings, polyhedra, number theory and game theory. This course is not available for credit to persons who have received credit in any mathematics course of a higher number with the exceptions of MA 112, 123, 162, 201, and 202. This course does not serve as a prerequisite for any calculus course. Credit not available on that basis of special examination. Prerequisite: Two years of high school algebra and a Math ACT score of 19 or above, or MA 108, or math placement test. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC

MA 112 (2) Course ID: 006624
Trigonometry
A standard course. Includes trigonometric functions, identities, multiple-angle formulas, laws of sines and cosines, and graphs of trigonometric functions. This course is not available to persons who have received credit for any mathematics course of a higher number with the exception of MA 113, 123, 132 and 162. Credit not available by special examination. Pre-requisites: Two years of high school algebra and a Math ACTE score of 21 or above or a Math SAT score of 510 or above; or MA 108R; or appropriate score on the math placement test. Lecture: 2 credits (30 contact hours).

Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 113 (4) Course ID: 006625
Calculus I
A course in one-variable calculus, including topics from analytic geometry, derivatives and integrals of elementary functions (including the trigonometric functions) with applications. Lecture, three hours; recitation, two hours per week. Pre-requisites: Math ACT of 27 or above, or Math SAT of 620 or above, or MA 109 (UK) and MA 112 (UK), or MA 110 (UK), or consent of the department. Students who enroll in MA 113 based on their test scores should have completed a year of pre-calculus study in high school that includes the study of the trigonometric functions. Note: Math placement test recommended. Lecture: 3.0 credits (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 114 (4) Course ID: 006626
Calculus II
A continuation of MA 113, primarily stressing techniques of integration. Lecture, 3 hours; recitation, 2 hours per week. Pre-requisites: High school trigonometry or MA 112 (UK); and a grade of C or better in MA 113 (UK) or MA 132 (UK). Lecture: 3.0 credit hours (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 123 (4) Course ID: 006627
Elementary Calculus and Its Applications
An introduction to differential and integral calculus, with applications to business and the biological and physical sciences. Not open to students who have credit in MA 113. Students who have received credit for MA 113 cannot receive credit for MA 123. Pre-requisites: Math ACT score of 26 or above, or Math SAT of 600 or above, or MA 109 (UK) or appropriate math placement score, or consent of department. Note: Math placement test recommended. Lecture: 4.0 credit hours (60 contact hours).
Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 162 (3) Course ID: 006628
Finite Mathematics and Its Applications
Finite mathematics with applications to business, biology, and the social sciences. Linear functions and inequalities, matrix algebra, linear programming, probability. Emphasis on setting up mathematical models from stated problems. Pre-requisites: MA 109 (UK) or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 193 (1) Course ID: 006629
Supplementary Mathematics Workshop I
Laboratory offered (only) as an adjunct to certain mathematics lecture courses. Offered only on a pass/fail basis. Co-requisites: Set by instructor. Lab 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)
Campus: BLC
MA 194 (1) Course ID: 006630
Supplementary Mathematics Workshop II
Laboratory offered (only) as an adjunct to certain mathematics lecture courses. Offered only on a pass/fail basis. Co-requisites: Set by instructor. Lab 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)
Campus: BLC
MA 201 (3) Course ID: 006631
Mathematics for Elementary Teachers I
Sets, numbers and operations, problem solving and number theory. Recommended only for majors in elementary and middle school education. Pre-requisites: MA 109 (UK) or MA 111 (UK). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 202 (3) Course ID: 006632
Mathematics for Elementary Teachers II
Algebraic reasoning, introduction to statistics and probability, geometry, and measurement. Pre-requisites: A grade of "C" or better in MA 201 (UK). Also recommended: a course in logic (e.g. PHI 120) or a course in calculus (e.g. MA 123 (UK)). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 213 (4) Course ID: 006633
Calculus III
MA 213 is a course in multivariable calculus. Topics include three dimensional vectors calculus, partial derivatives, double and triple integrals, sequences, and infinite series. Lecture, 3 hours; recitation, 2 hours per week. Pre-requisites: MA 114 (UK) or equivalent. Lecture: 3.0 credits (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 214 (3) Course ID: 006634
Calculus IV
MA 214 is a course in ordinary differential equations. Emphasis is on first and second order equations and applications. The course includes series solutions of linear second order equations and Laplace transform methods. Pre-requisites: MA 213 or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MA 241 (3) Course ID: 006635
Geometry for Middle School Teachers
A course in plane and solid geometry designed to give middle school mathematics teachers the knowledge needed to teach a beginning geometry course. Cannot be counted toward the mathematics minor or major. Pre-requisites: One semester of calculus or MA 201 (UK) with a grade of C or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)
Campus: BLC
MAI 105 (3) Course ID: 004342
Medical Assisting
Introduction to Medical Assisting
Introduces theory and practical application in the physician’s office laboratory including anatomy and physiology, patient preparation, specimen collection and transport, processing and testing, blood collection and prevention of disease transmission. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: Acceptance into the Medical Assisting Program or consent of Medical Assisting Coordinator/Director.
Components: Laboratory, Lecture
MAI 140 (4) Course ID: 004091
Medical Assisting Clinical Procedures I
Introduces clinical skills and techniques used in the physician’s office for patient examination, diagnosis and treatment. Presents principles and practical applications related to medical asepsis, infection control, vital signs, routine and specialty patient examinations, diagnostic, testing, and treatments with an emphasis on OSHA regulations. Lecture: 3 credits (45 contact hours); Lab: 1 credit (45 contact hours). Prerequisite: Consent of Medical Assisting Program Coordinator/Director or acceptance into the Medical Assisting Program.
Components: Laboratory, Lecture
MAI 150 (3) Course ID: 004092
Medical Assisting Administrative Procedures I
Provides knowledge of the duties required in an office with emphasis placed on a medical office environment. Course content includes communication with patients and co-workers, completion of medical office forms, telephone techniques, filing office correspondence, mail processing, appointment scheduling, processing medical records, and an introduction to medical office computer software. Lecture: 3 credits (45 contact hours). Prerequisite: Acceptance into the Medical Assisting program or consent of Medical Assisting Coordinator/Director.
Components: Lecture
MAI 170 (2) Course ID: 004093
Department Consent Required Dosage Calculations
Provides a review of basic mathemathics skills related to dosage calculations, a thorough knowledge of the systems of measurement and conversion, and application skills to perform dosage calculations. Lecture: 2 credits (30 contact hours). Prerequisite: Consent of Medical Assisting Coordinator/Director.
Components: Lecture
MAI 200 (3) Course ID: 004094
Pathophysiology for the Medical Assistant
Provides instruction related to common acquired diseases, congenital conditions, injuries, illnesses, and trauma situations as related to the major body systems. Lecture: 3 credits (45 contact hours). Prerequisite: (BIO 135 or AHS 109) and (CLA 131 or AHS 115 or AHS 120 or OST 103) or Consent of Medical Assisting Coordinator/Director.
All prerequisites must be achieved with a grade of C or greater.
Components: Lecture
MAI 220 (3) Course ID: 004095
Medical Assisting Laboratory Techniques II
Relates to laboratory procedures waived complexity testing performed in the physician’s office laboratory. Stresses CLIA and OSHA regulations. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: MAI 120 with a grade of C or greater.
Components: Laboratory, Lecture
MAI 230 (3) Course ID: 004096
Department Consent Required Medical Insurance
Introduces fundamentals of insurance processing and coding for the medical office, with focus on proper procedures for accurate coding systems using the ICD, CPT and HCPCS coding system. Lecture: 3 credits (45 contact hours). Prerequisite: Consent of Program Coordinator/Director.
Components: Lecture
MAI 240 (4) Course ID: 004097
Medical Assisting Clinical Procedures II
Continues instruction and application techniques for specialty examination, diagnostic testing and treatment modalities. Emphasizes fundamentals and practical applications of minor office surgical procedures. Lecture: 3 credits (45 contact hours). Lab: 1 credit (45 contact hours). Prerequisite: MAI 140 with a grade of C or greater OR Consent of Program Coordinator.
Components: Laboratory, Lecture
MAT 250 (3) Course ID: 004098
Medical Assisting Administrative Procedures II
Focused on compiling and completing financial and insurance claim forms. Includes banking concepts, accounting systems frequently used in the medical office, payment procedures, insurance plans and claims, paper and electronic billing methods, and professional fees. Lecture: 2 credits (30 contact hours), Lab: 1 credit (30 contact hours). Prerequisite: MAT 150 with a grade of C or greater OR Consent of Program Coordinator.
Components: Laboratory, Lecture

MAT 270 (3) Course ID: 004100
Pharmacology for the Medical Assistant
Examines pharmacology with concentration on drugs, drug nomenclature, classification of drugs, patient education, medication preparation and administration. Lecture: 2 credits (30 contact hours), Lab: 1 credit (45 contact hours). Prerequisite: (MAT 170 and AHS 109 or BIO 135) and (AHS 115 or AHS 120 or CLA 131 or OST 103) with a grade of C or better) or Consent of Medical Assisting Program Coordinator/Director.
Components: Laboratory, Lecture

MAT 281 (1) Course ID: 004101
Medical Assisting Practicum
Provides introductory practical experience (unpaid) through observation and work assignments in a healthcare setting. Clinical: 1 credit (60 contact hours). Prerequisite: Consent of Medical Assisting Program Coordinator/Director.
Components: Clinical

MAT 282 (2 - 3) Course ID: 004102
Medical Assisting Externship
Allows the student to apply knowledge, perform administrative and clinical procedures, and develop professional attitudes for interacting with other professionals and consumers in the health care field by means of externship assignments (unpaid). Clinical: 2-3 credits (120 - 180 contact hours). Prerequisite: MAT 281 and Consent of Medical Assisting Program Coordinator/Director.
Components: Clinical

MAT 299 (1 - 4) Course ID: 004341
Instructor Consent Required Selected Topics:
Medical Assisting: (Topic)
Various medical assisting topics, issues and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of six credit hours. Lecture: varies; Laboratory: varies. Prerequisite: Consent of instructor.
Components: Laboratory, Lecture

MAT Quantitative Reasoning

MAT 55 (3) Course ID: 004555
Pre-Algebra
Includes operations on integers, decimals and fractions. Introduces exponents, square roots, percents, ratios, proportions, prime factorization, basic geometry, algebraic expressions, basic linear equations, and applications. Pre-requisite: KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

MAT 65 (3) Course ID: 004556
Basic Algebra
Includes linear equations and inequalities, integer exponents, polynomials, factoring, equations of lines and their graphs, systems of linear equations, and applications. Prerequisite: MAT 055 or KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

MAT 85 (3) Course ID: 007045
Intermediate Algebra
Includes rational expressions, radical expressions, rational exponents, graphing parabolas, inequalities, equations of lines, functions and applications, with emphasis on solving quadratic, rational, and radical equations. Pre-requisite: MAT 065 or KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MAT 100 (2) Course ID: 002374
College Algebra Workshop
Provides parallel and supplemental review of algebra skills needed for success in college algebra for students with a Math ACT of 19-21. (Credit not available by special exam; withdrawal from MAT 100 requires withdrawal from MAT 150; can be offered pass/fail or letter grade basis.) Lecture: 2 credits (30 contact hours). Prerequisite: Concurrent enrollment in MAT 150. NOTE: Effective Fall 2010 ACT 19.
Components: Lecture

MAT 105 (3) Course ID: 004557
Business Mathematics
Covers basic mathematical concepts as applied to finance. Includes percentages, simple and compound interest, annuities, sinking funds, depreciation, and consumer debt, including installment buying, credit cards, and mortgages. Lecture: 3 credits (45 contact hours). Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination.
Components: Lecture
Attributes: QR - Mathematics (KCTCS), QR - Quantitative Reasoning

MAT 110 (3) Course ID: 004558
Applied Mathematics
Includes the concepts of ratio and proportion, units and conversions, linear equations in two variables, inequalities, graphing and writing equation of a line, percents, interest, descriptive statistics, and logical symbolism. Emphasizes applications in the various technologies. Lecture: 3 credits (45 contact hours). Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination.
Components: Lecture
Attributes: QR - Mathematics (KCTCS), QR - Quantitative Reasoning

MAT 116 (3) Course ID: 004559
Technical Mathematics
Includes some mathematical concepts from algebra, geometry, and trigonometry and applications relevant to these topics. Includes unit conversions, variation, measurement of geometric figures, vectors, and solving right and oblique triangles using trigonometry. Emphasizes applications in the various technologies. Lecture: 3 credits (45 contact hours). Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination.
Components: Lecture
Attributes: QR - Mathematics (KCTCS), QR - Quantitative Reasoning, Course Also Offered in Modules

MAT 126 (3) Course ID: 004562
Technical Algebra and Trigonometry
Examines mathematical concepts from algebra and trigonometry. Includes vectors, phasor algebra, variation, trigonometric functions, coordinate systems, system of linear equations, quadratic, rational, exponential and logarithmic equations. Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Mathematics (KCTCS), QR - Quantitative Reasoning, Course Also Offered in Modules

MAT 146 (3) Course ID: 002375
Contemporary College Mathematics
Serves as a course in college reasoning and problem solving intended for non-science majors. Includes voting methods, finance, population growth, and at least two additional topics chosen from: apportionment, geometry, logic, probability and statistics, graph theory, number theory, game theory, and set theory. Lecture: 3 credits (45 contact hours). Prerequisite: 1. Math ACT score of 19 or above, 2. Successful completion of Intermediate Algebra, MAT 126, or equivalent, or 3. KCTCS placement exam recommendation.
Components: Lecture
Attributes: QR - Mathematics - AA only (CPE), QR - Quantitative Reasoning

MAT 150 (3) Course ID: 002376
College Algebra
Includes selected topics in algebra and analytic geometry. Develops manipulative skills and concepts required for further study in mathematics. Includes linear, quadratic, polynomial, rational, exponential, logarithmic and piecewise functions; systems of equations; and an introduction to analytic geometry. (Students may not receive credit for both MAT150 and any other College Algebra or Precalculus course. Credit not available on the basis of special exam.) Lecture: 3 credits (45 contact hours). Prerequisites: 1. Math ACT score of 22 or above, 2. Math ACT score of 19 or 21 with concurrent MAT 100 workshop, 3. Successful completion of Intermediate Algebra, MAT 126, or equivalent, or 4. KCTCS placement exam recommendation.
Components: Lecture
Course Equivalents: MA 109
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 154 (2) Course ID: 000552
Trigonometry
Includes trigonometric functions, identities, multiple analytic formulas, laws of sines and cosines, graphs of trigonometric functions, and inverse trigonometric functions. Prerequisite: Completion of a college intermediate algebra course or two years of high school algebra. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Course Equivalents: MAT 155
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 155 (3) Course ID: 004563
Trigonometry
Includes the trigonometric functions, identities, multiple analytic formulas, laws of sines and cosines, graphs of trigonometric functions in rectangular and polar coordinates, and solving trigonometric equations. Emphasizes applications in each topic. (Students may not receive credit for both MAT155 and any other trigonometry or precalculus course.) Lecture: 3 credits (45 contact hours). Prerequisite: 1. Math ACT score of 22 or above, 2. Math ACT score of 19 or 21 with concurrent MAT150, 3. Successful completion of Intermediate Algebra, MAT 126, or equivalent, or 4. Placement exam recommendation.
Components: Lecture
Course Equivalents: MAT 154
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 159 (4) Course ID: 000543
Analytic Geometry and Trigonometry
Includes trigonometric functions, trigonometric identities, graphs of trigonometric functions, and inverse trigonometric functions, polynomial and rational functions, the algebra of functions, exponential and logarithmic functions, and systems of equations. The course is not available for credit by special examination. The course is not available for credit to persons who have received credit for college algebra or trigonometry course. Prerequisite: Two years of high school algebra and a Math ACT score of 19 or above, or MA 108R (UK) or math placement test. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Course Equivalents: MAT 160
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 160 (5) Course ID: 005312
Precalculus
Prepares students to enroll in a calculus sequence. Includes trigonometric functions, exponentials and logarithms, graphs, polar coordinates, conic sections, and systems of nonlinear equations. Students may not receive credit for both MAT 160 and either College Algebra or Trigonometry. Credit is not available by special examination. Lecture: 5 credits (75 contact hours). Prerequisite: 1. Math ACT score of 23 or above, 2. Placement exam recommendation, or 3. Consent of instructor.
Components: Lecture
Course Equivalents: MAT 159
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning
MAT 165 (3) Course ID: 005313
Finite Mathematics and its Applications
Examines finite mathematics with applications to business, biology and the social sciences including linear functions and inequalities, matrix algebra, linear programming, probability with emphasis on setting up mathematical models from stated problems. Lecture: 3 credits (45 contact hours). Prerequisite: MAT 150 or equivalent. Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 170 (2) Course ID: 005314
Brief Calculus with Applications
Provides an introduction to differential and integral calculus with applications in biological sciences, social sciences, physical sciences, or business with an analysis of algebraic, exponential, and logarithmic functions. Students may not receive credit for both MAT 170 and MAT 175. Lecture: 3 credits (45 contact hours). Prerequisite: Successful completion of MAT 150 or Math ACT 27 or above. Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 174 (4) Course ID: 000553
Calculus I
Includes topics from analytic geometry, derivatives and integrals of elementary functions, trigonometric functions, exponential functions, and logarithmic functions and their applications. A course in one variable calculus. Prerequisite: MAT ACT score of 27 or above, or MAT 150 and MAT 154, or MAT 159, or consent of instructor. Lecture: 4 credits (75 contact hours). Components: Lecture
Course Equivalents: MAT 175 Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 175 (5) Course ID: 005315
Calculus II
Examines one-variable calculus including limits, differentiation and integration of algebraic, trigonometric, exponential, logarithmic, hyperbolic, and inverse trigonometric functions with applications. Lecture: 5 credits (75 contact hours). Prerequisite: 1. College Algebra and Trigonometry, or equivalent, with grades of 'C' or higher. 2. Math ACT 27 or above. 3. Placement exam recommendation or 4. Consent of instructor. Components: Lecture
Course Equivalents: MAT 174 Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 184 (4) Course ID: 000557
Calculus II
Stresses techniques of integration and infinite series. Includes transcendental functions and polar coordinates. A continuation of MAT 174. Prerequisite: MAT 174 with a grade of 'C' or above. Lecture/Lab: 4.0 credits (75 contact hours). Components: Lecture
Course Equivalents: MAT 185 Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 185 (5) Course ID: 005316
Calculus II
Includes applications of integration, advanced integration techniques, sequences and infinite series, and parametric and polar equations. Lecture: 5 credits (75 contact hours). Prerequisite: Calculus I and Trigonometry, or equivalent, with grades of 'C' or higher, or Consent of Instructor. Components: Lecture
Course Equivalents: MAT 184 Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 190 (1 - 2) Course ID: 004564
Instructor Consent Required Mathematics Workshop
Promotes student success in mathematics by providing supplemental instruction in the form of extra class sessions. Pre-requisite: Mathematics course numbered higher than MAT100. Lab: 1.0 - 2.0 credits (30-60 contact hours). Components: Laboratory

MAT 201 (3) Course ID: 000905
Mathematical Concepts for Middle and Elementary School Teachers I
Concepts are stressed over manipulation. Topics include sets and functions, whole numbers, integers, rational numbers, decimals and real numbers, numeration, and elementary number theory. Lecture: 3 hours. Prerequisite: Two years of high school algebra or MA 108R. Components: Lecture
Attributes: University Course (Eastern Kentucky University) Campus: SMC

MAT 202 (3) Course ID: 000850
Mathematical Concepts for Middle and Elementary School Teachers II
Concepts are stressed over manipulation. Topics include geometry, measurement, the metric system, probability, and basic statistics. Lecture: 3 hours. Prerequisite: MAT 201 with a grade of at least 'C'. Components: Lecture
Attributes: University Course (Eastern Kentucky University) Campus: SMC

MAT 205 (3) Course ID: 005622
Mathematics For Elementary and Middle School Teachers I
Introduces problem solving, number and numeration systems, whole numbers, integers, rational and irrational numbers, and elementary number theory. Requires demonstration of basic skills in mathematics to receive credit in this course. Prerequisite: MAT 145 or MAT 150 or equivalent, with a minimum grade of 'C'. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 206 (3) Course ID: 005623
Mathematics For Elementary and Middle School Teachers II
Introduces probability and statistics; geometric concepts including congruence and similarity; and measurement. Required demonstration of basic skills in mathematics to receive credit in this course. Prerequisite: MAT 145 or MAT 150, or equivalent, with a minimum grade of 'C'. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 261 (3) Course ID: 003966
Introduction to Number Theory
Investigates topics from classical number theory, including discussions of mathematical induction, prime numbers, division algorithms, congruences, and quadratic reciprocity. Prerequisite: Consent of instructor. Lecture: 3 credits (45 contact hours). Components: Lecture

MAT 275 (4) Course ID: 005318
Calculus III
Examines multivariate calculus including parametric equations; rectangular, cylindrical, and spherical coordinate systems; vectors and vector-valued functions; limits and derivatives of functions of several variables; multiple integration; and line and surface integrals. Prerequisite: MAT 185 or equivalent, or Consent of Instructor. Lecture: 4 credits (60 contact hours). Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 285 (3) Course ID: 005319
Differential Equations
Examines ordinary differential equations emphasizing first and second order equations and applications. Includes solutions of second order equations and Laplace transform methods. Prerequisite: MAT275 or Consent of Instructor. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

MAT 0551 (0.3) Course ID: 006676
Whole Numbers
Perform basic whole number operations, evaluate powers and square roots, apply order of operations, perform rounding and estimation, find prime factorizations, and solve real world applications. Pre-requisite Placement by KCTCS placement examination. Lecture: 0.3 credits (4.5 contact hours). Components: Lecture

MAT 0552 (0.7) Course ID: 006677
Fractions
Find equivalent fractions, perform basic fraction operations, apply order of operations, order fractions, and perform real world applications. Pre-requisite: MAT 0551 or placement by KCTCS placement examination. Lecture: 0.7 credits (10.5 contact hours). Components: Lecture

MAT 0553 (0.7) Course ID: 006678
Decimals and Percents
Perform basic decimal and percent operations. Apply order of operations, convert among decimals, percents, and fractions, order decimals, perform rounding and estimation, and solve real world applications. Pre-requisite: MAT 0552 or placement by KCTCS placement examination. Lecture: 0.7 credits (10.5 contact hours). Components: Lecture

MAT 0554 (0.7) Course ID: 006679
Signed Number
Perform basic signed number operations, apply properties of real numbers, evaluate natural number powers, apply order of operations, and solve real world applications. Pre-requisite: MAT 0553 or placement by KCTCS placement examination. Lecture: 0.7 credits (10.5 contact hours). Components: Lecture

MAT 0555 (0.3) Course ID: 006680
Formulas and Measurement
Solve basic formulas, find the perimeter and area of basic plane figures, find the volume of basic geometric solids, solve linear equations using the addition and multiplication properties, convert units within the International System (Metric), Pre-requisite: MAT 0554 or placement by KCTCS placement examination. Components: Lecture

MAT 556 (0.3) Course ID: 006681
Tables and Graphs
Read and interpret data from graphs including pictographs, bar graphs, histograms, line graphs, circle graphs, the rectangular coordinate system and paired data, create a graph from data, and solve real world applications. Pre-requisite: MAT 0555 or placement by KCTCS placement examination. Lecture: 0.3 credits (4.5 contact hours). Components: Lecture

MAT 0651 (0.3) Course ID: 006682
Measurement
Convert measurements within and between the U.S. Customary System of units and the International System (SI-metric) of units, and perform operations involving units of measurement including perimeter, circumference, area, volume, and surface area. Pre-requisite: MAT 055 or equivalent as determined by KCTCS placement examination. Lecture: 0.3 credits (4.5 contact hours). Components: Lecture

MAT 0652 (0.7) Course ID: 006683
Algebraic Expressions
Apply properties of real numbers, evaluate variable expressions for given values of the variables, simplify variable expressions, translate verbal phrases into variable expressions, define and use properties of integral exponents, convert numbers between scientific and standard notations, multiply and divide numbers in scientific notation, evaluate square and cube roots, and apply the Pythagorean Theorem. Pre-requisite: MAT 0651 or placement by KCTCS placement examination. Lecture: 0.7 credits (10.5 contact hours). Components: Lecture
MAT 0653 (0.7) Course ID: 006684
Linear Equations and Inequalities
Solve linear equations and inequalities in one variable, translate verbal problems into equations and solve, solve literal equations with variables of power 1, solve application problems using direct and inverse variation, solve applications of linear equations, and graph solutions. Pre-requisite: MAT 0652 or placement by KCTCS placement examination. Lecture: 0.7 credits (10.5 contact hours).
Components: Lecture

MAT 0654 (0.7) Course ID: 006685
Graphing
Plot points in the rectangular coordinate system, graph linear equations using the slope and y-intercept, graph real world data and applications of graphing linear equations. Pre-requisite: MAT 0653 or placement by KCTCS placement examination. Lecture: 0.7 credits (10.5 contact hours).
Components: Lecture

MAT 0655 (0.3) Course ID: 006686
Polynomials and Exponents
Define and use properties of integral exponents, add polynomials, subtract polynomials, multiply polynomials, and divide a polynomial by a monomial. Pre-requisite: MAT 0654 or placement by KCTCS placement examination. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture

MAT 0656 (0.3) Course ID: 006687
Basic Factoring
Factor the greatest common factor from a polynomial, factor a polynomial by grouping, factor a simple trinomial of the form $ax^2 + bx + c$, factor a difference of two squares, and solve quadratic equations by factoring. Pre-requisite: MAT 0655 or placement by KCTCS placement examination. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture

MAT 1101 (0.7) Course ID: 006142
Logic and Reasoning
Investigates concepts of logical symbolism, valid and invalid arguments. Uses applications throughout. Prerequisite: MAT 0655 or equivalent as determined by KCTCS placement examination. Lecture: 0.7 credit (10.5 contact hours).
Components: Lecture

MAT 1102 (0.8) Course ID: 006143
Statistics
Develops concepts of descriptive statistics. Emphasizes applications throughout. Prerequisite: MAT 0655 or equivalent as determined by KCTCS placement examination. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

MAT 1103 (0.7) Course ID: 006144
Algebra and Graphing
Develops concepts of ratio and proportion, linear equations in two variables, inequalities, graphing and writing the equation of a line. Emphasizes applications throughout. Prerequisite: MAT 0655 or equivalent as determined by KCTCS placement examination. Lecture: 0.7 credit (10.5 contact hours).
Components: Lecture

MAT 125 (3) Course ID: 006669
Fundamentals of Mechatronics A
Introduces the student to the basics of Mechatronic systems and the operation of electrical, mechanical, pneumatics/hydraulic, and Programmable Logic Control components in an advanced manufacturing system. Presents a detailed explanation of the relationships of voltage, current, resistance, power, the operation of mechanical, pneumatics/hydraulic components, and programming fundamentals in industrial systems. Includes an overview of the fundamentals of alternating and direct current, rotating machinery, digital devices, and programming. (Credit may not be earned for this course if the student has earned credit for MFG 135). Pre-requisite: ENGT110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or consent of instructor. Lecture/Lab: 3 credit hours (60 contact hours).
Components: Lecture

MBS Medical Billing Specialist

MBS 100 (2) Course ID: 001673
Introduction to the Health Care Field
This course is designed to acquaint/teach the student with legal issues and ethical concerns as they apply to the patients’ medical records. *Student must maintain a 2.0 GPA in A & P to continue in the program.
Components: Lecture

MBS 110 (6) Course ID: 001676
Medical Insurance and Claims Processing
Provides an in-depth knowledge of the various insurance programs, including rules, regulations and guidelines, and follow-up for Medicare, Medicaid, Commercial insurance, and managed care (HMO), and complete insurance forms manually for reimbursement. Lecture: 6 credits (90 contact hours). Prerequisite: ((AHS 109 or BIO 135 or BIO 137 and BIO 139) and (AHS 115 or CLA 131 or OST 103) and Computer Literacy and MBS 105) with a grade of C or better. Corequisite: MBS 120.
Components: Lecture

MBS 120 (8) Course ID: 001678
Coding for Reimbursement
Prepares the student to code for optimum reimbursement using the ICD, CPT, and HCPCS codes for patient diagnoses and procedures. Prerequisite: (AHS 109 or BIO 135 or BIO 137 and BIO 139) and (AHS 115 or CLA 131 or OST 103) and Computer Literacy and MBS 105) with a grade of C or better) or consent. Corequisite: MBS 110.
Components: Lecture

ME Mechanical Engineering

ME 220 (3) Course ID: 000837
Engineering Thermodynamics I
Fundamental principles of thermodynamics. Prerequisite: PHY 231. Prerequisite or concurrent: MA 214.
Components: Lecture

MFG Manufacturing Technology

MFG 125 (3) Course ID: 006669
Fundamentals of Mechatronics A
Introduces the student to the basics of Mechatronic systems and the operation of electrical, mechanical, pneumatics/hydraulic, and Programmable Logic Control components in an advanced manufacturing system. Combines basic operational and analytical skills with critical thinking and applied troubleshooting. Teaches the students to troubleshoot a multitude of problems involved in electrical, mechanical, and hydraulic/pneumatic systems. (Credit may not be earned for this course if the student has earned credit for MFG 135). Pre-requisite: MFG125 Fundamentals of Mechatronics A or consent of instructor. Lecture/Lab: 3 credit hours (60 contact hours).
Components: Lecture

MFG 135 (6) Course ID: 006671
Fundamentals of Mechatronics
Introduces the student to the basics of Mechatronic systems and the operation of electrical, mechanical, pneumatics/hydraulic, and Programmable Logic Control components in an advanced manufacturing system. Combines basic operational and analytical skills with critical thinking and applied troubleshooting. Teaches the students to troubleshoot a multitude of problems involved in typical electrical, mechanical, and hydraulic/pneumatic systems. (Credit may be earned for this course if the student has earned credit for MFG 125 or MFG 130.) Pre-requisite: ENGT110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or consent of instructor. Lecture/ Lab: 6 credit hours (120 contact hours).
Components: Lecture

MFG 175 (2) Course ID: 006672
Lean Operations
Introduces students to the principles and practices of lean operations. Employs a lean simulation and examples from Toyota and other lean practitioners to introduce students to lean practices. Discusses Total Productive Maintenance. Lecture/ Lab 2 credit hours (30 contact hours).
Components: Lecture

Attributes: Course Also Offered in Modules
Campus: OWC
MG 256 (3) Course ID: 004901
Operations Management
Concepts and methods for economical planning and control of activities required for transforming a set of inputs into specified goods or services are introduced. Emphasis is given to forecasting, decision analysis, cost analysis, design of production systems, production/marketing relationships, operations planning and control, and the importance of global competitiveness. Prerequisite: MGT 283 or consent of instructor. Components: Lecture Campus: BLC

MG 257 (3) Course ID: 006642
Project Management
Provides tools used in project management to accomplish the goals of society's varied organizations. Provides insight into human behavior, knowledge of organizational issues, and skill with quantitative methods to allow successful project management. Pre-requisite: MGT283. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Campus: BLC

MG 267 (3) Course ID: 004913
Introduction to Business Law
The student is introduced to the state and federal court systems, tort and criminal law, law of contracts, partnerships, sale of goods, government regulations, bailments and negotiable instruments. Lecture: 3 credits (45 contact hours).

Components: Lecture
Campus: BLC

MG 274 (3) Course ID: 004914
Human Resource Management
The student is introduced to the basic methods of recruiting, selecting, training, compensating, and maintaining a productive workforce. Concepts of effective employee relations including collective bargaining, contract administration, and safety and health programs are introduced. Techniques for systematic human resource planning and development of policies consistent with government regulations are emphasized. Prerequisite: MGT 283 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture
Campus: BLC

MG 283 (3) Course ID: 004916
Principles of Management
The functional framework of planning, organizing, leading, and controlling is utilized to introduce the management process. The interdisciplinary nature of management theory is introduced also, with the inclusion of relevant aspects of human behavior and rational decision making. Prerequisite: BA 160/MGT 160, B&E 100 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture
Campus: BLC

MG 284 (3) Course ID: 004917
Applied Management Skills
A capstone course in which management theories and techniques are applied with emphasis on the action-skills that managers need for success. Course topics include delegating, motivating employees, team-building, conflict management, coaching and managing change. Prerequisite: BE 283/MGT 283 or prior supervisory experience. Lecture: 3 credits (45 contact hours).

Components: Lecture
Campus: BLC

MG 286 (3) Course ID: 004918
Self-Management
The need for managers to be self-directed before they can manage successfully the work of others is emphasized. Contemporary approaches to developing the behavioral skills needed to improve personal effectiveness are explored. Topics include personal planning and goal setting, time management, stress management, interpersonal and human relations skills. Lecture: 3 credits (45 contact hours).

Components: Lecture
Campus: BLC

MIT 103 (3) Course ID: 004510
Medical Office Terminology
Introduces students to medical terminology including familiar elements, body systems, operative procedures, pharmacology, and methods of researching medical information including, but not limited to, names and descriptions of diseases and drugs. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MIT 104 (3) Course ID: 004103
Medical Insurance
Introduces students to the basics of medical insurance including: insurance terminology, various coding systems, government programs, and general insurance procedures. Pre-requisite Or Co-requisite: MIT 103 or AHS 115 or CLA 131. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MIT 106 (3) Course ID: 004104
Introduction to Medical Transcription
Provides experience in transcription of basic medical dictation including English usage, transcription skills, medical knowledge, and proofreading and editing skills while meeting progressively demanding accuracy and productivity standards. Prerequisite: Computer Literacy course and OST 110 and (ENG 101 or OST 108) and (AHS 115 or CLA 131 or MIT 103). Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MIT 204 (3) Course ID: 004105
Medical Coding
Develops medical coding skills using government mandated coding systems as applied. Includes other reimbursement methods and medical insurance concepts. Prerequisite: MIT 104. Co-requisite: BIO 125 or Equivalent. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
MIT 205 (3) Course ID: 004509
Advanced Medical Coding
Applies advanced coding rules for various coding systems and applies the rules to code patient services for a variety of payment systems emphasizing payment fraud and/or abuse. Prerequisite: MIT 204. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MIT 206 (3) Course ID: 004106
Medical Transcription
Applies advanced concepts of medical transcription and provides advanced practice. Prerequisite: MIT 106 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MIT 208 (3) Course ID: 004507
Instructor Consent Required Inpatient Coding
Designed for students who have completed an entry-level coding course and are ready to move into more advanced hospital coding. Emphasizes inpatient coding using current government mandated coding systems. Prerequisite: MIT 204. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MIT 212 (1) Medications
Introduces the student to Pharmacology; the most commonly used drugs, their names, and classification; and drug reference tools while stressing spelling. Prerequisite: (MIT 103 or AHS 115 or CLA 131) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 217 (3) Medical Office Procedures
Provides a working knowledge of the duties required in a medical office. Includes professional and career responsibilities, interpersonal communication, administrative responsibilities, and financial administration. Pre-requisite Or Co-requisite: OST 110. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MIT 219 (3) Coding Exam Preparation
Designed to prepare medical coding students to take a certifying exam to become a professional outpatient coder as offered by AAPC or PHIA. Includes outpatient coding cases and review of medical terminology, basic anatomy, basic pathophysiology, reimbursement issues, and advanced coding guidelines for CPT, ICD-9-CM, and HCPCS coding systems. Pre-requisite: (MIT 204 and MIT 205) or MBS 120. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MIT 227 (3) Medical Office Software
Provides a working knowledge of computer management software in a simulated medical office setting. Prerequisite: (MIT 103 or AHS 115 or CLA 131) and Computer Literacy. Corequisite: MIT 217. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MIT 228 (3) Electronic Medical Records
Provides a working knowledge of computerized medical records software used in a variety of healthcare facilities. Pre-requisite: MIT 227. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MIT 230 (3) Medical Information Management
Identifies and applies rules and regulations of medical filing systems and procedures. Emphasizes management of both hard copy and magnetic media using alphabetic, numeric, chronologic, and color-coded filing systems. Concepts mastered for file retention and archiving. Discusses legal and ethical aspects of medical records. Prerequisite: Computer literacy course. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MIT 295 (3) Medical Information Technology Capstone
Enhances the student's transition from class to work by providing unpaid learning activities related to the MIT field. Integrates work experience with academic instruction. Includes an internship, field experiences, and/or simulated work experiences in which the student applies previously or concurrently learned concepts to practical work situations within the MIT field. Pre-requisite: Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours). Practicum: 2.0 credits (120 contact hours).
Components: Lecture, Practicum

MKT 100 (3) Introduction to Marketing
This course introduces the essentials of marketing for small and large organizations and develops concepts such as publicity, promotion, and market research, while emphasizing the importance of communication, interpersonal and management skills. Prerequisites: (MIT 103 or BA 100, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

MKT 155 (3) Personal Selling
The professional selling process which involves a series of interrelated activities is introduced. Emphasis is placed on planning and delivery of sales presentations. The six selling steps are examined - prospecting, qualifying, presenting, answering objections, closing, and the after-sale service. Students demonstrate effective selling techniques through simulation and role playing. Lecture: 3 credits (45 contact hours).
Components: Lecture

MKT 202 (3) Principles of Marketing
The marketing function is introduced and applied to various types of business organizations with attention to the marketing concept. Topics include the marketing mix of product, price, promotion, and distribution decisions; international marketing; and social responsibility. Prerequisite: MKT 160 or BA 100, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

MKT 282 (3) Advertising and Promotion
Advertising and Promotion
The principles of advertising will be introduced to the student. Topics will include economic and social aspects; advertising research; media strategy; consumer behavior; and legal issues in advertising. Prerequisite: BA 282/MKT 282. Lecture: 3 credits (45 contact hours).
Components: Lecture

MKT 290 (3) Advertising and Promotion
Advertising and Promotion
The principles of advertising will be introduced to the student. Topics will include economic and social aspects; advertising research; media strategy; consumer behavior; and legal issues in advertising. Prerequisite: BA 282/MKT 282. Lecture: 3 credits (45 contact hours).
Components: Lecture

MKT 291 (3) Retail Management
Retail management, merchandising, promotions, store control, and decision making are examined in this course. Fundamental principles of store operation, consumer behavior, and customer service are addressed. Retailing trends, opportunities, and problems are included also. Lecture: 3 credits (45 contact hours).
Components: Lecture

MKT 292 (3) Retail Management
Retail management, merchandising, promotions, store control, and decision making are examined in this course. Fundamental principles of store operation, consumer behavior, and customer service are addressed. Retailing trends, opportunities, and problems are included also. Lecture: 3 credits (45 contact hours).

MKT 295 (3) Medical Information Technology Capstone
Enhances the student's transition from class to work by providing unpaid learning activities related to the MIT field. Integrates work experience with academic instruction. Includes an internship, field experiences, and/or simulated work experiences in which the student applies previously or concurrently learned concepts to practical work situations within the MIT field. Pre-requisite: Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours). Practicum: 2.0 credits (120 contact hours).
Components: Lecture, Practicum

MNA Medicaid Nurse Aide
MNA 100 (3) Course ID: 001772
Medicaid Nurse Aide
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a long term care setting. Focuses on communication, infection control, safety, resident/patient rights, and basic nursing skills. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396d and 907 KAR 1:450. Lecture/ Lab: 3 credits (75 contact hours). (45:1 ratio).
Components: Lecture
Course Equivalents: NAA 100

MNG Mining Technology
MNG 123 (4) Course ID: 000576
Mining Electricity I
Qualifies students to take the Mine Electrical Certification Exam administered by Kentucky Office of Mine Safety and Licensing. Includes topics of basic electricity, direct current circuits, impedance, reactance, power, electrical energy, permisibility, underground and surface laws, solid-state, and national instruments and applications. Co-requisite: MNG 125. Lecture: 4.0 credit hours (60 contact hours).
Components: Lecture

MNG 125 (1) Mining Electricity I Lab
Encompasses an elementary lab for mining technology students. Includes construction of circuits using electrical-measuring instruments in the analysis of the circuits with focus on electrical safety. Emphasizes mining electrical equipment circuits, permisibility and maintenance. Corequisite: MNG 125. Laboratory: 1.0 credits (30 contact hours).
Components: Laboratory

MNG 150 (3) Mining Laws
Provides the theory, intent, construction and application of state and federal regulations pertaining to underground and surface coal mining. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MNG 160 (3) Elements of Underground Mining
Elements of Underground Mining
Introduces underground mining methods, operations, and procedures. Includes topics of miners’ rights, work environments, health and safety standards, roof control, mine ventilation, transportation, communication, compressed gas cylinders, explosives, mine gases and instruments, electrical hazards, accident prevention, and emergency procedures. Co-requisite: MNG 161. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MNG 161 (1) Elements of Underground Mining Lab
Elements of Underground Mining Lab
Applies the principles and policies of mining methods, operations, and procedures in a controlled laboratory environment. Focuses on the skills associated with the information taught in the paired underground mining lecture course. Co-requisite: MNG 160. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

MNG 170 (2) Elements of Surface Mining
Elements of Surface Mining
Introduces study of surface mining methods, operations, and procedures. Includes topics of miners’ rights, work environments, ground control, health and safety standards, transportation, communication, compressed gas cylinders, explosives, mine gases and instruments, electrical hazards, accident prevention, and emergency procedures. Co-requisite: MNG 171. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

MNG 171 (1) Elements of Surface Mining Lab
Elements of Surface Mining Lab
Applies the principles and policies of mining methods, operations, and procedures in a controlled laboratory environment.
environment. Focuses on the skills associated with the information taught in the paired lecture course for surface mining. Co-requisite: MNG 170. Lab: 1.0 credit (30 contact hours).

Components: Laboratory

MNG 180 (3) Course ID: 006789
Environmental Issues in Mining
Introduces topic of how underground and surface mining operations impact the environment in a multitude of ways. Includes basic information related to geological formations in mining and structure of coal related. Relates methods to mitigate negative affects of mining. Discusses methods to repair damage to environment. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MNG 190 (3) Course ID: 005206
Mine Emergency Technician
Applies principles and procedures to identify and treat life threatening conditions. Offers safety training needed to receive a Mine Emergency Technician certificate from Kentucky Department of Mines and Minerals after successful completion of the optional test. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MNG 274 (3) Course ID: 000722
Mine Safety
Introduces mine safety, program organization, safety training, mine rescue operations, and the role of state and federal governments in mine safety. Includes field trips as an integral part of the course. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MNG 275 (3) Course ID: 000725
Mine Management
Covers basic principles of business management and their specific applications to mine operations. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MNG 286 (3) Course ID: 000738
Roof Control and Ventilation
Involves an in-depth study of roof and rib control, and coal mine ventilation. Includes methods of inspection and reporting potential safety hazards, reading roof control plans, processes and procedures involving mine resistance, law, and minimum standards. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MNG 299 (1 - 4) Course ID: 006790
Selected Topics in Mining Technology: Topic
Addresses various mining technology topics, issues and trends. Includes topics that may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of four credit hours. Lecture/Lab: 1.0 - 4.0 credits (contact hours 15 - 120).

Components: Lecture

MOR Medical Office Radiology
MOR 100 (6) Course ID: 001773
Medical Office Limited Radiography
Provides knowledge and lab experience necessary to meet requirements for Limited Medical Radiography licensure. Consists of patient care and management, radiographic procedures, image production and evaluation, equipment operation and maintenance. Prerequisite: AHS 109 and AHS 115 with a grade of C or better. Co-requisite: MOR 115. Lecture: 4.0 credits (60 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture

MOR 115 (3) Course ID: 001775
Medical Office Limited Radiography Clinical
Apply the principles and procedures learned to afford the student the opportunity to observe, assist, and perform diagnostic radiographic examinations. Mandated by the State Radiation Control Board, the student shall accrue a total of 360 contact hours and perform the minimum of (50) radiographic examinations in each of the following areas: Chest, Extremities, and Musculoskeletal. Pre-requisite: AHS 109 and AHS 115 with a grade of C or better. Co-

Components: Lecture

MOR 117 (6) Course ID: 007111 Advanced Medical Office Radiography
Provides knowledge and lab experience necessary to meet requirements for Limited Medical Radiography licensure. Consists of patient care and management, radiographic procedures, image production and evaluation, equipment operation and maintenance. Prerequisite: MOR 100 and MOR 115 with a grade of C or better. Co-requisite: MOR 119 Advanced Medical Office Radiology Clinical. Lecture: 4.0 credits (60 contact hours). Lab: 2.0 credit (60 contact hours).

Components: Laboratory, Lecture

MOR 119 (3) Course ID: 007112
Advanced Medical Office Limited Radiography Clinical
Apply the principles and procedures learned in MOR 100 and MOR 115 to afford the student the opportunity to observe, assist, and perform diagnostic radiographic examinations. Mandated by the State Radiation Control Board, the student shall accrue a total of 360 contact hours and perform the minimum of (50) radiographic examinations in each of the following areas: Chest, Extremities, and Musculoskeletal. Pre-requisite: AHS 109 and AHS 115 with a grade of C or better. Co-

Components: Clinical

MRN Motor Transport
MRN 101 (3) Course ID: 006706
Anatomy of a Towboat
Introduces components found on modern towboats with emphasis on an overview of areas of the vessel from the wheelhouse to the engine room to the external components. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MRN 102 (3) Course ID: 006707
Basic Marine Safety
Provides an overview of risk-based decision making skills for assessing and managing marine hazards to prevent marine accidents or casualty. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

MRN 199 (6) Course ID: 006708
Marine Co-Op Experience I
Gives students experience in a higher level position in the marine industry. Provides compensated on-the-job work experience under the supervision of a qualified affiliate of the industry. Pre-requisite: 360 hours of river industry experience. Co-requisite: Current employment with the company providing the co-op experience. Co-Op: 6 credits (450 contact hours).

Components: Co-Op

MRN 200 (3) Course ID: 006709
Shipboard Deck Operations
Provides specifics of responsibilities, policies, training, safety and rigging procedures for towboat personnel. Pre-requisite: MRN 100. Lecture: 3 credits (45 contact hours).

Components: Lecture

MRN 201 (3) Course ID: 006710
Rules of the Road
Provides an in-depth analysis of the United States Coast Guard (USCG) Navigation Rules with an emphasis on the history and interpretation of the rules. Lecture: 3 credits (45 contact hours).

Components: Lecture

MRN 202 (3) Course ID: 006711
Piloting and Navigation
Identifies the effect of inland waterway prevailing conditions on vessels; provides instruction on locking procedures, radio telephone regulations, hydrology, and piloting. Lecture: 3 credits (45 contact hours).

Components: Lecture

MRN 203 (3) Course ID: 006712
Environmental Protection Rules
Provides analysis of environmental regulations governing the marine industry. Explores the environmental practices of vessels on the inland waterway systems and the governing agencies which establish industry regulations. Lecture: 3 credits (45 contact hours).

Components: Lecture

MRN 204 (3) Course ID: 006713
Marine Electrical Systems I
Explores the basic theory of electricity to form a foundation for marine electrical systems with an emphasis on power systems, circuits, capacitors, transformers and safety procedures. Lecture/Lab: 3 credits (60 contact hours).

Components: Lecture

MRN 205 (3) Course ID: 006714
Marine Electrical Systems II
Explores the maintenance measures needed to maintain electrical systems aboard towing vessels on the inland river system. Pre-requisite: MRN 204. Lecture/Lab 3 credits (60 contact hours).

Components: Lecture

MRN 206 (3) Course ID: 006715
Marine Diesel I
Introduces the operation and components of a marine diesel engine with emphasis on diesel engine theory, safety precautions, internal and external components, and contributing operation systems. Lecture/Lab: 3 credits (60 contact hours).

Components: Lecture

MRN 207 (3) Course ID: 006716
Marine Diesel II
Introduces the various systems involved in the operation of a marine diesel engine, including the application of the knowledge of diesel operation to maintenance and troubleshooting exercises. Pre-requisite: MRN 206. Lecture/Lab: 3 credits (60 contact hours).

Components: Lecture

MRN 208 (3) Course ID: 006717
Inland River Systems
Examines the U.S. inland waterway system and its tributaries as they relate to the inland marine industry and the movement of cargos. Lecture: 3 credits (45 contact hours).

Components: Lecture

MRN 209 (3) Course ID: 006718
Applied Marine Operations
Examine the overall structure of an inland marine towing company with focuses on purchasing, warehousing, dispatching, and human resources. Explores how each department is structured individually and as a corporation providing the co-op experience. Co-Op: 6 credits (450 contact hours).

Components: Lecture

Campus: WKCTC
MRN 210 (3) Course ID: 006719
Intermodal Transportation
Highlights the history of the movement of goods throughout the U.S. with an emphasis on the interconnectedness of the various modes of transportation and inland towing in particular. Lecture: 3 credits (45 contact hours).
Components: Lecture

MRN 299 (6) Course ID: 006720
Marine Co-Op Experience II
Gives students further experience in a higher level position in the marine industry. Provides supervised on-the-job work experience directly in line with the students' educational objective. Pre-requisite: MRN 199. Co-requisite: Current employment with the company providing the co-op experience. Co-Op: 6 credits (450 contact hours).
Components: Co-Op

MS Mechatronic Systems

MS 110 (4) Course ID: 005485
Mechatronic Systems Electrical Components
Introduces the systems approach to the operation of electrical components and the relationship of voltage, current, resistance, and power in industrial systems. Provides an overview of alternating and direct current fundamentals. Prepares the student for the Siemens Mechatronic Systems Certification Level I Exam. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

MS 120 (4) Course ID: 005486
Mechatronic Systems Mechanical Components
Introduces the systems approach to the operation of mechanical components and the relationship of their application in industrial systems. Provides an overview of rotating machinery fundamentals. Prepares the student for the Siemens Mechatronic Systems Certification Level I Exam. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

MS 130 (4) Course ID: 005487
Mechatronic Systems Hydraulic / Pneumatic Components
Introduces the systems approach to the operation of hydraulic / pneumatic components and the relationship of their application in industrial systems. Provides an overview of digital fundamentals. Prepares the student for the Siemens Mechatronic Systems Certification Level I Exam. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

MS 150 (4) Course ID: 005488
Mechatronic Systems Programmable Logic Controllers
Introduces the systems approach to the operation of Programmable Logic Control components and the relationship of their application in industrial systems. Provides an overview of Programming fundamentals. Prepares the student for the Siemens Mechatronic Systems Certification Level I Exam. Pre-requisite: MS 110 and MS 120 and MS 130. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

MSE Material Science Engineering

MSE 201 (3) Course ID: 005596
Introduction to Materials Science
Microscopic and macroscopic structure as related to the properties of materials with engineering applications. Pre-requisite: CHE 105, MA 113. Co-requisite: MA 114. Lecture: 3 credits (45 contact hours).
Components: Lecture
Same As Offering: MSE 201
Attributes: University Course (University of Kentucky) Campus: AUTC

MSE 201 (3) Course ID: 005596
Introduction to Materials Science
Microscopic and macroscopic structure as related to the properties of materials with engineering applications.

Pre-requisite: CHE 105, MA 113. Co-requisite: MA 114. Lecture: 3 credits (45 contact hours).
Components: Lecture
Same As Offering: MSE 201
Attributes: University Course (University of Kentucky) Campus: AUTC

MSG Massage Therapy

MSG 100 (4) Course ID: 003986
Musculoskeletal Anatomy & Physiology I
Provides extensive knowledge of the skeletal system and major joint articulations and an introduction to the muscular system from beginning terminology through the study of muscle tissue and neuromuscular fundamentals. Pre-requisite Or Co-requisite: (CLA135 or OST103 or AHS115). Co-requisite: MSG 125. Lecture: 4 credits (60 contact hours).
Components: Lecture

MSG 110 (4) Course ID: 003987
Musculoskeletal Anatomy & Physiology II
Details muscular interactions at major joint articulations including biomechanical concepts and muscles, joints, and innervations of the upper and lower extremities. Pre-requisite: MSG 125. Pre-requisite Or Co-requisite: MSG135. Lecture: 4 credits (60 contact hours).
Components: Lecture

MSG 125 (3) Course ID: 003990
Massage Techniques I
Introduces theory and technique of Swedish massage, including the history and benefits of massage, scope of practice, and performance of a one-hour full body systemic Swedish massage. Co-requisite: MSG 100. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

MSG 135 (3) Course ID: 003991
Massage Techniques II
Provides extensive knowledge of the skeletal system and major joint articulations and an introduction to the muscular system of the human body from beginning terminology through the study of muscle tissue and neuromuscular fundamentals. Pre-requisite: MSG 100 and MSG 125. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

MSG 205 (3) Course ID: 005521
Advanced Clinical Massage I
Prepares the student in the knowledge and skills of advanced massage techniques and integrating them in a medical atmosphere. Co-requisite: MSG110. Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

MSG 210 (3) Course ID: 005526
Advanced Clinical Massage II
Prepares students to integrate their massage practice into a clinical setting of rehabilitation of orthopedic conditions and injuries. Includes patient assessment, advanced orthopedics, and rehabilitative and preventative massage techniques. Pre-requisite: MSG205. Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

MSG 215 (2) Course ID: 003993
Massage Therapy Student Clinic
Applies principles and techniques by providing students with experience through a student massage clinic. Co-requisite: MSG 210. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory

MSG 220 (3) Course ID: 005522
Massage Therapy Prepares students to recognize and know common pathologies that they may encounter as a massage therapist. Covers pathologies directly linked to the physical systems of the body. Co-requisite: MSG 215. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MST Manufacturing Systems Technology

MST 200 (3) Course ID: 001778
Advanced Hydraulic Systems The advanced hydraulic systems class will cover design, repair, and troubleshooting of hydraulic systems. Prerequisite: FPX 100, FPX 101
Components: Lecture

MST 201 (2) Course ID: 001779
Advanced Hydraulic Systems Lab The advanced hydraulic systems lab will cover design, repair, and troubleshooting of hydraulic systems. Prerequisite: FPX 100, FPX101
Components: Laboratory

MST 204 (3) Course ID: 001780
Advanced Pneumatic Systems Design, repair, and troubleshooting of pneumatic systems will be covered in this course. Prerequisite: FPX 100, FPX 101
Components: Lecture

MST 205 (2) Course ID: 001781
Advanced Pneumatic Systems Lab Component repair and system troubleshooting will be covered in this lab. Prerequisite: FPX 100, FPX 101
Components: Laboratory

MST 206 (3) Course ID: 005259
Electrohydraulics Introduces electronic/electrical controls as it pertains to hydraulic valve control with the emphasis on automation, robotic and servo control. Lecture: 3 credits (45 contact hours). Prerequisite: (ENG110 and FPX 100) or Consent of Instructor. Corequisite: MST 207.
Components: Laboratory

MST 207 (2) Course ID: 005260
Electrohydraulics Lab Introduces electronic/electrical controls as it pertains to hydraulic valve control with the emphasis on automation, robotic and servo control. Laboratory: 2 credits (45 contact hours). Prerequisite: (ENG110 and ENG113 and FPX 101) or Consent of Instructor. Corequisite: MST 206.
Components: Laboratory

MSY Masonry

MSY 105 (3) Course ID: 001655
Introductory Masonry Introduces various types of mortar and cement along with the use of basic masonry tools. Emphasizes different methods of spacing materials on a construction site, the 5-8-10 method, and use of the transit level, brick spacing and modular rule focusing on laying straight and plumb brick to the line, bricking gables and building columns. Covers application techniques for setting up different types of masonry materials, marking off layout lines and erecting batter boards along with techniques employed in different types of weather and climates. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 115 (3) Course ID: 001656
Intermediate Masonry Builds on proficiency in competencies learned in MSY 105. Focuses on laying straight and plumb brick to the line with emphasis on bricking gables and building columns. Prerequisite: MSY 105 with a grade of C or higher or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 198 (3) Course ID: 001657
Instructor Consent Required Practicum I Provides supervised on-the-job work experience related to the students educational objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Consent of Instructor. Practicum: 3.0 credits (90 contact hours).
Components: Practicum
MSY 199 (3) Course ID: 001658
Instructor Consent Required Cooperative Education I
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Consent of Instructor. Co-Op: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 205 (3) Course ID: 001660
Advanced Masonry
Provides experience in laying quoin corners, bricking in around electrical and plumbing units, and laying door and window brick sills. Provides opportunity for students to construct expansion joints, piers, pilaster walls and retaining and splitface block walls. Prerequisite: [(MSY 105 and MSY 115 with a grade of 'C' or higher) or Consent of Instructor]. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 215 (3) Course ID: 001661
Masonry Lab
Provides for practice and application of principles, theories and skills taught in MSY 105, MSY 115, MSY 205. Prerequisite: [(MSY 105 and MSY 115 and MSY 205) with a grade of 'C' or higher] or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 225 (3) Course ID: 001662
Brick Construction
Covers the application of laying brick to a line overhead, laying a rowlock course, and making weep holes. Emphasizes tying intersecting walls with masonry ties and construction cavity walls and planters. Prerequisite: MSY 205 with a grade of 'C' or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 235 (3) Course ID: 001663
Special Techniques in Brick Construction
Provides practice in constructing a variety of walls including arches. Prerequisite: MSY 205 with a grade of 'C' or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 245 (3) Course ID: 001664
Anchors and Reinforcement
Presents different types of reinforcement used in masonry units such as installing wall ties and reinforcing wire, tying intersecting walls with metal ties, installing masonry anchor bolts, setting and anchoring door and window frames, and setting steel lintels and bearing plates. Covers the installation of dovetail tie concrete to set preformed masonry lintels, and laying of paving brick in a herringbone pattern. Prerequisite: MSY 105 with a grade of 'C' or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 251 (3) Course ID: 001665
Concrete Finishing
Focuses on theory and techniques inherent in the art of concrete finishing. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 253 (3) Course ID: 001666
Masonry Floors and Steps
Provides students with the opportunity to lay paving brick, steps, and flagstone floors including laying different types of patterns. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 255 (3) Course ID: 001667
Glass Blocks and Tile
Provides students with the opportunity to lay structural clay tile, glazed tile, glass block, and set coping tile. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 257 (3) Course ID: 001668
Stone
Includes identifying the types of stone and the different types of bonds used in stone masonry. Prerequisite: MSY 105 with a grade of 'C' or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 275 (3) Course ID: 001669
Fireplace Construction
Presents different types and styles of indoor and outdoor fireplaces, and the principles of layout, drafting and drawing a fireplace. Includes finishing dimensions of fireplace openings, fireplace layout, setting the flue lining, and applying a chimney cap. Prerequisite: MSY 205 with a grade of C or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

MSY 291 (1 - 3)
Masonry Applications
Provides students with additional opportunity to refine skills. Lab: 1.0 - 3.0 credits (46-135 contact hours).
Components: Laboratory

MSY 298 (3) Course ID: 001671
Instructor Consent Required Practicum I
Provides additional supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Consent of Instructor. Prac: 3.0 credits (90 contact hours).
Components: Practicum

MSY 299 (3) Course ID: 001672
Instructor Consent Required Cooperative Education II
Provides additional supervised on-the-job work experience related to the student's educational objectives. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Consent of Instructor. Co-op: 3.0 credits (90 contact hours).
Components: Co-Op

MT 50 (1 - 2)
Developmental Mathematics Workshop
The purpose of this course is to promote student's success in developmental mathematics by providing supplemental academic support such as extra class sessions, tutoring, and/or increased monitoring. Developmental mathematics workshop may be associated with any developmental math course offered through KCTCS and may be repeated for each math course. Credit cannot be received by special exam. Laboratory: 1-2 credits (30-60 contact hours). Corequisite: Set by instructor.
Components: Laboratory

MTT 216 (8)
Machine Tool Technology
Provides skills and knowledge needed to progress through the Tool and Die program. Includes safety, bench work and machining operations performed on die and mold applications. Lecture: 1 credit (15 contact hours). Laboratory: 7 credits (210 contact hours).
Components: Laboratory, Lecture

MU 101 (3)
Folk and Traditional Music of the Western Continents
Designed for non-music majors. The primary purpose of the course is to survey the body of music called ethnic, folk, or "traditional," as it has been found in Europe, most of Africa, and the Americas, from a geographic approach. Lecture: 3 hours.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities

MU 135 (1)
Instructor Consent Required Jazz Ensemble
The study of jazz performance technique and jazz literature through the participation in a jazz ensemble. Can be repeated for a total of 4 credits. Laboratory: 1 credit (3 contact hours). Prerequisite: Consent of instructor.
Components: Laboratory

MUC 190 (1)
Instructor Consent Required Marching Band
Preparation for and performance at university athletic functions, primarily football games. May be repeated to a maximum of four credits. Prerequisite: Audition and permission of the instructor. Lab: 1 credit (45 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)
Campus: OWC

MUP 101 (1 - 3)
Instructor Consent Required Piano
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory

MUP 102 (1 - 3)
Instructor Consent Required Voice
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory

MUP 114 (1 - 3)
Instructor Consent Required Trombone I
Provides a systematic study of trombone performance. May be repeated to a total of 3 credits. Laboratory: 1.0 - 3.0 credits (7.5 - 22.5 contact hours). Prerequisite: Consent of instructor.
Components: Laboratory
Attributes: University Course (University of Kentucky)

MUP 123 (1 - 3)
Instructor Consent Required Classical Guitar
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory

MUP 201 (1 - 3)
Instructor Consent Required Piano
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory

MUP 202 (1 - 3)
Instructor Consent Required Voice
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory

MUP 214 (1 - 3)
Instructor Consent Required Trombone II
Continues the systematic study of trombone performance through an individualized study of trombone technique. May be repeated for a total of 3 credits. Prerequisite: Consent of Instructor. Laboratory: 1.0 - 3.0 credits (7.5 - 22.5 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)
MUS 100 (3)  Course ID: 000883
Introduction to Music
Introduces the elements of music as they apply to the listening experience. Emphasizes the development of an awareness and understanding of musical styles from the Middle Ages to the present. Designed for the non-music major with no prior knowledge of music and is not intended to fulfill a program course requirement for music majors.

Components: Lecture
Attributes: AH - Humanities

MUS 106 (3)  Course ID: 006188
Music in Film
Presents a survey of the history of film from the silent era to the present. Develops critical listening, viewing, and analytical skills in relation to the function of music in film. Explores various cultural, artistic traditions which inform the musical styles in film. Lecture: 3 credits (45 contact hours).

Components: Lecture
Same As Offering: MUS 106
Attributes: AH - Humanities, University Course (Morehead State University)
Campus: JFC
MUS 106 (3)  Course ID: 006188
Music in Film
Presents a survey of the history of film from the silent era to the present. Develops critical listening, viewing, and analytical skills in relation to the function of music in film. Explores various cultural, artistic traditions which inform the musical styles in film. Lecture: 3 credits (45 contact hours).

Components: Lecture
Same As Offering: MUS 106
Attributes: AH - Humanities, University Course (Morehead State University)
Campus: WKCTC
MUS 113 (1)  Course ID: 006900
Class Instruction in Guitar I
Introduces the fundamentals of guitar playing to beginners. Lab: 1.0 credit (30 contact hours).

Components: Laboratory
MUS 114 (1)  Course ID: 006899
Class Instruction in Guitar II
Develops the fundamentals of guitar playing on an intermediate level. Pre-requisite: Guitar I or consent of instructor. Lab: 1.0 credit (30 contact hours).

Components: Laboratory
MUS 120 (3)  Course ID: 004609
Music Technology I
Introduces the use of technology as a tool for music creativity and productivity. Includes knowledge of how to create various styles of contemporary music utilizing loop and sampling based technology, creation of wave files, MP3 files, CD layout, and class projects. Prerequisite: MUS 174 or Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: AH - Humanities
MUS 121 (3)  Course ID: 004610
Music Technology II
Continues the process of integrating computer based technology into the creation and design of music through artistic and commercial applications. Covers intermediate skills in music notation, MIDI (Musical Instrument, Digital Interface) sequencing, and electronic keyboarding. Includes the exploration of many ways to incorporate these skills into computer/MIDI applications. Prerequisite: MUS 120 or consent of the instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: AH - Humanities
MUS 150 (1)  Course ID: 002231
Class Instruction in Piano I
Introduces the fundamentals of piano playing to beginners. Lab: 1.0 credit (30 contact hours)

Components: Laboratory
MUS 151 (1)  Course ID: 002232
Class Instruction in Piano II
Develops the fundamentals of piano playing on a second level, with advanced beginner music and technique. Prerequisite: MUS150. Lab: 1.0 credit (30 contact hours).

Components: Laboratory
MUS 152 (1)  Course ID: 002233
Class Instruction in Piano III
Develops the fundamentals of piano playing on an early intermediate level, with an emphasis on expanded repertoire. Prerequisite: MUS 151. Lab: 1.0 credit (30 contact hours).

Components: Laboratory
MUS 153 (1)  Course ID: 002234
Class Instruction in Piano IV
Develops the technique and musical content of piano playing on an upper intermediate level, with an emphasis on upper intermediate repertoire. Prerequisite: MUS152.
Lab: 1.0 credit (30 contact hours).

Components: Laboratory
MUS 175 (1)  Course ID: 002235
Instructor Consent Required Voice Class for Non-Music Majors
Includes applied voice group instruction for non-music majors with emphasis on basic breathing and vocal technique, elements of music notation, and diction. May be repeated for a maximum of 2 credits. Prerequisite: Consent of instructor. Lab: 1 credit (15 contact hours).

Components: Laboratory
MUS 174 (3)  Course ID: 002249
Theory for Nonmusic Majors
Introduces basic materials, musical organization, focusing on music reading, rudiments of notation, pitch, scale, tonal, and rhythmical organization, melodic construction, simple harmonic vocabulary, and beginning aural training. Uses individual composition and improvisation exercises to approach much of this material. Ability to read music is not a pre-requisite.

Components: Lecture
MUS 175 (1)  Course ID: 006791
Instructor Consent Required Jazz Ensemble
Introduces the study of jazz through performance and may be repeated to a maximum of four credits. Pre-requisite: Consent of Instructor. Lab: 1.0 credit (45 contact hours).

Components: Laboratory
MUS 187 (1)  Course ID: 002239
Instructor Consent Required Concert Band
Continues instrumental music experience through participation in a large concert band. May be repeated to a maximum of four credits. Prerequisite: Ability to read music and play a band instrument.

Components: Laboratory
MUS 192 (1)  Course ID: 002240
Instructor Consent Required University Chorus
Includes choral literature and performance requiring attendance at up to five hour of rehearsals per week. May be repeated up to 3 times for a total of 4 credits. May require audition and/or consent of instructor. Prerequisite: Audition and consent of instructor. Lab: 1 credit (15-45 contact hours).

Components: Laboratory
MUS 206 (3)  Course ID: 000857
American Music History
Includes a history of music in America from c. 1620 to the present. Requires listening to recordings, reading the primary text and suggested readings in books, periodicals, and documents. Focuses on important names, places, events, and styles in music, as well as important historical and sociological trends and movements.

Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities
MUS 207 (3)  Course ID: 004774
African American Music History
A history of African American music from Pre-colonial West African diasporas through American colonial times to the present. Requires listening to recordings, reading the primary text and suggested readings in books and periodicals. Important names, places, events, and styles in music, as well as important historical and sociological trends will be presented within the context of the African American experience. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities
MUS 208 (3)  Course ID: 004775
World Music
A geographic survey of selected music cultures throughout the world with hands-on experience playing the music of diverse cultures, audio/video examples of music-cultures in performances, reading and writing assignments, and attendance and reporting at live music events. Includes informational presentations by students, group listening and discussion, simple musical instrument construction, and small group projects. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities
MUS 222 (3)  Course ID: 002253
History and Sociology of Rock Music
Provides a listening survey course, with a chronological approach, covering the years 1950-present. Emphasizes both the music and the sociological climate reflected and advocated by the music. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities
MUS 223 (3)  Course ID: 006581
Music for Elementary Teachers
Covers music rudiments of music theory and methods for teaching music to elementary school children. Lecture: 3 credits (45 contact hours).

Components: Lecture
Same As Offering: MUS 223
MUS 223 (3)  Course ID: 006581
Music for Elementary Teachers
Covers music rudiments of music theory and methods for teaching music to elementary school children. Lecture: 3 credits (45 contact hours).

Components: Lecture
Same As Offering: MUS 223
Campus: HEC
MUS 260 (2)  Course ID: 000692
Teaching Music in the Elementary Grades I
Develops musicianship, skills, and techniques teachers need to direct musical activities effectively in the elementary classroom. Introduces music fundamentals and teaching materials through active participation in

Components: Laboratory
NAA 115 (3) Course ID: 004612
Nursing Assistant II
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a long term care setting. Focuses on communication, infection control, safety, resident/patient rights, and basic nursing skills. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396r and 307 KAR 1:450. Lecture: 2 credits (30 contact hours).
Components: Lecture

NAA 125 (6) Course ID: 004613
Advanced Nursing Assistant
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a long term care setting. Focuses on communication, infection control, safety, resident/patient rights, and basic nursing skills. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396r and 307 KAR 1:450. Lecture: 6 credits (150 contact hours).
Components: Lecture

NAA 1001 (2) Course ID: 006250
Long Term Care Nurse Aide
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a long term care setting. Focuses on communication, infection control, safety, resident/patient rights, and basic nursing skills. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396r and 307 KAR 1:450. Lecture: 2 credits (30 contact hours).
Components: Lecture

NAA 1002 (0.56) Course ID: 006251
Nurse Aide Skills Laboratory
Includes the laboratory component for application of skills and concepts taught in the nurse aide program. Prerequisite: NAA 1001 Lab. 0.56 credit (25 contact hours).
Components: Laboratory

NAA 1003 (0.44) Course ID: 006252
Nurse Aide Clinical Rotation
Includes the required supervised practical training component. Provides a working knowledge of the physiological, psychological, and sociological impact of institutionalization on the nursing facility resident. Prerequisite: NAA 1002. Clinical: 0.44 credit (20 contact hours).
Components: Clinical

NFS 101 (3) Course ID: 000898
Human Nutrition and Wellness
Food composition, digestion, absorption, and metabolism as related to selection of nutrients essential for human life, growth, reproduction, lactation, wellness, and physical activity. Not open to NFS majors except hospitality management students.
Components: Lecture

NFT 125 (1) Course ID: 005024
Compliance With National Fuel Gas Code
A continuation of safety information unique to the natural gas industry. Emphasis is placed on effective ways to avoid accidents and injuries at the worksite. Lecture: 1 credit (15 contact hours).
Components: Lecture

NFT 130 (1) Course ID: 005025
Compliance With Code of Federal Regulations
A survey of the criteria for the installation, maintenance and inspection of gas pipelines up to the outlet of the customers meter. Lecture: 1 credit (15 contact hours).
Components: Lecture

NFT 140 (2) Course ID: 004992
Pipeline Construction Safety
A survey of pipeline construction safety standards in the areas of trenching and excavating, confined spaces and controlling hazardous energy, communicating potential hazards, and traffic control in work zones. Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NFT 150 (3) Course ID: 005026
Patrol & Leakage Surveys on Natural Gas Pipeline Facilities
Provides information and practice on the techniques of gas pipeline patrol and leakage survey. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NFT 160 (3) Course ID: 005027
Installing & Maintaining Customer Service Lines & Meter & Regulator Sets
Designed to provide information and techniques for installing and maintaining customer service lines and meter and regulator sets. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NFT 170 (3) Course ID: 004993
Installing Gas Operated Equipment
Designed to provide information and practice for installing gas piping and gas equipment on customer's premises. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NFT 180 (3) Course ID: 005028
Installing and Inspecting Gas Distribution Piping
Provides information and practice basic to gas pipeline installation and inspection. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NFT 190 (3) Course ID: 005029
Performing Maintenance on Gas Pipelines
Provides information and industry accepted practices related to the maintenance of gas piping systems. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NFT 200 (3) Course ID: 005030
Placing Gas Pipelines Into Service
Provides information and procedures related to pigging, purging, hot tapping and stopping tie-in bypass operations on gas pipelines. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules
NGT 205 (2) Course ID: 005031
Monitoring Cathodic Protection Systems
Provides information and procedures related to corrosion and the processes and procedures basic to corrosion control. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NGT 210 (3) Course ID: 005032
Troubleshooting Cathodic Protection Rectifiers
Presents the electrical circuits basic to protection current rectifiers. Lecture: 2 credit (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NGT 220 (3) Course ID: 005033
Identifying Principles and Performing Operations
Basic to Gas Measurement
Presents the electrical circuits basic to protection current rectifiers. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NGT 230 (3) Course ID: 005034
Inspecting and Maintaining Gas Metering Systems
Provides information and practice on basic to gas metering systems. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Labs, Laboratory, Lecture
Attributes: Course Also Offered in Modules

NGT 240 (3) Course ID: 005035
Operating and Maintaining Gas Pressure Regulating Systems
Presents information and procedures basic to performing maintenance operations on self-operating and pilot operated pressure regulators. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

NGT 1001 (0.25) Course ID: 006446
Basic Procedures/Processes
Presents the major components of a natural gas system from well head to burner. Presents actions that each component has on the gas stream in the context of the total system. Reviews key terms and definitions applied to conditions common to the utilization of natural gas. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1002 (0.25) Course ID: 006447
Basic Properties of Fuel Gases
Presents advanced procedures for extracting natural gas from the earth and for transporting and regulating natural gas with an emphasis on the physical and chemical properties of natural fuel gases. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1003 (0.75) Course ID: 006448
Adjusting Gas Burners
Presents the science of gas burner design, factors affecting the proper combustion of fuel gas, and techniques used to measure gas input rates, gas flow, and pressure. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1004 (0.75) Course ID: 006449
Regulating Natural Gas
Presents factors related to measurement of natural gas in a distribution system, pressure regulation, accurate measurement of natural gas, and irregularities in meter installations. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1005 (0.5) Course ID: 006450
Gas Distribution Calculations
Presents methods for calculating area and volume measurements, gas flow rate measurements and heating values, venting and ventilation requirements for proper burning of natural gas, and comparing fuel costs.
Components: Lecture

NGT 1006 (0.5) Course ID: 006451
Records & Compliance Reports
Focusses on U.S. Department of Transportation reporting requirements, reading maps of natural gas systems, and preparing field sketches. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1101 (1.25) Course ID: 006452
Controlling/Preventing Fires
Introduces factors related to the fire extinguishing process, ways to prevent gas fires, and ways to extinguish natural gas fires. Lecture: 0.25 credits (3.75 contact hours); Lab: 1.0 credits (30 contact hours).
Components: Laboratory, Lecture

NGT 1102 (0.75) Course ID: 006461
Safe Working Environment
Emphasizes work safety practices, proper use of equipment, hazards of escaping gas, and drug testing and rehabilitation programs. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25 credit (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1103 (0.5) Course ID: 006462
Preventing Accidental Ignition
Identifies conditions, causes, and hazards related to gas leakage; emphasizes safety practices and procedures to prevent accidental ignition of natural gas. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1104 (0.5 - 500) Course ID: 006463
Traffic Control Guidelines
Present the basic standard for traffic control as described in the annual on Uniform Traffic Control Devices, Part VI According to the U.S. Department of Transportation.
Components: Laboratory, Lecture

NGT 1401 (0.5) Course ID: 006465
Excavating
Focuses on the Occupational Safety and Health Administration (OSHA) requirements for earth excavation, protection systems, and tables and specifications for designing protective systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture
Same As Offering: NGT 1401

NGT 1402 (1.25) Course ID: 006466
Operating Equipment Safely
Presents techniques of tractor/loader/backhoe operation while emphasizing safety precautions, maintenance and inspection, and proper control. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1403 (0.75) Course ID: 006467
Safety in Confined Spaces
Introduces confined spaces with emphasis on identifying hazards, monitoring of the atmosphere, entry procedures, and controlling hazardous energy. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture
Same As Offering: NGT 1403

NGT 1404 (0.5) Course ID: 006468
Communicating Potential Hazard
Examines health related chemical and explosive hazards while emphasizing identification of hazard information from labels and material safety data sheets and methods used to work safely with toxic chemicals and hazardous materials. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture
Same As Offering: NGT 1404

NGT 1501 (0.5) Course ID: 006453
Gas-in-Air Mixture
Focuses on detecting the presence of and measuring the percent of gas in a gas-in-air mixture. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1502 (0.5) Course ID: 006454
Gas Leaks/Odors
Presents basic facts about natural gas and natural gas leaks with emphasis on responding to gas leak and odor calls. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1503 (0.5) Course ID: 006455
Underground Facilities
Presents techniques and procedures basic to locating and marking underground pipeline facilities. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1504 (0.5) Course ID: 006456
Underground Leaks
Presents the theory and practice for investigating and pinpointing underground natural gas leaks. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1505 (0.75) Course ID: 006618
Detecting Carbon Monoxide
Presents the characteristics of carbon monoxide and the guidelines for investigation of carbon monoxide. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1601 (0.75) Course ID: 006469
Establishing a Gas Service
Presents methods for establishing a gas service with emphasis piping from the main to customer’s piping, piping inside buildings, and gas-equipped operation in service. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1602 (0.75) Course ID: 006470
Odorant Levels
Presents federal and Kentucky standards for proper odorant levels with emphasis on monitoring odorant levels. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1603 (0.75) Course ID: 006471
Installing Domestic Service
Presents the methods of installing Domestic Service and industry-recognized procedures for installing domestic gas service. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1604 (0.75) Course ID: 006472
Purging Techniques
Presents the theory and techniques common to purging natural gas lines, including safe practices and isolation of equipment during purging. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1701 (0.5) Course ID: 006473
Gas-Operated Appliances
Presents procedures for checking natural gas appliance systems to ensure proper installation and safe operation. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1702 (0.5) Course ID: 006474
Servicing Gas Equipment
Presents factors related to the ventilation process, standards to ensure proper ventilation and ventilation for gas-operated equipments, and ventilation inspection of gas-operated equipment. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture
NGT 1703 (0.75) Course ID: 006475
Venting Gas Equipment
Presents venting requirements for Categories I-IV gas-operated appliances; identifies features and benefits of high efficiency equipment with practice in sizing of vents and spacing venting systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1704 (1.25) Course ID: 006476
Electrical Concepts
Presents the basis for troubleshooting electrical control circuits in gas-operated appliances with emphasis on reading electrical fault diagrams and their physical arrangement in the appliance. Lecture: 0.25 credits (3.75 contact hours), Lab: 1 credit (30 contact hours).
Components: Laboratory, Lecture

NGT 1801 (0.5) Course ID: 006477
Installing Mains & Lines
Presents practices basic to installing gas mains and service lines with emphasis on safety, standards, and line-marking. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1802 (0.5) Course ID: 006478
Pipeline Installation
Examines the preparation of the pipeline right-of-way and the completion of the construction operation; presents the major phases of the inspection process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1803 (0.5) Course ID: 006479
Joining Plastic Pipe
Presents the material specifications and installation practices for polyethylene pipe, joining plastic pipe with mechanical fittings, and identification of methods to control static electricity. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1804 (0.75) Course ID: 006480
Plastic Pipe & Heat Fusion
Presents the theory of heat fusing polyethylene pipe and the specifications and conditions required to produce an acceptable joint. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1805 (0.5) Course ID: 006481
Permanent Field Repairs
Presents common methods and installation practices used to make field repairs on gas piping facilities and natural gas pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1806 (0.25) Course ID: 006482
Joining Copper Pipe
Presents materials and techniques for joining copper pipe/tubing. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1901 (0.5) Course ID: 006483
Maintaining Line Valves
Presents basic design characteristics and maintenance procedures for pipeline valves. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1902 (0.5) Course ID: 006484
Pressure Relief Valves
Presents components and operating characteristics of typical pressure relief valve installations; emphasizes spring-operated and pilot-operated pressure relief valves; focuses on factors to consider when installing pressure relief valves. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1903 (0.5) Course ID: 006485
Abandon/Deactivate Facilities
Presents processes and procedures for deactivating/abandoning gas facilities. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1904 (0.5) Course ID: 006486
Cast Iron Pipe
Presents materials and procedures for repairing cast iron pipe; emphasizes protection of cast iron pipe while excavating. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1905 (1) Course ID: 006487
Inspecting Pipe Welds
Presents duties and responsibilities basic to the practice of inspecting pipe welds; emphasizes the identification and evaluation of weld defects. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2001 (0.75) Course ID: 006488
Tapping/Stopping Pipelines
Presents techniques used to safely tap and stop pipelines under pressure. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2002 (0.75) Course ID: 006489
Pipeline Pigging
Presents techniques basic to pigging pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2003 (0.75) Course ID: 006490
Purging Techniques
Presents factors affecting the mechanical nature of displacing one gas with another gas by purging. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2004 (0.75) Course ID: 006491
Pipe Line/In-Bypass Operations
Presents procedures for performing tie-in/bypass operations. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2051 (0.5) Course ID: 006492
Corrosion Control
Presents the characteristics of corrosion, conditions causing corrosion in buried metal piping, and procedures and processes basic to corrosion control. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2052 (0.5) Course ID: 006493
Installing Cathodic Systems
Presents procedures for installing cathodic protection systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2053 (0.5) Course ID: 006494
Testing Corrosion Systems
Presents methods for monitoring and testing corrosion control systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2054 (0.5) Course ID: 006495
Monitoring Corrosion Control
Presents information and techniques for monitoring corrosion control methods on buried metal pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2101 (1) Course ID: 006496
Principles of Electricity
Presents the basics of both D.C. and A.C. electrical theory with an emphasis on current flow designs. Lecture: 1 credit (15 contact hours).
Components: Lecture

NGT 2102 (1) Course ID: 006497
Rectifier Components
Presents the theory and practice of identifying and testing typical rectifier components with emphasis on the identification of rectifying circuits, rectifier selection methods, and specialized types of rectifiers. Lecture: 0.50 credits (7.5 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2103 (1) Course ID: 006498
Rectifiers
Presents information and techniques for putting cathodic protection rectifiers into service. Lecture: 0.5 credits (7.5 contact hours) Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2201 (0.5) Course ID: 006499
Gas Measurement
Presents concepts and principles basic to gas measurement; demonstrates the effects of gas pressure and temperature on gas measurement using mathematical calculations; reviews the operating principles of diaphragm, rotary and turbine meters used to measure gas. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2202 (1) Course ID: 006500
Maintaining Line Valves
Presents the basic operating principles and maintenance schedules of gas flow control valves; demonstrates proper use and care of high-pressure grease guns. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2203 (0.5) Course ID: 006501
Pipeline Heaters
Presents the operation procedures and maintenance of catalytic and water bath indirect pipeline heaters. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2204 (0.5) Course ID: 006502
Proper Odorant Levels
Presents industry standards and devices used to introduce odorants into a natural gas system; emphasizes testing for odorant levels and the proper handling of odorants. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2205 (0.5) Course ID: 006503
Dew Point of a Gas
Covers theory and practice used to test the dew point of a gas; explains methods used to test moisture in gas. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2301 (0.5) Course ID: 006504
Orifice Meters
Presents operating principles of orifice meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2302 (0.5) Course ID: 006505
Turbine Meters
Presents operating principles of turbine type meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2303 (0.5) Course ID: 006506
Diaphragm Meters
Presents operating principles of diaphragm-type meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture
NGT 2304 (0.5)  Course ID: 006507  Rotary Meters
Presents operating principles of rotary meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2305 (0.5)  Course ID: 006508  Pressure Relief Valves
Presents purpose and operating characteristics of pressure relief valves; emphasizes inspecting, testing and maintenance of relief valves. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2306 (0.5)  Course ID: 006509  Recording Charts
Presents basic technology used to transfer information to a recording chart; emphasizes how to change, interpret, and send charts. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2401 (0.5)  Course ID: 006510  Self-Operating Regulators
Presents information and procedures basic to performing maintenance operations on self-operating pressure regulators. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2402 (0.5)  Course ID: 006511  Pilot Loaded Regulators
Presents concepts and principles basic to the operation and selection of pressure regulators and the control of gas pressure. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2403 (0.5)  Course ID: 006512  Test Pressure Limits
Presents the concepts and principles basic to test relief valves and pressure limiting and regulating stations. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2404 (0.5)  Course ID: 006513  Differential Pressure Recorder
Presents information and procedures for maintaining and calibrating differential pressure recorders. lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2405 (0.5)  Course ID: 006514  Mercury Instruments
Presents the fundamental operating and maintenance procedures for Mercury instruments, gauges and indexes. lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2406 (0.5)  Course ID: 006515  Multiple Range Pressure Chart
Presents concepts and principles basic to reading multiple range pressure recording charts. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NIP Nursing Integrated Program

NIP 102 (3)  Course ID: 006847  Introduction of Pharmacology
Introduces dosage calculations and medication administration of commonly used medications. Includes an overview of common drug classifications, drugs and their effects. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Incorporates the fundamental core values: caring, diversity, ethics, excellence, holism, integrity, and patient-centeredness. Integrates the integrating concepts: context and environment, knowledge and science, quality and safety, and relationship-centered care. Pre-requisite: Admission to the Integrated Nursing Program; successful completion of a Medicaid Nurse Aide equivalent course and proof of active status on the Medicaid Nurse Aide Registry. Completion, with a grade of ‘C’ or better, of BIO135, PSY110, COM181, ENG101, and CIT105 or OST 105 or equivalent. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: AHS 100, NIP 116.
Components: Lecture

NIP 116 (10)  Course ID: 006838  Fundamentals of Nursing
Focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse clients utilizing the six integrated concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Explores current and historical issues impacting nursing. Introduces framework for organizing the care of clients with alterations in basic human needs by incorporating the seven core values of caring, diversity, excellence, integrity, ethics, holism, and patient-centeredness. Focuses on the integration of knowledge, skills acquisition, and critical thinking in the provision of prudent health care delivery. Examines client’s needs, health promotion, basic human needs, prevention of complication as related to mechanisms of self-defense including immunity, inflammation, infection, and the surgical patient. Examines client’s needs, health promotion, basic human needs, prevention of complication as related to mechanisms of self-defense including immunity, inflammation, infection, and the surgical patient.
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules

NIP 120 (3)  Course ID: 005381  Maternal Child Nursing Care
Focuses on health promotion in the context of the family experiencing reproductive issues including pregnancy, labor and delivery, post-partum, and the newborn. Focuses on management of care for patients with perinatal complications and high-risk newborns. Integrates concepts of the NLN Education Competencies Model, Neuman’s Systems Model and the Maslow Hierarchy, including pharmacological and therapeutic interventions throughout the course. Pre-requisite: Completion with a grade of ‘C’ or better in NIP 116, NIP 102 and AHS 100. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: NIP 128. Lecture: 2.0 credits (30 contact hours). Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules

NIP 128 (10)  Course ID: 006842  Medical Surgical Alteration
Focuses on care of clients with stressors to normal lines of defense in hematology, immune, integumentary, fluid and electrolyte/acid/base balance, respiratory, musculoskeletal, cardiovascular, gastrointestinal, hepatobiliary, renal/urinary, endocrine, reproductive, and neurological/sensory. Integrates the concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Uses the Neuman System and the Maslow Hierarchy, including pharmacological and therapeutic interventions throughout the course. Pre-requisite: Completion with a grade of ‘C’ or better in NIP 120, NIP 128, and AHS 100. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: NIP 120, MAT 150. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

NIP 210 (9)  Course ID: 005437  Advanced Nursing Practice
Focuses on the advanced assessment of diverse individuals throughout the lifespan by incorporating the integrating concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Applies knowledge acquired in NIP 205. Pathophysiology for Nursing Practice. Utilizes the nursing process in care and management of clients with complex health care needs and disorders of self-defense/protection, skin, hair and nails, cancer, hematological system, peripheral vascular system, cardiovascular system, respiratory tract, endocrine system, gastrointestinal system, reproductive system, renal/urinary system, nervous system, sensory system, musculoskeletal system and lymphatic system across the lifespan. Prerequisite: Completion, with a grade of ‘C’ or better in NIP 120, NIP 128 OR successful completion of a Practical Nursing curriculum and proof of active unencumbered Kentucky Practical Nurse Licensure. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course.

NIP 215 (7)  Course ID: 005438  Leadership and Specialty Practice
Prepares the student in the Associate Degree Nursing Program to assume the role of a graduate nurse in the synthesis and application of the nursing process for the holistic care of the patient with complex, multidimensional stressors. Emphasizes leadership and management of care, continued skill development and professionalism: to include ethics, integrity, excellence diversity and caring. Includes the student in the dynamics and issues of teams, organizations and the health care system that require effective leadership interventions and proactive leadership strategies. Emphasizes self-development of leadership attributes, such that every student will be able to reason effectively and take leadership roles and will be able to implement these strategies at the appropriate time and place. Integrates theories and concepts from all nursing courses and provisions for practice in predominantly distributive health care settings. Emphasizes the utilization of the nursing process, prevention of illness, maintenance of health, and the Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules
NIS 150 (3) Course ID: 001832
Perl Programming I
Coding, executing, and documenting PERL scripting applications to create dynamic behavior in elements of a Web page. Prerequisite: (CIS 120 and IT 132) or Consent of Instructor. Lecture: 3 credits (45 contact hours). Components: Lecture

NIS 152 (3) Course ID: 001833
Introduction to JavaScript
This course is designed to provide students with the knowledge and skills to code, execute, and document JavaScript scripting applications. JavaScript can be used to create dynamic behavior in elements of a Web page. Prerequisite: (CIS 120 and IT 132) or Consent of Instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Components: Laboratory, Lecture

NIS 160 (3) Course ID: 001834
Networking Core Technologies
Provides a technical level of understanding in the areas of networking connectivity, data communications concepts, and communication protocols. Includes communications, networking concepts, hardware, software, transmission media, access methods, protocols, and network configurations. Addresses system design considerations. Emphasizes local area networks, and installation of a simple local area network. Prepares students to take standard industry certification tests. Prerequisite: (IT 105) OR (ET232 and ET 234) or Consent of Instructor. Lecture: 3 credits (45 contact hours). Components: Lecture

Attributes: Course Also Offered in Modules

NIS 211 (3) Course ID: 004323
Administering Microsoft Windows Professional: Topic
Provides students with the knowledge and skills necessary to install and configure Microsoft Windows client operating systems. Measures ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Windows. Lecture: 3 hours. Prerequisite: NIS 160 or IT 120 or IT 124 or Consent of Instructor. Components: Lecture

Attributes: Course Also Offered in Modules

NIS 213 (3) Course ID: 004324
Administering Microsoft Windows Server: Topic
Provides students with the knowledge and skills necessary to install and configure Microsoft Windows Server to work in a Workgroup or Domain environment and provide various services to organizations. Measures ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Windows Server operating systems. Prerequisite: NIS 160 or IT 120 or IT 124 or Consent of Instructor. Components: Lecture

Attributes: Course Also Offered in Modules

NIS 214 (3) Course ID: 003827
Supporting Windows Network Infrastructure Topic:
Provides students with the knowledge and skills necessary to be responsible for installing, configuring, and supporting a network infrastructure that uses Microsoft Windows Server products. Lecture: 2 hrs; Laboratory: 2 hrs. Prerequisite: NIS 213 or Consent of Instructor. Components: Laboratory, Lecture

Attributes: Course Also Offered in Modules

NIS 216 (3) Course ID: 003828
Implementing and Administering Microsoft Windows Directory Services Topic:
Provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Active Directory services. Focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. Prerequisite: NIS 214 or Consent of Instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Components: Laboratory, Lecture

Attributes: Course Also Offered in Modules

NIS 230 (3) Course ID: 003846
UNIX Administration
This course provides students with the knowledge and skills necessary to perform post-installation and day-to-day administration tasks in a single-domain or multiple-domain UNIX based network. Lecture: 2 hrs; Laboratory: 2 hrs. Prerequisite: NIS 160 or CIS 210 or Consent of Instructor. Components: Laboratory, Lecture

NIS 242 (3) Course ID: 003831
Designing a Windows Directory Services Infrastructure Topic:
Provides students with the knowledge and skills necessary to design a Microsoft Windows services infrastructure in an enterprise network. Presents strategies to assist the student in identifying the information technology needs of an organization, and then designing an Active Directory structure that meets those needs. Lecture: 2 hrs; Laboratory: 2 hrs. Prerequisite: NIS 214 and NIS 216 or Consent of Instructor. Components: Laboratory, Lecture

NIS 244 (3) Course ID: 003832
Designing a Windows Networking Services Infrastructure Topic:
Provides students with the knowledge and skills needed to create a networking services infrastructure design that supports the required network applications. Presents strategies to assist the student in identifying the information technology needs of an organization, and then design that meets those needs. Lecture: 2 hrs; Laboratory: 2 hrs. Prerequisite: NIS 214 and NIS 216 or Consent of Instructor. Components: Laboratory, Lecture

NIS 245 (3) Course ID: 003833
Designing a Secure Windows Network Topic:
Provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks using Microsoft Windows technologies. Contains four units that describe security in specific areas of the network: Unit 1 - Providing Secure Access to Local Network Users. Unit 2 - Providing Secure Access to Remote Users and Remote Offices. Unit 3 - Providing Secure Access Between Private and Public Networks. Unit 4 - Providing Secure Access to Partners. Lecture: 2 hrs; Laboratory: 2 hrs. Prerequisite: NIS 214 and NIS 216 or Consent of Instructor. Components: Laboratory, Lecture

NIS 246 (3) Course ID: 002282
Microsoft SQL Server System Administration Topic
Provides students with knowledge and skills to install, configure, administer, and troubleshoot Microsoft SQL Server databases. Prerequisite: IT 147 and NIS 213. Lecture: 3 credits (45 contact hours). Components: Lecture

NIS 270 (3) Course ID: 001840
Network Hardware Installation and Troubleshooting
This course is designed to provide students with the knowledge and skills to design, configure, troubleshoot, wire cabling systems and equipment involved with connecting a local area network. Lecture: 2 hours. Laboratory: 2 hours. Prerequisite: NIS 160 or CIS 210 or Consent of Instructor. Components: Lecture

NIS 275 (3) Course ID: 001841
Internet Servers Administration
This course is designed to provide students with the knowledge and skills to install, configure, manage, and troubleshoot Internet servers and TCP/IP protocol. Prerequisite: NIS 160, (ET 232 or CIS 110). ET 234, or consent of instructor. Components: Laboratory, Lecture

NIS 290 (1-4) Course ID: 001843
Instructor Consent Required Selected Topics in Network and Information System Technology
Selected topics in Networking and Information Systems Technology, due to rapidly changing technology or in response to local needs, will be offered in this course. Topics may vary from semester to semester at the discretion of the instructor. Course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of Instructor. Components: Lecture

NIS 1601 (0.6) Course ID: 005883
Network Concepts, Media and Topologies
Provides a technical level of understanding in data communications, networking concepts, hardware, and transmission media. Prerequisite: (IT 105) OR (ET232 and ET 234) OR Consent of Instructor. Lecture: 0.6 (9 contact hours). Components: Lecture

NIS 1602 (0.8) Course ID: 005884
Network Protocols and Standards
Provides an understanding of the OSI Model and protocols used in network design. Prerequisite: NIS 1601 or consent of instructor. Lecture: 0.8 credit (12 contact hours). Components: Lecture

NIS 1603 (0.8) Course ID: 005885
Network Implementation
Provides a technical level of understanding of networking connectivity including networking software and addresses system considerations for local area networks. Prerequisite: NIS 1602 or consent of instructor. Lecture: 0.8 (12 contact hours). Components: Lecture

NIS 1604 (0.8) Course ID: 005886
Network Support
Provides a technical level of understanding of supporting and troubleshooting networks. Prerequisite: NIS 1603 or consent of instructor. Lecture: 0.8 (12 contact hours). Components: Lecture

NIS 2111 (0.75) Course ID: 006130
Operating Microsoft Windows Topic:
Provides an overview of Microsoft Windows Client Software with installation and upgrading Windows as well as configuring system settings. Prerequisite: NIS 160 or IT 120 or IT 124 or consent of instructor. Lecture: 0.75 credit (11.25 contact hours). Components: Lecture

NIS 2112 (0.75) Course ID: 006131
User, Group, and Device Management Topic:
Provides an overview of disks and partitions, users and groups, and drivers. Prerequisite: NIS 2111 or consent of instructor. Lecture: 0.75 credit (11.25 contact hours). Components: Lecture

NIS 2113 (0.75) Course ID: 006132
Configuring Networks, Applications, and Security Topic:
Provides an overview of network connectivity, Windows security and the desktop environment. Prerequisite: NIS 2112 or consent of instructor. Lecture: 0.75 credit (11.25 contact hours). Components: Lecture

NIS 2114 (0.75) Course ID: 006133
Optimizing and Troubleshooting Windows Topic:
Provides students with knowledge and skills for monitoring and optimizing operating system performance as well as troubleshooting techniques and mobile computing concepts. Prerequisite: NIS 2113 or consent of instructor. Lecture: 0.75 credit (11.25 contact hours). Components: Lecture

NIS 2131 (0.6) Course ID: 006134
Introducing Microsoft Windows Server Topic: Server 2003
Provides an introduction of Microsoft Windows Server Software, introduces configuration and administration of Server components. Prerequisite: NIS 160 or IT 120 or IT 124 or consent of instructor. Lecture: 0.6 credit (9 contact hours). Components: Lecture

NIS 2132 (0.6) Course ID: 006135
Monitoring and Maintaining Windows Server Topic: Server 2003
Provides techniques to manage, monitor, and maintain Windows Server including backup and restoration of data. Prerequisite: NIS 2131 or consent of instructor. Lecture: 0.6 credit (9 contact hours). Components: Lecture
NIS 2133 (0.6)  Course ID: 006136
Managing Users, Groups, & Computer Accounts /
Windows Server Topic: Server 2003
Provides students with the knowledge and skills for configuring and managing Microsoft Windows Server 2003. Prerequisite: NIS 2132 or consent of instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

NIS 2134 (0.6)  Course ID: 006137
Sharing File and Printing System Resources Topic:
Server 2003
Provides instruction in the creation, management, and sharing of files and printing system resources including troubleshooting techniques for failures and errors. Prerequisite: NIS 2133 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

NIS 2135 (0.6)  Course ID: 006138
Prepares students to configure and manage device drivers and disk storage. Prerequisite: NIS 2134 or consent of instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

NIS 2141 (1)  Course ID: 006139
Introducing and Installing Windows Networking Topic:
Server 2008
Provides an overview of networking concepts; in addition, installing and configuring Microsoft Windows Server Software will be demonstrated. Prerequisite: NIS 213 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

NIS 2142 (1)  Course ID: 006140
Configuring Microsoft Windows Server Topic: Server 2008
Provides students with the knowledge and skills for configuring and managing Microsoft Windows Server, remote access, and wireless networks. Prerequisite: NIS 2141 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

NIS 2143 (1)  Course ID: 006141
Configuring and Maintaining Microsoft Windows Networks Topic: Server 2008
Provides students with the knowledge and skills for configuring and managing Microsoft Windows networks, network authentications, settings, backups and restorations. Prerequisite: NIS 2142. Lecture: 1 credit (15 contact hours).
Components: Lecture

NIS 2161 (0.75)  Course ID: 006395
Introduction to Active Directory Services
Provides skills for setting up, configuring and administering basic Active Directory services. Prerequisite: NIS 214 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours); Laboratory: 0.25 credit (7.5 contact hours).
Components: Laboratory, Lecture

NIS 2162 (0.75)  Course ID: 006396
Active Directory Management and Administration
Provides skills for advanced administration of Active Directory. Prerequisite: NIS 2161 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours) Laboratory: 0.25 credit (7.5 contact hours).
Components: Laboratory, Lecture

NIS 2163 (0.75)  Course ID: 006397
Group Policy Management and Administration
Provides skills and knowledge for group policy management and administration. Prerequisite: NIS 2162 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours) Laboratory: 0.25 credit (7.5 contact hours).
Components: Laboratory, Lecture

NIS 2164 (0.75)  Course ID: 006398
Active Directory Maintenance and Additional Services
Provides skills and knowledge for implementing Active Directory troubleshooting techniques as well as administration & integration of additional services such as DNS and Certificate services. Prerequisite: NIS 2163 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours) Laboratory: 0.25 credit (7.5 contact hours).
Components: Laboratory, Lecture

NMI 140 (2)  Course ID: 005714
Clinical Procedures I
Covers radionuclide skeletal system imaging techniques to demonstrate vascular, soft tissue and skeletal distribution. Includes radionuclide cardiovascular system imaging procedures for myocardial perfusion and viability, functional evaluation (equilibrium and first-pass methods) and deep vein thrombosis detection. Prerequisite: Admission to the NMMI program. Computer Literacy: [(MAT 150) and (BIO 137 and BIO 139)] or consent of instructor. Corequisite: CHE 140 and either PHY 171 or PHY 172. NMI 141 and NMI 150. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

NMI 141 (2)  Course ID: 005715
Physics and Instrumentation I
Introduces concepts and physical principles that govern radioactivity and the interactions of radiation with matter, the principles, operation and quality control for non-imaging, gas-filled detectors and non-imaging scintillation detectors; also the principles and applications of statistics as they relate to radiation detection and counting. Prerequisite: Admission to the NMMI program. Computer Literacy: [(MAT 150) and (BIO 137 and BIO 139)] or consent of instructor. Corequisite: NMI 140 and NMI 142 and NMI 150. Prerequisite or Corequisite: CHE 140 and either PHY 171 or PHY 172. Laboratory: 2.0 credits (45 contact hours).
Components: Laboratory, Lecture

NMI 150 (2)  Course ID: 005717
Clinical I
Introduces concepts of clinical practice with application of knowledge and principles from previous general education course work and/or concurrent NMI courses. Will include actual clinical experience in a nuclear medicine clinical setting. Prerequisite: Admission to the NMMI program. Computer Literacy: [(MAT 150) and (BIO 137 and BIO 139)] or consent of instructor. Corequisite: NMI 140 and NMI 141 and NMI 142 or consent of instructor. Corequisite or Corequisite: CHE 140 and either PHY 171 or PHY 172. Clinical: 2.0 credits (180 contact hours).
Components: Clinical

NMI 160 (2)  Course ID: 005718
Clinical Procedures II
Covers imaging of organs and systems in relation to the abdomen and gastrointestinal tract in addition to imaging procedures and quantitative evaluation of the pulmonary system. Prerequisite: [(NMI 140 and NMI 141 and NMI 142 and NMI 150) with a grade of C or greater] or consent of instructor. Corequisite: NMI 161 and NMI 170. Prerequisite or Corequisite: CHE 150. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

NMI 161 (2)  Course ID: 005719
Physics and Instrumentation II
Includes use and quality control of the various types of systems used for scintillation imaging and computed tomography in hybrid imaging. Covers the configuration, function, and application of computers in nuclear medicine. Prerequisite: [(NMI 140 and NMI 141 and NMI 142 and NMI 150) with a grade of C or greater] or consent of instructor. Corequisite: NMI 160 and NMI 170. Prerequisite or Corequisite: CHE 150. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Laboratory, Lecture

NMI 170 (2)  Course ID: 005720
Clinic I
Continuation of NMI 150 Clinic I. Covers clinical practice with application knowledge and principles from previous general education course work and previous/concurrent NMI courses. Will include actual clinical experience in an approved nuclear medicine clinical setting. Prerequisite: [(NMI 140 and NMI 141 and NMI 142 and NMI 150) with a grade of C or greater] or consent of instructor. Corequisite: [(NMI 160 and NMI 161) or consent of instructor. Corequisite: CHE 150. Clinical: 2.0 credits (180 contact hours).
Components: Clinical

NMI 220 (2)  Course ID: 005721
Clinic II
Continuation of NMI 170 Clinic II. Covers application of knowledge and principles from previous general education course work and/or previous/concurrent NMI courses. Includes actual clinical experience in an affiliated nuclear medicine clinical setting. Prerequisite: [(NMI 160 and NMI 161 and NMI 170) with a grade of C or greater] or consent of instructor. Corequisite: NMI 230 or consent of instructor. Clinical: 2.0 credits (180 contact hours).
Components: Clinical

NMI 230 (2)  Course ID: 005722
Radiopharmacy
Covers procurement, preparation, quality control, dispensing, patient dosage calculation, identification, documentation, administration, disposal, storage, and safe handling of radioactive materials used by the nuclear medicine technologist. Includes commonly used pharmaceuticals in Nuclear Medicine, including dosages, side effects, contraindications, adverse reactions and antagonists. (CT contrast media administration.) Prerequisite: [(NMI 160 and NMI 161 and NMI 170) with a grade of C or greater] or consent of instructor. Corequisite: NMI 220 or consent of instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

NMI 240 (4)  Course ID: 005723
Clinical Procedures III
Covers imaging procedures of the urinary system, central nervous system and endocrine systems including appropriate interventional and challenge procedures. Prerequisite: [(NMI 220 and NMI 230) with a grade of C or greater] or consent of instructor. Corequisite: NMI 260 or consent of instructor. Clinical: 4.0 credits (60 contact hours).
Components: Lecture

NMI 250 (4)  Course ID: 005724
Clinical Procedures IV
Covers oncologic imaging procedures, inflammatory/ infectious process imaging procedures, radionuclide therapy procedures, non-imaging procedures related to hematology and vitamin B-12 absorption / excretion and pediatric imaging. Pre-requisite: [(NMI 240 and NMI 260) with a grade of C or greater] or consent of instructor. Corequisite: NMI 270 or consent of instructor. Lecture: 4.0 hours (60 contact hours).
Components: Lecture

NMI 260 (4)  Course ID: 005725
Clinical IV
Continuation of NMI 220 Clinic III; Covers application of knowledge and principles from previous general education course work and/or previous/concurrent NMI courses. Will include actual clinical experience in an affiliated nuclear medicine clinical setting. Prerequisite: [(NMI 220 and NMI 230) with a grade of C or greater] or consent of instructor. Corequisite: NMI 240 or consent of instructor. Clinical: 4.0 credits (360 contact hours).
Components: Clinical
NMI 270 (4)  Course ID: 005726  
Clinic V  
Continuation of NMI 260 Clinic IV. Covers application of knowledge and principles from previous general education course work and/or concurrent NMI courses. Includes actual clinical experience in an approved nuclear medicine clinical setting. Pre-requisite: [(NMI 240 and NMI 260) with a grade of C or greater] or consent of instructor. Co-requisite: NMI 250 or consent of instructor. Clinical: 4.0 credits (380 contact hours).

Components: Clinical

NPN  Practical Nursing

NPN 100 (2)  Course ID: 004021

Introduction to Nursing & Health Care System  
Provides a historical overview of current health care including medical economics, ethical and legal parameters, roles and responsibilities of health care team members with an emphasis on reflective nursing practice. Explores medical terminology, therapeutic communication techniques, concepts of health, assessment, self care and basic needs related to activities of daily living across the lifespan. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent)] within the past three years OR active status on the Medicaid Nurse Aide Registry AND Computer Literacy as defined by KCTCS. Prerequisite or Corequisite: [(BIO 135 or BIO 139) and (AHS 100 or PSY 223) with a minimum grade of C in each course] OR Consent of PN Coordinator. Lecture: 2 credits (30 contact hours).

Components: Lecture

NPN 101 (6)  Course ID: 005727

Nursing Fundamentals  
Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Emphasizes practical nursing and the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including therapeutic communication techniques; nursing assessment; nursing process and care planning; charting; legal and ethical parameters of health care; rest and sleep; and body mechanics. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent)] within the past three years OR active status on the Medicaid Nurse Aide Registry AND Computer Literacy as defined by KCTCS. Prerequisite or Corequisite: [(BIO 135 or BIO 139) and (AHS 100 or PSY 223) with a minimum grade of C in each course] OR Consent of PN Coordinator. Lecture: 2 credits (30 contact hours).

Components: Clinical, Laboratory, Lecture

Attributes: Course Also Offered in Modules

NPN 108 (3)  Course ID: 005628

Pharmacology in Nursing  
Introduces dosage calculations and medication administration of commonly used medications. Includes an overview of common drugs, drug classifications, and effects administered in the following modes: oral, sublingual, rectal, topical, intradermal, intramuscular, subcutaneous, intravenous including IV fluid administration skills. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: Admission to the Practical Nursing program AND CPR for Health Care Providers or Red Cross Professional Rescuer certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent)] within the past three years OR active status on the Medicaid Nurse Aide Registry AND Computer Literacy as defined by KCTCS. MT 110 or higher numbered math course, with the exception of higher numbered courses which do not fulfill the general education math for the AAS degree (ENG 101 or (AHS 115 or CLA 131) and ENG 101, with a minimum grade of C in each course). Prerequisite or corequisite: BIO 139 and PSY 223.

Components: Laboratory, Lecture

Attributes: Course Also Offered in Modules

NPN 109 (2)  Course ID: 004023

Pharmacology I  
Introduces techniques used to administer medications. Includes dosages, diagnostic studies, related medical therapies, and legal responsibilities. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent)] within the past three years OR active status on the Medicaid Nurse Aide Registry AND Computer Literacy as defined by KCTCS. Prerequisite or Corequisite: [(BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or OST 103) and (AHS 100 or PSY 223) with a minimum grade of C in each course].

Components: Clinical, Laboratory, Lecture

Same As Offering: NPN 101

Attributes: Course Also Offered in Modules

NPN 105 (6)  Course ID: 004022

Development of Care Giver Role  
Introduces nursing and the nursing process as related to client activities of daily living across the life span. Provides an opportunity to develop and practice psychomotor skills related to health assessment, promotion, maintenance, and illness prevention. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent)] within the past three years OR active status on the Medicaid Nurse Aide Registry AND Computer Literacy as defined by KCTCS. Prerequisite or Corequisite: [(BIO 135 or BIO 139) and (AHS 100 or PSY 223) with a minimum grade of C in each course] OR Consent of PN Coordinator. Lecture: 3 credits (45 contact hours); Lab/Clinical: 3 credits (45:1 ratio/135 contact hours).

Components: Clinical, Laboratory, Lecture

NPN 106 (6)  Course ID: 005627

Fundamentals of Nursing Care  
Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Emphasizes practical nursing and the nursing process in the context of Functional Health Patterns as related to client daily living across the life span. Covers fundamental nursing skills including therapeutic communication techniques; nursing assessment; nursing process and care planning; charting; legal and ethical parameters of health care; rest and sleep; body mechanics and introductory content on the surgical experience. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent)] within the past three years OR active status on the Medicaid Nurse Aide Registry AND Computer Literacy as defined by KCTCS. ENG 101 and MT 110 and (AHS 115 or CLA 131) with a minimum C grade. Prerequisite or Corequisite: (BIO 139 and PSY 223). Minimum C grade. Lecture: 4 credits (60 contact hours). Lab: 2 credits (90 contact hours).

Components: Clinical, Laboratory, Lecture

Attributes: Course Also Offered in Modules

NPN 111 (5)  Course ID: 004626

Practical Nursing Bridge Course  
Provides overview of the health care system and roles and responsibilities of the health care team. Emphasizes the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including therapeutic communication techniques, nursing assessment, and the nursing process. Introduces dosage calculations and administration of medications; and overview of common drugs, drug classifications, and effects of drugs administered in all modes. Emphasizes nursing responsibility, accountability, and the application of the nursing process to drug therapy. Upon successful completion of all components of the course, the student will be admitted to NPN 135 and will have earned advanced standing hours, dependent upon curriculum option. Prerequisite: Admission to the Practical Nursing program; NAA 115 or equivalent; BIO 135 or BIO 139; ENG 101 or COM 181 or COM 252 or TEC 200; CLA 131 or AHS 120 or OST 103; computer literacy.

Components: Laboratory, Lecture

NPN 125 (3)  Course ID: 004025

Mental Health  
Applies nursing process to clients experiencing common mental health problems with emphasis on assisting clients to cope with psychological problems throughout the life span - i.e., chemical dependency, violence and other stress and developmental problems related to mental health. Prerequisite: OPTION 1: (NPN 100 and NPN 105 and NPN 110)] or (NPN 100 and NPN 105 and (AHS 100 or PSY 223) or Consent of PN coordinator. Minimum C grade). Prerequisite or Corequisite: OPTION 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or AHS 115 or OST 103 or CLA 131). Minimum C grade.) OPTION 2: (NPN 106 and NPN 108 and BIO 139 and PSY 223) Minimum C grade. Lecture: 2 credits (30 contact hours). Lab/Clinical: 1 credit (45 contact hours).

Components: Clinical, Laboratory, Lecture

Same As Offering: NPN 115

Attributes: Course Also Offered in Modules

NPN 130 (3)  Course ID: 004026

Pharmacology II  
Study of common drugs by classification and effects with emphasis on responsibility, accountability, and application of the nursing process to drug therapy. Prerequisite: (NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) or Consent of PN Coordinator. Minimum C grade). Lecture: 2 credits (30 contact hours). Lab/Clinical: 1 credit (45 contact hours).

Components: Clinical, Laboratory, Lecture

NPN 135 (6)  Course ID: 004027

Introduction to Health Deviation  
Application of the nursing process for selected child/adult clients experiencing common health deviations interfering with activities of daily living. Emphasis is on the nurse as the provider of care. Prerequisite: OPTION 1: [(NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)] or Consent of PN Coordinator. Minimum C grade. OPTION 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 115 or AHS 120 or CLA 131 or OST 103) Minimum C grade). Lecture: 3 credits (45 contact hours). Lab/Clinical: 3 credit (45:1 ratio/135 contact hours).

Components: Clinical, Laboratory, Lecture

NPN 200 (5)  Course ID: 004028  
Med Surg I  
Applies nursing process to selected child/adult clients experiencing common health deviations interfering with activities of daily living with emphasis on the nurse as the provider of care. Prerequisite: (NPN 125 or NPN 130 and NPN 135 and NPN 201) or Consent of PN Coordinator. Minimum C grade. Lecture: 3 credits (45 contact hours). Lab/Clinical: 2 credits (90 contact hours).

Components: Clinical, Laboratory, Lecture
NPN 201 (3)  
Course ID: 004024  
Child Bearing Family  
Applies nursing process to childbearing families with focus on health promotion and common health alterations in the reproductive process. Prerequisite: OPTION 1: (NPN 100 and NPN 105) and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) or Consent of PN Coordinator. Minimum C grade. OPTION 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 115 or AHS 120 or CLA 131 or OST 103). Minimum C grade. Lecture: 1 credit (15 contact hours).  
Components: Clinical, Laboratory  
Attributes: Course Also Offered in Modules  
NPN 250 (1)  
Course ID: 005140  
Practical Nursing Role Delineation  
Provides the opportunity for nursing mobility to the candidates who have not successfully completed the NCLEX-RN, and desire to complete the NCLEX-PN. Consists of eight (8) hours of didactic and 16 hours of clinical instruction. Focuses on roles and responsibilities of the Licensed Practical Nurse as a member of the health care team. Prerequisite: Completion of the required education program in registered nursing at an approved school of nursing and completion of the requirements of graduation. Unsuccessful in completion of the NCLEX-RN. Lecture: 0.5 credit (8 contact hours); Laboratory: 0.5 credit (16 contact hours).  
Components: Laboratory, Lecture  
NPN 101 (0.5)  
Course ID: 006270  
Roles & Professionalism  
Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Consists of an introduction to various medical specialties and an overview of the roles and responsibilities associated with them. Includes the development of a historical perspective of the roles and responsibilities of the health care team. Lecture: 0.5 credit (7.5 contact hours).  
Components: Lecture  
NPN 1012 (1)  
Course ID: 006271  
Nursing Process  
Emphasizes practical nursing and the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including nutritional assessment, nutritional process and care planning, and charting. Prerequisite: NPN 1011 with a C or better. Lecture: 0.5 credit (7.5 contact hours).  
Components: Lecture  
NPN 1013 (1)  
Course ID: 006272  
Basic Human Needs  
Emphasizes practical nursing and the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including nutritional assessment, nutritional process and care planning, charting, legal and ethical parameters of health care; rest and sleep; and body mechanics. Prerequisite: NPN 1011 with a C or better. Lecture: 0.5 credit (7.5 contact hours).  
Components: Lecture  
NPN 1014 (0.5)  
Course ID: 006273  
Nutrition  
Emphasizes practical nursing and the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including nutritional assessment, nutritional process and care planning, charting, legal and ethical parameters of health care; rest and sleep; and body mechanics. Prerequisite: NPN 1011 with a C or better. Lecture: 0.5 credit (7.5 contact hours).  
Components: Lecture  
NPN 1015 (1)  
Course ID: 006274  
Nursing Fundamentals Lab  
Emphasizes practical nursing and the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to client daily living across the life span. Includes the application of knowledge and skills in a lab setting. Prerequisite: NPN 1011 completion with a C or better. Prerequisite or corequisite: NPN 1012 and NPN 1013 and NPN 1014 (Pre-requisites must be completed with a C or better). Laboratory: 1 credit (45 contact hours).  
Components: Laboratory  
NPN 1061 (1)  
Course ID: 005699  
PN Role in Health Care Delivery  
Prerequisite or corequisite: (BIO 139 and PSY 223) Minimum C grade. Lecture: 1 credit (15 contact hours).  
Components: Clinical, Lecture  
Attributes: Course Also Offered in Modules  
NPN 1062 (1.5)  
Course ID: 005700  
Nursing Process  
Provides the opportunity for nursing mobility to the candidates who have not successfully completed the NCLEX-RN, and desire to complete the NCLEX-PN. Consists of eight (8) hours of didactic and 16 hours of clinical instruction. Focuses on roles and responsibilities of the Licensed Practical Nurse as a member of the health care team. Prerequisite: Completion of the required education program in registered nursing at an approved school of nursing and completion of the requirements of graduation. Unsuccessful in completion of the NCLEX-RN. Lecture: 0.5 credit (8 contact hours); Laboratory: 0.5 credit (16 contact hours).  
Components: Laboratory, Lecture  
NPN 1063 (1.5)  
Course ID: 005701  
Health Assessment  
Provides health assessment and lab components of various skills that must be successfully completed prior to the student’s caring for patients in the clinical arena (versus simulated patients). Prerequisite: NPN 1062 Minimum C grade. Prerequisite or Corequisite: (BIO 139 and PSY 223). Minimum C grade. Lecture: 1 credit (15 contact hours). Laboratory: 0.25 credits (11.25 contact hours). Clinical: 0.25 credits (11.25 contact hours).  
Components: Clinical, Laboratory, Lecture  
NPN 1064 (2)  
Course ID: 005702  
Care of the Client Undergoing Surgical Intervention  
Provides the opportunity for nursing mobility to the candidates who have not successfully completed the NCLEX-RN, and desire to complete the NCLEX-PN. Consists of eight (8) hours of didactic and 16 hours of clinical instruction. Focuses on roles and responsibilities of the Licensed Practical Nurse as a member of the health care team. Prerequisite: Completion of the required education program in registered nursing at an approved school of nursing and completion of the requirements of graduation. Unsuccessful in completion of the NCLEX-RN. Lecture: 0.5 credit (7.5 contact hours).  
Components: Lecture  
NPN 1061 (1)  
Course ID: 005699  
PN Role in Health Care Delivery  
Components: Clinical, Lecture  
Attributes: Course Also Offered in Modules  
NPN 1081 (0.5)  
Course ID: 005703  
Overview of Pharmacology  
Provides an overview of pharmacology and the legal and ethical implications for nursing practice. Prerequisite: Admission to program. Current CPR card for Health Care Providers; Current certification must be maintained throughout the program. Successful completion of a Medicaid Nurse Aide equivalent course within the past three (3) years or proof of active status on the Medicaid Nurse Aide Registry. Admission into the Practical Nursing Program. ENG 101 and MT 110 (and AHS 115 or CLA 131). Minimum C grade. Prerequisite or Corequisite: BIO 139 and PSY 223. Must achieve a C or higher in each prerequisite course. Lecture: 0.75 credits (11.25 contact hours). Lab: 0.25 credits (11.25 contact hours).  
Components: Laboratory, Lecture  
NPN 1082 (1.15)  
Course ID: 005704  
Medication Administration  
Provides an overview of pharmacology and the legal and ethical implications for nursing practice. Prerequisite: NPN 1081. Minimum C grade. Lecture: 0.75 credits (11.25 contact hours). Lab: 0.4 credits (18 contact hours).  
Components: Laboratory, Lecture  
NPN 1083 (1.35)  
Course ID: 005733  
Parenteral Medication Administration  
Provides an overview of pharmacology and the legal and ethical implications for nursing practice. Prerequisite: NPN 1082. Minimum C grade. Prerequisite or corequisite: BIO 139 and PSY 223. Minimum C grade. Lecture: 1.35 credits (38.25 contact hours)  
Components: Laboratory, Lecture
NPN 1111 (1)  
Course ID: 006276  
Intro to Pharmacology  
Provides an overview of pharmacological principles, introducing drug calculations, drug classifications and common drugs, as well as effects of medications. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: NPN 1011 Completion with a C or better. Lecture: 1 credit (15 contact hours).  
Components: Lecture

NPN 1112 (1)  
Course ID: 006277  
Medication Administration  
Focuses on the role of the practical nurse in regard to medication administration utilizing oral, enteral, sublingual, buccal, rectal, topical, transdermal, intramuscular, and subcutaneous routes. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: NPN 1111. Completion with a C or better. Laboratory: 1 credit (45 contact hours).  
Components: Laboratory

NPN 1113 (1)  
Course ID: 006278  
Intravenous Therapy  
Focuses on the role of the practical nurse in regard to medication administration utilizing the oral, enteral, sublingual, buccal, rectal, topical, transdermal, intramuscular, and subcutaneous routes. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: NPN 1112. Completion with a C or better. Lecture: 1 credit (45 contact hours).  
Components: Laboratory

NPN 1251 (0.75)  
Course ID: 005705  
Intro to Psychiatric-Mental Health Nursing  
Introduces the introduction to psychiatric-mental health nursing and the nurse’s role in multidisciplinary care. Prerequisite: OPTION 1: (NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) or Consent), Minimum C grade. Prerequisite or corequisite: OPTION 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or AHS 115 or OST 103 or CLA 131), Minimum C grade. OPTION 3: (NPN 106 and NPN 108 and BIO 139 and PSY 223) Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Clinical: 0.25 credits (11.25 contact hours).  
Components: Clinical, Lecture

NPN 1252 (0.75)  
Course ID: 005706  
Components of the Nurse-Client Relationship  
Introduces the aspects of therapeutic communication and the nurse’s role in multidisciplinary care. Prerequisite: ALL OPTIONS: NPN 1251. Minimum C grade. Corequisite or Prerequisite: OPTION 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or AHS 115 or OST 103 or CLA 131), Minimum C grade. OPTION 3: (NPN 106 and NPN 108 and BIO 139 and PSY 223) Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Clinical: 0.25 credits (11.25 contact hours).  
Components: Clinical, Lecture

NPN 1253 (0.75)  
Course ID: 005707  
Clients with Psychiatric Disorders  
Introduces the disorders specific to adult issues of interfering with activities of daily living. Emphasizes the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 1401 Minimum C grade. Corequisite or Prerequisite: OPTION 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)), Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.125 credits (6.25 contact hours).  
Components: Clinical, Laboratory, Lecture

NPN 1401 (0.75)  
Course ID: 005760  
Fluid/Electrolyte Balance Care  
Provides an overview of fluid and electrolyte imbalance and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 106 and NPN 108 and BIO 139 and PSY 223 with a minimum grade of C in each course. Prerequisite or corequisite: NPN 125 and NPN 201, Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.125 credits (6.25 contact hours).  
Components: Clinical, Laboratory, Lecture

NPN 1402 (0.75)  
Course ID: 005761  
Cardio-Respiratory Function Care  
Provides an overview of cardiovascular and respiratory function, and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 1401 Minimum C grade. Prerequisite or corequisite: OPTION 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)), Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.125 credits (6.25 contact hours). Clinical: 0.125 credits (6.25 contact hours).  
Components: Clinical, Laboratory, Lecture

NPN 1403 (0.75)  
Course ID: 005763  
Nursing and Activity/Exercise Functions across the Lifespan  
Provides an overview of nutrition in activity/exercise, the administration of medications to children, and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 1402 Minimum C grade. Prerequisite or corequisite: NPN 201 and NPN 125 with minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.125 credits (6.25 contact hours). Clinical: 0.125 credits (6.25 contact hours).  
Components: Clinical, Laboratory, Lecture

NPN 1404 (0.75)  
Course ID: 005764  
Surgical Intervention Care  
Provides an overview of the adult child patient experiencing surgical intervention, and the role of the practical nurse in planning appropriate care. Prerequisite: NPN 1403 Minimum C grade. Prerequisite or corequisite: NPN 201 and NPN 125. Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.125 credits (6.25 contact hours). Clinical: 0.125 credits (6.25 contact hours).  
Components: Clinical, Laboratory, Lecture

NPN 2011 (0.75 - 1)  
Course ID: 005770  
Ante-Partal Phase Care  
Provides an overview of prenatal assessment and the role of the practical nurse in planning appropriate interventions. Prerequisite: OPTION 1: (NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)), Minimum C grade. Option 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)) and (AHS 120 or AHS 115 or OST 103 or CLA 131), Minimum C grade. Lecture: 0.5 credits (7.5 contact hours).  
Components: Clinical, Laboratory, Lecture

NPN 2012 (0.75)  
Course ID: 005771  
Intra-Partal Phase Care  
Provides an overview of intra-partal assessment and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2011 Minimum C grade. Prerequisite or corequisite: OPTION 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)). Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.125 (6.25 contact hours).  
Components: Clinical, Laboratory, Lecture

NPN 2013 (0.75)  
Course ID: 005772  
Post-Partal: Maternal Phase Care  
Provides an overview of maternal post-partal assessment and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2012 with minimum C grade. Prerequisite or corequisite: OPTION 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)). Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.125 (6.25 contact hours).  
Components: Clinical, Laboratory, Lecture

NPN 2014 (0.75)  
Course ID: 005773  
Nursing Care of the Newborn  
Provides an overview of newborn assessment and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2013 Minimum C grade. Prerequisite or corequisite: OPTION 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)), Minimum C grade. Lecture: 0.5 credits (7.5 contact hours). Laboratory: 0.125 (6.25 contact hours). Clinical: 0.125 credits (6.25 contact hours).  
Components: Clinical, Laboratory, Lecture
NPN 2021 (1)  Course ID: 006293
Alterations in Metabolism
Applies nursing process to selected child/adult clients experiencing common health deviations related to metabolic dysfunctions that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 1356 Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2022 (1)  Course ID: 006294
Fluid and Electrolytes
Applies nursing process to selected child/adult clients experiencing common health deviations related to fluid and electrolyte imbalances that interfere with activities of daily living with emphasis on the nurse as the provider of care. Prerequisite: NPN 2021 Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2023 (1)  Course ID: 006295
Metabolism Clinical Practice
Demonstrate the knowledge gained in NPN2021 and NPN2022. Provide care for clients with alterations in metabolism, fluid and electrolyte imbalances. Prerequisite: NPN 2022 Completion with a C or better. Lecture: 1 credit (45 contact hours).
Components: Clinical, Laboratory

NPN 2024 (1)  Course ID: 006296
Cellular Proliferation
Applies nursing process to selected child/adult clients experiencing common health deviations related to cellular deviations that interfere with activities of daily living with emphasis on the nurse as the provider of care. Prerequisite: NPN 2023 Completion of a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2025 (1)  Course ID: 006297
Alterations in Perfusion
Applies nursing process to selected child/adult clients experiencing common health deviations related to cardiovascular dysfunctions that interfere with activities of daily living with emphasis on the role as the provider of care. Prerequisite: NPN 1356 Completion with a C or better. Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2026 (1)  Course ID: 006298
Perfusion & Cell Deviation Clinicals
Demonstrate the knowledge gained in NPN2024 and NPN2025. Provide care for clients with alterations in metabolism, fluid and electrolyte imbalances. Prerequisite: NPN 2025 Completion with a C or better. Lecture: 1 credit (45 contact hours).
Components: Clinical, Laboratory

NPN 2061 (1)  Course ID: 006299
Alterations in Coordination
Applies nursing process to selected child/adult clients experiencing common health deviations related to coordination dysfunction that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2026 Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2062 (1,5)  Course ID: 006300
Neurological Alterations
Applies nursing process to selected child/adult clients experiencing common health deviations related to coordination dysfunction that interferes with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2061 Completion with a C or better. Lecture: 1.5 credit (22.5 contact hours).
Components: Lecture

NPN 2063 (1)  Course ID: 006301
Neuro/Coordination Clinical
Applies nursing process to selected child/adult clients experiencing common health deviations related to coordination dysfunction that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite or corequisite: NPN 2062 (Pre-requisites must be completed with a C or better). Laboratory: 1 credit (45 contact hours)
Components: Laboratory

NPN 2064 (1)  Course ID: 006302
Elimination Alterations
Applies nursing process to selected child/adult clients experiencing common health deviations related to elimination dysfunction that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2063 Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2065 (0.5)  Course ID: 006303
Multi System Failure
Applies nursing process to selected child/adult clients experiencing common health deviations related to multi-system failure that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2064 Completion with a C or better. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

NPN 2066 (1)  Course ID: 006304
Multi System Failure Clinical
Applies nursing process to selected child/adult clients experiencing common health deviations related to multi-system failure and elimination disorders that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite or corequisite: NPN 2065 (Pre-requisites must be completed with a C or better). Clinical: 1 credit (45 contact hours).
Components: Clinical

NPN 2081 (2)  Course ID: 005765
Neurological Function Care
Presents content on alterations in neurological function and the role of the practical nurse in planning appropriate interventions. Prerequisite: (NPN 125 and NPN 140 and NPN 201). Minimum C grade. Corequisite: NPN 210 and NPN 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 credits (36 contact hours).
Components: Clinical, Lecture

NPN 2082 (2)  Course ID: 005766
Coordination/Special Senses/Integumentary Function
Presents content on patients with alterations in coordination, special senses, and integumentary function, and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2081 with a grade of C or greater. Corequisite: NPN 210 and NPN 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 credits (36 contact hours).
Components: Clinical, Lecture

NPN 2083 (2)  Course ID: 005767
Cardiovascular Function Care
Presents content on the patient with alterations in cardiovascular function and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2082 with a grade of C or greater. Corequisite: NPN 210 and NPN 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 credits (36 contact hours).
Components: Clinical, Lecture

NPN 2084 (2)  Course ID: 005768
Metabolism & Elimination Care
Presents content on the patient with alterations in metabolism and elimination and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2083 with a grade of C or greater. Corequisite: NPN 210 and NPN 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 credits (36 contact hours).
Components: Clinical, Lecture

NPN 2085 (2)  Course ID: 005769
Cell Function/Multi-System Failure Care
Presents content on alterations in cellular deviation and multi-system organ failure, and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2084 with a grade of C or greater. Corequisite: NPN 210 and 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 (36 contact hours).
Components: Clinical, Lecture

NPN 2101 (1)  Course ID: 005774
Theoretical Concepts of Clinical Practicum
Presents concepts of legal nursing practice that will be implemented in the NPN 2102 practicum experience. Prerequisite: OPTION 1: NPN 205. Minimum C grade; OPTION 2: NPN 206. Minimum C grade; Prerequisite or corequisite: OPTION 3: (NPN 208 and NPN 215) or Consent. Minimum C grade. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2102 (3)  Course ID: 005775
Clinical Practicum
Presents the nursing practicum experience in the clinical setting. Prerequisite: ALL OPTIONS: NPN 2101 with a grade of C or greater. Prerequisite or corequisite: OPTION 3: (NPN 208 and NPN 215) or Consent. Minimum C grade. Practicum: 3 credits (135 contact hours).
Components: Practicum

NPN 2151 (0.5)  Course ID: 005776
Leadership and Management as a Professional Concept
Designed to present content on leadership, management, and regulatory issues for the role of practical nurse. Prerequisite: OPTION 1: NPN 125 and NPN 130 and NPN 135 and NPN 201. Minimum C grade. OPTION 2: NPN 125 and NPN 135. Minimum C grade; OPTION 3: NPN 125 and NPN 140 and NPN 201. Minimum C grade. Prerequisite or corequisite: OPTION 2: NPN 201 and NPN 202. Minimum C grade; OPTION 3: NPN 208 and NPN 210. Minimum C grade. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NPN 2152 (0.5)  Course ID: 005777
Role Transition from Student to Graduate Practice
Designed to prepare the student to transition to a career in practical nursing. Prerequisite: 2151 Minimum C grade. Prerequisite or corequisite: OPTION 2: NPN 201 and NPN 202. Minimum C grade. OPTION 3: NPN 208 and NPN 210. Minimum C grade. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NRN Nursing

NRN 255 (9)  Course ID: 004890
Nursing V
Includes the application of the nursing process as it relates to health promotion and care of child/adult clients experiencing interferences with the ability to meet selected basic human needs. Emphasizes the nurse as a provider of care. Credit not available by special examination. Prerequisite: Satisfactory completion of courses required by the first year nursing curriculum as specified; satisfactory completion being C or better in each nursing and science course. At least 2.0 grade point average. Prerequisite Or Co-requisite: BIO 225. Lecture: 5.0 credits (75 contact hours). Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Lecture
Campus: BLC

NRN 265 (9)  Course ID: 004891
Nursing VI
Focuses on the application of the nursing process as it relates to health promotion and care of child/adult clients experiencing interferences with the ability to meet selected basic human needs. Emphasizes the nurse as a provider and manager of care as well as a member of the discipline. Credit not available by special examination. Prerequisite: Satisfactory completion of NRN 255 and BIO 225 with a grade of C or better, at least a 2.0 grade point average. Lecture: 5.0 credits (75 contact hours). Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Lecture
Campus: BLC

NRS 100 (2)  Course ID: 006616
Enhancing Nursing Student Success
Enhances the probability of students being successful in a nursing program by fostering critical thinking skills and practice taking NCLC-Style examinations. Focuses on understanding the role of a nursing student. Addresses stress and time management as contributors to nursing student success. Pre-requisite: Active status on Kentucky
NRS Nursing

NRS 101 (9) Course ID: 004332
Nursing Care I
Establishes the foundation for competency based nursing practice by introducing beginning concepts and skills that are built upon the nursing curriculum. Introduces the four roles of nursing practice including human flourishing, human judgment, professional identity, and spirit of inquiry. Applies problem-solving and critical thinking skills in the care of clients across the life span and of diverse cultures with actual or the potential for health alterations due to common acute and chronic health problems. Includes the application of the nursing process to meet the needs of patients during an acute clinical nursing level. Pre-requisite: Admission to the Nursing Program, Proof of active status on Kentucky Medicaid Nurse Aide Registry or its equivalent and computer literacy; (BIO 137 and (MAT 110 or MAT 150 or higher mathematics course) with a grade of 'C' or better; PSY 110. Pre-requisite Or Co-requisite: (BIO 139 with a grade of 'C' or better) and PSY 223. Lecture: 9.0 credit hours (255 clinical hours).
Components: Clinical, Lecture

NRS 102 (10) Course ID: 004333
Nursing Care II
Includes the application of problem-solving and critical thinking skills in the care of clients across the life span and of diverse cultures with actual or the potential for alterations in health due to common acute and chronic health problems. Provides care of clients during the childbearing cycle focusing on common health alterations in the reproductive process. Strengthens the four roles of nursing practice including human flourishing, human judgment, professional identity, and spirit of inquiry while higher level skills are introduced. Includes an integrated clinical practicum of direct patient care in a healthcare facility or health care organization to facilitate the transition from student to LPN practice. Prerequisite: NRS 101 with a better grade of C or better. Pre-requisite Or Co-requisite: ENG 101 and oral communications course. Lecture: 10.0 credit hours (300 clinical hours).
Components: Clinical, Lecture

NRS 200 (3) Course ID: 004334
LPN-ADN Transition
Facilitates the transition of licensed practical nurses into the nursing mobility program by building upon previous knowledge, attitudes, and cognitive and psychomotor skills using strategies of adult learning. Oriented the student to the philosophy and organizational framework of the ADN Program and assists the practical nurse to make the role transition to registered nursing. Emphasizes essential concepts and beginning problem-solving skills required for registered nursing practice. Upon successful completion of all components of NRS 200, the student will be admitted to NRS 203 and earn eight (8) credit hours for NRS 101 and eight (8) hours for NRS 102 for a total of sixteen (16) credit hours. Prerequisite: Admission to nursing program; BIO 137, BIO 139, and (MAT 110 or MAT 150 or higher mathematics course) with a grade of C or better, ENG 101, computer literacy, oral communications course, (PY 110 or PSY 100) and PSY 223. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture

NRS 203 (9) Course ID: 004335
Nursing Care III
Applies problem-solving and critical thinking skills in the care of diverse clients/families across the life span with actual or the potential for alterations in health due to complex acute and chronic health problems. Emphasizes leadership, management concepts, clinical decision-making, knowledge, skills and professional values within a legal/ethical framework. Introduces the RN responsibilities in relation to the four roles of nursing practice including human flourishing, human judgment, professional identity, and spirit of inquiry. Pre-requisite: NRS 102 with a grade of 'C' or better. Pre-requisite Or Co-requisite: BIO 225 or BIO 227 with a grade of 'C' or better; ENG 102. Lecture: 9.0 credits (225 clinical hours).
Components: Clinical, Lecture

NRS 204 (10) Course ID: 004336
Nursing Care IV
Integrates previous knowledge and skills into the development of the associate degree nurse. Focuses on the four roles of nursing practice including human flourishing, human judgment, professional identity, and spirit of inquiry with an emphasis on leadership, management, clinical decision-making, collaboration, knowledge, judgment, skills and professional values within a legal/ethical framework. Applies problem-solving and critical thinking skills in the care of diverse clients/families across the lifespan with actual or potential alterations in health due to complex acute and chronic health problems. Includes an integrated clinical practicum of direct patient care in a healthcare facility or health care organization to facilitate the transition from student role to RN practice. Pre-requisite: NRS 203 and (BIO 227 or BIO 225) with a grade of 'C' or better. Pre-requisite Or Co-requisite: Prior to or concurrent Heritage/Humanities. Lecture: 10.0 credits (270 clinical hours).
Components: Clinical, Lecture

NSG Nursing

NSG 100 (3) Course ID: 005269
Preparation for Nursing
Explores careers in the nursing profession. Includes career options and educational pathways, goal setting and self-awareness, tools/strategies in nursing programs, and trends impacting nursing's future. Lecture: 3 credits (45 contact hours).
Components: Lecture

NSG 101 (9) Course ID: 000568
Nursing Practice I
Covers nursing practice using functional health patterns within the context of the contemporary health care delivery system. Emphasizes foundation knowledge of nursing practice, skills acquisition, and the care of patients with health perception-health management, value-belief, and rest-sleep dysfunctional health patterns. Prerequisite: Admission to the Associate Degree Nursing Program; (BIO 137 and MAT 110 or (MAT 150 or higher) with a grade of 'C' or better; PSY 110 and Computer Literacy. Pre-requisite Or Co-requisite: BIO 139 with a grade of 'C' or better and PSY 223. Lecture: 5.0 credits (75 contact hours). Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Laboratory, Lecture

NSG 106 (9) Course ID: 006179
Nursing One
Introduces and applies Gordon's Functional Health Patterns (FHP) within the context of the contemporary health care system. Emphasizes foundation knowledge of nursing practice, skills acquisition, and care of clients with risk for or actual common chronic health pattern dysfunctions. Prerequisite: Admission to Associate Degree Nursing Program; BIO 137 (within ten years) with a grade of 'C' or better, MAT 110 or MAT 150 with a grade of 'C' or better, and PSY 110. Prerequisite or Corequisite: BIO 139 with a grade of 'C' or better (within 10 years) and ENG 101. Lecture: 5.0 credits (75 contact hours). Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Lecture

NSG 126 (3) Course ID: 004280
Pharmacology in Nursing
This is an elective course which studies common drugs, their classification, and their effects on functional and dysfunctional health patterns. Areas of emphasis include nursing responsibility, accountability, and application of the nursing process regarding drug therapy. Lecture: 3 hours.
Components: Lecture

NSG 196 (5) Course ID: 006180
Nursing LPN Bridge Course
Builds upon the LVN/LPN experiences in application of core components of nursing. Focuses on the nursing care for the patient with mental health dysfunctions and the patient experiencing acute and/or chronic health pattern dysfunctions. Covers selected content and skills from Nursing One and Nursing Two. Includes the role of the Associate Degree Nurse and application of the core components of nursing practice to patient's experience. Prerequisite: Admission to Associate Degree Nursing Program, BIO 137 and BIO 139 (within ten years) with a grade of C or better, MAT110 or MAT 150 with a grade of C or better, PSY 110, ENG 101, PSY 223 and Oral Communications Course. Prerequisite or Corequisite: NSG 216. Lecture: 4.0 credits (90 contact hours). Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Lecture

Same As Offering: NSG 196
Attributes: Course Also Offered in Modules

NSG 197 (3) Course ID: 005907
Transition to ADN
Builds upon the basic nursing skills and concepts learned in the LVN/LPN experience. Assists the Practical Nurse to make the beginning transition to the RN role. Includes the role of the Associate Degree Nurse and application of the course components of nursing practice to patients experiencing the dysfunctional health patterns of nutritional-metabolic and elimination. Upon successful completion of all components of the course, the student will be admitted to NSG 220 and will have been earned by advanced standing, 15 credit hours in nursing. Prerequisite: Admission to the Associate Degree Nursing Program and (BIO 137 and BIO 139 and (MAT 110 or MAT 150 or higher) with a grade of 'C' or better), PSY 110, PSY 223, ENG 101, Oral Communications and Computer Literacy. Prerequisite or Corequisite: NSG 215 and NSG 212 with a grade of 'C' or better. Lecture: 1.5 credits (37.5 contact hours). Laboratory: 0.5 credit (22.5 contact hours).
Components: Clinical, Lecture

NSG 199 (2) Course ID: 005905
Accelerated Transition: PN-A.D.N Bridge
Provides an accelerated course designed for the LPN/LVN who demonstrates through competency assessment the ability to build upon previous learning and experience. Focuses on the beginning transition to the RN role, the acquisition of essential skills and the development of critical thinking in the care of patients experiencing the dysfunctional health patterns of nutritional-metabolic and elimination. Upon successful completion of all components of the course, the student will be admitted to NSG 220 and will have earned by advanced standing, a total of 15 credit hours in nursing. Prerequisite: Admission to the Associate Degree Nursing Program and (BIO 137 and BIO 139 and (MAT 110 or MAT 150 or higher) with a grade of 'C' or better), PSY 110, PSY 223, ENG 101, Oral Communications, Computer Literacy and a passing score on a national normed PN to RN mobility examination. Corequisite: NSG 215 and NSG 212. Lecture: 1.5 credit (22.5 contact hours) Laboratory: 0.5 credit (22.5 contact hours).
Components: Laboratory, Lecture

NSG 201 (5) Course ID: 000790
LPN to ADN Bridge
This course will build upon the basic nursing skills and concepts learned in the LVN/LPN experience. The course is designed to assist the Practical Nurse to make the beginning transition to the RN role. Areas of study include the role of the Associate Degree Nurse and application of the core components of nursing practice to clients experiencing the dysfunctional health patterns of perception-health management, value-belief, rest-sleep, activity-exercise and nutritional-metabolic. Upon successful completion of all components of the course, the student will be admitted to NSG 203 and will have been earned by advanced standing, 18 credit hours in nursing. Lecture: 4 hours. Laboratory: 3 hours. Prerequisite: BIO 137, BIO 139, MT 110 or MT 150 or higher with a grade of C or better, PSY 110, ENG 101, Computer Literacy.
Components: Laboratory, Lecture

NSG 206 (9) Course ID: 006181
Nursing Two
Includes the application of core components of nursing to clients experiencing alterations in health. Focuses on nursing care for the client with mental health dysfunctions and the client experiencing acute and/or chronic health pattern dysfunctions. Prerequisite: NSG 106 with a grade of 'C' or better. Corequisite: NSG 216. Prerequisite or Corequisite: PSY 223 and Oral Communications course. Lecture: 5 credits (75 contact hours). Laboratory/Clinical: 4 credits (180 contact hours, 45:1 ratio).
Components: Clinical, Laboratory, Lecture
**NSG 210 (6)** Course ID: 005906
**Medical Surgical Nursing I**
Focuses on the application of the core components of nursing to adult patients experiencing dysfunctional health patterns. Emphasizes the care of patients with nutritional/metabolic and elimination dysfunctional health patterns. Prerequisite: (NSG 101 and BIO 139) with a grade of 'C' or better with ENG 101 and Oral Communications. Lecture: 3.0 credits (45 contact hours). Components: Clinical, Laboratory, Lecture

**NSG 211 (3)** Course ID: 005908
**Maternal Newborn Nursing**
Focuses on the application of the core components of nursing to the care of childbearing families experiencing functional and dysfunctional health patterns. Prerequisite: (NSG 210 and NSG 212) with a grade of 'C' or higher, ENG 101 and Oral Communications. Lecture: 3.0 credits (15 contact hours).

**NSG 212 (3)** Course ID: 005909
**Behavioral Health Nursing**
Focuses on the application of the nursing care to patients experiencing a dysfunctional health pattern. Emphasizes the care of patients with Coping-Stress-Tolerance and Altered Role-Relationship health patterns. Prerequisite: (NSG 101 and BIO 139) with a grade of 'C' or higher, ENG 101 and Oral Communications. Lecture: 3.0 credits (45 contact hours).

**NSG 215 (1)**
**Pharmacology I**
Focuses on common drugs, their classification and effects on functional and dysfunctional health patterns (activity/exercise, coping/stress/tolerance, role/relationship, altered self-perception/self-concept, and cognitive perceptual). Emphasizes the development of the nurse as a provider of care using evidence-based practice. Emphasizes the role of the nurse in enhancing healing of the whole person from birth to death. Prerequisite: ENG 101 and Oral Communications. Lecture: 1.0 credit (15 contact hours).

**NSG 216 (1)** Course ID: 006182
**Nursing Pharmacology I**
Focuses on common drugs, classifications, indications, and effects. Emphasizes the development of the nurse as a provider of care using evidence-based practice. Emphasizes the role of the nurse in enhancing healing of the whole person from birth to death. Prerequisite: ENG 101 and Oral Communications. Lecture: 1.0 credit (15 contact hours).

**NSG 218 (4)** Course ID: 004434
**Pharmacology II**
Focuses on common drugs, their classification and effects on functional and dysfunctional health patterns (activity/exercise, coping/stress/tolerance, role/relationship, altered self-perception/self-concept, and cognitive perceptual). Emphasizes the development of the nurse as a provider of care using evidence-based practice. Emphasizes the role of the nurse in enhancing healing of the whole person from birth to death. Prerequisite: ENG 101 and Oral Communications. Lecture: 4.0 credits (60 contact hours).

**NSG 219 (1 - 4)** Course ID: 000531
**Instructor Consent Required Selected Topics in Nursing: (Topic)**
Various nursing topics, issues, and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; courses may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor.

**NSG 220 (6)** Course ID: 005912
**Medical/Surgical Nursing II**
Focuses on the application of the core components of nursing to adult patients experiencing dysfunctional health patterns. Emphasizes the care of patients with activity/exercise dysfunctional health patterns (cardiac, respiratory and musculoskeletal). Prerequisite: (NSG 210, NSG 215 and NSG 212) with a grade of 'C' or higher and ENG 101 and Oral Communications. Prerequisite or corequisite: (NSG 211 and BIO 225) with a grade of 'C' or higher and ENG 102. Lecture: 3.0 credits (45 contact hours). Laboratory: 3.0 credits (135 contact hours).

**NSG 225 (1)** Course ID: 005913
**Pharmacology II**
Focuses on common drugs, their classification and effects on functional and dysfunctional health patterns (activity/exercise, coping/stress/tolerance, role/relationship, altered self-perception/self-concept, and cognitive perceptual). Emphasizes the development of the nurse as a provider of care using evidence-based practice. Emphasizes the role of the nurse in enhancing healing of the whole person from birth to death. Prerequisite: ENG 101 and Oral Communications. Lecture: 1.0 credit (15 contact hours).

**NSG 226 (1)** Course ID: 006183
**Nursing Pharmacology II**
Focuses on common drugs, classifications, indications, and effects. Emphasizes the development of the nurse as a provider of care using evidence-based practice. Emphasizes the role of the nurse in enhancing healing of the whole person from birth to death. Prerequisite: ENG 101 and Oral Communications. Lecture: 1.0 credit (15 contact hours).

**NSG 291 (3)** Course ID: 005782
**Healthcare Cultural Immersion Experience**
Introduces health care providers to cultural values, beliefs, practices, and communication patterns of a chosen culture through an immersion experience. Focuses on basic cultural vocabulary and on behaviors, beliefs, and nursing and health care practices of the chosen population. May be conducted in a country native to the chosen cultural group. Lecture: 3 credits (45 contact hours).

**NSG 292 (3)** Course ID: 004434
**Alternative and Complementary Therapies**
This is an elective course that focuses on the impact of alternative and complementary therapies in nursing practice. Holistic nursing is emphasized, as well as the nurse's role in enhancing healing of the whole person from birth to death. Lecture: 3 credits (45 contact hours).

**NSG 293 (3)** Course ID: 004534
**Validation of Essential Skills**
Review of essential skills set. Prerequisite: Admission to LPN to ADN Bridge Program. ([BIO 137 and BIO 139) within ten years, with a grade of C or better] and [MT 110 or MT 150] with a grade of C or better) and (PSY 100 or PSY 110) and BIO 223 and ENG 101 and Oral Communications. Laboratory: 0.4 credit (18 contact hours).

**NSG 295 (3)** Course ID: 006305
**Role Transition - Level I**
Provides transitions from the Licensed Practical Nurse to the role of Associate Degree Nurse. Prerequisite: NSG 1961 with a grade of 'C' or better and Physician or corequisite: NSG 2161 with a grade of 'C' or better if taken as a pre-requisite. Lecture: 1 credit (15 contact hours).

**NSG 296 (3)** Course ID: 006306
**Behavioral Health**
Focuses on the nursing care for the client with mental health dysfunctions. Prerequisite: (NSG 1962 and NSG 2161) with a grade of C or better. Lecture: 1 credit (15 contact hours).
a grade of C or better. Prerequisite or corequisite: NSG 2162 with a grade of C or better if taken as a pre-requisite. Laboratory: 0.3 credit (13.5 contact hours).

Components: Laboratory

NSG 216 (2) Course ID: 006309

Medical-Surgical Dysfunctions

Covers the implementation of nursing care for the client experiencing acute and/or chronic dysfunction in Gordon’s Functional Health Patterns. Prerequisite: (NSG 1964 and NSG 2162) with a grade of C or better. Lecture: 2 credits (30 contact hours).

Components: Lecture

NSG 1966 (0.3) Course ID: 006310

Introduction to ADN Skills II

Allows students to demonstrate skills competencies for the care of patients. Prerequisite: NSG 1965 with a grade of C or better. Prerequisite or corequisite: NSG 2163 with a grade of C or greater if taken as a prerequisite. Laboratory: 0.3 credit (13.5 contact hours).

Components: Laboratory

NSG 2161 (0.2) Course ID: 006311

Principles of Pharmacology

Emphasizes nursing implications and the use of the nursing process in medication administration. Prerequisite: Admission to LPN to A.D.N. Bridge Program. (BIO 137 and BIO 138) within ten years, with a grade of C or better and (MT 110 or MT 150) with a grade of C or better and (PSY 100 or PSY 110) and BIO 223 and Oral Communications and ENG 101 and (NSG 1961 with a grade of C or better). Prerequisite or corequisite: NSG 1962 with a grade of C or better if taken as a prerequisite. Lecture: 0.2 credit (3 contact hours)

Components: Lecture

NSG 2162 (0.2) Course ID: 006312

Nurse’s Role in Drug Therapy

Focuses on classifications, indications, and effects of common drugs. Emphasizes nursing implications and the use of the nursing process in medication administration. Prerequisite: NSG 2161 with a grade of C or better. Prerequisite or corequisite: (NSG 1964) with a grade of C or better if taken as a pre-requisite. Lecture: 0.2 credit (3 contact hours)

Components: Lecture

NSG 2163 (0.6) Course ID: 006313

Pharmacology Agents I

Focuses on classifications, indications, and effects of common drugs. Emphasizes nursing implications and the use of the nursing process in medication administration. Prerequisite: NSG 2162 with a grade of C or better. Prerequisite or corequisite: NSG 1966 with a grade of C or better if taken as a pre-requisite. Lecture: 0.6 credit (9 contact hours)

Components: Lecture

NSG 2261 (0.1) Course ID: 006314

Nursing Pharmacology 2.0

Focuses on classifications, indications, and effects of common drugs. Emphasizes nursing implications and the use of the nursing process in medication administration. Prerequisite: Admission to LPN to A.D.N. Bridge Program. (BIO 137 and BIO 139) within ten years, with a grade of C or better and (MT 110 or MT 150) with a grade of C or better and (PSY 100 or PSY 110) and BIO 223 and Oral Communications and ENG 101 and (NSG 1961 with a grade of C or better). Prerequisite or corequisite: BIO 225 within ten years, with a grade of C or better and ENG 102 and (NSG 2361 and NSG 2362 and NSG 2363) with a grade of C or better if taken as a pre-requisite. Lecture: 0.1 credit (1.5 contact hours)

Components: Lecture

NSG 2262 (0.9) Course ID: 006315

Nursing Pharmacology 2.1

Focuses on classifications, indications, and effects of common drugs. Emphasizes nursing implications and the use of the nursing process in medication administration. Prerequisite: NSG 2261 with a grade of C or better. Prerequisite or corequisite: NSG 2364 with a grade of C or better if taken as a prerequisite. Lecture: 0.9 credit (13.5 contact hours)

Components: Lecture

NSG 2361 (2.5) Course ID: 006316

Childbearing Family

Applies core components of nursing in the care of child-bearing families experiencing functional and dysfunctional health patterns. Prerequisite: NSG 2164 and NSG 2165 with a grade of C or better. Prerequisite or corequisite: BIO 225 within ten years, with a grade of C or better and ENG 102. Lecture: 2.5 credit (37.5 contact hours).

Components: Lecture

NSG 2362 (2) Course ID: 006317

Maternal-Newborn Clinical

Applies core components of nursing in the care of child-bearing families experiencing functional and dysfunctional health patterns. Prerequisite: NSG 2361 with a grade of C or better. Prerequisite or corequisite: NSG 2261 with a grade of C or better if taken as a pre-requisite. Clinical: 2 credits (30 contact hours).

Components: Clinical

NSG 2363 (2) Course ID: 006318

The Pediatric Client

Applies core components of nursing in the care of child-bearing families experiencing functional and dysfunctional health patterns. Prerequisite: NSG 2362 with a grade of C or better. Prerequisite or corequisite: NSG 2262 with a grade of C or better if taken as a pre-requisite. Lecture: 2 credits (30 contact hours).

Components: Lecture

NSG 2364 (0.5) Course ID: 006319

Role Transition - Level II

Provides overview of competencies required for entry into practice. Prerequisite: NSG 2363 with a grade of C or better. Lecture: 0.5 credit (7.5 contact hours)

Components: Lecture

NSG 2365 (2) Course ID: 006755

Pediatric Clinical

Applies core components of nursing in the care of child-bearing and child-rearing families experiencing functional and dysfunctional health patterns. Prerequisite: NSG 2364 with a grade of “C” or greater. Clinical: 2.0 credits (90 contact hours)

Components: Clinical

NSG 2461 (2) Course ID: 006320

Medical Surgical Nursing II A

Emphasizes the development of the nurse as a provider of care, manager of care, and member of the nursing profession. Provides for the application of critical thinking skills to the care of diverse clients/families across the lifespan with actual or potential alteration in health due to complex acute and chronic health problems. Emphasizes leadership, management, clinical decision-making, collaboration, knowledge, judgment, skills, and professional values within the legal/ethical framework to facilitate the transition of the student to Registered Nurse practice. Prerequisite: NSG 236 with a grade of C or greater. Prerequisite or corequisite: Heritage/Humanities/or Foreign Language Course. Lecture: 2 credits (30 contact hours)

Components: Lecture

NSG 2462 (2) Course ID: 006321

Medical Surgical Nursing II B

Emphasizes the development of the nurse as a provider of care, manager of care, and member of the nursing profession. Provides for the application of critical thinking skills to the care of diverse clients/families across the lifespan with actual or potential alteration in health due to complex acute and chronic health problems. Emphasizes leadership, management, clinical decision-making, collaboration, knowledge, judgment, skills, and professional values within the legal/ethical framework to facilitate the transition of the student to Registered Nurse practice. Prerequisite: NSG 2461 with a grade of C or better. Lecture: 2 credits (30 contact hours)

Components: Lecture

NSG 2463 (1) Course ID: 006322

Medical Surgical Nursing II C

Promotes an integrated practicum with an emphasis on leadership, management, clinical decision-making, collaboration, knowledge, judgment, skills, and professional values within the legal/ethical framework to facilitate the transition of the student to Registered Nurse practice. Prerequisite: NSG 2462 with a grade of C or better. Clinical: 1 credit (15 contact hours)

Components: Clinical

NSG 2464 (4) Course ID: 006323

Integrated Clinical Practicum

Includes an integrated practicum with an emphasis on leadership, management, clinical decision-making, collaboration, knowledge, judgment, skills, and professional values within the legal/ethical framework to facilitate the transition of the student to Registered Nurse practice. Prerequisite: NSG 2463 with a grade of C or better. Clinical: 4 credits (180 contact hours)

Components: Clinical

OST 100 (1) Course ID: 003768

Keyboarding

Develops skill operating a keyboard by touch. Lab: 1.0 credit (45 contact hours)

Components: Laboratory

OST 101 (3) Course ID: 004926

Keyboarding & Intro to Document Formatting

Develops skill in operating a keyboard by touch and to develop an introductory level of skill producing standard business documents using a word processing program with speed and accuracy. Lecture: 3.0 credits (45 contact hours)

Components: Lecture

OST 105 (3) Course ID: 003769

Introduction to Information Systems

Introduces and familiarizes students with essential computer concepts and terminology including operating systems software, multitasking concepts, disk and file management and telecommunications. Teaches basic competencies in word processing, electronic spreadsheets, presentations, databases, and online skills including networking, electronic mail, Web browsing, and Internet research. (Key 20 wpm is recommended). Pre-requisite: RDG 020 and MAT 055. Lecture: 3.0 credits (45 contact hours)

Components: Lecture

OST 107 (3) Course ID: 004429

Electronic Information Messaging & Internet Research

Students gain the skills and knowledge to explore and use the Internet for research and use a flexible messaging and information program to communicate efficiently with others. Prerequisite: OST 105 or computer literacy. Lecture: 3 credits (45 contact hours)

Components: Lecture

OST 108 (3) Course ID: 004521

Editing Skills for Office Professionals

A hands-on approach to editing business documents. Applies proper placement and structure of business documents. Reviews principles of grammar, punctuation, vocabulary, spelling, word and number usage, and proofreading rules. Lecture: 3 credits (45 contact hours)

Components: Lecture

OST 109 (3) Course ID: 004520

Legal Terminology

Introduces the judicial system (discovery, trial, and appellate processes), civil law, criminal law, legal terminology and legal citations commonly used in the legal field. Includes terms and how to use them in legal context. Lecture: 3.0 credits (45 contact hours)

Components: Lecture

OST 110 (3) Course ID: 003770

Instructor Consent Required Document Formatting and Introduction to Word Processing

Provides experience in word processing including the mastery of touch typing with speed and accuracy using industry standard software. Prerequisite: RDG 020 and Consent of Instructor (OST 101 equivalent skills). Lecture: 3.0 credits (45 contact hours)

Components: Lecture
OST 112 (3) Course ID: 004428
Financial Management
Designed to teach students fundamental principles and concepts including: financial markets, futures, bonds, commodities, interest rates, and taxes. The primary emphasis is short and long term financial planning along with interpretation of financial information. Careers in the financial industry discussed. Lecture: 3 credits (45 contact hours).
Components: Lecture

OST 113 (1) Course ID: 005270
Speedbuilding
Presents techniques for increased keyboarding speed and accuracy. Lecture: 1 credit (15 contact hours). Prerequisite: OST 100 or equivalent as determined by typing competency test.
Components: Lecture

OST 130 (3) Course ID: 004518
Typography
Introduces the principles of typography, type basics, type aesthetics, how to design with type, parameters of type and how they can be used to produce quality type. Utilizes advanced commands and pagination composition skills. Studies grids, file management and other options with design standards with business publications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

OST 150 (3) Course ID: 003771
Transcription and Office Technology
Produce usable business documents from machine dictation using word processing software, with emphasis on spelling, punctuation, and grammar. Proofreading and editing applications stress the importance of accuracy and quality of document creation and production. Demonstration of office machines will be incorporated. Lecture: 3 hrs; Laboratory: 0. Prerequisite: ENG 101 or Permission of Instructor and OST 110
Components: Lecture

OST 160 (3) Course ID: 003772
Records and Database Management
Presents aspects of the management of records from creation to disposal, using database software to create and edit files and prepare reports. Prerequisite: OST 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

OST 210 (3) Course ID: 003773
Advanced Word Processing Applications
Uses advanced features of a current word processing software to format and produce documents utilizes in an office. Prerequisite: OST 110. Lecture: 3.0 credit hours. (45 contact hours).
Components: Lecture

OST 213 (3) Course ID: 004517
Business Calculations For The Office Professional
Applies skills required for the performance of business tasks: use of numeric keypad to compute payroll, markup/ markdown, purchases, loans, discounts, stock and bond transactions; and other business applications. Lecture: 3 credits (45 contact hours).
Components: Lecture

OST 215 (3) Course ID: 003774
Office Procedures
Studies the practices and procedures of current office concepts with emphasis given to the electronic office including: job application procedures, human relations in the office, business ethics, decision-making skills, travel and meeting arrangements, time and stress management, incoming/outgoing mail processes, and telephone procedures. Prerequisite: OST 110. Corequisite: OST 110. Lecture: 3 credits (45 contact hours).
Components: Lecture

OST 216 (1 - 6) Course ID: 004515
Selected Topics
Expands course offerings to address local office issues as new technology is developed. Varies from semester to semester at the discretion of the instructor; may be repeated with different topics to a maximum of six credit hours. Lecture: 1-6 hours (15-90 contact hours).
Components: Lecture

OST 220 (3) Course ID: 003775
Administrative Office Simulations
Applies administrative procedures office simulations to include organizing, communicating, scheduling, and analyzing. Emphasizes productivity, efficiency, accuracy, and problem solving. Uses technology to research information on the Internet and send and receive e-mail. Continues to develop speed and accuracy. Prerequisite: (OST 215 and OST 240) or consent of instructor Lecture: 3.0 credits (45 contact hours).
Components: Lecture

OST 221 (3) Course ID: 005469
Legal Office Simulation
Applies classroom experiences and skills in a simulated legal office environment. Prerequisite: OST 110. Lecture: 3 credits (45 contact hours).
Components: Lecture

OST 225 (3) Course ID: 003776
Introduction to Desktop Publishing
Uses desktop publishing software to design and produce high resolution publications such as flyers, brochures, business forms, and newsletters. Introduces basic design techniques, type and graphics layout, and related terminology. Prerequisite: (OST 105 and OST 110) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

OST 235 (3) Course ID: 003777
Business Communications Technology
Presents aspects of communications technology used in the global business environment, including presentations software; a basic understanding of voice recognition software; planning and composition of written, oral, and electronic communications; grammar, punctuation, and spelling; and principles of proofreading, both manual and electronic. Prerequisite: (ENG 101 or OST 108) and OST 110. Lecture: 3 credits (45 contact hours).
Components: Lecture

Attributes: Course Also Offered in Modules

OST 240 (3) Course ID: 003778
Software Integration
Expands computer skills through the use of spreadsheet, database management, word processing, and presentation software for the integration of information. Prerequisite: OST 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

OST 250 (3) Course ID: 004514
Advanced Desktop Publishing
Provides advanced techniques in electronic publishing design, layout, composition and paste-up. Prerequisite: (OST 225 or Consent of Instructor). Lecture: 3.0 credits (45 contact hours).
Components: Lecture

OST 255 (3) Course ID: 004425
Introduction to Business Graphics
Provides instruction in the process of image-editing including how to create original artwork, manipulate color, enhance artwork, graphics and retoch photographs and clip art used in desktop publishing programs. Prerequisite: (OST 105 or OST 225) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

OST 272 (3) Course ID: 004511
Presentation Graphics
Uses industry standard software to create business presentations, business graphics, transparency, and slides. Applies editing, formatting, page layout and design, and paste-up techniques for clarity and impact. Prerequisite: OST 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

OST 275 (3) Course ID: 003779
Office Management
Management principles and techniques and their applications to the modern business office are included. Emphasis is on information systems and the role of managerial personnel. Lecture: 3 credits. Laboratory: 0 credits.
Components: Lecture

Attributes: Course Also Offered in Modules

OST 295 (1 - 3) Course ID: 003780
Instructor Consent Required Office Systems Technology Internship
Provides the opportunity to apply acquired occupational skills in a realistic setting, enhancing the transition from school to work. Requires approval of OST advisor. Prerequisite: Consent of instructor and 2.0 GPA. Laboratory: 1-3 credits (45-135 contact hours).
Components: Laboratory

OST 296 (3) Course ID: 004505
Instructor Consent Required Office Systems Technology Internship II
Enhances transition from school to work by providing non-paid work experience which utilizes the skills required to achieve occupational goal. Prerequisite: Consent of Program Adviser. Practicum: 3 credits (135 contact hours).
Components: Practicum

OST 2751 (0.5) Course ID: 005806
Office Management Principles
Includes introductory management principles and techniques for the modern business office. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

OST 2752 (1) Course ID: 005807
Managing Human Resources in the Office
Includes management principles and techniques and their application to the management of human resources in the modern business office. Prerequisite: OST 271. Lecture: 1 credit (15 contact hours).
Components: Lecture

OST 2753 (0.5) Course ID: 005808
Managing Office Administrative Services
Management principles and techniques for the modern business office as they apply to the development of an information system and the management of physical resources are included. Prerequisite: OST 2751. 0.5 credit. (7.5 contact hours).
Components: Lecture

OST 2754 (1) Course ID: 005809
Managing Office Administrative Systems
Includes quality management principles and techniques for the administrative systems in a modern business office. Prerequisite: OST 2751. Lecture: 1 credit. (15 contact hours).
Components: Lecture

OTA Occupational Therapy Assistant

OTA 101 (3) Course ID: 006868
Introduction to Occupational Therapy
Introduces the profession of occupational therapy by examination of history, philosophy, and theoretical foundations. Examines roles of Occupational Therapist (OT) and Occupational Therapy Assistant (OTA) with respect to education, credential, employment settings, and ethics. Outlines usage of Occupational Therapy Practice Framework, medical terminology, group dynamics, and communication skills. Pre-requisite: Admission to OTA program or permission of instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture

OTA 113 (2) Course ID: 006869
Applied Anatomy and Kinesiology
Studies the musculoskeletal and nervous systems of the human body in relationship to movement and function. Emphasizes the upper extremity and shoulder girdle. Focuses on innervation of muscles, muscle grouping for function, and common problems seen when these systems are affected by disease/injury. Introduces the analysis of movement in specific life tasks. Uses the goniometer for joint measurement, manual muscle testing for strength, and promotes familiarity with the terms and techniques used in assessing motor function. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
OTA 115 (2)  Course ID: 006881
Skills and Interventions I
Develops the basic foundational principles/applications of occupational therapy, such as the concept of basic needs, therapeutic interventions, techniques, applications, analysis, safety, and adaptive skill development as the basics of an individual's occupational performance. Provides explanation and introductory lab practice of the occupational therapy assistant elements. Pre-requisite: Admission to OTA program and permission of instructor. Lab: 2.0 credits (60 contact hours).

Components: Lecture

OTA 116 (2)  Course ID: 006882
Media Principles and Procedures I
Develops skills in planning, implementing and evaluating occupational therapy for individuals experiencing deficits in occupational performance through the analysis of human occupation and subsequent methods of remediating, compensating, grading, and/or modifying activities and environments for optimal occupational performance. Develops communication skills necessary for documentation and patient interaction. Focuses on appropriate treatment and need for awareness of ethnic, cultural, and socio-economic factors that impact individuals. Provides opportunities for students to develop skills in activity analysis, functional mobility, therapeutic crafts, and modalities. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (90 contact hours).

Components: Lecture

OTA 125 (2)  Course ID: 006883
Assistive Technology and Documentation
Presents various methods of documentation used in occupational therapy settings for evaluation, intervention, justification of payment for equipment, discharge, and other client records, and requirements of third party payers. Explores assistive technology to facilitate knowledge in a broad range of devices, services, strategies, and practices conceived and applied to decrease the problems faced by individuals. Pre-requisite: Admission to OTA program and permission of instructor. Lab: 2.0 credits (60 contact hours).

Components: Lecture

OTA 126 (1)  Course ID: 006870
Level IIA Fieldwork
Provides the opportunity to observe and participate in various settings appropriate to occupational therapy service but not necessarily within a therapy department or under an occupational therapy professional. Provides opportunities to develop entry-level skills in the occupational therapy process with hands-on interaction as appropriate. Encourages development of professional behaviors and effective communication skills. Pre-requisite: Admission to OTA program and permission of instructor. Clinical: 1.0 credit (60 contact hours).

Components: Clinical

OTA 136 (4)  Course ID: 006871
Physical Dysfunction
Includes study of physical conditions commonly seen by Occupational Therapy, including diagnoses, instruction on treatment, and application of treatment. Introduces practice models to guide treatment applications, including procedures for multiple conditions in physical dysfunction. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 4.0 credits (120 contact hours).

Components: Lecture

OTA 146 (3)  Course ID: 006872
Occupational Therapy in Mental Health
Presents typical and dysfunctional behavior using the occupational therapy process as it pertains to mental health practice settings. Explores alternative methods and settings for mental health practice. Covers training and practice in interpersonal skills necessary for effective communication with clients, families, significant others, other health care professionals, and the public. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 3.0 credits (75 contact hours).

Components: Lecture

OTA 206 (2)  Course ID: 006873
Community Practice
Explores the current and emerging practice areas of occupational therapy in the immediate and future needs. Focuses on occupation-based practice, holistic, wellness, and prevention models applied throughout the lifespan. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).

Components: Lecture

OTA 216 (2)  Course ID: 006884
Media Principles and Procedures II
Provides students the opportunity to apply skills in evaluating and planning occupational therapy for individuals experiencing deficits in occupational performance in a safe and efficient manner. Develops assessment skills in order to plan appropriate treatments applicable to deficits in occupational performance, including fabrication of orthotics and adaptive equipment and techniques. Develops communication skills necessary for documentation and patient interaction. Provides opportunities for students to develop skills in assessment, adaptations, orthotics and appropriate treatment with awareness of ethnic, cultural, and socio-economic factors that impact individuals. Pre-requisite: Admission to OTA program and permission of instructor. Lab: 2.0 credits (90 contact hours).

Components: Laboratory

OTA 225 (2)  Course ID: 006885
Skills and Interventions II
Incorporates analysis of instruction and implementation of occupational therapy treatment techniques. Provides opportunities to apply theoretical concepts in practice situations, involving higher-level activities of daily living, comprehensive analysis, purposeful activity, modalities and neurological re-education. Applies implementation skills necessary for level II fieldwork and to work as entry-level occupational therapy assistant. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).

Components: Lecture

OTA 226 (1)  Course ID: 006874
Level IIB Fieldwork
Provides the opportunity to observe and participate in various settings appropriate to occupational therapy service but not necessarily within a therapy department or under an occupational therapy professional. Provides opportunities to develop intermediate skills in the occupational therapy process. Provides opportunities for students to advance therapeutic skills and to generalize skills and knowledge from the classroom to the practice setting. Hones professional behaviors and communication skills established in previous occupational therapy classes. Pre-requisite: Admission to OTA program and permission of instructor. Clinical: 1.0 credit (60 contact hours).

Components: Clinical

OTA 236 (2)  Course ID: 006875
Professional Transitions and Management
Explores professional issues related to the transition from student to practitioner, the relationships the occupational therapy assistant (OTA) has with other health care professionals, identification of licensure and certification requirements, professional memberships, job search strategies, methods of reimbursement, and formulation of professional approaches to become a successful entry-level therapist. Pre-requisite: Admission to OTA program and permission of instructor. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

OTA 246 (3)  Course ID: 006876
Pediatric Issues in Occupational Therapy
Examines occupational therapy in the pediatric population. Investigates physical, emotional, and cognitive processes begin, change, and develop from birth through adolescence. Addresses concepts of occupation in pediatrics. Encourages students to view treatments holistically and to integrate normal developmental milestones and various disabilities. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 3.0 credits (75 contact hours).

Components: Lecture

OTA 256 (2)  Course ID: 006877
Elder Issues in Occupational Therapy
Explores the concerns for occupational therapy in the aging population. Examines how physical, emotional and cognitive processes change through adulthood. Discusses the effects of occupational therapy throughout the life span employing a holistic approach to intervention. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).

Components: Lecture

OTA 265 (5)  Course ID: 006878
Level IIIF Fieldwork
Provides opportunity to function in various clinical settings under supervision of experienced occupational therapy practitioner. Promotes collaboration with the Occupational Therapist in planning/implementation of treatment programs with clients with a variety of diagnoses and ages. Cultivates skills necessary to function at entry-level of practice through the first of two successive fieldwork rotations in unique healthcare settings/institutions. Pre-requisite: Admission to OTA program and permission of instructor. Practicum: 5.0 credits (300 contact hours).

Components: Practicum

OTA 275 (6)  Course ID: 006879
Level IIF Fieldwork
Provides opportunity to function in various clinical settings under supervision of experienced occupational therapy practitioner. Promotes collaboration with the Occupational Therapist in planning/implementation of treatment programs with clients with a variety of diagnoses and ages. Strengthens complex skills, including critical thinking, required for entry-level of practice through the final of two successive fieldwork rotations in unique healthcare settings/institutions. Pre-requisite: Admission to OTA program and permission of instructor. Practicum: 5.0 credits (300 contact hours).

Components: Practicum

OTA 285 (2)  Course ID: 006880
Clinical Seminar
Provides students an opportunity to share information from their clinical site with both the academic instructor and their classmates. Emphasizes application of information learned to other situations. Prepares students for National Board for Certification in Occupational Therapy (NBCOT) certification examination. Pre-requisite: Admission to OTA program and permission of instructor. Co-requisite: OTA 266 OR OTA 276. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

PAR 110 (8)  Course ID: 003803
Introduction to Paramedic Practice
Introduces the practice of paramedicine which includes: roles and responsibilities, emergency medical systems (EMS), medical/legal considerations, EMS communications, fundamentals of patient assessment, airway, and ventilation, pathophysiology of shock, respiratory, infectious diseases, behavioral emergencies, trauma, and pharmacology. Pre-requisites: Hold current unrestricted certification in KY or hold current unrestricted certification examination. Admission to the paramedic program. ((CLA 131 or AHS 115 or OST 103) and (BIO 135 or BIO 137) or Consent of Instructor). Lecture: 7.0 credits (105 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture

PAR 120 (8)  Course ID: 003804
Paramedic Practice II
Includes the study of the cardiovascular system as it relates to paramedic practice in medications, electrical activity of the heart, pathophysiology, assessment, and other treatment techniques. Focuses on medical emergencies including cardiovascular, endocrine, nervous systems, gastrointestinal, genitourinary/reproduction, acute abdomen, anaphylaxis, toxocology, alcoholism, drug abuse, environmental injuries, obstetrics and gynecology, and life line developmental considerations. Pre-requisite: PAR 110. Lecture: 5.0 credits (75 contact hours). Lab: 3.0 credits (90 contact hours).

Components: Laboratory, Lecture
PAR 220 (5) Course ID: 003805
Paramedic Practice III
Includes major incident response, rescue, stress
management, hazardous material incidents, and death and
dying. Covers Advanced Cardiac Life Support, Pediatric
Life Support, Neonatal Resuscitation, and Trauma Life
Support. Prerequisites: PAR 120. Lecture: 4 credits (60
contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture

PAR 230 (7) Course ID: 003806
Clinical Practicum I
Requires clinical observation and practice of paramedic
procedures in the clinical setting to apply knowledge
from previous paramedic course-work. (Students will
rotate through selected hospital departments to include:
emergency department, intensive care, coronary care,
operating room, recovery room, pediatric unit, labor and
delivery, newborn nursery, psychiatric unit or crisis center,
and morgue.) Prerequisites: PAR 220 or Consent of
Instructor. Practicum: 7 credits (315 contact hours). *M*
Components: Practicum
Attributes: Course Also Offered in Modules

PAR 240 (7) Course ID: 003807
Field Internship I
Focuses on competency-based internship with assigned
ambulance services where knowledge is applied from
previous paramedic courses to deliver out-of-hospital
care to patients. (Students will complete a minimum 525
hours of field internship under the direction of a licensed
paramedic.) Prerequisite: PAR 230 or Consent of
Instructor. Practicum: 7.0 credits (525 contact hours).
Components: Practicum

PAR 2301 (4) Course ID: 005783
Clinical Practicum I-A
Provides clinical observation and practice for paramedic
procedures in the clinical setting. Provides for application
of knowledge from previous paramedic course-work.
(Students will conduct 180 hours in rotations through
selected hospital departments to include: emergency
department, operating room, recovery room and psychiatric
unit or crisis center.) Prerequisite: PAR 220 or Consent of
Instructor. Practicum: 4 credits (180 contact hours).
Components: Practicum

PAR 2302 (3) Course ID: 005784
Clinical Practicum I-B
Provides for clinical observation and practice of paramedic
procedures in the clinical setting. Provides for the
application of knowledge from previous paramedic course-
work. (Students will conduct 150 hours in rotations through
selected hospital departments to include: intensive care,
coronary care, operating room, pediatric unit, labor and
delivery, newborn nursery and morgue.) Prerequisite: PAR
2301
Components: Practicum

PAR 2401 (3) Course ID: 005785
Field Internship I-A
Provides field-work with assigned ambulance services.
Provides for application of knowledge from previous
paramedic courses and clinical experiences to deliver pre-
hospital care to patients. Students will complete a minimum
225 hours of field experience. Prerequisite: PAR 220 and
PAR 2301 or Consent of Instructor.
Components: Practicum

PAR 2402 (4) Course ID: 005786
Field Internship I-B
Provides field-work with assigned ambulance services.
The student will apply knowledge from previous paramedic
courses and clinical experiences to deliver pre-hospital
care to patients. Students will complete a minimum
300 hours of field experience. Prerequisite: PAR 2401.
Practicum: 4 credits (300 contact hours).
Components: Practicum

PGL 211 (3) Course ID: 007051
Legal Systems and Terminology
Provides an overview of major principles and functions of
the state and federal legal systems, introduces various
legal fields for professional opportunities, presents legal
vocabulary, gives an overview of different areas of law, and
presents ethics. Pre-requisite: ACT, COMPASS, or ASSET
scores for college level reading and writing OR completion
of Transitional reading and writing courses. Co-requisite:
PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Campus: MDC

PGL 112 (3) Course ID: 007052
Legal Research
Introduces the basic sources of law and methods of legal
research, including ethics. Pre-requisite: ACT, COMPASS,
or ASSET scores for college level reading and writing OR
completion of Transitional reading and writing courses.
Co-requisite: PGL 111. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Campus: MDC

PGL 113 (3) Course ID: 007053
Law Office Management
Provides practical application of daily legal office skills
needed in the legal field, professional enrichment
presentations, history of the profession, professional
ethics through fact analysis, and an overview of law office
management. Pre-requisite: ACT, COMPASS, or ASSET
scores for college level reading and writing OR completion
of Transitional reading and writing courses. Lecture: 3.0
credits (45 contact hours).
Components: Lecture
Campus: MDC

PGL 211 (3) Course ID: 007054
Family Law
Examines the areas of law pertaining to domestic relations,
emphasizing ethics. Pre-requisite: PGL 111 and PGL 112.
Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Campus: MDC

PGL 212 (3) Course ID: 007055
Legal Writing
Includes composition of legal communications, briefs,
memoranda, and other legal documents, with an emphasis
on ethical considerations. Pre-requisite: PGL 111 and PGL
112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Campus: MDC

PGL 213 (3) Course ID: 007056
Civil Litigation I
Presents the litigation process and emphasizes the
structure of the court systems. Includes gathering
information and evidence, summarizing and arranging
materials, maintaining docket and file control, developing
a litigation case, and interviewing clients and witnesses,
using ethical standards. Pre-requisite: PGL 111 and PGL
112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Campus: MDC

PGL 214 (3) Course ID: 007057
Real Property I
Introduces real property law including ownership, transfer
of property, liens and encumbrances, and the various types
of deeds. Pre-requisite: PGL 111 and PGL 112. Lecture:
3.0 credits (45 contact hours).
Components: Lecture
Campus: MDC

PGL 221 (3) Course ID: 007058
Wills and Estates
Introduces the laws of inheritance and estates, basic
concepts of estates and wills, probate procedures, and
preparation of documents while emphasizing ethics. Pre-
requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45
contact hours).
Components: Lecture
Campus: MDC

PGL 223 (3) Course ID: 007059
Civil Litigation II
Continues the study of the litigation process from discovery
through appeal. Emphasizes collecting and organizing
discovery materials and demonstrating knowledge of the
limits placed on discovery by the federal and state rules
of civil procedure. Includes the trial and appeal phases of
litigation, with emphasis on trial preparation and appellate
procedure. Pre-requisite: PGL 213. Lecture: 3.0 credits (45
contact hours).
Components: Lecture
Campus: MDC

PGL 224 (3) Course ID: 007060
Real Property II
Examines legal documents related to real property as
recorded in the clerk’s office, the tax assessor’s office, and
the circuit clerk’s office. Includes compiling a title abstract
and completing an assignment to prepare a real estate
file from transaction through closing and post-closing,
implementing ethics. Pre-requisite: PGL 214. Lecture: 3.0
credits (45 contact hours).
Components: Lecture
Campus: MDC

PGL 233 (3) Course ID: 007062
Ethics
Provides an overview of the various sources of ethics law
and rules, along with the essentials of how and why a legal
professional must report misconduct. Explores the types of
discipline an ethical lapse may trigger, such as sanctions,
disqualification, civil and criminal liability, and what it
means to be engaged in the ‘unauthorized practice of law.’
Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45
contact hours).
Components: Lecture
Campus: MDC

PGY 206 (3) Course ID: 000846
Elementary Physiology
An introductory survey course in basic human physiology.
Prerequisite: One semester of college biology. Lecture: 3.0
credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)
Campus: BLC

PHA Pharmacy

PHA 104 (2) Course ID: 004160
Parenterals
A basic understanding of working with admixtures. Focuses
on aseptic technique and basic sterile compounding.
Lecture: 1 credit (15 contact hours); Laboratory: 1 credit
(45 contact hours).
Components: Laboratory, Lecture

PHA 110 (5) Course ID: 004159
Pharmacy Procedures and Skills
Introduces the student to the field of pharmacy. Includes
pharmacy assistant responsibilities, legal requirements,
safety issues, and basic skills of a pharmacy assistant.
Lecture: 4 credits (60 contact hours); Laboratory: 1 credit
(45 contact hours).
Components: Laboratory, Lecture

PHA 125 (2) Course ID: 004161
Pharmaceutical Calculations
Covers basic math review, percentage strengths, ratio
and proportion, conversion between the apothecary and
metric systems, and intravenous calculations. Focus
is on equivalencies and calculation of drug dosages.
Prerequisite: MAT 065 or equivalent. Lecture: 2 credits (30
contact hours).
Components: Lecture
PHA 136 (3)  
Course ID: 001930  
Pharmacology  
Introduces the study of drugs and their effect on the human body. Emphasis is placed on those commonly used drugs, their dosage and common side effects as well as any adverse actions that might occur. Lecture: 2 credits (45 contact hours).  
Components: Lecture  
PHA 200 (3)  
Course ID: 001931  
Admixtures for IV Therapy  
Provides a basic working knowledge for the pharmacy technician involved in the preparation of IV admixtures. Prerequisite: (PHA 110 and 136 with a grade of C or greater). Corequisite: PHA 205 or Consent of Instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
PHA 205 (1)  
Course ID: 001932  
Admixture Preparations  
Provides the opportunity to become proficient in the techniques of IV Admixing and in the use of related equipment associated with sterile product preparation. Prerequisite: (PHA 110 and 136 with a grade of C or greater). Corequisite: PHA 200 or Consent of Instructor. Laboratory: 1 credit (45 contact hours).  
Components: Lecture  
PHB 152 (1)  
Course ID: 001475  
Phlebotomy: Clinical Experience  
Introduces the student to clinical practice in the phlebotomy department of a laboratory. The student will begin to develop performance skills in routine venipuncture and capillary collection procedures emphasizing performance skills in routine venipuncture and capillary collection procedures. Prerequisite: PHB 151 or PHB 170 or MAI 120. Laboratory: 1.0 credit (30 contact hours).  
Components: Laboratory  
PHB 153 (4)  
Course ID: 004479  
Advanced Topics in Phlebotomy  
Prepares the student as an integral member of the health-care team. One who collects blood from patients/donors in hospitals, blood banks or clinics for analysis or other medical purposes. Practices standard precautions, record keeping, vital signs and therapeutic communication skills. Prerequisite: PHB 151 Phlebotomy for the Healthcare Worker. Lecture: 4.0 credits (60 contact hours).  
Components: Lecture  
PHB 155 (2-3)  
Course ID: 001399  
Phlebotomy Clinical  
This course is designed to build on the knowledge acquired in phlebotomy lecture and lab. In this course the student will use external institutions for clinical experience to become more proficient in the performance of routine venipuncture and derral collections. The student will gain the experience needed to handle routine venipuncture complications and the skills necessary to adequately perform the duties of a phlebotomist. Prerequisite: PHB 151 Phlebotomy for the Healthcare Professional or PHB 100 Phlebotomy. Lab: 2.0 - 3.0 credits (120 - 180 contact hours).  
Components: Laboratory  
PHA 100 (6)  
Course ID: 001938  
Phlebotomy  
Prepares the student as an integral member of the health-care team and collect blood from patients/donors in hospitals, blood banks or clinics for analysis or other medical purposes. Includes standard precautions, record keeping, and therapeutic communication skills. Lecture: 6 credits (90 contact hours).  
Components: Lecture  
PHA 120 (6)  
Course ID: 003809  
Fundamentals of Clinical Laboratory Phlebotomy  
Fundamental techniques of areas of the clinical laboratory appropriate to the phlebotomist are introduced. Included is a study of medical ethics, medical terminology, anatomy and physiology of the circulatory system, professional organizations, communication, record keeping, specimen collection, chain of custody, laboratory safety, and quality control. Lecture: 3 hrs; Laboratory: 9 hrs. Prerequisite: CPR Certification, Malpractice insurance, Hepatitis, Varicella, PPID, Rabies, and Rubella blood work results.  
Components: Laboratory, Lecture  
PHA 151 (1)  
Course ID: 004072  
Instructor Consent Required Phlebotomy for the Health Care Worker  
Course covers fundamental techniques in proper venipuncture and capillary collection. Included is a study of medical ethics, laboratory terminology, anatomy and physiology of the circulatory system, communication and record keeping, specimen processing, laboratory safety, isolation procedures and special collection. Pre-requisite: Permission of the instructor. Lecture/Lab: 1.0 credits (30 contact hours).  
Components: Lecture  
PHA 130 (3)  
Course ID: 000354  
Ethics  
Introduces students to a critical examination of philosophical principles related to moral action and policy values. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
PHA 140 (3)  
Course ID: 005139  
The Ethics of War and Peace  
Ethical reasoning and application of ethical theories to moral issues connected to war and peace. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
PHA 250 (1 - 8)  
Course ID: 001936  
Instructor Consent Required Pharmacy Practice  
Enhances the student's transition from class to the 'world of work' by providing work experience in a setting which utilizes the skills required to achieve the student's occupational goals. Prerequisite: Consent of Instructor. Laboratory/Clinical: 1-8 credits (60-480 contact hours).  
Components: Lecture  
PHI 120 (3)  
Course ID: 000356  
Introductory Logic  
Examines special topics in philosophy. Includes, but not limited to, individual philosophers, movements, writings, traditions, and selected eras. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
PHI 130 (3)  
Course ID: 000497  
History of Philosophy I: From Greek Beginnings to the Middle Ages  
Provides an introductory study of the development of Western philosophy from ancient through late medieval times, including the development of fields such as logic, metaphysics, epistemology, and ethics. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
PHI 140 (3)  
Course ID: 005139  
The Ethics of War and Peace  
Ethical reasoning and application of ethical theories to moral issues connected to war and peace. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
PHI 150 (3)  
Course ID: 000359  
Business Ethics  
Examines the principles of ethics and standards related to moral reasoning used to analyze moral issues in business. Applies ethics and reasoning to current issues of management, employees, government, public safety, and the environment. Lecture: 3 credits (40 contact hours).  
Components: Lecture  
PHI 260 (3)  
Course ID: 000698  
History of Philosophy II: From the Renaissance to the Present Era  
Provides an introductory study of the development of Western philosophy from early modern through contemporary times, including the development of fields such as metaphysics, analytic and continental philosophy, and ethics. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
PHI 270 (3)  
Course ID: 000497  
History of Philosophy III: From the Renaissance to the Present Era  
Provides an introductory study of the development of Western philosophy from early modern through contemporary times, including the development of fields such as metaphysics, analytic and continental philosophy, and ethics. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
PHI 299 (3)  
Course ID: 006969  
Special Topics in Philosophy: Topic  
Examines special topics in philosophy. Includes, but not limited to, individual philosophers, movements, writings, traditions, and selected eras. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
PHS 175 (6)  
Course ID: 001941  
Applied Physics  
This course is a basic study of the principles of physics and mechanics, including motion, force, vectors, work, energy, machines, properties of matter, behavior of fluids, temperature and heat, properties of gases, wave motion, electricity, light, and nuclear physics. Problem solving techniques are stressed. Corequisite: MT 125. Lecture: 8 credits (120 contact hours).  
Components: Lecture  
PHX 150 (3)  
Course ID: 001944  
Introductory Physics  
A non-calculus approach to the concepts and applications of the physical principles of force, work, rate, resistance, energy, power, transformers and gas lawe is presented in this course. Students are shown by examples, classroom demonstration, and laboratory experiments how these concepts are applied to the translational and rotational mechanical, fluidal, electrical and thermal energy systems. Problem solving techniques and scientific method are stressed throughout this course. Prerequisite: MT 115 or MT 125. Lecture: 3 credits (45 contact hours).  
Components: Lecture
PHY 100 (3) Course ID: 000550
Concepts of the Physical World
This semester course provides an introduction to the concepts of physics for students planning to teach in elementary and middle schools. Topics include structure and properties of matter, mechanics, and electricity. Credit is not given to students who already have credit for PHY 201 or PHY 231. Companion lecture to PHY 161 laboratory. Prerequisite: KCTCS placement in College Algebra or completion of Intermediate Algebra. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SL - Science Laboratory, SL - Science

PHY 151 (3) Course ID: 000840
Introductory Physics I
Focuses on the conceptual principles of mechanics of solids, liquids, gases, heat, and sound using some algebra. Credit is not given to students who already have credit for PHY 201 or PHY 231. Companion lecture to PHY 162 laboratory. Prerequisite: KCTCS placement in College Algebra or completion of Intermediate Algebra. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

PHY 152 (3) Course ID: 000402
Introductory Physics II
Focuses on the conceptual principles of electricity, magnetism, optics, atomic, and nuclear physics using some algebra. Credit is not given to students who already have credit for PHY 201 or PHY 232. Companion lecture to PHY 160 laboratory. Prerequisite: KCTCS placement in College Algebra or completion of Intermediate Algebra. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

PHY 160 (3) Course ID: 000436
Physics and Astronomy for Elementary Teachers
Addresses basic concepts of astronomy and physics appropriate for elementary teachers and is taught with an emphasis on inquiry-based, laboratory activities. Topics include the basics of the motion of objects, astronomy by sight, electrical circuits, magnetism and the behavior of light. Companion course to GLY 160. Pre-requisite: GLY 160. Lecture: 1 credit hour (15 contact hours), Lab: 2 credit hours (75 contact hours).
Components: Laboratory
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science

PHY 161 (1) Course ID: 000471
Introductory Physics I Laboratory
Investigates concepts introduced in PHY 151 through experiments in classical mechanics and thermal physics. Prerequisite or concurrent: PHY 151. Lab: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

PHY 162 (1) Course ID: 000475
Introductory Physics II Laboratory
Investigates concepts introduced in PHY 152 through experiments in electricity, magnetism, light, atoms, and nuclei. Prerequisite or concurrent: PHY 152. Laboratory: 1 credit (15 contact hours). Lab: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

PHY 171 (4) Course ID: 000156
Applied Physics
Surveys mechanics, heat, sound, electricity, magnetism, light, and modern physics as applied to practical systems. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours).
Components: Laboratory
Attributes: SN - Science, SL - Science Laboratory, SL - Science Laboratory, SN - Science, Course Also Offered in Modules

PHY 172 (2) Course ID: 004817
Physics for Health Sciences
Introduces the basic concepts of motion, forces, work, energy, power and waves through experimentation, as applied in electricity and magnetism, optics, atomic, and nuclear physics. Prerequisite: KCTCS placement in College Algebra or completion of Intermediate Algebra. Lab: 2 credit hours (60 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

PHY 201 (4) Course ID: 000911
College Physics I
Focuses on the mechanics of matter as governed by Newton's Laws; by the conservation laws of energy, momentum, and angular momentum; and thermal processes using algebra and basic trigonometry. Companion lecture to PHY 202 laboratory. Credit is not given to students who have already completed PHY 231. Prerequisite: (MT 150 or higher) or MA109 or an ACT math score of 25 or higher. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Components: Discussion, Lecture
Attributes: SN - Science, SN - Science

PHY 202 (1) Course ID: 000627
College Physics II Laboratory
Enhances concepts introduced in PHY 201 through experiments in classical mechanics and thermal physics. Pre-requisite Or Co-requisite: PHY201 or equivalent. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

PHY 203 (4) Course ID: 000524
College Physics II
Focuses on electromagnetic phenomena, circuits, optics and an introduction to modern physics using algebra and basic trigonometry. Companion lecture to PHY 204 laboratory. Credit is not given to students who have already completed PHY 232. Prerequisite: PHY 201 or equivalent. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Components: Discussion, Lecture
Attributes: SN - Science, SN - Science

PHY 204 (1) Course ID: 000192
College Physics II Laboratory
Enhances concepts introduced in PHY 203 through experiments in electricity, magnetism, and optics. Pre-requisite Or Co-requisite: PHY203 or equivalent. Lab: 1.0 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

PHY 231 (4) Course ID: 000290
General University Physics I
Focuses on the mechanics of matter as governed by Newton's Laws and by the conservation laws of energy, linear momentum, and angular momentum using calculus and trigonometry. Companion lecture to PHY 241 laboratory. Pre-requisite Or Co-requisite: MT185 or MA114 or equivalent. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Components: Discussion, Lecture
Attributes: SN - Science, SN - Science

PHY 232 (4) Course ID: 000625
General University Physics II
Focuses on electromagnetic phenomena, circuits, and optics using vector calculus. Companion lecture to PHY 242 laboratory. Prerequisite: PHY 231. Pre-requisite Or Co-requisite: MT275 or MA213 or equivalent. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Components: Discussion, Lecture
Attributes: SN - Science, SN - Science

PHY 241 (1) Course ID: 000638
General University Physics I Laboratory
Enhances concepts introduced in PHY 231 through a complement of experiments relating to motion, Newton's laws, rotation, and energy conservation principles. Prerequisite Or Co-requisite: PHY 231 Laboratory: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

PHY 242 (1) Course ID: 000642
General University Physics II Laboratory
Enhances concepts introduced in PHY 232 through a complement of experiments probing electromagnetic phenomena, circuits, and optics. Pre-requisite Or Co-requisite: PHY 232 Laboratory: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, SL - Science Laboratory

PHY 1711 (0.5) Course ID: 006109
Motion & Newton's Laws
Surveys selected topics in velocity, acceleration, and force. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/ Lab: 0.5 credit (9.37 contact hours).
Components: Lecture

PHY 1712 (0.5) Course ID: 006110
Work, Energy, Power, and Momentum
Surveys selected topics in work, energy, power, and momentum. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours).
Components: Lecture

PHY 1713 (0.5) Course ID: 006111
Fluid Dynamics
Surveys selected topics in fluid dynamics. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.37 contact hours).
Components: Lecture

PHY 1714 (0.5) Course ID: 006112
Thermodynamics
Surveys selected topics in thermodynamics. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours).
Components: Lecture

PHY 1715 (0.5) Course ID: 006113
Electricity and Magnetism
Surveys selected topics in electricity and magnetism. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.37 contact hours).
Components: Lecture

PHY 1716 (0.5) Course ID: 006114
Wave Motion, Sound, and Light
Includes selected topics in wave mechanics, sound, and optics. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours).
Components: Lecture

PHY 1717 (0.5) Course ID: 006115
Modern and Nuclear Physics
Surveys selected topics in atomic, nuclear, and modern physics. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.37 contact hours).
Components: Lecture

PHY 1718 (0.5) Course ID: 006116
Integrated Physics Concepts
Surveys selected topics in applied physics. Prerequisite: PHY 1711 and PHY 1712 and PHY 1713 and PHY 1714 and PHY 1715 and PHY 1716, and PHY 1717 or Consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours).
Components: Lecture
PLB 100 (3) Course ID: 004325
Basic Theory of Plumbing
Provides a history of the plumbing trade and basic principles of the trade. Lecture: 2 credits (45 contact hours).
Components: Lecture

PLB 105 (3) Course ID: 004326
Plumbing Principles
Provides the proper installation procedures for piping, water heaters and sewage systems. The plumbing codes appropriate for each installation will also be studied. Laboratory: 3 credits (135 contact hours).
Components: Laboratory

PLB 150 (3) Course ID: 001945
Plumbing, Introduction to the Trade
Introduces the origin and basic principles of the plumbing industry. Includes the orientation of methods associated with the plumbing industry. Lecture: 3 credits (45 contact hours).
Components: Lecture

PLB 151 (3) Course ID: 001946
Basic Plumbing Skills
This course introduces the student to basic pipe joining techniques. Corequisite: PLB 150. Laboratory: 3 credits (135 contact hours).
Components: Laboratory

PLB 160 (3) Course ID: 001947
Plumbing Systems, DW & Water
Presents a study of designing and sizing water distribution and drain, waste and vent pipes. Studies of code requirements and installation of common residential fixtures is also covered. Corequisite: PLB 150 or equivalent. Lecture: 3 credits (45 contact hours).
Components: Lecture

PLB 161 (2) Course ID: 001948
Rough-in of Plumbing Fixtures
Develops the skills necessary to rough-in DWV and water piping for residential or commercial applications. Corequisite: PLB 160. Lecture: 2 credits (90 contact hours).
Components: Laboratory

PLB 163 (2) Course ID: 001949
Plumbing Fixtures
Develops the skills necessary to rough-in and install a kitchen group and laundry fixtures for residential and commercial applications. Corequisite: PLB 250. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

PLB 250 (3) Course ID: 001950
Plumbing Appliances & Fixtures
Presents the installation practices of residential water heaters (electrical and gas); and the installation of commercial water heating systems with pumps, controls, and valve systems. Study will also include site layout and testing. Prerequisite: PLB 150. Lecture: 3 credits (45 contact hours).
Components: Lecture

PLB 251 (2) Course ID: 001951
Pumps and Water Heaters
Develops skills in the installation of plumbing appliances (water heater), and appurtenances. Prerequisite: PLB 150. Corequisite: PLB 250. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

PLB 253 (2) Course ID: 001952
Ground Work and Layout
This course includes site layout, installation, and testing of DWV piping systems. Prerequisite: PLB 150 or equivalent. Corequisite: PLB 150. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

PLB 260 (2) Course ID: 001953
Service
This course presents the study of methods, procedures, and skills involved in planning and estimating residential and commercial plumbing fixtures and systems. Prerequisite: PLB 150 or equivalent. Lecture: 2 credits (30 contact hours).
Components: Lecture

PLB 261 (2) Course ID: 001954
Advanced Plumbing Lab
This course will teach the student to plan and apply local code requirements for residential plumbing systems, and estimate supplies and cost of same. Prerequisite: PLB 150 or equivalent. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

PLB 262 (3) Course ID: 001955
Backflow Prevention
This course teaches the student how to protect portable water systems from the hazards of backflow. Prerequisite: Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

PLB 269 (1) Course ID: 004330
Sewer and Drain Cleaning
Teaches the student to remove obstructions from trap fixtures, sewer lines, and drain lines. Repair of leaks and maintenance of cleaning equipment is also included. Prerequisite: PLB 150 or equivalent. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

PLB 270 (3) Course ID: 001956
License Preparation for Journeyman Exam
Provides a study of Kentucky Code in preparation for the Journeyman Exam. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture

PLB 298 (4) Course ID: 004251
Instructor Consent Required Practicum/Repairs & Maintenance
Designed to provide the student with experience in the plumbing industry. This will be a non-paid evaluation of a student’s developed skills. Prerequisite: Consent of instructor. Practicum: 4 credits (180 contact hours).
Components: Practicum

PLB 299 (4) Course ID: 001958
Instructor Consent Required Cooperative Education
Provides students with experience in the plumbing industry. This will be a paid evaluation of a student’s developed skills. Prerequisite: Consent of Instructor. Co-op: 4 credits (300 contact hours).
Components: Co-Op

PLW 100 (4) Course ID: 006695
Introduction to Engineering Design
Provides an introduction to the engineering profession, engineering disciplines, and technology. Emphasizes a “problem-solving” approach, engineering design process, and team projects. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PLW 125 (4) Course ID: 006696
Principles of Engineering
Students will be introduced to various types of engineering, engineering communications, various design processes, types of engineering systems, statics, materials, and stress analysis. Prerequisite: PLW 100. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PLW 150 (4) Course ID: 006697
Digital Electronics
This course uses computer simulations and hands-on laboratory to teach students about the logic of electronics as they design, test, and construct electronic circuits and devices. Lecture: 1 credit (15 contact hours). Lab: 3 credits (45 contact hours).
Components: Laboratory, Lecture

PLW 200 (4) Course ID: 006698
Aerospace Engineering
The major focus of the Aerospace Engineering (AE) course is to expose students to the world of aeronautics, flight, and engineering. They will employ engineering and scientific concepts in the solution of aerospace problems. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PLW 225 (4) Course ID: 006699
Civil Engineering and Architecture
The major focus of the Civil Engineering and Architecture (CE) course is a long-term project that involves the development of a local property site. As students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of this property. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PLW 250 (4) Course ID: 006700
Computer Integrated Manufacturing
The purpose of the Computer Integrated Manufacturing course is to expose students to the fundamentals of computerized manufacturing technology. The course includes: Computer Modeling; CNC Equipment; CAM Software; Robotics; and Flexible Manufacturing Systems. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PLW 295 (4) Course ID: 006701
Engineering Design and Development
Engineering student teams research, design, and construct a solution to open-ended engineering problem using product development lifecycle and the design process; presentation to defend solutions to a panel of outside reviewers. Pre-requisite: PLW 150 AND one of the following: PLW 200, OR PLW 225, OR PLW 250, OR Consent of the APC and/or Instructor. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PMX 100 (3) Course ID: 001962
Precision Measurement
This class introduces the student to the basic fundamentals of precision measurement and its application in the industrial setting. Lecture: 3 credits (45 contact hours).
Components: Lecture

POL 101 (3) Course ID: 000912
American Government
Examines national government and the political process in the United States, with emphasis on the Constitution, the President, Congress, and the judicial system. Focuses on the nature of American democracy, political challenges, and opportunities. Lecture: 3 credits (45 contact hours).
Components: Lecture

Attributes: SB - Social Behavior Science, SB - Political Science
POL 210 (3)  Course ID: 000630
Introduction to European Politics: East and West
Compares the political institutions, policy-making processes, citizen participation and political outcomes in Eastern and Western European states. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Political Science

POL 212 (3)  Course ID: 002254
Culture and Politics in Developing Nations
Examines and compares the politics of selected states in Africa, Asia, and Latin America analyzing such issues as culture, ethnicity, language, social class, and ideology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science, SB - Political Science

POL 235 (3)  Course ID: 000438
World Politics
Examines the most significant problems of world politics, including the fundamental factors governing international relations, the techniques and instruments of power politics, and the conflicting interest in organizing world peace. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science, SB - Political Science

POL 255 (3)  Course ID: 00066
State Government
Examines the institutions, political processes, and policies of state governments, and the relationships of state governments with other levels of government in the United States. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Political Science

POL 271 (3)  Course ID: 000724
Introduction to Political Behavior
The study of behavior in a political context; the analysis of basic behavioral concepts used in political science such as political roles, group behavior, belief systems, personality, power, and decision-making. Lecture: 3 credits (45 contact hours).
Components: Lecture

POL 280 (3)  Course ID: 005213
Issues in Public Policy
Examines selected major public issues, focusing on their nature, political ramifications, and alternate methods of managing conflict. Includes discussion of varying policies such as poverty, health care, energy, education, race and ethnic relations, and the environment. Lecture: 3 credits (45 contact hours).
Components: Lecture

POL 299 (1 - 3)  Course ID: 004276
Special Topics in Political Science
Addresses various topics, issues, and trends in political science. Includes topics that may vary from semester to semester at the discretion of the instructor. Lecture: 1.0 - 3.0 credits (15 contact hours).
Components: Lecture

PSG 110 (3)  Course ID: 005276
Polysonmography Level I
Provides the knowledge necessary for entry-level personnel in the basics of polysomnographic technology. Includes instrumentation setup and calibration, recording and monitoring techniques, therapeutic interventions and patient-technologist interactions related to polysomnography. Lecture: 3 credits (45 contact hours). Prerequisite: (BIO 137 and (MAT 110 or MT 145 or MT 150)) with a grade of C or better or consent of the instructor.
Components: Lecture

PSG 111 (3)  Course ID: 005277
Polysonmography Lab I
Provides practical experience on the equipment used during a standard sleep study. The set-up, calibration, attachment, artifact recognition and troubleshooting of electroencephalographic (EEG), electro-oculographic (EOG), electromyographic (EMG), pulse oximetry (SpO2), body position, airflow, chest and abdominal movement detection equipment as well as the application of positive airway pressure and oxygen used in therapeutic interventions will be included. Laboratory exercises to develop effective patient-technologist interactions will also be included. Laboratory: 1 credit (60 contact hours). Prerequisite: (BIO 137 and (MT 110 or MT 145 or MT 150)) with a grade of C or better or consent of the instructor.
Components: Laboratory

PSG 115 (3)  Course ID: 005278
Polysonmography Practice I
Provides clinical experience and training in the basic skills required of an entry-level polysomnographic technologist. Includes instrumentation set-up and calibration, recording and monitoring techniques, documentation, professional issues and patient-technologist interactions related to polysomnographic technology. Clinical: 3 credits (180 contact hours).
Components: Clinical

PSG 130 (3)  Course ID: 005279
Polysonmography Level II
Addresses all of the aspects of sleep scoring and event recognition, instrumentation setup and calibration, recording and monitoring techniques, documentation, professional issues, therapeutic interventions, and patient-technologist interactions related to polysomnography. Prerequisite: PSG 110 with a grade of C or better, or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

PSG 131 (1)  Course ID: 005280
Polysonmography Lab II
Provides laboratory training in advanced aspects of polysomnographic technology. Students will become familiar with the skills and apply the knowledge needed to evaluate sleep recordings. It covers sleep stage scoring, event recognition, report generation, and higher level therapeutic interventions. Includes procedure and scoring for specialized testing such as the multiple sleep latency test (MSLT) and maintenance of wakefulness test (MWT). Laboratory: 1 credit (60 contact hours). Prerequisite: PSG 111 with a grade of C or better, or consent of the instructor.
Components: Laboratory

PSG 133 (3)  Course ID: 007064
Pathologies of Sleep and Related Disorders
Develops knowledge of pathophysiology of sleep disorders as well as the effect of co-morbidities on sleep. Presents content on pathologies and related applications for various age groups to include pharmacology, medical emergency recognition and treatment. Pre-requisite: PSG 110 with a grade of C or better or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

PSG 135 (3)  Course ID: 005281
Polysonmography Practice II
Provides students with experience in advanced aspects of polysomnographic technology. It covers all the aspects of sleep scoring and event recognition, instrumentation set-up and calibration, recording and monitoring techniques,
documentation, professional issues, therapeutic interventions, and patient-technologist interactions related to polysomnographic technology. Clinical: 3 credits (180 contact hours). Prerequisite: PSG 115 with a grade of C or better, or consent of the instructor. Also Healthcare Provider BLS certification.

Components: Clinical

PSJ 110 (3) Course ID: 005067
Jewelry/Metals I
Introduces the tools, techniques, and materials of the professional jeweler/metalsmith with an emphasis on the design and production of jewelry projects in precious metals, the basic development of jewelry bench skills, and the discussion of business practices. Laboratory: 3.0 credits (90 contact hours).

Components: Laboratory

PSJ 115 (3) Course ID: 005068
Jewelry/Metals II
Continues PSJ 110 and a further introduction to the tools, techniques, and materials of the professional jeweler/metalsmith. Emphasizes working more 3-dimensionally and with greater complexity through the design and completion of jewelry projects. Prerequisite: PSJ 110 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).

Components: Laboratory

PSJ 116 (3) Course ID: 005069
Ancient Techniques
Introduces the history, methods and techniques of metalsmithing from antiquity through the 14th century. Emphasizes metalsmithing traditions and classic techniques through the design and completion of jewelry projects and assignments incorporating ancient methods. Prerequisite: PSJ 110 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).

Components: Laboratory

PSJ 210 (3) Course ID: 005071
Jewelry/Metals III
Provides an in-depth investigation into tools, techniques, and materials of the professional jeweler/metalsmith including the application of coloring through enamelng and alternative means. Prerequisite: (PSJ 115 and PSJ 117) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).

Components: Laboratory

PSJ 211 (3) Course ID: 005072
Hollowware and Metal Forming
Covers design and technical processes creating functional hollowware. Emphasizes dimensional forming of sheet metal through raising, sinking, planishing, and anticlastic forming. Prerequisite: PSJ 115 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).

Components: Laboratory

PSJ 212 (2) Course ID: 005073
Metallurgy of Precious Metals
Covers properties and characteristics of precious metals and their alloys. Emphasizes the science of metallurgy and its practical application for the professional jeweler/metalsmith. Prerequisite: (PSJ 115 and PSJ 116) or Consent of Instructor. Lab: 2.0 credits (60 contact hours).

Components: Laboratory

PSJ 215 (3) Course ID: 005074
Jewelry/Metals IV
Includes an in-depth investigation on production methods and techniques of the professional jeweler/metalsmith. Prerequisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).

Components: Laboratory

PSJ 216 (3) Course ID: 005075
Stone Setting
Covers advanced stone setting methods and techniques for the professional jeweler/metalsmith. Prerequisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).

Components: Laboratory

PSJ 220 (2) Course ID: 005076
Jewelry/Metals Production Development
Explores product development and the business concerns of the professional jeweler/metalsmith. Prerequisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Pre-requisite Or Co-requisite: PSJ 215. Laboratory: 2.0 credits (60 contact hours).

Components: Laboratory

PSJ 230 (6) Course ID: 005077
Jewelry/Metals V
Provides a capstone course that focuses on creating a body of work for exhibition and developing a professional portfolio. Prerequisite: (PSJ 210 and PSJ 212 and PSJ 220) or Consent of Instructor. Lab: 6.0 credits (180 contact hours).

Components: Laboratory

PSM 101 (3) Course ID: 005552
Bluegrass & Traditional Music History I: Geographic Influence & Instrumental Origin
Provides an overview of traditional instruments and their geographic and cultural origins as they relate to the foundation of bluegrass and traditional music genres. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

PSM 105 (1) Course ID: 005553
Recording I
Introduces recording and sound reproduction history, terminology, equipment, and practical session experience. Lab: 1.0 credit (30 contact hours).

Components: Laboratory

PSM 108 (1) Course ID: 005529
Songwriting I
Introduces the process of creating original melodies and lyrics under the direction of a professional songwriter. Prerequisite: (30 contact hours).

Components: Laboratory

PSM 110 (1) Course ID: 005554
Individual Stringed Instrument Instruction
Provides an individual stringed instrument study course under the guidance of an experienced professional instructor. Designed to teach performance techniques in a flexible structure. May be repeated with different subtitle for a maximum of 4 credits. Prerequisite: Audition. Lab: 1.0 credit (30 contact hours).

Components: Laboratory

PSM 111 (1) Course ID: 005556
Guitar I
Teaches basic fundamentals of bluegrass and traditional chords, rhythm and simple flat-picking lead along with standard tuning and set-up tips. Prerequisite: MUS 174 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).

Components: Laboratory

PSM 115 (2) Course ID: 005555
Bluegrass & Traditional Band/Ensemble
Pairs two or more instrumentalists in a group/ensemble setting, in order to explore the components and structure of a 'band' under the guidance of a professional band leader. May be repeated with different subtitle for a maximum of 8 credits. Lab: 2.0 credits (60 contact hours).

Components: Laboratory

PSM 116 (2) Course ID: 005528
Bluegrass & Traditional Harmony/Part Singing
Introduces basic bluegrass and traditional harmony/part singing and theory using ear training, number notation and basic chords. Prerequisite: MUS 174 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).

Components: Laboratory

PSM 121 (3) Course ID: 005557
Bluegrass & Traditional Music History II: Evolution of Old Time, Folk and Early Bluegrass
Provides an in-depth study of old time, folk and early bluegrass music genres and their components, exploring connections between radio, labor conflict, war and early professional musicians. Prerequisite: PSM 101 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

PSM 125 (1) Course ID: 005558
Recording II
Provides practical studio and set-up training for recording sessions utilizing software and computers. Prerequisite: PSM 105 or Consent of Instructor. Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory

PSM 128 (1) Course ID: 005559
Songwriting II
Provides guidance through the process of creating and refining original melodies and lyrics under the direction of a professional songwriter, emphasizing different techniques while overcoming barriers. Prerequisite: PSM 108 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).

Components: Laboratory

PSM 231 (3) Course ID: 005560
Bluegrass & Traditional Music History III: Early Stringband & Country Music
Provides an in-depth study of early stringband, country music and promotion pioneers, focusing on the role of early radio and barn dances. Prerequisite: PSM 121 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

PSM 235 (2) Course ID: 005561
Recording III
Provides an in-depth study of computer and Pro Tools software, recording techniques and applications. Prerequisite: PSM 125 or Consent of Instructor. Laboratory: 2.0 credits (60 contact hours).

Components: Laboratory

PSM 238 (2) Course ID: 005562
Songwriting III
Provides guidance through the process of creating and refining original melodies and lyrics under the direction of a professional songwriter, emphasizing writing for specific media and multi-writer collaboration. Prerequisite: PSM 128 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).

Components: Laboratory

PSM 241 (2) Course ID: 005563
Bluegrass & Traditional Music History IV: The Masters & Their Music
Provides a comprehensive study of the music and careers of the iconic figures in bluegrass & traditional music from 1936 to present. Requires listening to recordings, reading the primary text, and reading suggested articles from industry periodicals. Prerequisite: PSM 231. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

PSM 245 (2) Course ID: 005564
Recording IV
Provides an advanced and complex study of recording, mixing and editing software session data to finished products. Prerequisite: PSM 235 or Consent of Instructor. Laboratory: 2.0 credits (60 contact hours).

Components: Laboratory

PSM 248 (2) Course ID: 005565
Songwriting IV
Provides guidance through the process of creating an effective demo and marketing original songs under the direction of a professional songwriter, emphasizing the completed demo project. Prerequisite: PSM 238 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).

Components: Laboratory
PSM 250 (3)  Course ID: 005566
Instructor Consent Required Field Experience/Production/Business
Designed to give a wide variety of practical, hands-on work experience in the bluegrass and traditional music field. (Companion course to PSA 240). Prerequisite: Consent of Instructor. Lab: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

**PSW**

**Professional Studio Artist - Wood/Furniture Design**

**PSW 111 (3)  Course ID: 005056**
**Introduction to Furniture Making**
Introduces tools, techniques, and materials of the professional wood worker, focusing on actual studio production and design processes in wood and furniture. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

**PSW 115 (3)  Course ID: 005057**
**Furniture Making II**
Focuses on the application of complex joinery, design features, and finishing techniques to a given furniture project. Explores historical perspectives and business related topics. Prerequisite: PSW 111 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

**PSW 116 (2)  Course ID: 005058**
**Wood Finishing**
Introduces wood finishing and fine furniture making. Prerequisite: PSW 111 and PSW 115) or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

**PSW 117 (3)  Course ID: 005059**
**Wood Turning for Furniture**
Covers basic and advanced turning skills including spindle turning and faceplate work and tool sharpening and usage. Prerequisite: PSW 111 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

**PSW 210 (3)  Course ID: 005060**
**Furniture Making III**
Focuses on complicated joinery techniques, machine tool operations, advanced finishing applications, and small business considerations. Prerequisite: PSW 115 and PSW 116) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

**PSW 211 (3)  Course ID: 005061**
**Wood Bending and Veneering**
Covers construction and design possibilities through techniques of strip lamination and steam bending to create curved shaped parts in furniture. Includes veneering design and applications. Prerequisite: (PSW 115 and PSW 116) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

**PSW 212 (3)  Course ID: 005063**
**Chair Design**
Focuses on design and construction for good seating requirements based on sound design and structural integrity. Prerequisite: PSW 117 or Consent of Instructor. Prerequisite Or Co-requisite: PSW 211. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

**PSW 215 (3)  Course ID: 005062**
**Furniture Making IV**
Emphasizes special processes of design, production, and cost efficiencies associated with operating a custom furniture studio including marketing and overall business knowledge. Prerequisite: (PSW 210 and PSW 212) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

**PSW 220 (2)  Course ID: 005064**
**Furniture/Wood Product Development**
Includes applications associated with design and construction possibilities with fabricated products. Focuses on C. N. c. machining and CAD design as well as 32-MM and KD (knock down) systems including architectural wood and cabinetry design. Prerequisite: (PSW 210 and PSW 211) or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSW 230 (6)  Course ID: 005065
**Furniture Making V**
Focuses on creating a body of work for exhibition and developing a professional portfolio. Prerequisite: (PSW 212 and PSW 215 and PSW 220) or Consent of Instructor. Lab: 6.0 credits (180 contact hours).
Components: Laboratory

**PSY**

**Psychology**

**PSY 110 (3)  Course ID: 000563**
**General Psychology**
Introduces the history, methods and content of modern psychology. Covers the history and systems of psychology, psychological research, psychological processes, developmental psychology, personality, abnormal behavior and social psychology. Prerequisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of Transitional reading course(s).
Components: Lecture
Attributes: SB - Psychology, Course Also Offered in Modules

**PSY 180 (3)  Course ID: 000151**
**Human Relations**
Explores the sociological and psychological forces that affect interpersonal relationships as individuals work and live together. Prerequisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of Transitional reading course(s).
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Psychology

**PSY 185 (3)  Course ID: 000602**
**Human Potential**
Introduces the principles of relating to self and others and focuses upon self-growth. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Psychology

**PSY 195 (1)  Course ID: 005749**
**Orientation to Psychology**
An orientation to educational issues and career planning for students who have declared psychology as a major. Topics include career paths and opportunities, professional resources and issues, and educational planning. Pass/Fail only. Prerequisite: Declared major in Psychology, or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

**PSY 215 (4)  Course ID: 002255**
**Experimental Psychology**
A study of the application of scientific methods to psychological research. Special emphasis is placed on the critical evaluation of contemporary research in experimental psychology. Particular attention is focused on the design execution, and written report of laboratory research. Lecture, three hours; laboratory, two hours. Prerequisite: PSY 100 and sophomore standing, or consent of instructor.
Components: Laboratory, Lecture

**PSY 216 (4)  Course ID: 002256**
**Applications of Statistics in Psychology**
An introduction to statistical procedures used in making decisions based on psychological data. May not be used to satisfy the laboratory requirement in the College of Arts and Sciences. Lecture, three hours; laboratory, two hours. Prerequisite: PSY 100.
Components: Laboratory, Lecture

**PSY 223 (3)  Course ID: 000488**
**Developmental Psychology**
Introduces the principles of developmental psychology as seen in human growth over the entire lifespan, focusing primarily on infancy through adolescence. Emphasizes theory and data relating to developmental aspects of cognition, language, and personality. Lecture: 3 credits (45 contact hours). Prerequisite: PSY 100 or PY 110.
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Psychology

**PSY 230 (3)  Course ID: 000387**
**Psychosocial Aspects of Death and Dying**
Examines the biopsychological, sociological, and psychological aspects of death and dying. Covers the behavior and attitudes associated with death in preparation for dealing with dying and bereavement. Prerequisite: PSY 110 or SOC 101, or consent of instructor.
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Psychology

**PSY 297 (3)  Course ID: 004818**
**Psychology of Aging**
Provides an overview of the demographics of aging, theories of aging and research methods used to study adult development. Examines the biological, psychological and social impact of aging, longevity work, retirement, death and bereavement. Prerequisite: PSY 110 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Psychology

**PSY 298 (3)  Course ID: 004819**
**Essentials of Abnormal Psychology**
Provides an overview of the theories, diagnoses, and treatments of psychological disorders. Covers the biological, psychological, and social factors that influence the etiology, understanding, and management of psychopathology within society. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, SB - Psychology

**PSY 1101 (0.6)  Course ID: 006215**
**Foundations of Psychology**
Introduces the history, methods, and content of modern psychology to include the systems of psychology, psychological research, and physiological psychology. Prerequisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of Transitional reading course(s). Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture

**PSY 1102 (0.6)  Course ID: 006216**
**Senses, Perception and Emotion**
Addresses the history, methods, and content of modern psychology to include psychological processes. Prerequisite: PSY1102. Lecture: 0.6 credit (9.0 contact hours).
Components: Lecture

**PSY 1103 (0.6)  Course ID: 006217**
**Learning, Memory, Intelligence**
Addresses the history, methods, and content of modern psychology to include psychological processes. Prerequisite: PSY1102. Lecture: 0.6 credit (9.0 contact hours).
Components: Lecture

**PSY 1104 (0.6)  Course ID: 006218**
**Personality & Social Aspects**
Addresses the history, methods, and content of modern psychology to include psychological processes. Prerequisite: PSY1103. Lecture: 0.6 credit (9.0 contact hours).
Components: Lecture

**PSY 1105 (0.6)  Course ID: 006219**
**Psychological Disorders**
Addresses the history, methods, and content of modern psychology to include psychological processes. Prerequisite: PSY1104. Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture

**PSY 2231 (0.6)  Course ID: 006379**
**Foundations of Development**
Introduces the principles of developmental psychology with emphasis on theory and data relating to the physical, cognitive, and psycho-social developmental aspects.
PTA 100 (4) Course ID: 004009
Orientation to Physical Therapy Practice
Includes orientation to the profession of physical therapy, legal aspects of physical therapy practice, interdisciplinary team, cultural diversity, medical terminology, and introductory patient-care skills such as communication, aseptic techniques, body mechanics, safety procedures, wheelchair management, patient transfers, patient positioning, draping, and vital signs. Prerequisite: Admission to the PTA Program and completion of BIO 137 with a grade of C or better. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours). 30:1 ratio.

Components: Laboratory
Attributes: Course Also Offered in Modules

PTA 120 (2) Course ID: 006723
Basic Skills for the PTA
Introduces basic concepts of health and disease and introductory patient care skills. Includes orientation to the profession of physical therapy, legal aspects of physical therapy practice, interdisciplinary team, cultural diversity, medical terminology, and introductory patient-care skills such as communication, aseptic techniques, body mechanics, safety procedures, wheelchair management, patient transfers, patient positioning, draping, and vital signs. Prerequisite: Admission to the PTA Program and completion of BIO 137 & BIO 139 with a C or better. Co-requisite: PTA 1501, PTA 1502, PTA 150 and PTA 170. Lab: 2 credits (60 contact hours).

Components: Lecture
Campus: MDC

PTA 121 (2) Course ID: 006724
Basic Skills for the PTA Lab
Develops introductory patient-care skills such as communication, safety procedures, aseptic technique; body mechanics; wheelchair management; patient transfers; positioning and draping; gait training; pain assessment; passive, active, and active-assisted exercise; stretching; and documentation. Lab experiences will reflect concepts taught in the paired lecture course. Prerequisite: Admission to the PTA Program; Completion of BIO 137 & BIO 139 with a C or better. Co-requisite: PTA 1501 and PTA 1502 and PTA 150 and PTA 170. Lab: 2 credits (60 contact hours).

Components: Laboratory
Campus: MDC

PTA 150 (6) Course ID: 004174
Functional Anatomy and Kinesiology
Emphasizes the structure and function of the musculoskeletal system, the relationship with biomechanical principles, basic physical principles, and the mechanical aspects of human motion. Includes muscle testing, flexibility testing, goniometry, and aspects of normal gait and posture. Prerequisite: Admission to the PTA Program and completion of BIO 137 & BIO 139 with a grade of C or better. Corequisite: PTA 160 and PTA 170. Prerequisite or Corequisite: PTA 100 with a C or better. Lecture: 3.0 credits (45 contact hours). Lab: 3.0 credits (90 contact hours).

Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

PTA 170 (1) Course ID: 004013
Clinical Practicum I
Includes clinical observation and practice of selected physical therapy interventions and data collection with the application of knowledge from previous/current PTA courses and general education coursework. Prerequisite: Option 1 or Option 2: Admission to the PTA Program, Completion of BIO 137 & BIO 139 with a C or better. Corequisite: PTA 150, PTA 1501, PTA 1502, PTA 120, and PTA 121. Prerequisite or Corequisite: Option 1: PTA 100 with a C or better. Practicum: 1 credit (60 contact hours).

Components: Laboratory

PTA 200 (5) Course ID: 004017
Modalities & Procedures in Physical Therapy
Includes the basic physical science principles of selected physical therapy interventions, data collection, and selected physical therapy interventions including wound therapy, compression therapy, safety procedures, gait training, traction, massage, superficial heat and cold, deep heat modalities, electrotherapy, ultraviolet radiation, hydrotherapy, and documentation. Prerequisite: PTA 100, PTA 150, PTA 160, PTA 170. Corequisite: PTA 220, PTA 240. Lecture: 2 credits (30 contact hours). Laboratory: 3 credits (90 contact hours).

Components: Laboratory
Attributes: Course Also Offered in Modules

PTA 202 (2) Course ID: 006725
Therapeutic Modalities in Physical Therapy
Includes the basic physical science, data collection, and principles of selected physical therapy interventions including, massage, superficial heat and cold, sound agents, electromagnetic radiation, electrotherapy, biofeedback, traction, and compression therapy. Prerequisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, PTA 121, PTA 170 with a C or better. Co-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 203, PTA 240. Students cannot progress to PTA 240 without a grade of C or better in all other co-requisite courses. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Campus: MDC

PTA 203 (2) Course ID: 006726
Therapeutic Modalities in Physical Therapy Lab
Develops skills in data collection, documentation, and the application of selected physical therapy interventions including, massage, superficial heat and cold, sound agents, electrotherapy, biofeedback, traction, and compression therapy. Lab experiences will reflect concepts taught in the paired lecture course. Prerequisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, PTA 121, PTA 170 with a C or better. Co-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 202, PTA 203, PTA 240. Students cannot progress to PTA 240 without a grade of C or better in all other co-requisite courses. Lab: 2.0 credits (60 contact hours).

Components: Laboratory
Campus: MDC

PTA 220 (5) Course ID: 004016
Physical Therapy Principles & Procedures
Emphasizes selective physical therapy interventions and data collection for management of patients with the following problems: musculoskeletal conditions, pulmonary diseases, pathological gait, balance problems, thermal injuries, arthritis, amputations and cardiac diseases. Includes therapeutic exercise, orthotics, prosthesis, wellness, and women’s health issues. Prerequisite: Admission to the Physical Therapist Assistant Program and completion of PTA 100, PTA 150, PTA 160, and all general education courses required for completion of the Physical Therapist Assistant program with a grade of C or better. Completion of PTA 170 with a grade of P. Corequisite: PTA 200, PTA 240. Lecture: 2 credits (30 contact hours). Laboratory: 3 credits (90 contact hours).

Components: Laboratory, Lecture

PTA 222 (2) Course ID: 006727
Pathology & Rehabilitation of Orthopedic Conditions
Emphasizes the etiology, pathology, prevention, data collection, and selected physical therapy interventions for management of patients with the following problems: musculoskeletal conditions, pathological gait, arthritis, and amputations. Includes the study of wellness and women’s issues, therapeutic exercise, orthotics, and prosthetics. Prerequisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of P. Co-requisite: PTA 223, PTA 232, PTA 233, PTA 202, PTA 203, and PTA 240. Students cannot progress to PTA 240 without a grade of C or better in all other co-requisite courses. Lecture: 2 credits (30 contact hours).

Components: Laboratory

PTA 223 (2) Course ID: 006728
Pathology & Rehabilitation of Orthopedic Conditions Lab
Develops skills in selected physical therapy interventions and data collection for management of patients with the following problems: musculoskeletal conditions, pathological gait, arthritis, and amputations. Includes therapeutic exercise, orthotics, prosthetics, and supportive devices. Prerequisite: Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a grade of P. Co-requisite: PTA 222, PTA 223, PTA 202, PTA 203 and PTA 240. Students cannot progress to PTA 240 without a grade of C or better in all other co-requisite courses. Lab: 2 credits (60 contact hours).

Components: Laboratory

PTA 233 (2) Course ID: 006729
Pathology & Rehabilitation of Neurological & Pediatric Conditions
Focuses on etiology, pathology, progression, prevention, data collection, and selected physical therapy interventions for management of patients of all age groups with disabilities resulting from the following: brain injury, spinal cord injury, and genetic/congenital disorders. Includes balance disorders, normal growth and development, and the rationale and techniques of neuromuscular education. Prerequisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of P. Co-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 202, PTA 203 and PTA 240. Students cannot progress to PTA 240 without a grade of C or better in all other co-requisite courses. Lecture: 3 credits (45 contact hours).

Components: Laboratory
Campus: MDC
PTA 233 (2)  Course ID: 006730
Pathology & Rehabilitation of Neurological & Pediatric Conditions Lab
Develops skills in the application of selected physical therapy interventions for patients with the following problems: respiratory system, cardiovascular system, metabolic, and rheumatologic pathologies; psychiatric disorders; infectious diseases; oncology; thermal injuries; intergenerational disorders; and wounds. Includes therapeutic exercise and wound care. Pre-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 202, and PTA 203 with a grade of C or better. Completion of PTA 240 with a grade of P. Corequisite: PTA 222, PTA 223, PTA 232, PTA 202, and PTA 203. Students cannot progress to PTA 280 without a grade of C or better in all other co-requisite courses. Lab: 1 credit (30 contact hours).
Components: Laboratory
Campus: MDC

PTA 240 (2)  Course ID: 004018
Clinical Practicum II
Includes clinical observation and practice of selected physical therapy interventions and data collection with the application of knowledge from previous/concurrent PTA courses and general education coursework. This course will entail four consecutive weeks of full-time clinical experience. In order to participate in this clinical experience, the student must be earning a grade of C or better in all corequisite courses. Pre-requisite: [Option 1: Admission to the PTA Program and completion of PTA 100, PTA 150, PTA 160, and all general education courses required for completion of the Physical Therapist Assistant Program with a grade of C or better. Completion of PTA 170 with a grade of P. OR [Option 2: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, PTA 121, and PTA 170 with a C or better. Corequisite: [Option 1: PTA 200 and PTA 220] OR [Option 2: PTA 222, PTA 232, PTA 233, PTA 202, and PTA 203 with a C or better. Corequisite: Completion of PTA 240 with a grade of P. Corequisite: [Option 2: PTA 254, PTA 255, and PTA 280. Students cannot progress to PTA 280 without a grade of C or better in all co-requisite courses. Practicum: 2.0 credits Components: Practicum

PTA 250 (5)  Course ID: 004019
Neurological Rehabilitation in Physical Therapy
Focuses on rehabilitation procedures, including assistive devices, for patients of all age groups with disabilities resulting from brain injury, spinal cord injury, and genetic/congenital disorders. Includes normal growth and development and the rationale and techniques of neuromuscular re-education. Pre-requisite: Admission to the Physical Therapist Assistant Program and completion of PTA 200 and PTA 220 with a grade of C or better. Completion of PTA 240 with a grade of P. Corequisite: PTA 260, PTA 280. Lecture: 3 credits (45 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture

PTA 254 (1)  Course ID: 006731
Pathology & Rehabilitation of Special Populations & Conditions
Emphasizes the etiology, pathology, prevention, data collection, and selected physical therapy interventions for management of patients with the following conditions: respiratory system, cardiovascular system, metabolic, and rheumatologic pathologies; psychiatric disorders; infectious diseases; oncology; thermal injuries; intergenerational disorders; and wounds. Includes therapeutic exercise and wound care. Pre-requisite: PTA 222, PTA 223, PTA 222, PTA 232, PTA 233, PTA 202, PTA 203 with a grade of C or better. Completion of PTA 240 with a grade of P. Co-requisite: PTA 255, PTA 260, and PTA 280. Students cannot progress to PTA 280 without a grade of C or better in all other co-requisite courses. Lecture: 1 credit (15 contact hours).
Components: Lecture
Campus: MDC

PTA 255 (1)  Course ID: 006732
Pathology & Rehabilitation of Special Populations & Conditions Lab
Develops skills in the application of selected physical therapy interventions for patients with the following problems: respiratory system, cardiovascular system, metabolic, and rheumatologic pathologies; psychiatric disorders; infectious diseases; oncology; thermal injuries; intergenerational disorders; and wounds. Includes therapeutic exercise and wound care. Pre-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 202, and PTA 203 with a grade of C or better. Completion of PTA 240 with a grade of P. Corequisite: PTA 222, PTA 223, PTA 232, PTA 202, and PTA 203. Students cannot progress to PTA 280 without a grade of C or better in all other co-requisite courses. Lab: 1 credit (30 contact hours).
Components: Laboratory
Campus: MDC

PTA 260 (2)  Course ID: 004172
Seminar in Physical Therapy
Presents topics to assist the student in the transition to physical therapist assistant including trends, specialized practice, patient services, and the employment process. Utilizes case studies to assist students to integrate theory and practice. Pre-requisite: [Option 1: Admission to the Physical Therapist Assistant Program and completion of PTA 200 and PTA 220 with a grade of C or better. Completion of PTA 240 with a grade of P. OR [Option 2: PTA 222, PTA 223, PTA 232, PTA 233, PTA 202, and PTA 203 with a C or better. Completion of PTA 240 with a grade of P. Corequisite: [Option 2: PTA 254, PTA 255, and PTA 280. Students cannot progress to PTA 280 without a grade of C or better in all co-requisite courses.] Pre-requisite Or Co-requisite: [Option 1: PTA 250 and PTA 280 (If taken as a pre-requisite, a grade of C or greater is required). Lecture: 2 credits (30 contact hours).

PTA 280 (5)  Course ID: 004020
Clinical Practicum III
Includes clinical observation and practice of physical therapy interventions and data collection with the application of knowledge from previous and concurrent PTA courses and general education coursework. By the end of the clinical experience the student will demonstrate an entry level of practice. Pre-requisite: [Option 1: Admission to the Physical Therapist Assistant Program and completion of PTA 200 and PTA 280 with a grade of C or better. Corequisite: [Option 1: PTA 200 and PTA 220] OR [Option 2: PTA 222, PTA 232, PTA 233, PTA 202, and PTA 203. Students cannot progress to PTA 240 without a grade of C or better in all corequisite courses. Practicum: 5.0 credits

PY 181 (1)  Course ID: 000312
Leadership Development
Designed to prepare student leaders to lead small groups in freshman orientation. Class sessions under the leadership of the college counselors will be held the semester prior to active participation in leadership roles. During the second semester, leaders are assigned small numbers of freshman class members to provide them with assistance in becoming familiar with college life and its programs. Laboratory: 1 credit (15 contact hours). Prerequisite: GE 100, and consent of instructor.
Components: Laboratory

PY 188 (1)  Course ID: 000604
Directed Undergraduate Reading in Psychology
An in-depth study of a specific topic in psychology related to the student's personal or career interests. Evaluation is based on oral examinations and a final written progress report. Lecture: 1 credit (15 contact hours). Prerequisite: Consent of instructor.
Components: Lecture

PY 189 (1 - 2)  Course ID: 000606
Directed Undergraduate Research in Psychology
Designed to further the spirit of inquiry. Advanced students conduct elementary psychological research relevant to their personal interests. Use of the literature of psychology is required. Laboratory: 1-2 credits.
Components: Laboratory

PY 299 (1 - 3)  Course ID: 000534
Special Introductory Topics in Psychology
An introductory study of selected topics in psychology. Topics may include, but are not limited to: psychology of aging, health psychology, industrial/business psychology, evolutionary psychology, and the writings of selected psychologists. May be repeated to a maximum of six credits under different subtitles. Lecture: 1-3 credits (15 contact hours). Prerequisite: PSY 100 or PY 110 or consent of instructor.
Components: Lecture

QMS 101 (3)  Course ID: 004464
Introduction to Quality Systems
Students are introduced to fundamental concepts, principles, and practices used to improve quality in organizations. The need for organizational change is reviewed and paradigms of quality are introduced. An overview of areas of change, methods of quality planning, and methods for implementing quality policies are provided. Students will practice problem solving techniques, make decisions based on data, work in teams, troubleshoot, and demonstrate knowledge of implementing continuous improvement processes. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

QMS 201 (3)  Course ID: 004465
Customer Service Improvement Skills
Students will develop cognitive processes and behavioral skills needed to improve personal and work group effectiveness. Techniques are discussed and demonstrated in assessing internal and external customer needs and develop plans for delivery of quality customer service. Topics include customer's point of view, benchmarking quality customer service processes, developing partnerships with customers, measuring customer satisfaction, self-evaluation, personal mission statements, time management, communication and listening techniques, coaching, mentoring, group problem solving, and decision making techniques. Lecture: 3 credits (45 contact hours). Prerequisite: QMS 101 or Consent of Instructor.
Components: Lecture
Attributes: Course Also Offered in Modules
QMS 202 (3) Course ID: 000859
Performance Management

Students are introduced to a systematic, data-oriented approach to managing people for maximizing performance and quality. Data are used to measure and evaluate effectiveness of performance. Organizational and individual behavior will be studied in the context of increasing performance and quality. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules

QMS 210 (3) Course ID: 004283
Lean Processes
Introduces the concepts and skills of lean manufacturing for manufacturing and service settings. Covers organizational readiness, 5S, value stream mapping, kaizen, and visual workplace. Examines the implementation of processing. Prerequisite: QMS 101 or Consent of Instructor and MA 109 or MT 150. Lecture: 3 credits (45 contact hours).

Components: Lecture

QMS 212 (3) Course ID: 004284
Project Management
Provides insight into concepts and skills required to design the infrastructure for the successful planning, scheduling, and launching of a project. Promotes skills necessary to improve coordination of organizational resources, create effective teams, operate efficiently in a rapidly changing world, and minimize internal problems of system start ups. Teaches techniques to gain organizational acceptance for projects. Prerequisite: QMS 101 or Consent of Instructor. Lecture: 3 Credits (45 contact hours).

Components: Lecture

QMS 220 (3) Course ID: 004466
Quality Audits
Involves an in-depth examination of the function of planning, organizing, and conducting quality audits. Emphasizes planning, implementing, and reporting results of quality audits and taking corrective action. Prerequisite: QMS 101 or Consent of Instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

QMS 240 (3) Course ID: 004467
Statistics for Quality I
Introduces methods of organizing information about processes. Examines presentation, description, and analysis of data. Emphasizes handling and interpreting numerical information, including histograms and control charts. Presents and applies concepts of probability to control charts to promote process understanding to improve quality of products and services. Investigates sampling principles. Uses computer generated analyses. Prerequisite: MA 109 or MT 150. Lecture: 3 credits (45 contact hours).

Components: Lecture

QMS 242 (3) Course ID: 004468
Statistics for Quality II
Builds upon the foundation of QMS 240 techniques of inferential statistics. Confidence interval estimation, hypothesis testing, regression analysis, ANOVA, and non-parametric tests are developed. Gauging Studies and SPC techniques for short production runs are included. Lecture: 3 credits (45 contact hours). Prerequisite: QMS 240.

Components: Lecture

QMS 262 (4) Course ID: 000694
Design of Experiments
Basic statistical methods are reviewed. Statistical techniques which parallel methods of SPC are introduced. Analysis of means, analysis of variance, and contrast comparisons are studied to facilitate the understanding of the different experimental design methods. Examples from manufacturing illustrate how to reduce product variability and optimum process factor settings. Computer software is utilized throughout the course. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours). Prerequisite: QMS 242 or Consent of Instructor.

Components: Laboratory, Lecture

QMS 299 (1-6) Course ID: 000537
Instructor Consent Required Topics in Quality Management Systems: (Topic)
Quality issues selected are considered in this course. Topics vary from semester to semester. This course may be repeated with different topics for a maximum of 6 credit hours. Lecture: 1-3 credits (15-90 contact hours). Prerequisite: Consent of Instructor.

Components: Lecture

QMS 1011 (0.6) Course ID: 005165
Understanding a Quality Focused Organization
Past quality initiatives and progressive quality trends. Lecture: 0.6 credits (9 contact hours)

Components: Lecture

QMS 1012 (0.6) Course ID: 005166
Quality Tools of the Trade
Quality improvement tools and techniques and their integration into an organization. Prerequisite: QMS 1011 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

QMS 1013 (0.6) Course ID: 005167
Systems for Quality Improvement
Integrated quality systems and operations that produce high levels of employee and intra-organizational commitment. Prerequisite: QMS 1012 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

QMS 1014 (0.6) Course ID: 005168
Quality Planning for Continuous Improvement
Organizational-wide planning techniques and processes focused on long-term quality improvement. Prerequisite: QMS 1013 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

QMS 2011 (1) Course ID: 006199
Personal Effectiveness for Quality Customer Service
Provides for the development of cognitive processes and behavioral skills needed to improve personal and work group effectiveness. Includes self-evaluation, personal mission statements, time management, communication and listening techniques, coaching, mentoring, group problem solving, and decision making techniques. Prerequisite: QMS 1013 or Consent of Instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

QMS 2012 (1) Course ID: 006200
Understanding the Customer
Includes techniques for assessing internal and external customer needs and developing plans for delivery of quality customer service. Includes customer’s point of view, benchmarking quality customer service processes, and developing partnerships with customers. Prerequisite: QMS 2011 or Consent of Instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

QMS 2013 (1) Course ID: 006201
Analyzing the Health of the Customer Service Relationship
Includes how to measure customer satisfaction, using decision making techniques. Prerequisite: QMS 2012 or Consent of Instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

QMS 2021 (0.6) Course ID: 005170
Introduction to Performance Management
Emphasis on performance management and the ABC model of behavior change. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

QMS 2022 (0.6) Course ID: 005171
ABC Analysis and Delivering Reinforcers
Principles of ABC analysis with emphasis on reinforcers and techniques in delivering reinforcers. Prerequisite: QMS 2021 or Consent or Instructor. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

Introduction to Chinese Culture
Components: Lecture

Attributes: Cultural Studies, AH - Foreign Language

RAE Russian and Eastern Studies

RAE 120 (3) Course ID: 005363
Introduction to Chinese Culture
Examines economic, political, cultural, and social realities that offer more opportunities and engagement at every level for non-native Chinese people. Includes some basic vocabulary. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, SB - Russian

RAE 150 (4) Course ID: 004857
Elementary Chinese I
Introduces basic models of communication in Chinese. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary. Presents an overview of the cultures of China. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Foreign Language

RAE 151 (4) Course ID: 004858
Elementary Chinese II
Continues the study of basic Chinese through grammar, reading, and oral practice. Stresses speaking and listening as the target skills; reading and writing remain centered on intense and repetitive practice with the pinyin character system. Emphasizes everyday language. Presents an overview of the cultures of China. Prerequisite: RAE 150 or Consent of Instructor Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Foreign Language

RCP Respiratory Care Practitioner

RCP 110 (3) Course ID: 003786
Cardiopulmonary Anatomy and Physiology
Provides an in-depth analysis of the respiratory and circulatory systems with emphasis on the interaction of systems in gas exchange and acid-base balance as well as the structure and function of the chest cage, mechanics of breathing and control of respiration. Lecture: 3 credits (45 contact hours). Prerequisite: BIO 137 with a grade of C or better. Corequisite: BIO 137.

Components: Lecture
RCP 120 (4) Course ID: 003787
Theory and Principles of Respiratory Care
Presents the principles and techniques of therapeutic procedures used in respiratory care, including an emphasis on medical asepsis, safe handling and administration of medical gases, uses of humidity, aerosol therapy, lung inflation techniques, bronchial hygiene and airway care. Prerequisite or corequisite: (BIO 137 and (MAT 110 or MAT 146 or MAT 150 or equivalent)) with a grade of C or better if taken as a pre-requisite. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (60 contact hours). Components: Laboratory, Lecture

RCP 122 (4) Course ID: 004831
Fundamentals of Respiratory Care
Introduces respiratory care including chest physical assessment, medical gas therapy, humidity and aerosol therapy, bronchial hygiene, airway management, medical asepsis and development of the respiratory care plan. Prerequisite: [(MAT 110 or MAT 146 or MAT 150) BIO 137 and BIO 139] with a grade of C or better or consent of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (60 contact hours). Components: Laboratory, Lecture

RCP 125 (4) Course ID: 003788
Cardiopulmonary Evaluation
Examines cardiopulmonary assessment with in-depth coverage of invasive and non-invasive arterial blood gas interpretation, electrocardiography and assessment of chest and neck imaging. Prerequisite: (RCP 110 and BIO 137 and (MAT 110 or 145 or MT 145 or equivalent)) with a grade of C or better. Prerequisite or Corequisite: RCP 110. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (60 contact hours). Components: Laboratory, Lecture

RCP 130 (3) Course ID: 003789
Pharmacology
Provides an in-depth study of pharmacological agents, their use in the practice of respiratory care for patients with cardiovascular or pulmonary impairment as well as accuracy in drug calculations and delivery. Lecture: 3 credits (45 contact hours). Prerequisite: (RCP 110 and (MT 110 or MT 145 or MT 150) with a grade of C or better). Corequisite: RCP 110 and (MT 110 or MT 145 or MT 150).

Components: Lecture

RCP 140 (2) Course ID: 004835
Cardiopulmonary Assessment
Emphasizes blood gas analysis, pulmonary function studies, electrocardiography and chest radiography. Prerequisite: [(RCP 110 and RCP 122 and RCP 130) with a grade of C or better] or consent of instructor. Lecture: 1.5 credits (22.5 contact hours). Laboratory: 0.5 credit (15 contact hours).

Components: Laboratory, Lecture

RCP 150 (2) Course ID: 003790
Clinical Practice I
Provides an opportunity for observation and/or performance of techniques for chest physical assessment, medical gas administration, humidity and aerosol therapy and bronchial hygiene in the assigned clinical setting. Prerequisite or corequisite: RCP 120 with a grade of C or better; Valid Health Care Provider CPR card. Clinical: 2 credits (120 contact hours). Components: Clinical

RCP 175 (3) Course ID: 003791
Clinical Practice II
Provides an opportunity to participate in the health care team while practicing techniques of respiratory care including airway management and bronchial hygiene in the assigned setting. Prerequisite: RCP 150 with a grade of C or better; Clinical: 3 credits (180 contact hours).

Components: Clinical

RCP 176 (2) Course ID: 004834
Respiratory Care Practice II
Emphasizes participation in the health care team while practicing techniques of basic respiratory care including airway management and bronchial hygiene Prerequisite: [(RCP 110 and RCP 122 and RCP 130) with a grade of C or better] or consent of instructor. Prerequisite or corequisite: RCP 140 (if taken as a pre-requisite, a grade of C or better is required.) Clinical: 2 credits (120 contact hours). Components: Clinical

RCP 180 (3) Course ID: 003792
Ventilatory Support
Covers the technological and physiological aspects of mechanical ventilation including the theory of operation, classification, and management of the patient ventilator system. Prerequisite: RCP 120 and RCP 150 with a grade of C or better. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (60 contact hours). Components: Laboratory, Lecture

RCP 185 (2) Course ID: 004837
Introduction to Mechanical Ventilation
Introduces the technological aspects of mechanical ventilation including the theory of operation, classification and patient-ventilator system checks. Prerequisite: [(RCP 140 and RCP 176) with a grade of C or better] or consent of instructor. Lecture: 1.5 credits (22.5 contact hours). Laboratory: 0.5 credit (15 contact hours).

Components: Laboratory, Lecture

RCP 190 (2) Course ID: 003793
Advanced Ventilatory Support
Addresses advanced concepts in ventilatory support, including physiologic effects, indications, monitoring and management of the patient-ventilator system. Prerequisite: RCP 180 with a grade of C or better. Lecture: 1.5 credits (22.5 contact hours); Laboratory: 0.5 credits (30 contact hours). Components: Laboratory, Lecture

RCP 195 (4) Course ID: 004838
Patient-Ventilator System Management
Addresses advanced concepts in ventilatory support including monitoring and management of the patient-ventilator system. Prerequisite: [(RCP 185 and RCP 201) with a grade of C or better] or consent of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (60 contact hours).

Components: Laboratory, Lecture

RCP 200 (3) Course ID: 003794
Clinical Practice III
Provides practice in adult mechanical ventilation procedures and airway management in the critical care setting and performance of other respiratory care skills. Prerequisite: RCP 175 with a grade of C or better. Clinical: 3 credits (180 contact hours).

Components: Clinical

RCP 201 (2) Course ID: 004836
Respiratory Care Practice III
Provides practice in adult mechanical ventilation procedures and airway management in the critical care setting in addition to continued performance of the basic respiratory care skills. Prerequisite: [(RCP 140 and RCP 176) with a grade of C or better] or Consent of Instructor. Clinical: 2 credits (120 contact hours).

Components: Clinical

RCP 204 (3) Course ID: 003795
Emergency & Special Procedures
Prepares students to participate in advanced emergency life support and special procedures. Prerequisite or Corequisite: [(RCP 130 and BIO 139) with a grade of C or better]. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credit (30 contact hours).

Components: Laboratory, Lecture

RCP 210 (3) Course ID: 003796
Cardiopulmonary Pathophysiology
Addresses the etiology, diagnosis, clinical manifestations and management of cardiopulmonary disorders as related to respiratory care including the fundamental microbiological principles and their relation to health and disease. Prerequisite: [(RCP 110 or RCP 201 and RCP 185) with a grade of C or better] or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

RCP 212 (3) Course ID: 003797
Neonatal/Pediatric Respiratory Care
Provides a study of the special needs of the neonatal and pediatric patient with focus on fetal cardiopulmonary development, evaluation, assessment and treatment of cardiopulmonary conditions and diseases of the neonatal and pediatric patient, as well as equipment unique to this population. Prerequisite: (RCP 185 and RCP 201) with a grade of C or better) or Consent of Instructor. Prerequisite or Corequisite: RCP 190 with a grade of C or better or Consent of Instructor. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credits (30 contact hours).

Components: Laboratory, Lecture

RCP 214 (3) Course ID: 003798
Advanced Diagnostic Procedures
Provides observation and practice of advanced diagnostic evaluation techniques while improving efficiency in the ventilatory management of patients. Prerequisite: RCP 200 with a grade of C or better. Clinical: 3 credits (180 contact hours).

Components: Clinical

RCP 226 (4) Course ID: 004841
Respiratory Care Practice IV
Provides observation and practice in advanced cardiopulmonary evaluation techniques while improving efficiency in the ventilatory management of adult patients. Prerequisite: [(RCP 176 and RCP 185) with a grade of C or better] or Consent of Instructor. Clinical: 4 credits (240 contact hours).

Components: Clinical

RCP 228 (2) Course ID: 003800
Preventive and Long-Term Respiratory Care
Covers prevention of cardiopulmonary disorders and care of individuals with long term cardiopulmonary disability. Addresses psychosocial and physical needs of clients with emphasis on improving the quality of life and cardiopulmonary reserve. Prerequisite: [(RCP 110 or (RCP 195 and RCP 210 and RCP 212) or RCP 226) with a grade of C or better] or Consent of Instructor. Lecture: 2 credits (30 contact hours).

Components: Lecture

RCP 240 (3) Course ID: 004844
Advanced Cardiopulmonary Evaluation
Addresses cardiopulmonary assessment including hemodynamic monitoring, pulmonary and cardiac exercise/stress testing, advanced cardiac procedures, blood chemistry and fluid and electrolyte balance. Prerequisite: [(RCP 195 and RCP 210 and RCP 226) with a grade of C or better] or consent of instructor. Lecture: 2.75 credits (41.25 contact hours). Laboratory: 2.5 credits (30 contact hours).

Components: Laboratory, Lecture

RCP 245 (2) Course ID: 004845
Advanced Cardiac Life Support
Focuses on managing acute cardiovascular emergencies including cardiac arrest, acute myocardial infarction and stroke. Students demonstrating essential knowledge and skills and obtaining 85% or greater on the written exam will receive an American Heart Association ACLS provider card. Lecture: 1.5 credits (22.5 contact hours). Laboratory: 0.5 credit (20 contact hours).

Components: Laboratory, Lecture

RCP 250 (3) Course ID: 003801
Clinical Practice V
Prepares students to participate in effective and efficient planning, managing and delivering respiratory care to diverse client populations in various settings. Prerequisite: RCP 225 with a grade of C or better. Clinical: 3 credits (180 contact hours).

Components: Clinical

RCP 251 (4) Course ID: 004843
Respiratory Care Practice V
Prepares students to plan, manage, and deliver respiratory care to diverse client populations in various settings. Enables students to practice mechanical ventilation
techniques and observe/practice techniques of advanced life support. Prerequisite: (RCT 195 and RCP 210 and RCP 220 and RCP 226) with a grade of C or better) or Consent of Instructor. Clinical: 2 credits (90 contact hours).

Components: Clinical

RCP 260 (1) Course ID: 004846

Respiratory Care Seminar

Analyzes material previously studied in the program and prepares students for the National Board for Respiratory Care examination. Addresses job seeking skills. Prerequisite: (RCP 200 and RCP 210 and RCP 212 and RCP 225) with a grade of C or better) or Consent of Instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

RCT Realtime Captioning Technology

RCT 270 (3) Course ID: 004497

Realtime Vocabulary

This course provides instruction in writing the spoken word with punctuation by means of a conflict-free reporting theory and principles as approved by NCRA to provide instantaneous translation. An in-depth study of vocabulary development and increased knowledge of terminology through dictation will be given. The student will receive instructions on using a computer-aided (realtime) theory system and teacher interaction. The student should also be able to take dictation at a minimum of 140 words per minute, transcribed with 95 percent accuracy by the end of the semester. Prerequisite: RCT 260, RCT 261, or Consent of Instructor. Must pass with at least a C grade in the prerequisite courses.

Components: Laboratory

RCT 271 (2) Course ID: 004480

Realtime Vocabulary Lab

This course will enable the student to practice realtime vocabulary writing and increase the user’s machine shorthand speed and accuracy. This course must be taken in conjunction with RCT 270 Realtime Vocabulary. Laboratory: 2 credits (90 contact hours). Prerequisite: RCT 260 and RCT 261, or Consent of Instructor; student must receive at least a C grade in the prerequisite courses.

Components: Laboratory

RCT 272 (3) Course ID: 004496

Judicial Technology

Provides the student with instruction in writing the spoken word with punctuation by means of a conflict-free reporting theory as approved by NCRA to provide instantaneous translation. How in computer-aided transcription, includes) instruction in operating a computer-system, basic care and maintenance, system support, understanding of computer-aided transcription terminology, and application of computer functions such as producing a transcript, reading, translating, editing, printing, using parentheticals, dictionary management, computer operating systems, windows, formatting an ASCII disk, computer terminology, overview of related software packages, realtime application, operating a realtime transcription system, setting up and operating realtime related hardware, speaker identification, realtime transcript, composition, and formatting. Students will learn the psychology and available resource materials for writing realtime. The student will receive live practice dictation, instruction in realtime reporting in

Components: Lecture

RCT 280 (3) Course ID: 004534

Realtime Skill Development

Provides instruction in writing the spoken word with punctuation by means of a realtime translation theory as approved by NCRA to provide instantaneous translation. Continued theory instruction is provided and the use of tutorial and/or realtime technology and teacher interaction. Dictation practice for 2-voice, multi-voice testimony including literary, jury charge, current events and technical materials will assist in speed and accuracy development. Specific emphasis is placed on dictionary building/management. Upon successful completion of this course, students will be able to take dictation at 120 words per minute, transcribed with 95 percent accuracy by the end of this term. Prerequisite: RCT 260 and RCT 261.

Student must achieve at least a C grade in the prerequisite courses. Corequisite: RCT 281. Student must receive at least a C grade in the prerequisite courses. Lecture: 3 credits (45 contact hours).

Components: Lecture

RCT 281 (2) Course ID: 004495

Realtime Skill Development Lab

Provides skill development in realtime dictionary building management and increase the user’s machine shorthand speed and accuracy. This course must be taken in conjunction with RCT 280 Realtime Skill Development. Prerequisite: RCT 260 and RCT 261 or Consent of Instructor. Student must achieve at least a C grade in the prerequisite course. Corequisite: RCT 280. Laboratory: 2 credits (90 contact hours).

Components: Laboratory

RDG Transitional Reading

RDG 20 (3) Course ID: 002286

Improved College Reading

Improves proficiency in reading comprehension, vocabulary, and critical thinking skills, and prepares students for college and career reading through individualized and/or group instruction practice. Prerequisite: As determined by KCTCS Placement Policy. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Course Also Offered in Modules

RDG 30 (3) Course ID: 002287

Reading for the College Classroom

Improves critical reading skills by developing vocabulary techniques, active reading strategies, comprehension accuracy, and interpretation of visual elements in text. Applies theories and strategies taught in the course to college and career reading materials. Prerequisite: As determined by KCTCS Placement Policy, or successful completion of RDG 20. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Course Also Offered in Modules

RDG 41 (1) Course ID: 006805

Reading Laboratory

Designed to improve reading comprehension, vocabulary, and critical thinking skills. Strategies taught in this course will be applied to college level materials. Pre-requisite: Compass score 81-83. Lab: 1.0 credit (15 contact hours).

Components: Laboratory

Attributes: Course Also Offered in Modules

RDG 185 (3) Course ID: 000301

College Reading

Designed to improve critical reading, thinking, and writing at the college level by identifying the components of expository, persuasive, argumentative, and research text, including the author’s use of tone, purpose, biased language and writing patterns. Apply strategies to college level text. Prerequisite: KCTCS Placement Policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Course Also Offered in Modules

RDG 201 (0.5) Course ID: 006737

Active Reading

Applies active reading, metacognitive, self-evaluation, and reading rate strategies for proficiency in reading comprehension. Includes topics such as the reading process, self-monitoring and self-correcting comprehension, and adjusting reading strategies for various comprehension purposes. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture

Campus: BSC

RDG 202 (0.75) Course ID: 006738

Transitions, Thought Patterns

Construct meaning from texts through analyzing transitions and patterns of organization to improve comprehension and critical thinking skills. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: .75 credits (11.25 contact hours).

Components: Lecture

Campus: BSC

RDG 203 (1) Course ID: 006739

Basics of Argument

Recognize basic argument components, analyze contradictions to prior learning, and draw valid conclusions about claims and supports for claims to improve critical reading and thinking skills. Use main ideas to accurately summarize texts. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

Campus: BSC

RDG 204 (0.75) Course ID: 006740

Words and Visual Elements

Expands vocabulary through examining word parts and context clues, and infers tone and purpose through word combinations. Constructs meaning from visual elements to improve comprehension of text. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: .75 credits (11.25 contact hours).

Components: Lecture

Campus: BSC

RDG 301 (0.75) Course ID: 006741

Critical Reading

Uses active learning, prior knowledge, and metacognitive strategies to quickly enhance comprehension. Uses active learning, prior knowledge, and self-assessment strategies to quickly enhance comprehension of text. Pre-requisite: As determined by KCTCS Placement Policy, or successful completion of RDG 202. Lecture: .75 credits (11.25 contact hours).

Components: Lecture

Campus: BSC

RDG 303 (0.75) Course ID: 006743

Logic and Evidence

Analyzes test structures, paragraphs, longer passages, and arguments for central ideas, supporting examples, reasons, and evidence to construct meaning from texts. Pre-requisite: As determined by KCTCS Placement Policy, or successful completion of RDG 202. Lecture: .75 credits (11.25 contact hours).

Components: Lecture

Campus: BSC

RDG 304 (0.75) Course ID: 006744

Words and Visual Elements

Construct meaning from word parts, context clues, connotation, and denotation for accurate comprehension of text. Evaluate word combinations to determine the author’s view, tone, and purpose for writing the texts. Infer meaning from visual elements such as diagrams, charts, and photos. Pre-requisite: As determined by KCTCS Placement Policy, or successful completion of RDG 202. Lecture: .75 credits (11.25 contact hours).

Components: Lecture

Campus: BSC

RDG 1851 (0.75) Course ID: 006933

Critical Reading

Apply Active Reading, Metacognitive processes and analyze common text structures and supporting details to improve basic critical reading skills. Pre-requisite: current KCTCS placement policy. Lecture: .75 (11.25 contact hours).

Components: Lecture

Campus: BSC

RDG 1852 (0.75) Course ID: 006934

Valid Supports

Identify patterns of writing and discern facts from opinions to determine valid supports. Use patterns and valid supports to organize ideas for a summary or concept map. Pre-requisite: RDG 1852. Lecture: .75 (11.25 contact hours).

Components: Lecture
Components: Lecture

RDG 1853 (0.75) Course ID: 006935
Bias and Fallacies
Interpret the author’s devices for expressing the writing purpose, point-of-view and bias in informative, persuasive, and literary texts. Use this information to draw valid inferences and analyze arguments. Forte logical reasoning from various types of texts. Pre-requisite: RDG 1852. Lecture: .75 credits (11.25 contact hours).
Components: Lecture

RDG 1854 (0.75) Course ID: 006936
Words and Visuals
Conduct meaning from vocabulary and visual elements, and use this information to summarize, map concepts, and paraphrase content to improve critical reading skills. Pre-requisite: RDG 1853. Lecture: .75 credits (11.25 contact hours).
Components: Lecture

REA 200 (3) Course ID: 000875
Real Estate Investments I
Introduces various types of real estate investments. Includes a comparison of investments in real estate with other types of investments. Covers basic fundamentals of investment analysis and terminology. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 203 (3) Course ID: 000527
Commercial and Industrial Property
Covers classifications of commercial and industrial properties. Includes investment, environment, financing, taxes, depreciation, ownership, cash flow projection, and discount rate analysis. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 204 (3) Course ID: 000825
Land Planning and Development
Includes the specialized field of land planning and development with emphasis on new home construction. Includes market research, site selection and analysis, regulations, financing, earthwork, streets, and landscaping. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 205 (3) Course ID: 000620
Farm Brokerage
Includes farm brokerage and specific subjects relating to the sale of farm property. Covers listing, prospecting, showing, financing, negotiating and closing the farm sale as well as the duties of the farm manager. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 212 (3) Course ID: 000194
Real Estate Investments II
Includes an analysis of operations and cash flow with detailed instruction on the internal rate of return, financial management rate of return, operational and feasibility analysis, and model investment projections. Pre-requisite: REA 202. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 220 (3) Course ID: 000886
Real Estate Brokerage Management
Includes basic real estate principles and theories as they apply to real estate brokerage management. Includes legal and work environment; brokerage management concepts; employment agreements; personnel selection, compensation, and management; policy manuals; listing and marketing management; and financial control. Lecture: 3.0 credits (45 contact hours).
Components: Independent Study

REA 221 (1) Course ID: 004772
Basic Income Approach to Property Valuation
Provides students with a foundation in the concepts and procedures necessary in the appraisal of real estate income property. Explores how Gross Potential Income is obtained by market analysis and research, how and where to obtain all operating expenses being generated by an income-producing property, how to develop a reliable Capitalization Rate, and how to utilize Direct Capitalization Methods. Prerequisite: REA 121 or Appraiser's license. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

REA 222 (1) Course ID: 004773
Uniform Standards of Professional Appraisal
Provides an understanding and appreciation of the Uniform Standards of Professional Appraisal Practice (USPAP) and how these standards set the minimum foundation on which both the development of an appraisal and the reporting of that appraisal must adhere and develop. Meets the pre-licensing and continuing education requirements of the Kentucky Real Estate Appraisers Board and the Appraisal Institute. Prerequisite: REA 121 or Appraiser's license. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

REA 225 (3) Course ID: 000432
Real Estate Finance
Examines all aspects of real estate finance including financial instruments, financial institutions, buyer qualifications, and mortgage markets. Includes government influence, risk analysis, and financing of income-producing properties. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 230 (3) Course ID: 000391
Real Estate Law
Examines the laws and regulations pertaining to real estate and related environmental issues. Includes ownership rights, title examination, planning and zoning, contracts of sale, Fair Housing regulations, agency issues, court systems and recent current court decisions. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REL 101 (3 - 3) Course ID: 000645
Selected Topics in Real Estate: (Topic)
Includes topics to expand course offerings as new technology and information are developed, as well as to address local real estate needs. Covers various topics from semester to semester at the discretion of the instructor. (May be repeated to a maximum of six credit hours.) Prerequisite: Consent of instructor. Lecture: 1-3 credits (15 contact hours).
Components: Lecture

REL 120 (3) Course ID: 005282
Introduction to the Old Testament
Introduces books of the Hebrew Bible (Old Testament) using knowledge of literary forms as well as historical and cultural backgrounds to aid in the interpretation of the religious and philosophical meanings of the text. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

REL 121 (3) Course ID: 005283
Introduction to the New Testament
Introduces New Testament using knowledge of literary forms as well as historical and cultural backgrounds to aid in the interpretation of the religious and philosophical meanings of the text. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

REL 130 (3) Course ID: 000360
Introduction to Comparative Religion
Introduces students to a comparative analysis of world religions, emphasizing beliefs, rituals, artistic expressions, and cultural and social organization. Includes both Eastern and Western religions. (Same as ANT 130). Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: ANT 130
Attributes: Cultural Studies, AH - Arts and Humanities, AH - Humanities, SB - Social Behavior Science, SB - Religion

REL 135 (3) Course ID: 007063
Introduction to Comparative Christianity
Provides an overview of the history of Christianity and compares the major Christian faiths and movements, their formation, and the political and social influences that caused their development. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
REL 240 (3) Course ID: 006945
Life and Teaching of Jesus
Investigates the life and teachings of Jesus of Nazareth through a critical analysis of the ancient sources and modern scholarly reconstructions. Lecture: 3 credits (45 contact hours).
Components: Lecture

REL 241 (3) Course ID: 006946
Life and Letters of Paul
Presents the person and thought of the Apostle Paul in social, cultural, political, philosophical, and theological context. Investigates Paul's ethics and his views as preserved in the Christian New Testament. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

RES Respiratory Care
RES 299 (3) Course ID: 006958
Special Topics in Respiratory Care
A special project or experience in Respiratory Care will be selected to enhance core material in the Respiratory Care Program. Provides the student an opportunity for independent-study and specialized instruction as approved by the instructor. Course may be repeated to a maximum of 6 hours. Lecture: variable; Laboratory: variable; Co-Prerequisite: Consent of the Instructor.
Components: Laboratory, Lecture

SCI Natural Science
SCI 295 (3) Course ID: 005237
Scientific Investigations
Real-time, hands-on research projects are carried out using the scientific method. Results of research projects may be presented at the Conference for Student Research, or other scientific meetings. Students prepare research projects for inclusion in a Handbook of Procedures Using the Scientific Method. Prerequisite: 1. Mathematics, Reading, and English assessment placement scores above developmental levels or completion of requisite developmental courses. 2. Completion of 3 credit hours of general education science area in which the research project will be carried out with grade of B or higher. 3. Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Lecture
Attributes: SN - Science, SN - Science

SED Special Education/Sign Language
SED 101 (3) Course ID: 000923
Sign Language I
Includes a functional-notational approach to a beginning competency in Sign Language. Incorporates syntax, grammar, non-manual markers (behaviors) of sign language, and cultural information. (After an initial orientation period, no verbal communication will be used in the classroom.) Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Foreign Language

SED 203 (3) Course ID: 000530
Sign Language III
Emphasizes the practical application of signing, skills, development of cross-cultural communication abilities and vocabulary expansion. Reviews linguistic information and introduces additional linguistic materials. Pre-requisite: SED 102. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Foreign Language

SED 204 (3) Course ID: 000833
Sign Language IV
Continues the expansion of sign vocabulary, sharpening of conversational skills including fingerspelling and numbers, semantics, morphology, syntax and other sign language features applied to conversational settings. Pre-requisite: SED 203. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Foreign Language

SET Small Engine Technology
SET 100 (3) Course ID: 002002
Introduction to Small Engine Repair
This course introduces the student to small engines and their various applications. Also included are the identification and demonstration of hand tools, special tools, and measuring tools. It covers the selection and use of shop manuals and applying safety procedures when working with small engines. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 110 (3) Course ID: 002003
Basic Small Engine Theory
This course introduces the student to the principles of construction and operation of internal combustion engines including the definitions of the following trade terms: valve overlap, reed value, two-stroke cycle engine and four-stroke cycle engine. Corequisite: SET 100. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 111 (1) Course ID: 002004
Basic Small Engine Lab
This course provides applications of the theory presented in SET 110. It includes hands-on experience, step-by-step procedures for disassembling engines, identification of engine components, inspection of parts, performing precision measurements on crankshaft, cylinder bore and valves, and the reassembly of the engines. Corequisite: SET 110. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 116 (3) Course ID: 002005
Introduction to Marine Technology
This course introduces the student to outboard and inboard motors and boats, safety practices and the operation of two-cycle and four-cycle motors. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 117 (2) Course ID: 002006
Marine Electrical and Fuel Systems
This course presents electrical theory and applications for the marine technician including the marine battery, starter systems, alternator charging systems, and fuel systems. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

SET 118 (3) Course ID: 002007
Powerhead Overhaul
This course presents instruction in overhauling two-cycle engines and repairing and or replacing ignition systems. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 119 (1) Course ID: 002008
Powerhead Overhaul Lab
This course presents hands-on experience in overhauling two-cycle motors, tuning-up motors and repairing and or replacing ignition systems. Corequisite: SET 118. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 120 (3) Course ID: 002009
Mid-Section, Lower Unit and Trim/Tilt
This course presents the theory and application necessary to repair and or replace parts in the mid-section, lower unit, and trim/tilt systems in marine applications. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 121 (2) Course ID: 002010
Mid-Section, Lower Unit and Trim/Tilt Lab
This course presents hands-on instruction in the theory necessary to repair and or replace parts in the mid-section, lower units, and trim/tilt systems in marine applications. Corequisite: SET 120. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
SET 122 (3) Course ID: 002011
Four-Cycle Engine/Stern Drive
This course presents the theory and application of repair and overhaul methods for the four-cycle engines, and how to make repairs of various stern drive systems. Prerequisite: None. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 123 (1) Course ID: 002012
Four-Cycle Engine/Stern Drive Lab
This course presents hands-on training in the theory and application of repair and overhaul methods for the four-cycle engines, and how to make repairs of various stern drive systems. Corequisite: SET 122. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 200 (3) Course ID: 002013
Electrical Systems
This course presents electrical systems and their application. Basic electrical theory, including electrical pressure, current, resistance and power measured in volts, amperes, and ohms is presented. Ohm's law will be discussed with its application to electrical circuits. Basic circuits (series, parallel, and combination of series and parallel) will be discussed. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 201 (1) Course ID: 002014
Electrical Systems Lab
This course presents hands-on training in electrical systems and their application. Basic electrical theory, including electrical pressure, current, resistance and power measured in volts, amperes, and ohms is presented. Ohm's law will be discussed with its application to electrical circuits. Basic circuits (series, parallel, and combination of series and parallel) will be discussed. Corequisite: SET 200. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 210 (3) Course ID: 002015
Ignition/Charging Systems
This course presents ignition/charging systems theory, the principle of operation of a generator/alternator system, and component identification and application. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 211 (1) Course ID: 002016
Ignition/Charging Systems Lab
This course presents hands-on experience with ignition/charging systems, the principle of operation of a generator/alternator system, and component identification and application. Corequisite: SET 210. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 220 (3) Course ID: 002017
Fuel Systems
This course introduces fuel systems used on two-cycle and four-cycle engines: the basic types, components, the types of carburetors, the types of fuel filters, and the types of fuel pumps and air filters. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 221 (1) Course ID: 002018
Fuel Systems Lab
This course provides hands-on experience with fuel systems. The student will diagnose carburetor problems, rebuild diaphragm-type and float type carburetors, test carburetors and make needed adjustments, and adjust the governor according to manufacturers' specifications on two-cycle and four-cycle engines. Corequisite: SET 220. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 230 (3) Course ID: 002019
Introduction to Motorcycle Technology
This course will introduce the student to motorcycle repair. It will cover the career of the motorcycle repair technician, including entry level skills, advancement opportunities and activities performed at a dealership. Safe working practices, accident prevention, proper lifting, and recognizing typical hazards around a motorcycle service department will be stressed. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 231 (3) Course ID: 002020
Motorcycle Chassis Systems
After completion of this course, the student will be able to identify front fork components and service procedures for the steering assembly. The student will be able to identify the service requirements for final drives and the front fork. Instruction will be given in the inspection of brake systems, safe handling of brake fluid, replacing brake shoes and pads, and bleeding hydraulic brake systems. Laboratory: 3 credits (135 contact hours).
Components: Laboratory

SET 233 (2) Course ID: 002021
Carburetors and Fuel Systems
The student will be able to identify parts of a motorcycle carburetor and discuss the components and operations of various carburetor circuits. The student will also be able to remove, clean, and install a carburetor and remove, clean and install a fuel valve. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

SET 235 (1) Course ID: 002022
Clutches and Starter Systems
Upon completion of this course the student will be able to discuss starter systems found on motorcycles and have a working knowledge of servicing kick and electric starters. The student will also be able to identify parts of a clutch, discuss guidelines for clutch service and be able to remove, disassemble, inspect and reassemble a motorcycle clutch. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 237 (2) Course ID: 002023
Engine Tune-Up
After completion of this course the student will be able to perform motorcycle engine tune-ups including: ignition systems, replacing points and condensers, adjusting and verifying timing and service guidelines. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

SET 239 (1) Course ID: 002024
Tools and Measurements
After completing this course the student will be able to list and demonstrate the ability to use the tools of the motorcycle technician, including hand tools, power tools, measuring instruments and specialty tools.Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 240 (3) Course ID: 002025
Four Stroke Cycle Engine
This course presents theory, repair and overhaul methods of four-cycle engines. The student will learn to inspect engines for problems, follow service manuals for measuring cylinder bore, piston fit, ring clearance, rod clearance, crankshaft clearance and valve train components. The student will use special tools including a cylinder hone, valve guide reamer, valve seat cutter, and valve grinder and demonstrate safety practices while using this equipment. Lecture: 3 credits (45 contact hours).
Components: Lecture

SET 241 (1) Course ID: 002026
Four Stroke Cycle Engine Lab
In this course, students repair and overhaul four-cycle engines, inspect engines for problems, follow service manuals specifications needed for measuring cylinder bore, piston fit, ring clearance, rod clearance, crankshaft clearance and valve training components. Students will use the following special tools: cylinder hone, valve guide reamer, valve seat cutter, and valve grinder. Safety practices will be observed while using the equipment. Corequisite: SET 240. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 250 (3) Course ID: 002027
Two Stroke Cycle Engine
This course presents theory, repair and overhaul methods of two-stroke cycle engines. Students learn to inspect engines for problems, follow a service manual for measuring cylinder bore, piston fit, ring clearance, rod clearance, crankshaft clearance and valve training components. This course introduces students to the following special tools: cylinder hone, valve guide reamer, valve seat cutter, and valve grinder. Safety practices will be observed while using equipment. Lecture: 2 credits (45 contact hours).
Components: Lecture

SET 251 (1) Course ID: 002028
Two Stroke Cycle Engine Lab
Students repair and overhaul two-cycle engines. Students disassemble, inspect, and service cylinder, piston rings and connecting rod, crankshaft and crankcase assembly, and demonstrate effective safety practices while using special equipment. Students also reassemble and test engines and components to standards set by manufacturer. Corequisite: SET 250. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 255 (2) Course ID: 002029
Chassis Systems
This class presents hands-on application of the theory, repair, and overhaul methods of manual and hydrostatic transmissions. It includes how to inspect, diagnose, and repair manual and hydraulic steering systems and deck assemblies. The student will also learn how to perform preventative maintenance, adjust wheel bearings, check steering alignment and remove and replace tires. This course will introduce the student to special tools, fire changers, and the safety practices associated with the use of this equipment. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

SET 257 (1) Course ID: 002030
Welding for Small Engines
This class introduces students to the art and science of welding. Students learn to prepare the equipment and to perform basic welding operations. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

SET 259 (2) Course ID: 002031
Portable Two Cycle Equipment Lab
This class will enable the student to identify the external parts of the equipment, operate equipment, handle and mix fuel, and transport and handle trimmers and saws. Instruction will be given to identify and diagnose related problems in chain saws, trimmers and other two-stroke cycle equipment. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

SET 298 (2) Course ID: 002032
Practicum
Practicum provides supervised on-the-job work experience related to the student's education objectives. Students participating in practicum do not receive compensation. Prerequisite: Permission of Instructor. Practicum: 2 credits (150 contact hours).
Components: Practicum

SFA Safety and First Aid

SFA 101 (3) Course ID: 004735
OSHA, Health, & Environmental Safety
The basics of OSHA compliance in addition to covering the principles of industrial health and safety, environmental regulations, and industrial requirements with a focus on personal safety and health. Lecture: 3 credits (45 contact hours).
Components: Lecture

SFA 100 (1) Course ID: 002034
Safety and First Aid
Safety and First Aid is a course designed to teach current strategies related to designated emergency situations as put forth by the National Safety Council or American Red Cross. The National Safety Council or American Red Cross standardized course qualifies a student for certification in safety and first aid. Lecture: 1 credit (15 contact hours).
Components: Lecture

SFA 101 (3) Course ID: 004735
OSHA, Health, & Environmental Safety
The basics of OSHA compliance in addition to covering the principles of industrial health and safety, environmental regulations, and industrial requirements with a focus on personal safety and health. Lecture: 3 credits (45 contact hours).
Components: Lecture
SMT 110 (3)  
Principles of Surveying  
Course ID: 002035  
Provides a study of field and office procedures for measuring distances, elevations, and horizontal and vertical angles. Covers Polaris and solar observations, plane state coordinates, control surveys, and public land surveys. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SMT 130 (3)  
Land Surveying Graphics  
Course ID: 006733  
Covers graphical communication in surveying and mapping, fundamentals of projection, map projection theory, D-viewing, spatial relationships and viewpoints, blueprints, cross-sections, sketches for field notes and presentations, land and parcel descriptions, map accuracy standards, plotting data from field notes and data collection, contour theory, and computations related to survey drafting. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SMT 160 (3)  
Construction Surveying  
Course ID: 002038  
Provides a study of field and office procedures for the layout of construction sites. Includes theory of construction surveys for route locations, plant site, earthwork calculations, circular curves, lines, and grades. Prerequisite: SMT 110, or Instructor Consent. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SMT 210 (3)  
Advanced Surveying Measurement  
Course ID: 006734  
Examines the nature of measurements, statistical analysis of random errors in measurements, propagation of errors, survey standards and design specifications, development of coordinate geometry and trigonometric solutions of plane surveying problems, analysis of errors and mistakes in indirect measurement. Prerequisite: SMT 110. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SMT 220 (3)  
Surveying Lab  
Course ID: 004438  
Investigates field procedures for measuring distances, elevations, horizontal and vertical angles, plane state coordinates and control surveys as they pertain to boundary location, route location, construction and mine surveys. Corequisite: SMT 160. Laboratory: 3 credits (90 contact hours).  
Components: Laboratory

SMT 230 (3)  
Land Boundary Location  
Course ID: 006735  
Explores the role of the surveyor in retracing land boundaries, methods of boundary establishment, classification and analysis of boundary evidence, preparing deed descriptions and survey plats, preservation of survey evidence, surveyor as expert witness, liability, and professionalism in surveying. Prerequisite: SMT 110. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SMT 250 (3)  
Mine Surveying  
Course ID: 006736  
Introduces the theory and practice of mine surveying and use of survey instruments, for the location of drill holes, bench surveys, layout of blasting patterns, haul road layout, transfer of control from surface to underground, alignment of underground development, recording of survey information, control systems, location and selection of stations, bore hole surveys, and subsidence surveys. Prerequisite: SMT 130 or Instructor Consent. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SMT 270 (3)  
Professional Ethics & Conduct for Land Surveyors  
Course ID: 002041  
Explores the professional and ethical conduct of the Land Surveyor in areas of building a business, managing employees, communications, project management, and self-management. Prerequisite: SMT 230, or Instructor Consent. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SMT 280 (4)  
Introduction to GIS and GPS  
Course ID: 004436  
This course provides an overview of the principles and practices of Geographic Information Systems (GIS) and Global Positioning Systems (GPS). The GIS portion of the course will deal with issues of spatial data models, database design, introductory and intermediate GIS operations, and case studies of real world GIS applications. The GPS portion of the course focuses on GPS technology, software applications. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (45 contact hours).  
Components: Laboratory, Lecture

SMT 290 (3)  
Boundary Law  
Course ID: 004435  
This course is the survey of property law, explaining the creation, description, and maintenance of property boundaries, easements and right-of-ways. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SMT 292 (1 - 6)  
Instructor Consent Required Special Topics  
Course ID: 004471  
Various topics will be addressed. Laboratory: 1 - 6 credits (45 - 270 contact hours). Prerequisite: Permission of Instructor.  
Components: Laboratory

SOC 101 (3)  
Introduction to Sociology  
Course ID: 000920  
Introduces concepts and methods of sociology including investigation of socialization, group processes, social inequality, social institutions, and social change. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SOC 151 (3)  
Social Interaction  
Course ID: 000844  
Explores the fundamental sociological and social psychological processes underlying human interaction. Focuses on the dynamics of symbolic exchange, the social context and processes shaping it, and examines its effects on the formation and maintenance of social and personality systems. Prerequisite: SOC 101 or PSY 110 or Consent of Instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SOC 172 (3)  
Modern Social Problems  
Course ID: 000404  
Examines selected social problems of the day from a sociological perspective. Topics may include family, poverty, education, crime, race, housing, population, health care, industrial development, and power. Prerequisite: SOC 101 or SOC 151, or Consent of Instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SOC 220 (3)  
The Community  
Course ID: 000890  
Examines social organization and process in modern communities, both rural and urban; social techniques of community improvement. Prerequisite: Three hours of sociology or Consent of Instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SOC 235 (3)  
Inequality in Society  
Course ID: 002258  
Analyzes the nature, development, and persistence of inequality in various societies. Diverse dimensions of inequality are viewed as the basis for a number of specific social problems in Western and non-Western societies. Social origins of inequality are emphasized. Policy implications are addressed. Prerequisite: Three hours of sociology or Consent of Instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture

SPA Spanish Language and Literature

SPA 101 (4)  
Elementary Spanish I (spoken approach)  
Course ID: 000922  
Introduces basic modes of communication in Spanish. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary. Provides instructional assignments and self-correctional exercises that will be practiced in the classroom. Presents an overview of the culture of various Spanish-speaking countries.  
Components: Lecture

SPA 102 (4)  
Elementary Spanish II (spoken approach)  
Course ID: 000799  
Continues to highlight the basic modes of communication in Spanish, to include present and past tense, stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary. Presents an overview of the culture of various Spanish-speaking countries. Prerequisite: SPA 101, or consent of the department and placement test. Lecture: 4 credits (60 contact hours).  
Components: Lecture

SPA 110 (3)  
Basic Conversational Spanish  
Course ID: 003884  
Introduces pronunciation, practical structures, and basic vocabulary designed to enable students to communicate using simple Spanish in everyday situations in Spanish-speaking countries and areas of the United States. Cannot be used for major or minor. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture
SPA 115 (3)  Course ID: 002261  
Hispanic Culture: (Country or Region)  
Introduces the basic cultural patterns of a Spanish-speaking country or region through in-class experience and/or travel. May be taken up to two times with focus on different country or region. Lecture: 3.0 credits (45 contact hours).

Components: Lecture  
Attributes: Cultural Studies, SB - Social Behavior Science, SB - Spanish

SPA 151 (3)  Course ID: 005762  
Spanish for Health Professionals  
The course will teach Spanish terminology and basic grammar related to medical patients, including vocabulary for diagnosis and treatment. Prerequisite: Prior college or high school Spanish or other experience with the Spanish language roughly equivalent to one semester of college study. Lecture: 3 credits (45 contact hours).

Components: Lecture  
Same As Offering: SPA 151  
Attributes: University Course (University of Kentucky)  
Campus: HZC

SPA 201 (3)  Course ID: 009017  
Intermediate Spanish I  
Focuses on intermediate level speaking, listening, reading, and writing skills with an emphasis on more advanced grammatical structures; emphasizes speaking the language to expand vocabulary; examines current issues, cultural nuances, and dominant Hispanic themes. Prerequisite: SPA 102, or consent of department and placement test. Lecture: 3 credits (45 contact hours).

Components: Lecture  
Attributes: Cultural Studies, AH - Foreign Language

SPA 202 (3)  Course ID: 002262  
Intermediate Spanish II  
Continues intermediate level speaking, listening, reading, and writing skills from SPA 201 with an emphasis on more advanced grammatical structures; focuses on speaking the language to expand vocabulary; examines current issues, cultural nuances, and dominant Hispanic themes. Prerequisite: SPA 201 or consent of department and placement test. Lecture: 3 credits (45 contact hours).

Components: Lecture  
Attributes: Cultural Studies, AH - Foreign Language

SPA 211 (3)  Course ID: 004678  
Spanish Conversation  
Sections limited to no more than 15 students each. Oral-aural practice in spoken language. Special emphasis placed on the acquisition of idioms and fundamental conversational vocabulary. Pre-requisite: SPA 202 or equivalent or consent from the department. Lecture: 3 credits (45 contact hours).

Components: Lecture  
Campus: BLC

SPA 1011 (0.8)  Course ID: 006222  
Spanish Greetings & Farewells  
Highlights greetings and farewells in simple conversations; introduces the present tense of the verb ser (to be); explores the geography, culture, history and political issues of Spanish speaking countries with focus on Hispanics in the United States. Lecture: 0.8 credit (12 contact hours).

Components: Lecture  
Campus: WKCTC

SPA 1012 (0.8)  Course ID: 006223  
Spanish for School Life  
Introduces basic modes of communication to discuss school life and everyday activities; focuses on asking questions and describing people and things; introduces the present tense of estar (to be) and -ar; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Spain. Prerequisite: SPA 1011. Lecture: 0.8 credits (12 contact hours).

Components: Lecture  
Campus: WKCTC

SPA 1013 (0.8)  Course ID: 006224  
Spanish for Family and Friends  
Features descriptions of family and friends; focuses on using possessive and descriptive adjectives; introduces the present tense of -er and -ir verbs, uses the verb tener and venir to express needs and state of mind; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Ecuador. Prerequisites: SPA 1013. Lecture: 0.8 credit (12 contact). Components: Lecture  
Campus: WKCTC

SPA 1014 (0.8)  Course ID: 006225  
Spanish for Pastime Activities  
Presents conversations regarding Pastime and activities; focuses on the present tense of the verbs ir, select stem-changing and verbs with irregular yo forms, in the context of making plans and describing events; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Mexico. Prerequisite: SPA 1013. Lecture: 0.8 credit (12 contact hours).

Components: Lecture  
Campus: WKCTC

SPA 1015 (0.8)  Course ID: 006226  
Spanish for Travel  
Presents conversations to discuss and plan a vacation; expands communication to talk about feelings; introduces the present progressive tense and compares the verbs ser and estar to express descriptions, conditions and emotions; explores the geography, culture, history, and political issues of Spanish speaking countries. Prerequisite: SPA1014. Lecture: 0.8 credit (12 contact hours).

Components: Lecture  
Campus: WKCTC

SPA 1021 (0.8)  Course ID: 006227  
Spanish for Shopping  
Highlights conversations and vocabulary in the shopping setting; introduces verbs for to know and practice answering questions of to whom or for whom an action is done; presents present to express past tense; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Cuba. Prerequisite: SPA 101. Lecture: 0.8 credit (12 contact hours).

Components: Lecture  
Campus: WKCTC

SPA 1022 (0.8)  Course ID: 006228  
Spanish for Daily Routines  
Presents descriptions of the daily routine; introduces reflexive verbs and the irregular pretent of ser (to be) and ir (to go); highlights the verb gustar and verbs like gustar; presents negative statements; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Peru. Prerequisite: SPA 1021. Lecture: 0.8 credit (12 contact hours).

Components: Lecture  
Campus: WKCTC

SPA 1023 (0.8)  Course ID: 006229  
Spanish for Restaurant Settings  
Features dialogs for ordering in a restaurant and describing food, for explaining where you are and for talking about familiar people and places; introduces the pretent of stem-changing verbs, comparatives and superlatives and indirect object pronouns and direct object pronouns; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Guatemala. Prerequisite: SPA 1022. Lecture: 0.8 credit (12 contact hours).

Components: Lecture  
Campus: WKCTC

SPA 1024 (0.8)  Course ID: 006230  
Spanish for Celebrations  
Highlights conversations of congratulations and gratitude and discussing different stages of life; presents irregular pretetens; discusses pronouns as prepositions; explores the geography, culture, history and political issue of Spanish speaking countries with focus on Chile. Prerequisite: SPA 1023. Lecture: 0.8 credits (12 contact hours).

Components: Lecture  
Campus: WKCTC

SPA 1025 (0.8)  Course ID: 006231  
Spanish for Health Care  
Presents dialog to talk about medical conditions; contrasts the imperfect and preterit past tense; illustrates impersonal constructions with se; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Costa Rica. Prerequisite: SPA 1024. Lecture: 0.8 credit (12 contact hours).

Components: Lecture  
Campus: WKCTC

STA 200 (3)  Course ID: 006640  
Statistics: A Force in Human Judgment  
This course is concerned with the interaction of the science and art of statistics with our everyday lives emphasizing examples from the social and behavioral sciences. The student will not be required to learn mathematical formulas. Topics include the nature of statistics, uses and misuses of statistics, the scope and limitations of statistics, criteria by which published statistics may be judged, interpretation of probability and the art of decision making. Prerequisite: Completion of the mathematics basic skills requirement.

Components: Lecture  
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)  
Campus: BLC

STA 210 (3)  Course ID: 005196  
Statistics: A Force in Human Judgement  
Examines the interaction of the science and art of statistics in everyday life emphasizing examples from the social and behavioral sciences including the nature, scope, limitations, and interpretation of statistics. Prerequisite: MAT 145 or MAT 150 or equivalent. Lecture: 3 credits (45 contact hours).

Components: Lecture  
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

STA 215 (3)  Course ID: 006938  
Introduction to Statistical Reasoning  
Introduction to descriptive statistics, normal distributions, linear correlation and regression, sampling, experiments, chance phenomena, one- and two-sample estimation and hypothesis testing, chi-square tests, and use of statistical software. Pre-requisites: Completion of all developmental requirements (reading, writing, and mathematics). Lecture: 3 credits (45 contact hours).

Components: Lecture  
Attributes: University Course (Eastern Kentucky University)  
Campus: BLC

STA 220 (3)  Course ID: 005197  
Statistics  
Examines statistical descriptive sample data including frequency distributions, measures of central tendency, and measures of dispersion. Includes theoretical distributions, statistical estimation, and hypothesis testing. Introduces simple linear regression and correlation. Prerequisite: MAT 150 or equivalent. Lecture: 3 credits (45 contact hours).

Components: Lecture  
Attributes: QR - Mathematics - AA & AS (CPE), QR - Quantitative Reasoning

STA 291 (3)  Course ID: 006641  
Statistical Method  
Introduction to principles of statistics. Statistical description of sample data including frequency distributions, measures of central tendency, and measures of dispersion. Theoretical distributions, statistical estimation, and hypothesis testing. Introduction to simple linear regression and correlation. Pre-requisites: MA 113, MA 123 or equivalent. Lecture: 3.0 Credits (45 Contact Hours).

Components: Lecture  
Attributes: QR - Mathematics - AA & AS (CPE), University Course (University of Kentucky)  
Campus: BLC

SUR 100 (12)  Course ID: 002046  
Surgical Technology Fundamentals Theory  
Provides an overview of the history of surgery and the role of the surgical technologists, including professional responsibilities, legal and ethical considerations, interpersonal relationships and communication skills. Incorporates safety, hazards preparation, aseptic technique and duties of the scrubbed and the circulating surgical technologist during a surgical procedure. Provides
Components: Lecture

SUR 101 (1)  Course ID: 002047  Surgical Technology Fundamentals Lab
Provides opportunity for demonstration of skills required to prepare the patient, operating room, basic equipment, and supplies; and to function as a member of an operating room team. Incorporates OSHA safety standards, aseptic technique, and duties of both the scrubbed and circulating technologist during a surgical procedure. Prerequisite: Minimum ‘C’ grade in [BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 121 or OST 103) and (BIO 225 or BIO 226 or BIO 227 or BIO 118). Current CPR certification for Healthcare Professionals. Corequisite: SUR 101 and SUR 125 and SUR 130. Lecture: 12 credits (90 contact hours).

Components: Laboratory

SUR 103 (1)  Course ID: 002048  Surgical Technology Supplemental Lab
Provides opportunity for supplemental practice of surgical skills required to prepare the patient, in the operating room, basic equipment, and supplies; and to function as a member of an operating room team. Incorporates OSHA safety standards, aseptic techniques, and duties of both the scrubbed and circulating technologist during a surgical procedure. Prerequisite: [BIO 130 or BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 121 or OST 103) and (AHS 130 or BIO 225 or BIO 227 or BIO 118). Current CPR certification for Healthcare Professionals. All prerequisites must be achieved with a grade of C or greater. Corequisite: SUR 130. Pre-requisite Or Co-requisite: SUR 101 Lab: 1.0 credit (45 contact hours).

Components: Laboratory

SUR 109 (3)  Course ID: 005375  Introduction to Surgical Technology
Provides a brief overview of the history of surgery and an in-depth introduction to the role and responsibilities of the surgical technologists, an integral health care professional in the delivery of perioperative patient care and surgical services; includes professional responsibilities, legal and ethical considerations, interpersonal relationships and communication skills. Introduces the basics of biomedical science and identifying information resources. Introduces all-hazards preparation for the surgical technologist, basic principles of aseptic techniques, sterilization, surgical scrub, gown and gloving and basic instruments used in surgery along with correlating the impact of microbiology in relationships to the practice of sterile technique and infection control in the operative setting. Prerequisite: Current CPR or BLS certification or consent. Corequisite: May be taken concurrently with SUR 110, SUR 101, SUR 125, SUR 126, & SUR 130. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

SUR 110 (9)  Course ID: 005470  Surgical Technology Fundamentals
Incorporates aseptic technique and duties of the scrubbed and the circulating surgical technologist during a surgical procedure; Provides indepth information for the successful preparation, performance, and completion of basic surgical procedures; Addresses specialty areas of general surgery, obstetrics with attendant surgical techniques; Introduces the theory of abdominal incisions, wound closures, and standard precaution skills in each clinical assignment. Includes biomedical sciences of electricity, physics, and robotics as they pertain to surgical technology. (Required of surgical technology program, current CPR or BLS certification, SUR 109, AHS 115 or consent. Lecture: 9 credits (135 contact hours).

Components: Lecture

SUR 125 (2)  Course ID: 002049  Surgical Technology Skills Practicum I
Provides experience in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. Prerequisite: Minimum ‘C’ grade in SUR 101. Current CPR certification for Healthcare Professionals. Corequisite: SUR 100 or (SUR 109 and 110). Pre-requisite Or Co-requisite: SUR 130. Clinical: 2.0 - 3.0 credits (120 - 180 contact hours).

Components: Clinical

SUR 130 (2)  Course ID: 002050  Principles of Surgical Pharmacology
Introduces the fundamental principles of the clinical use of drugs. Emphasizes the role and responsibility of the surgical technologist related to drugs, a review of basic mathemetic skills, a thorough knowledge of the systems of measurement, and conversion and application of skills to perform dosage calculations. Presents information related to medicines in common use in the surgical setting. Prerequisite: Minimum ‘C’ grade in [BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 121 or OST 103) and (BIO 225 or BIO 226 or BIO 227 or BIO 118). Current CPR certification for Healthcare Professionals. Corequisite: SUR 100 - SUR 101. Corequisite or Pre-requisite: SUR 125. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

SUR 200 (9)  Course ID: 002051  Surgical Technology Advanced Theory
Focuses on the relevant anatomy, indications for surgery, patient preparation, special equipment and supplies, purpose, expected outcomes, and possible complications of specialty areas following OSHA standards. Prerequisite: Minimum grade of ‘C’ in [SUR 100 or (SUR 109 and SUR 110)] and SUR 125 and SUR 130. Co-requisite: SUR 201. Lecture: 9.0 credits (135 contact hours).

Components: Lecture

SUR 201 (6 - 7)  Course ID: 002052  Surgical Technology Skills Practicum II
Provides opportunity for application of techniques learned in SUR 200 in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. Prerequisite: Minimum grade of ‘C’ in [SUR 100 or (SUR 109 and 110)] and SUR 125 and SUR 130. Corequisite: SUR 200. Clinical: 6.0 - 7.0 credits (360-420 contact hours).

Components: Clinical

SUR 275 (2)  Course ID: 002053  Surgical Technology Advanced Practicum
Provides an advanced experience in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with limited supervision. Prerequisite: Minimum grade of ‘C’ in SUR 200 and SUR 201. Practicum: 2.0 credits (120 contact hours).

Components: Practicum

SUR 280 (5)  Course ID: 004246  Surgical Anatomy
Provides accurate information about the structure and function of the human body. Intended for students who are pursuing a career as a Surgical First Assistant. Prerequisite: Surgical Technologist or CNOR Corequisite: SUR 284 & SUR 295. Lecture: 5.0 credits (75 contact hours).

Components: Lecture

SUR 282 (3)  Course ID: 004247  Perioperative Biocience
Promotes an understanding of microbial physiology which precedes the understanding of disease transmission and/or prevention; Emphasizes standard precautions and infection control; Contains pharmacology section designed to promote understanding of effects of pre, post and operative drugs; Includes anesthesia section designed to promote understanding of general principles/techniques and drugs used by anesthesia and effects on the patient; Introduces the student to the following: diagnostic testing such as radiology, laboratory, cardiographic, wound healing, nutrition perioperatively, fluid and electrolyte balance, and techniques in maintaining homeostasis. Prerequisite: Program admission and student must be a certified Surgical Technologist or an RN with operating room experience. Student must provide current documentation of certification. Prerequisites: SUR 280 & SUR 284 & SUR 295. Corequisite: SUR 296. Lecture: 3 credits (45 hours contact hours).

Components: Lecture

SUR 284 (3)  Course ID: 004248  Principles of Surgical Assisting
Introduces the student to the theory involved in surgical assisting; Incorporates anatomy, surgical techniques, aseptic techniques, draping, positioning, suturing, safety, and duties of the surgical team. Prerequisite: Program admission. Student must be certified Surgical Technologist or an RN with operating room experience OR consent. Corequisite: SUR 280 & SUR 295. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture

SUR 295 (1)  Course ID: 004250  Surgical First Assistant Clinical
Includes the performance of entry level duties of a surgical assistant in a clinical setting under the supervision of a qualified preceptor. For credit: Accreditation of Allied Health programs Surgical Assistant Core Curriculum related to the nature of the cases and the duties involved. Prerequisite: Program admission. Co-requisite: SUR 280 and SUR 295. Clinical: 1 credit hour (45 contact hours).

Components: Clinical

SUR 296 (3)  Course ID: 006666  Surgical First Assistant Practicum
Involves advanced training in the preoperative, operative, and postoperative phases of surgery. Exposes student to a wide variety of surgical procedures. Emphasizes surgical anatomy, along with critical thinking skills, in every surgical procedure under the supervision of a surgeon who is responsible for overseeing the clinical educational experience of the student. Pre-requisite: SUR 280, SUR 284 and SUR 295. Co-requisite: SUR 282. Practicum: 3.0 credits (270 contact hours).

Components: Practicum

Campus: MDC

SWK 124 (3)  Course ID: 000584  Introduction to Social Services
Introduces social welfare concepts and philosophies. Examines the profession of social work and its philosophy and value commitments within social welfare. Covers public and private service delivery systems. (Required of social work majors and recommended it be taken the first year.) Lecture: 2.0 credits: Lab: 2.0 credits.

Components: Laboratory, Lecture

SWK 180 (3)  Course ID: 000154  Introduction to Gerontology
The major biological, psychological, and sociological issues facing America’s aging population are examined. Attention is also focused on the resources available to meet needs of older Americans. Lecture: 3 credits (45 contact hours).

Components: Lecture

SWK 220 (3)  Course ID: 005587  Cultural Diversity in Human Services
Explores current and historical cultural diversity in human services as it applies to clients from various cultural groups. Focuses on cultural self awareness and cultural competence and its pertains to human services professionals and client helper relationships. Draws attention to dominant and minority cultural norms, attitudes and belief systems including the culture of poverty. Lecture: 3 credits (45 contact hours).

Components: Lecture

Course Equivalents: HMS 220
SWK 222 (3)  Course ID: 000484  
Development of Social Welfare  
Includes cultural traditions, value orientations, and political and economic forces which have contributed to the emergence of present social welfare policies and systems in the United States. (Required of social work majors and open to all others.) Lecture: 3 credits (45 contact hours).  
Components: Lecture  
SWK 255 (3)  Course ID: 005584  
Introduction to Addictions  
Provides an overview of approaches to understanding addictions with emphasis on the bio-psycho-social model. Analyzes the etiology, progression, and processes involved in change. Prerequisite: PSY 100 or PSY 110 or consent of instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
Campus: ECTC  
SWK 260 (3)  Course ID: 005586  
Crisis Intervention  
Focuses on crisis intervention theory, suicide prevention, and risk assessment techniques. Covers risk assessment protocols, crisis triage, de-escalation and referral. Introduces clinical, ethical and legal aspects. Prerequisite: PSY 100 or PSY 110 or permission from instructor. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
SWK 269 (3)  Course ID: 000304  
Juvenile Delinquency  
The history, nature, and extent of juvenile delinquency are studied including an examination of trends and methods of treatment in contemporary society. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
SWK 270 (3)  Course ID: 000508  
Corrections  
The philosophy of major correctional practices, the issues of rehabilitation, punishment, and treatment of the offender. The structure of the correctional institution and the impact it has on the offender are also examined. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
Components: Lecture  
Attributes: SB - Social Behavior Science, SB - Social Work  
SWK 276 (3)  Course ID: 000748  
Criminology  
The history, nature, and extent of crime are studied, including trends and theories of crime, philosophies and forms of punishment, as well as methods of treatment. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
Attributes: SB - Social Behavior Science, SB - Social Work  
SWK 281 (3)  Course ID: 000734  
Psychology of Aging  
A study of the aging process with emphasis on the needs, roles, and attitudes of seniors in our society. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
TA Theatre Arts  
TA 195 (1 - 3)  Course ID: 004554  
Special Projects in Theatre Arts (Project Title)  
Projects in Theatre Arts that are not otherwise covered by or extend beyond the scope of TA 190, TA 191, or other theatre arts course offerings. Projects may include, but are not limited to, practical application of techniques in special circumstances; special theatre tours; research projects that will be used as the basis of a practical application project; or theatrical workshop projects designed to cover a special area of practice. Projects will be selected by the instructor and may be repeated with different titles for up to six credit hours. Lecture: 1-3 credits (15-45 contact hours); Laboratory: 1-3 credits (60-180 contact hours). Prerequisite: Consent of Instructor.  
Components: Laboratory, Lecture  
TA 264 (3)  Course ID: 002268  
Makeup for the Theatre  
Theory and practice in the principles, materials and application of makeup. Lecture, two hours; laboratory, two hours. Prerequisite: TA 150 or consent of instructor.  
Components: Laboratory, Lecture  
Components: Laboratory  
TEC Technical Communications  
TEC 10 (3)  Course ID: 002071  
Developmental Writing for the Workplace  
This course is designed to allow students to survey grammar and punctuation skills, which are essential to writing. Emphasis is on clarity and exactness as required to communicate effectively in today's workplace. Prerequisite: None  
Components: Lecture  
Campus: ECTC  
TEC 200 (3)  Course ID: 002073  
Technical Communications  
Students will study written and oral communications in a technical environment. Emphasis is on preparing business communications, technical reports, technical instructions and proposals used in industry. Students also develop and prepare oral presentations. A review of basic grammar and writing principles is included. Students are introduced to electronic communication equipment and its functions.  
Components: Lecture  
THA Theatre  
THA 101 (3)  Course ID: 000925  
Introduction to Theatre: Principles and Practice  
Cultivates students judgment, perception, and creative response to theatre, emphasizing what and how theatre communicates through examining both processes and products of theatre.  
Components: Lecture  
Attributes: AH - Arts and Humanities, AH - Humanities  
THA 126 (3)  Course ID: 000774  
Acting I: Fundamentals of Acting  
Explores a broad spectrum of skills in the creative process of acting ensemble. Includes improvisation, movement disciplines (including theatre games, modern dance, and characterization), emotional and sensory awareness, and the process of integrating these into a clearly defined stage technique. Lecture: 3 hours; Laboratory: 2 hours.  
Components: Laboratory, Lecture  
THA 127 (3)  Course ID: 002264  
Acting Techniques  
Uses movement exercises, sensory work, theatre games and basic stage combat exercises to heighten physical awareness, release personal blocks, and discover the experience of being truthful with fellow actors. Continues with students moving on to individual work to establish physical techniques they will use when working on a production. Provides an exploration of physical and emotional awareness and development of a more creative use of their imaginations. Lecture: 1.0 credit hour (15 contact hours) Lab: 2.0 credit hours (90 contact hours). Prerequisite: THA 126.  
Components: Laboratory, Lecture  
THA 141 (3)  Course ID: 006781  
Costuming & Make-up for the Stage  
Develops an understanding of the basic elements of costume and make-up design and application. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).  
Components: Laboratory, Lecture  
THA 150 (3)  Course ID: 002265  
Fundamentals of Production  
Includes a comprehensive study of the basic organizational structure, processes and techniques involved in theatre design, technology and management. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
THA 190 (1)  Course ID: 000031  
Instructor Consent Required Production Practicum  
Provides study and practice of production techniques through rehearsal and performance. Practicum: 1.0 credit (45 contact hours).  
Components: Practicum  
THA 191 (1)  Course ID: 002266  
Instructor Consent Required Performance Practicum  
Provides study and practice of acting and directing through rehearsal and performance. Practicum: 1.0 credit hour (45 contact hours).  
Components: Practicum  
THA 196 (3)  Course ID: 004032  
Instructor Consent Required Summer Theatre Workshop  
Includes studies in the theory and application of acting, directing and production principles supplemented by written assignments to be determined by the college Theatre program. Admission by audition or selection by director/college staff. Open to apprentice students in a Summer Theatre program. Prerequisite: Acceptance by audition or selection by director/college staff. Lab: 1.0 - 3.0 credit hours (45 - 125 contact hours).  
Components: Laboratory  
THA 200 (3)  Course ID: 003810  
Introduction to Dramatic Literature  
Provides a study of representative dramatic literature from Greek Antiquity to the present.  
Components: Lecture  
Attributes: AH - Arts and Humanities, AH - Humanities  
THA 203 (3)  Course ID: 004433  
Acting for the Camera  
Includes a fundamental approach to auditioning and acting for the camera. Prerequisite: THA 126. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
THA 225 (3)  Course ID: 000791  
Acting II: Scene Study (Realism)  
Concentrates on several components of the acting process: preliminary study in modern acting theories, Stanislavski to the present; textual analysis, character study and scene work; studio exercises aimed at refining rehearsal skills for the actor. Prerequisite: THA 126 or Consent of Instructor. Lecture: 2.0 credit hours (30 contact hours). Laboratory: 1.0 credit hour (15 contact hours).  
Components: Laboratory, Lecture  
THA 227 (3)  Course ID: 002267  
Acting III: Scene Study (Styles)  
Introduces the actor to a performance style other than realism while continuing to develop the actor’s skills in analysis and rehearsal. Prerequisite: THA 226 or Consent of Instructor. Lecture: 2.0 credit hours (30 contact hours). Lab: 1.0 contact hour (15 contact hours).  
Components: Laboratory, Lecture  
THA 250 (3)  Course ID: 006782  
Stage Electrics  
Provides a comprehensive study of sound production and stage lighting in principle and practice. It concentrates on the fundamentals of circuits, instrumentation, and operation of stage lights and sound. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).  
Components: Laboratory, Lecture  
THA 260 (3)  Course ID: 000717  
Stagecraft  
Provides a study of theory, principles and techniques of scenic design and construction. Includes assignments in practical applications. Prerequisite: THA 150 or Consent of Instructor. Lecture: 2.0 credit hours (30 contact hours). Lab: 1.0 credit hour (15 contact hours).  
Components: Laboratory, Lecture  
THA 283 (3)  Course ID: 000111  
American Theatre  
Surveys American theatre history, giving particular emphasis to the late nineteenth and twentieth centuries, examining both theatre practice and dramaturgy and placing them within an historical, social, and cultural
context. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Humanities

TRU Truck Driving
Course ID: 002092

TRU 100 (6) Truck Driving
The purpose of the program is to prepare individuals as professional drivers for the truck driving industry. The course content is designed to familiarize students with the fundamental and operational procedures to become professional truck drivers. This is the entire curriculum. It is not divided into individual courses. There are no credit hours given and nothing is transferable. Prerequisite: CDL Permit
Components: Laboratory, Lecture

UPH Upholstery

UPH 100 (3) Introduction to Upholstery
Course ID: 002093
This course introduces the student to the variety of careers in the upholstery business and provides an overview of the industry including furniture manufacturing, furniture upholstery and repair and employment opportunities. Tools, equipment and techniques used in upholstery are discussed. The terms used in industry are stressed. Lecture: 3 credits (45 contact hours).
Components: Lecture

UPH 105 (1) Upholstery Fabrics and Materials
Course ID: 002095
This course introduces the student to various materials used in upholstery, the techniques for using each material, selection of upholstery fabrics and details concerning the usage of each fabric.
Components: Lecture

UPH 111 (1) Upholstery Fabrics and Materials Lab
Course ID: 002096
This course provides practical experience in the use of upholstery fabrics, material and equipment. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

UPH 120 (1) Furniture Preparation
Course ID: 002097
This course introduces the student to the various techniques used in the stripping and repair of furniture frames and to the installation of webbing and springs. Lecture: 1 credit (15 contact hours).
Components: Lecture

UPH 121 (2) Furniture Preparation Lab
Course ID: 002098
This course provides practical experience in the use of various techniques used in the stripping and repairing of furniture frames and to the installation of webbing and springs. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

UPH 125 (1) Padding Installation
Course ID: 002099
This course introduces the student to various aspects of padding furniture for upholstery purposes. Lecture: 1 credit (15 contact hours).
Components: Lecture

UPH 126 (1) Padding Installation Lab
Course ID: 002100
This course provides practical experience in the use of padding furniture for upholstery purposes. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

UPH 131 (4) Final Cover Fabrication and Installation Lab
Course ID: 002101
This course provides practical experience in the use of various aspects of padding furniture for upholstery. The methods and materials used in making cushions and

VCA Visual Communications - Advertising and Design

VCA 102 (3) Fundamentals of Drawing
Course ID: 002108
Introduces basic drafting skills and concepts as it relates to graphic design. Emphasizes how to create form in space and to draw in proper perspective for reproduction purposes. Students must receive a letter grade of 'C' or better. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture

VCA 106 (2) Creative Typographical Design
Course ID: 002113
Introduces basic design skills and concepts as it relates to graphic design. Emphasizes how to create form in space and to draw in proper perspective for reproduction purposes. Students must receive a letter grade of 'C' or better. Lecture/Lab: 4.0 credits (60 contact hours).
Components: Lecture

VCA 108 (3) Digital Color Theory
Course ID: 002110
Introduces basic design skills and concepts as it relates to graphic design. Emphasizes how to create form in space and to draw in proper perspective for reproduction purposes. Students must receive a letter grade of 'C' or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

VCA 120 (3) Digital Photography
Course ID: 002116
Introduces basic digital photography principles and skills to compose technically proficient photographs. Includes the use of layout markers to creatively manipulate type forms and produce interesting, attractive type-only designs. Students must receive a letter grade of 'C' or better. Lecture/Lab: 3.0 credits (45 contact hours).
Components: Lecture

VCA 122 (3) Illustration For Advertising
Course ID: 000201
Develops skills in visualization and illustration techniques as they apply to advertising and graphic design. Emphasizes visual interpretation of narrative textual information (such as a story, poem or magazine article), into professional illustrations. Students must receive a letter grade of 'C' or better. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture

VCA 151 (3) Digital Filmmaking I
Course ID: 005382
Provides training in non-studio video production and editing. Includes applied aesthetics and production of dramatic, informational, and experimental work. Prerequisite: VCA 160 and VCC 166 with a grade of 'C' or better. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture

VCA 152 (3) Digital Filmmaking II
Course ID: 005383
Digital Filmmaking II Provides training in computer based editing and pre-production planning. Includes applied aesthetics of video editing production of dramatic, informational or experimental work on video. Pre-requisite Or Co-requisite: VCA 160 and VCC 166 with a grade of 'C' or better. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Components: Lecture

Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (15 contact hours).

Components: Laboratory, Lecture

VCA 298 (2 - 6) Course ID: 000210

Practicum

Incorporates and applies skills and techniques previously learned in the classroom and commercial art laboratory. Provides practical experience in a variety of commercial art establishments in the community. Prerequisite: VCA 280, VCA 261 or VCA 271 with a grade of C or greater or Consent of Instructor. Lecture: 1 credit (15 contact hours) Lab/Practicum: 3 credits (150 contact hours/50:1 ratio).

Components: Laboratory, Lecture

VCC Visual Communications - Core

VCC 100 (3) Course ID: 004455

Introduction to Visual Communication

Introduces the concepts, vocabulary, and processes used in relation to visual communication. Includes various disciplines such as advertising and design, multimedia, and printing. Identifies career paths and specific job skills within the visual communication field. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

VCC 105 (3) Course ID: 004458

Fundamentals of Typography

Explores the use of type as a major element of design. Students become skilled in selecting appropriate type styles and fonts for a variety of media. Offers experience in using type as a creative tool to produce interesting, type-only designs. Introduces the elements and principles of design. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

VCC 110 (3) Course ID: 002111

Graphic Design Concepts

Explores in detail the elements and principles of design to develop excellent skills in producing creative ideas and effective designs for various media forms. Provides an opportunity to apply concepts in the process of design. Emphasis on the importance of project planning is discussed. Students must receive a letter grade of "C" or better. Pre-requisite Or Co-requisite: VCA102, VCC105, VCA106, and VCC125 or Permission of Instructor. Lecture/ Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 115 (3) Course ID: 005141

Strategic Concepts

Introduces advertising, promotion, creative and marketing concepts related to the visual communication field. Topics also include legal issues, media strategy, and consumer behavior. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

VCC 125 (3) Course ID: 006859

Introduction to Computer Graphics

Introduces students to computer applications that are specific to the visual communication industry. Develops primary skills using software applications for page layout, illustration and digital imaging. Students must complete with a letter grade of "C" or better. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 150 (3) Course ID: 004475

Computer Fundamentals for Visual Communication

Emphasizes skills and awareness of computer applications that are specific to the visual communication industry. Covers computer literature requirements and page-layout of various publications will be discussed. Students will learn to design and produce digital printed material and will be prepared to meet federal and industry standards. Students must complete with a letter grade of "C" or better. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 200 (3) Course ID: 0002124

Computer Illustration

Develops skills in computer illustration and drawing using industry-standard software. Introduces vector graphics and their uses in the visual communication industry. Creation of vector graphics from simple to increasingly complex designs will be the focus of this course. Students must receive a letter grade of "C" or better. Prerequisite: VCC125 or VCA 170 or Permission of Instructor. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 210 (3) Course ID: 0002125

Advanced Computer Illustration

Provides students with advanced knowledge and skills in computer illustration. Creation of vector graphics and complex designs will be the focus of this course. Students must receive a letter grade of "C" or better. Prerequisite: Permission of Instructor. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 212 (3) Course ID: 005589

Vinyl Graphics and Applications

Introduces concepts, vocabulary, and processes used in relation to the design and production of graphics for the sign industry. Provides knowledge in the operation of wide format printers and vinyl cutters to create special graphics for indoor and outdoor advertising. Covers the procedures used to prepare vinyl graphics and substrates for different applications. Students must receive a letter grade of "C" or better. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 214 (3) Course ID: 005731

Dye-Sublimation Process

Provides knowledge in the dye-sublimation process and special inks. Students gain skills to produce designs on various promotional materials and the operational heat transfer equipment, software packages and dye-sublimation printers. Students must receive a letter grade of "C" or better. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 216 (3) Course ID: 006860

Pad Printing

Introduces students to the technology of pad printing. Includes the set-up and operation of pad printing equipment, including registration, creating molds, artwork preparation, plate preparation, and using ink and substrates to produce quality promotional products to specification. Students must complete with a letter grade of "C" or better. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 218 (3) Course ID: 006861

Digital Printing

Provides basic knowledge of the steps and procedures used to prepare files for digital printing. Students will learn the basic operation of various digital printing classroom equipment including digital color copiers and wide format printers. Emphasis is placed on the set-up of equipment and page-layout of various publications will be discussed. Students will learn the design and production of digital printed materials from start to finish to customer specifications, including finishing and binding requirements. Students must complete with a letter grade of "C" or better. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 220 (3) Course ID: 004473

Instructor Consent Required Computer Page Design

Provides practical application in the operation and development of skills in page design and layout using industry-standard software. Students will understand and apply concepts and mechanics of page layout to produce various publications using graphic design concepts learned. Students must receive a letter grade of "C" or...
better. Prerequisite: VCC 125 or Permission of Instructor. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 230 (3) Course ID: 004462 Instructor Consent Required Advanced Computer Page Design Provides advanced skills in designing and producing publications for print media. Students will use a combination of Adobe InDesign, Photoshop, and Illustrator to produce a variety of complex and multi-page documents. This course strengthens drawing and vocabulary. Lecture: 3 credits (45 contact hours).

Components: Lecture

VCC 260 (3) Course ID: 001509 Instructor Consent Required Digital Prepress Provides basic knowledge of the steps and procedures used to troubleshoot, correct, and prepare digital files for output to customer's specifications. Students will use a combination of Adobe InDesign, Photoshop, and Illustrator to design a variety design projects, preflight, and prepare them for appropriate print production. Provides students with the basic skills to produce and utilize PDF documents. Critical thinking for problem solving, preparation, and production of graphic design work will be the focus of this course. Students must receive a letter grade of 'C' or better. Prerequisite: Permission of Instructor. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCC 266 (3) Course ID: 005142 Advanced Digital Imaging Develops advanced skills to digitally manipulate, enhance, and create composite photographs. Applies advanced principles, concepts, and techniques for graphic design and digital photography. Creation and manipulation of graphics for complex images and designs will be the focus of this course. Students must receive a letter grade of 'C' or better. Prerequisite: Permission of Instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

VCC 270 (3) Course ID: 005798 PDF Basics Provides students with the basic skills to produce and utilize PDF documents. Prerequisite: Consent of Instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

VCC 297 (3) Course ID: 004469 Instructor Consent Required Internship Provides supervised on-the-job work experience related to the students educational objectives. Students participating in Internships do not receive compensation for their work. Co-Op/Internship: 3 credits (180 contact hours). Prerequisite: Permission of Instructor. Components: Co-Op

VCC 298 (3) Course ID: 004463 Instructor Consent Required Practicum Provides supervised on-the-job work experience related to the student's educational objectives. Student participating in the Practicum do not receive compensation. Practicum/Internship: 3 credits (180 contact hours). Prerequisite: Permission of Instructor. Components: Practicum

VCM Visual Communications - Multimedia

VCM 100 (3) Course ID: 001757 Introduction to Multimedia Introduction to Multimedia explores multimedia concepts and vocabulary. Lecture: 3 credits (45 contact hours).

Components: Lecture

VCM 110 (3) Course ID: 004453 Fundamentals of Animation Theories and history of animation are introduced in this course. The student will create 2-D animation using traditional techniques. This course strengthens drawing skills, collaborative production and animation concepts. Lecture: 3 credits (45 contact hours).

Components: Lecture

VCM 115 (3) Course ID: 004452 2-D Animation Introduces basic computer animation using industry standard software. Uses software to create 2-D animations for various multi-media functions. Prerequisite: (VCM 110 or VCM 100) and VCA 170 with a grade of C or better or Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (75 contact hours).

Components: Lecture

VCM 140 (3) Course ID: 001762 Multimedia Audio and Video Presents techniques for multimedia audio and digital video acquisition, non-linear techniques, and use of video images on the World Wide Web. Pre-requisite: VCM 100 with a grade of 'C' or better or Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (75 contact hours).

Components: Laboratory, Lecture

VCM 200 (3) Course ID: 001766 Basic Interactive Multimedia Introduces basic web page development using web page editing software including an introduction to HTML, layout, simple rollovers, tables and cascading style sheets. Prerequisite: CPU 150 or VCC 150 or VCA 170 with a grade of 'C' or better or Consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

VCM 210 (3) Course ID: 004344 3-D Animation Introduces the principles of animation. Uses commercial 3-D animation packages and storyboards to produce 3-D models and animations. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (75 contact hours). Prerequisite: (VCM 115 with a grade of C or greater) or Consent of Instructor. Components: Lecture

VCM 215 (3) Course ID: 005143 Advanced Two-Dimensional Animation Advanced 2D animation using vector animation software. Use skills acquired in VCM 115 and gain additional knowledge to create advanced level multimedia animations. Prerequisite: VCM 115 or permission of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

VCM 220 (3) Course ID: 001767 Webpage Design Presents application of page design for the Internet focusing on principles of design, language, structure, and restriction of an Internet application. Prerequisite: VCM 100 or VCA 170 with a grade of C or better or Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (75 contact hours/37.5:1 ratio). Components: Laboratory, Lecture

VCM 230 (3) Course ID: 004345 Advanced Webpage Design Introduces aesthetic, navigational, accessibility, usability, and interactivity issues for web designers. Prerequisite: VCM 220 with a grade of C or better or Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (75 contact hours).

Components: Laboratory

VCM 240 (3) Course ID: 004456 Advanced Audio/Video Emphasizes planning and creation of audio/video projects through a non-linear editing environment and deploys audio/video content through various delivery systems. Prerequisite: VCM 140 with a grade of C or better or Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (75 contact hours/37.5:1 ratio). Components: Laboratory, Lecture

VCP Visual Communications - Printing

VCP 100 (3) Course ID: 005797 Intro Graphic Print Production Introduces the concepts, vocabulary, and processes used in relation graphic print production. Includes basic skills and the concepts needed across various graphic disciplines. Identifies career paths and specific job skills within the printing industry are identified. Lecture: 3 credits (45 contact hours).

Components: Lecture

VCP 140 (3) Course ID: 004531 Finishing and Binding Operations Emphasizes finishing and binding operations needed to complete a printed job including handling, figuring, cutting, and using and maintaining finishing and binding equipment. Prerequisite: VCC 100 with a grade of C or better or Consent of Instructor. Laboratory: 3 credits (45 contact hours).

Components: Laboratory

VCP 230 (6) Course ID: 001506 Pre-Press Introduces the proper method of operating an offset duplicator including adjustments needed to produce quality printed products. Lecture: 1 credit (15 contact hours); Laboratory: 5 credits (185 contact hours). Prerequisite: VCC 100 with a grade of C or greater or Consent of Instructor. Components: Laboratory, Lecture

VCP 250 (3) Course ID: 005795 Screen Printing Includes how to identify and perform the proper methods of the operations of a screen printing process, including registration, placement, screen preparations, artwork preparations, and using ink substrates to produce quality screen printed products to specification. Students must receive a letter grade of 'C' or better. Lecture/Lab: 3.0 credits (90 contact hours).

Components: Lecture

VCP 255 (3) Course ID: 001508 Instructor Consent Required Special Topics Lab This course provides the student with additional hands-on experience. Topic will be specified by instructor. Laboratory: 3 credits (45 contact hours). Course may be scheduled a maximum of three times, with a total of 9 credit hours/135 clock hours. Prerequisite: Permission of Instructor. Components: Laboratory

VCP 274 (6) Course ID: 004532 Press II Introduces the proper method of operating an offset press including special adjustments needed to produce four-color process reproduction. Laboratory: 6 credits (180 contact hours/30:1 ratio). Prerequisite: VCP 230 with a grade of C or greater or Consent of Instructor. Components: Laboratory

VCP 285 (3) Course ID: 004536 Instructor Consent Required Electronic Prepress This is a capstone course designed to address the multiple applications of a Digital Production Artist in Visual Communication. Prerequisite: Permission of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio). Components: Laboratory

VMI Volumetric Medical Imaging

VMI 200 (4) Course ID: 005199 Sectional Anatomy & Pathology I The anatomy of the human body will be examined through cross-sectional images from cadavers and CT/MR images. Emphasis will be placed on identifying anatomical landmarks and describing relative anatomical location with appropriate medical terminology. Topics will include: head, neck, spine, thorax, abdomen, pelvis, and upper and lower extremities. Some pathology will be included. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: BIO 137 and BIO 139.

Components: Laboratory, Lecture

VMI 201 (4) Course ID: 005200 Sectional Anatomy & Pathology II Continuation of Sectional Anatomy and Pathology I with an emphasis on pathology. Topics include oncology, orthopedics, angiography, and endoscopy. Case studies utilized to demonstrate anatomical location and identification of normal/pathologic tissue. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: VMI 200.

Components: Laboratory, Lecture
WLD 110 (2) Course ID: 004605
Cutting Processes
A working knowledge of various cutting processes used by the welding industry. Will include, but is not limited to, safety, theory of operation, setup and operating techniques, troubleshooting and making minor equipment repairs, terms and definitions, identification, evaluation, repair and prevention of discontinuities of cut surfaces. Includes oxy-fuel cutting, plasma arc cutting, exothermic cutting, air carbon arc cutting, shielded metal arc cutting, and mechanical cutting process. Lecture: 2 credits (30 contact hours) Corequisite: WLD 111 or Consent of Instructor.
Components: Lecture

WLD 111 (3) Course ID: 004577
Cutting Processes Lab
Designed to provide the student with practical experience to become proficient in the use of various metal cutting processes. Safety, setup, and operating techniques are employed. Students will troubleshoot and make minor repairs to equipment. Students will also learn to identify, repair, and prevent reoccurrence of cut surface discontinuities. Processes shall include, but not limited to: OFC, PAC, AAC, and mechanical methods. Various materials will be used where appropriate. Lab: 3 credits (90 contact hours/30:1 ratio) Corequisite: WLD 110 or Consent of Instructor.
Components: Laboratory

WLD 120 (2) Course ID: 004600
Shielded Metal Arc Welding
Students learn to identify, inspection, and maintenance of SMAW electrodes; principles of SMAW; the effects of variables on the SMAW process to weld plate and pipe; and metallurgy. Lecture: 2 credits (30 contact hours). Corequisite: WLD 121 or Consent of Instructor.
Components: Lecture

WLD 121 (3) Course ID: 004578
Shielded Metal Arc Welding Fillet Lab
Provides laboratory experiences in which the student acquires the manipulative skills to perform fillet welds in all positions. Lab: 3 credits (90 contact hours/30:1 ratio) Corequisite: WLD 120 or Consent of Instructor.
Components: Laboratory

WLD 123 (3) Course ID: 004599
Shielded Metal Arc Welding Groove with Backing Lab
Provides experiences in which students acquire the manipulative skills to do groove welds in all positions with backing. Lecture: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 120 and 121 or Consent of Instructor.
Components: Laboratory

WLD 130 (2) Course ID: 004579
Gas Tungsten Arc Welding
Identification, inspection, and maintenance of GTAW machines; identification, selection, and storage of GTAW electrodes; principles of GTAW; the effects of variables on the GTAW process; and metallurgy. This course also teaches the theory and application of Plasma Arc Cutting. Corequisite: WLD 131 or Consent of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture

WLD 131 (3) Course ID: 004580
Gas Tungsten Arc Welding Fillet Lab
Teaches the necessary manipulative skills needed to apply the Gas Tungsten Arc on various joint designs on plate with both ferrous and non-ferrous metals. Plasma Arc cutting included. Corequisite: WLD 130 or Consent of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory

WLD 133 (3) Course ID: 004581
Gas Tungsten Arc Welding Groove Lab
Teaches the method of operation and application of the gas tungsten arc welding process for welding groove welds in both ferrous and non-ferrous plate in all positions. Prerequisite: WLD 130 or Consent of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory

WLD 140 (2) Course ID: 004582
Gas Metal Arc Welding
Identification, inspection, and maintenance of GMAW machines; identification, selection, and storage of GMAW electrodes; principles of GMAW; and the effects of variables on the GMAW process. Theory and applications of related processes such as FCAW and SAW and metallurgy are also included. Lecture: 2 credits (30 contact hours).
Components: Lecture

WLD 141 (3) Course ID: 004583
Gas Metal Arc Welding Fillet Lab
Teaches the practical application and manipulative skills of Gas Metal Arc Welding and the proper safety situations needed in this process. Both ferrous and non-ferrous metals will be covered, as well as various joint designs on plate in all positions. Corequisite: WLD 140 or Consent of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory

WLD 143 (3) Course ID: 004584
Gas Metal Arc Welding Groove Lab
Teaches the method of operation and application of the gas metal arc welding process for welding groove welds in both ferrous and non-ferrous plate in all positions using both short circuiting and spray transfer where appropriate. Prerequisite: WLD 140 or Consent of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory

WLD 145 (1) Course ID: 004586
Gas Metal Arc Welding Aluminum Lab
Welding aluminum using the GMAW process. Fillets and groove welds are made in all positions in both plate and pipe. Short Circuiting and Spray transfers are used where appropriate. Prerequisite: WLD 140 or Consent of Instructor. Laboratory: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory

WLD 147 (1) Course ID: 004585
Flux Cored Arc Welding Lab
Acquaints the student with the method of operation and application of the flux cored welding system. Prerequisite: WLD 140 or Consent of Instructor. Laboratory: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory

WLD 151 (2) Course ID: 004603
Basic Welding A
Introduction to welding, cutting processes, and related equipment. Basic setup, operation, and related safety are applied. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory, Lecture

WLD 152 (5) Course ID: 004441
Basic Welding B
An introduction to common cutting and welding processes used in industry. Theory, setup, operation, and related safety are applied. Lecture: 2 credits (30 contact hours). Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory, Lecture

WLD 161 (1) Course ID: 004602
Submerged Arc Welding Lab
Designed to provide the student with a working knowledge of SAW set-up, maintenance, and consumable identification. Includes practice in basic SAW principles and techniques related to the field of study. Laboratory: 1 credit (30 contact hours/30:1 ratio). Prerequisite: WLD 140 or Consent of Instructor. Components: Laboratory

WLD 170 (2) Course ID: 004587
Blueprint Reading for Welding
Provides a study of occupationally specific prints for welders. Advanced study of multi-view drawings, assembly drawings, datum dimensions, numerical control drawings, sheet metal prints, castings and forgings, instrumentation and control charts and diagrams, working drawings, geometric dimensioning and tolerancing and use of reference materials and books are included. Occupational specifics including welding drawings, symbols, joint types,
grooves, pipe welding symbols, testing symbols and specification interpretations are stressed. Lecture: 2 credits (30 contact hours). Corequisite: WLD 171 or Consent of Instructor.
Components: Lecture

WLD 171 (3) Course ID: 004588
Blueprint Reading for Welding Lab
Provides students with practice fabricating from a blueprint. Students will read and fabricate from detail prints, control distortion during fabrication, and follow the proper sequence in welding a fabricated part. Students will use welding symbols and study weld sizes and strengths. Lab: 3 credits (90 contact hours/30:1 ratio). Corequisite: WLD 170 or Consent of Instructor.
Components: Laboratory

WLD 198 (1 - 6) Course ID: 004573
Instructor Consent Required Special Topics in Welding
Various Welding Technology topics, issues and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Lecture: Varies. Laboratory: Varies. Prerequisite: Consent of instructor.
Components: Lecture

WLD 220 (2) Course ID: 004589
Welding Certification
Provides the student with a working knowledge of certification encountered in welding. The student will start with developing a WPS, qualify the WPS, and qualify personnel. Documents used in welding certification are developed and used. Corequisite: WLD 221 or Consent of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture

WLD 221 (3) Course ID: 004590
Welding Certification Lab
Provides students an opportunity to test on all types of welding for certification standards. Laboratory: 3 credits (90 contact hours/30:1 ratio). Corequisite: WLD 220 or Consent of Instructor.
Components: Laboratory

WLD 225 (3) Course ID: 004591
Shielded Metal Arc Welding Open Groove Lab
Designed to build upon SMAW Plate Lab I & II. Covers the student the opportunity to advance skills in the practical aspects of vee-butt plate welding using SMAW. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 120 and 121 or Consent of Instructor.
Components: Laboratory

WLD 227 (3) Course ID: 004592
Shielded Metal Arc Welding Pipe Lab A
Teaches the required manipulative skills to arc weld pipe using mild steel electrodes in the 2G and 5G positions including proper pipe preparations, electrodes, safety precautions, and welding sequences. Fillet welds on pipe joints are also included in 2F, 2FR, 4F, and 5F positions. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 225 or Consent of Instructor.
Components: Laboratory

WLD 229 (3) Course ID: 004593
Shielded Metal Arc Welding Pipe Lab B
Teaches the required manipulative skills to arc weld pipe using mild steel electrodes in the 6G position including proper pipe preparations, electrodes, safety precautions, and welding sequences. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 225 or Consent of Instructor.
Components: Laboratory

WLD 235 (3) Course ID: 004594
Gas Tungsten Arc Welding Pipe Lab A
Teaches the method of operation and application of the gas tungsten arc welding system for welding of both ferrous and non-ferrous pipe in 2G and 5G positions. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 133 or Consent of Instructor.
Components: Laboratory

WLD 237 (3) Course ID: 004595
Gas Tungsten Arc Welding Pipe Lab B
Teaches the method of operation and application of the gas tungsten arc welding process for welding of both ferrous and non-ferrous pipe in 6G position. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 133 or Consent of Instructor.
Components: Laboratory

WLD 239 (1) Course ID: 005310
Orbital Tube Welding
Familiarizes students with the orbital weld system, basic setup, operation, and safety. Prerequisite: WLD 130 & WLD 131 or Permission of Instructor: Laboratory: 1 credit (30 contact hours).
Components: Laboratory

WLD 240 (2) Course ID: 004596
Materials Technology
Provides the student with a working knowledge of materials used in welding. This class includes materials identification and classification. Metallurgy is included with a detailed analysis of physical, mechanical, and chemical properties. Introduces the student to the application of metallurgy to welding including preheat, interpass temperature, and post-weld heat treatment and their effects on welding and welding's effect on them. Lecture: 2 credits (30 contact hours).
Components: Lecture

WLD 245 (3) Course ID: 004604
Gas Metal Arc Welding Pipe Lab A
Acquaints the student with the operation and application of the Gas Metal Arc System for welding in 2G and 5G positions. Lab: 3 credits (90 contact hours/30:1 ratio). Corequisite: WLD 143 or Consent of Instructor.
Components: Laboratory

WLD 247 (3) Course ID: 004597
Gas Metal Arc Welding Pipe Lab B
Acquaints the student with the operation and application of the Gas Metal Arc System for welding groove welds in pipe in 6G position. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 143 or Consent of Instructor.
Components: Laboratory

WLD 251 (1) Course ID: 004608
Welding Automation Lab
Provides the student a working knowledge and hands-on experience using automatic welding equipment such as robotic welding systems, bug-o systems, and automated GTA welding systems. Lab: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory

WLD 253 (1) Course ID: 004607
Pipe Fitting and Template Development Lab
Provides experiences in pipe template development and job knowledge and experience with the techniques and tools used to field layout, cut, and fit the various pipe joints that are used in pipe trades. Lab: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory

WLD 298 (1 - 6) Course ID: 004443
Instructor Consent Required Welding Practicum
Provides on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Laboratory: 1-6 credits (30-180 contact hours/30:1 ratio). Prerequisite: Consent of Instructor.
Components: Practicum

WLD 299 (1 - 6) Course ID: 004598
Instructor Consent Required Cooperative Education Program
Provides supervised on-the-job work experience related to the student's educational objectives. Prerequisite: Consent of Instructor.
Components: Co-Op

Introduction to Welding Technology
Provides an overview of the terminology, materials, processing equipment and related software utilized by panel processing manufacturers of residential and commercial case work. Emphasis will be placed on the design and fabrication of frameless cabinetry to the use of panel saws, edgebanders, CNC boring equipment and case clamp's. Lecture: 2 credits (60 contact hours).
Components: Lecture

WMT 240 (4) Course ID: 002185
Cabinet Making Technology
This course is an overview of the cabinet and store fixtures industries. Emphasis will be placed on the design and construction of face frame as well as frameless (32mm) systems. Each student will plan and build a vanity, kitchen cabinet or store fixture which utilizes contemporary casework techniques. Prerequisite: WMT 110 and WMT 120. Lecture: 4 credits (120 contact hours).
Components: Lecture

WMT 250 (4) Course ID: 002186
Furniture Technology
Furniture design principles, structural considerations, joinery, fasteners, veneering, and use of specialized machines for complex operations are the focus of this course. Each student will plan and build a piece of furniture which includes at least one drawer, a door and some veneering. Prerequisite: WMT 110 and WMT 120. Lecture: 4 credits (120 contact hours).
Components: Lecture

WMT 260 (4) Course ID: 002187
Millwork Technology
Design of moulding, doors, and door frames; windows; stairs; and mantels are the focus of this course. Emphasis will be placed on construction principles, joinery, and fasteners for millwork assemblies. Each student will build one or more millwork items. Prerequisite: WMT 110 and WMT 120. Lecture: 4 credits (120 contact hours).
Components: Lecture
WMT 270 (2) Moulder/Grinder Operation
Course ID: 002188
This course is an introduction to the setup, operation, and maintenance of moulding and grinding equipment. The student will use tools, measuring devices and visual inspection techniques to insure quality to customer specifications. Students will set up and operate a moulder or plane, shape and groove woodstock. Students will read work tickets and examine the pattern shape to determine moulder setup procedure and type of woodstock to be cut. Prerequisite: Permission of the Instructor. Lecture: 2 credits (60 contact hours).
Components: Lecture

WMT 280 (2) Instructor Consent Required Estimating
Course ID: 002189
Instructor Consent Required Estimating
This course is an introduction to estimating costs and materials for wood products. Special emphasis will be placed on projecting material and labor costs for custom wood products as well as mass produced items. Prerequisite: Permission of the Instructor. Lecture: 2 credits (60 contact hours).
Components: Lecture

WMT 290 (4) Instructor Consent Required Advanced Wood Processing
Course ID: 002190
Instructor Consent Required Advanced Wood Processing
This course is a capstone experience for advanced wood processing technicians involving the integration of computer aided design and world-class manufacturing of wood products. Prerequisite: Permission of the Instructor. Lecture: 4 credits (120 contact hours).
Components: Lecture

WPP 200 (3) Workplace Principles
Course ID: 002193
Workplace Principles
Workplace Principles examines the changing workforce and the skills needed to adapt to constantly changing demands and expectations. The course includes but is not limited to problem solving, teamwork, time management, and self-management skills. Job-seeking and job-retention skills are taught through the development of resumes and job search materials. Maximum benefit is received if this course is taken in the latter part of the student's course work. Lecture: 3 credits (45 contact hours).
Components: Lecture

ZOO 293 (3 - 6) Applied Experiences in Zoo Technology
Course ID: 005347
Applied Experiences in Zoo Technology
Provides experience working in a fully accredited zoological park and exposure to zookeeping with many facets of animal husbandry. Practicum: 3 - 6 credits (180-360 contact hours).
Components: Practicum
Determinations of Residency Status for Admission and Tuition Purposes

13 KAR 2:045.
RELATES TO: KRS Chapter 13B, 164.020, 164.030, 164A.330(6)
STATUTORY AUTHORITY: KRS 164.020(8)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 164.020(8) requires the Council on Postsecondary Education to determine and approve the minimum qualifications for admission to a state postsecondary education institution and authorizes the Council to set different tuition amounts for residents of Kentucky and for nonresidents. This administrative regulation establishes the procedure and guidelines for determining the residency status of a student who is seeking admission to, or who is enrolled at, a state-supported postsecondary education institution.

Section 1 Definitions

1. "Academic term" means a division of the school year during which a course of studies is offered and includes a semester, quarter, or single consolidated summer term as defined by the institution.

2. "Continuous enrollment" means enrollment in a state-supported postsecondary education institution at the same degree level for consecutive terms, excluding summer terms, since the beginning of the period for which continuous enrollment is claimed unless a sequence of continuous enrollment is broken due to extenuating circumstances beyond the student's control, including serious personal illness or injury, illness or death of a parent.

3. "Degree level" means enrollment in a course or program that could result in the award of a:
   a. Certificate, diploma, or other program award at an institution;
   b. Baccalaureate degree or lower, including enrollment in a course by a nondegree-seeking postbaccalaureate student;
   c. Graduation or graduate certification other than a first-professional degree in law, medicine, dentistry, or Pharm D.; or
   d. Professional degree in law, medicine, dentistry, or Pharm D.

4. "Dependent person" means a person who cannot demonstrate financial independence from parents or persons other than a spouse and who does not meet the criteria for independence established in Section 5 of this administrative regulation.

5. "Determination of residency status" means the decision of a postsecondary education institution that may include a formal hearing that results in the classification of a person as a Kentucky resident or as a nonresident for admission and tuition purposes.

6. "Domicile" means a person's true, fixed, and permanent home and the place where the person intends to remain indefinitely, and to which the person expects to return if absent without intending to establish a new domicile elsewhere.

7. "Full-time employment" means continuous employment for at least forty-eight (48) weeks at an average of at least thirty (30) hours per week.

8. "Independent person" means a person who demonstrates financial independence from parents or persons other than a spouse and who meets the criteria for independence established in Section 5 of this administrative regulation.

9. "Institution" means an entity defined by KRS 164.001(12) if the type of institution is not expressly stated and includes the Kentucky Virtual University, the Council on Postsecondary Education, and the Kentucky Higher Education Assistance Authority.

10. "Kentucky resident" means a person determined by an institution for tuition purposes to be domiciled in and a resident of Kentucky as determined by this administrative regulation.

11. "Nonresident" means a person who:
   a. Is domiciled outside Kentucky;
   b. Currently maintains legal residence outside Kentucky; or
   c. Is not a Kentucky resident as determined by this administrative regulation.

12. "Parent" means one (1) of the following:
   a. A person's father or mother;
   b. A court-appointed legal guardian if:
      1. The guardianship is recognized by an appropriate court within the United States;
      2. There was a relinquishment of the rights of the parents; and
      3. The guardianship was not established primarily to confer Kentucky residency on the person.

13. "Preponderance of the evidence" means the greater weight of evidence or evidence that is more credible and convincing to the mind.

14. "Residence" means the place of abode of a person and the place where the person is physically present most of the time for a noneducational purpose in accordance with Section 3 of this administrative regulation.

15. "Student financial aid" means all forms of payments to a student if one condition of receiving the payment is the enrollment of the student at an institution, and includes student employment by the institution or a graduate assistantship.

16. "Sustenance" means living expenses including room, board, maintenance, transportation, and educational expenses including tuition, fees, books, and supplies.

Section 2 Scope

1. State-supported postsecondary education institutions were established and are maintained by the Commonwealth of Kentucky primarily in the benefit of qualified residents of Kentucky. The substantial commitment of public resources to postsecondary education is predicated on the proposition that the state benefits significantly from the existence of an educated citizenry. As a matter of policy, access to postsecondary education shall be provided so far as feasible at a reasonable cost to a qualified individual who is domiciled in Kentucky and who is a resident of Kentucky.

2. The Council on Postsecondary Education may require a student who is neither domiciled in nor a resident of Kentucky to meet higher admission standards and to pay a higher level of tuition than resident students.

3. This administrative regulation shall apply to all student residency determination regardless of circumstances, including residency determinations made by the state-supported institutions for prospective and currently enrolled students; the Southern Regional Education Board for contract spaces; reciprocity agreements, if applicable; the Kentucky Virtual University; academic common market programs; the Kentucky Educational Excellence Scholarship Program; and other state student financial aid programs, as appropriate.

Section 3 Determination of Residency Status; General Rules

1. A determination of residency shall include:
   a. An initial determination of residency status by an institution during the admission process or upon enrollment in an institution for a specific academic term or for admission into a specific academic program;
   b. A reconsideration of a determination of residency status by an institution based upon a changed circumstance or the reconsideration of a determination of residency status by an institution after other administrative procedures have been completed.

2. An initial determination of residency status shall be based upon:
   a. The facts in existence when the credentials established by an institution for admission for a specific academic term have been received and during the period of review by the institution;
   b. Information derived from admissions materials;
   c. If applicable, other materials required by an institution and consistent with this administrative regulation; and
   d. Other information available to the institution from any source.

3. An individual seeking a determination of Kentucky residency status shall demonstrate that status by a preponderance of the evidence.

4. A determination of residency status shall be based upon verifiable circumstances or actions.

5. Evidence and information cited as the basis for Kentucky domicile and residency shall accompany the application for a determination of residency status.

6. A student classified as a nonresident shall retain that status until the student is officially reclassified by an institution.

7. A student may apply for a review of a determination of residency status once for each academic term.

8. If an institution has information that a student's residency status may be incorrect, the institution shall review and determine the student's correct residency status.

9. If the Council on Postsecondary Education has information that an institution's determination of residency status for a student may be incorrect, it may require the institution to review the circumstances and report the results of that review.

10. An institution shall impose a penalty or sanction against a student who gives...
incorrect or misleading information to an institutional official, including payment of nonresident tuition for each academic term for which resident tuition was assessed based on an improper determination of residency status. The penalty or sanction may also include:
(a) Student discipline by the institution through a policy written and disseminated to students; or
(b) Criminal prosecution.

Section 4 Presumptions Regarding Residency Status
(1) In making a determination of residency status, it shall be presumed that a person is a nonresident of Kentucky if:
  (a) A person is, or seeks to be, an undergraduate student and admissions records show the student to be a graduate of an out-of-state high school within five (5) years prior to a request for a determination of residency status;
  (b) A person’s admissions records indicate the student’s residence to be outside of Kentucky at the time of application for admission;
  (c) A person moves to Kentucky primarily for the purpose of enrollment in an institution;
  (d) A person moves to Kentucky and within twelve (12) months enrolled at an institution more than half time;
  (e) A person has a continuous absence of one (1) year from Kentucky;
  (f) A person attended an out-of-state higher education institution during the past academic year and paid in-state tuition at that institution.

(2) A presumption arising from subsection (1) of this section shall only be overcome by preponderance of evidence sufficient to demonstrate that a person is domiciled in and is a resident of Kentucky.

Section 5 Determination of Whether a Student is Dependent or Independent
(1) In a determination of residency status, an institution shall first determine whether a student is dependent or independent. This provision is predicated on the assumption that a dependent person lacks the financial ability to live independently of the person upon whom the student is dependent and therefore lacks the ability to form the requisite intent to establish domicile. A determination that a student is independent shall be one (1) step in the overall determination of whether a student is or is not a resident of Kentucky.

(2) In determining the dependent or independent status of a person, the following information shall be considered as well as other relevant information available at the time the determination is made:
(a) Whether the person has been claimed as a dependent on the federal or state tax returns of a parent or other person for the year preceding the date of application for a determination of residency status; or
(b) Whether the person has no longer claimed by a parent or other person as a dependent or as an exemption for federal and state tax purposes, and whether the person has financial earnings and resources independent of a person other than an independent spouse necessary to provide for the person’s own sustenance.

(3) An individual who enrolls at an institution immediately following graduation from high school and remains enrolled shall be presumed to be a dependent person unless the contrary is evident from the information submitted.

(4) Domicile may be inferred from the student’s permanent address, parent’s mailing address, or location of high school of graduation.

(5) Marriage to an independent person domiciled in and who is a resident of Kentucky shall be a factor considered by an institution in determining whether a student is dependent or independent.

(6) Financial assistance from or a loan made by a parent or family member other than an independent spouse, if used for sustenance of the student:
  (a) Shall not be considered in establishing a student as independent; and
  (b) Shall not be a factor in establishing that a student is dependent.

Section 6 Effect of a Determination of Dependent Status on a Determination of Residency Status
(1) The effect of a determination that a person is dependent shall be:
  (a) The domicile and residency of a dependent person shall be the same as the domicile and residency of the person upon whom the student is dependent.
  (b) The domicile and residency of a dependent person whose parents are divorced, separated, or otherwise living apart shall be Kentucky if either parent is domiciled in and is a resident of Kentucky; and
  (c) The domicile and residency of a dependent person whose parents are domiciled in Kentucky but subsequently move from the state:
    (a) The dependent person shall be a resident of Kentucky while in continuous enrollment at the degree level in which currently enrolled; and
    (b) The dependent person’s residency status shall be reassessed if continuous enrollment is broken or the current degree level is completed.

Section 7 Member of Armed Forces of the United States, Spouse and Dependents; Effect on a Determination of Residency Status
(1) A member, spouse, or dependent of a member whose domicile and residency was Kentucky at the time of induction into the Armed Forces of the United States, and who maintains Kentucky as home of record and permanent address, shall be entitled to Kentucky residency status:
  (a) During the member’s time of active service; or
  (b) If the member returns to this state within six (6) months of the date of the member’s discharge from active duty.

(2) If the member of the armed services on active duty for more than thirty (30) days and who has a permanent duty station in Kentucky shall be classified as a Kentucky resident and shall be entitled to in-state tuition as shall the spouse or a dependent child of the member.

(b) A member, spouse, or dependent of a member shall not lose Kentucky residency status if the member is transferred on military orders while the member, spouse, or dependent requesting the status is in continuous enrollment at the degree level in which currently enrolled.

(3)(a) Membership in the National Guard or civilian employment at a military base alone shall not qualify a person for Kentucky residency status under the provisions of subsections (1) and (2) of this section. If a member of the Kentucky National Guard is on active duty status for a period of not less than thirty (30) days, the member shall be considered a Kentucky resident, as shall the spouse of a dependent child of the member.

(4) A person’s residency status established pursuant to this section shall be reassessed if the qualifying condition is terminated.

Section 8 Status of Nonresident Aliens; Visas and Immigration
(1)(a) A person holding a permanent residency visa or classified as a political refugee shall establish domicile and residency in the same manner as another person.

(b) Time spent in Kentucky and progress made in fulfilling the conditions of domicile and residency prior to obtaining permanent residency status shall be considered in establishing Kentucky domicile and residency.

(2) A person holding a nonimmigrant visa with designation A, E, G, H-1, H-4 if accompanying a person with an H-1 visa, J-K-1, N, R shall establish domicile and residency the same as another person.

(3)(a) An independent person holding a nonimmigrant visa with designation B, C, D, F, H-2, H-3, H-4 if accompanying a person with an H-2 or H-3 visa, J, M, O, P, Q, S, T, TD, or TN shall not be classified as a Kentucky resident, because that person does not have the capacity to remain in Kentucky indefinitely and therefore cannot form the requisite intent necessary to establish domicile as defined in Section 1(6) of this administrative regulation.

(b) A dependent person holding a visa as described in paragraph (a) of this subsection, but who is a dependent of a parent holding a visa as described in subsection (2) of this section, shall be considered as holding the visa of the parent.

(c) A dependent person holding a visa described in subsection (2) of this section or paragraph (a) of this subsection, if a parent is a citizen of the United States and is a resident of and domiciled in Kentucky, shall be a resident of Kentucky for the purposes of this administrative regulation.

(4) A person shall be a Kentucky resident for the purpose of this administrative regulation if the person graduated from a Kentucky high school and:
  (a) Is an undocumented alien;
  (b) Holds a visa listed in subsections (2) or (3)(a) of this section; or
  (c) Is a dependent of a person who holds a visa listed in subsections (2) or (3)(a) of this section.

(5)(a) Except as provided in paragraph (b) of this subsection, a person who has petitioned the federal government to reclassify visa status shall continue to be ineligible until the petition has been decided by the federal government.

(b) A person who has petitioned the federal government to reclassify his or her visa status based on marriage to a Kentucky resident and who can demonstrate that the petition has been filed and acknowledged by the federal government shall be entitled to in-state tuition as shall the spouse or a dependent child of the member.

Section 9 Beneficiaries of a Kentucky Educational Savings Plan Trust
A beneficiary of a Kentucky Educational Savings Plan Trust shall be granted residency status if the beneficiary meets the requirements of KRS 164A.330(6).

Section 10 Criteria Used in a Determination of Residency Status
Section 12 Student Responsibilities

(1) A determination of Kentucky domicile and residency shall be based upon verifiable circumstances or actions.
   (a) A single fact shall not be paramount, and each situation shall be evaluated to identify the facts essential to the determination of domicile and residency.
   (b) A student's claim of residency shall be supported by the information and circumstances set forth in subsection (2) of this section and shall be individually weighted, appropriate to the facts and circumstances of each determination of residency.
   (c) A person shall not be determined to be a Kentucky resident by the performance of an act that is incidental to fulfilling an educational purpose or by an act performed as a matter of convenience.
   (d) Mere physical presence in Kentucky, including living with a relative or friend, shall not be sufficient evidence of domicile and residency.
   (e) A student or prospective student shall respond to all requests for information regarding domicile or residency requested by an institution.
   (f) The following facts, although not conclusive, shall have probative value in their entirety and shall be individually weighted, appropriate to the facts and circumstances of each determination of residency:
      (a) Acceptance of an offer of full-time employment or transfer to an employer in Kentucky or contiguous areas while maintaining residence and domicile in Kentucky.
      (b) Continuous physical presence in Kentucky while in a nonstudent status for the twelve (12) months immediately preceding the start of the academic term for which a classification of Kentucky residency is sought.
      (c) Filing a Kentucky resident income tax return for the calendar year preceding the date of application for a change in residency status.
      (2) Payment of Kentucky withholding taxes while employed during the calendar year for which a change in classification is sought.
      (d) Full-time employment of at least one (1) year while living in Kentucky.
      (e) Attendance as a full-time, nonresident student at an out-of-state institution based on a determination by the student that the person is a resident of Kentucky.
      (f) Abandonment of a former domicile or residence and establishing domicile and residency in Kentucky with application to or attendance at an institution following and incidental to the change in domicile and residency.
      (g) Obtaining licensing or certification for a professional and occupational purpose in Kentucky.
      (h) Payment of real property taxes in Kentucky.
      (i) Ownership of real property in Kentucky if the property was used by the student as a residence preceding the date of application for a determination of residency status.
      (j) Marriage of an independent student to a person who was domiciled in and a resident of Kentucky prior to the marriage.
      (k) The extent to which a student is dependent on student financial aid in order to provide basic sustenance.
   (3) Except as provided in subsection (4) of this section, the following facts shall have limited probative value in a determination that a person is domiciled in and is a resident of Kentucky:
      (a) Kentucky automobile registration.
      (b) Kentucky driver’s license.
      (c) Registration as a Kentucky voter.
      (d) Long-term lease of at least twelve (12) consecutive months of noncollege housing.
      (e) Continued presence in Kentucky during academic breaks.
   (4) The absence of a fact contained in subsection (3) of this section shall have significant probative value in determining that a student is not domiciled in or is not a resident of Kentucky.

Section 11 Effect of a Change in Circumstances on Residency Status

(1) If a person becomes independent or if the residency status of an applicant or parent of the applicant changes, an institution shall reassess residency either upon a request by the student or a review initiated by the institution.
   (2) Upon transfer to a Kentucky institution, a student's residency status shall be assessed by the receiving institution.
   (3) A reconsideration of a determination of residency status for a dependent person shall be subject to the provisions for continuous enrollment, if applicable.

Section 12 Student Responsibilities

(1) A student shall be determined under the proper residency classification, which includes the following actions:
   (a) Submitting a written request to the designated office or person at the institution;
   (b) Making a written request to the designated office or person at the institution to review the designated office or person at the institution immediately upon a change in residency.
   (2) If a student fails to notify an institutional official of a change in residency, an institutional official may investigate and evaluate a student's residency status.

Section 15 Cost of Formal Hearings

(1) An institution shall pay the cost of all legal representation in support of the student’s claim of residency.
(2) A student shall pay for the cost of a formal hearing.

Appendix
## Math Course Transitions

### Crosswalk - Mathematics

<table>
<thead>
<tr>
<th>New Courses</th>
<th>Old Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropped</td>
<td>MA 109 College Algebra</td>
</tr>
<tr>
<td>MAT 159 Analytical Geometry and Trigonometry</td>
<td>MA 110 Analytical Geometry and Trigonometry</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 111 Contemporary Mathematics</td>
</tr>
<tr>
<td>MAT 154 Trigonometry</td>
<td>MA 112 Trigonometry</td>
</tr>
<tr>
<td>MAT 174 Calculus I</td>
<td>MA 113 Calculus I</td>
</tr>
<tr>
<td>MAT 184 Calculus II</td>
<td>MA 114 Calculus II</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 123 Elementary Calculus</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 162 Finite Mathematics and its Applications</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 193 Supplementary Mathematics Workshop 1: (Topic)</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 194 Supplementary Mathematics Workshop 2: (Topic)</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 201 Mathematics for Elementary Teachers</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 202 Mathematical Problem Solving for Elementary Teachers</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 213 Calculus III</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 214 Calculus IV</td>
</tr>
<tr>
<td>Dropped</td>
<td>MA 241 Geometry for Middle School Teachers</td>
</tr>
<tr>
<td>Dropped</td>
<td>MAH 155 Applied Mathematics</td>
</tr>
<tr>
<td>Dropped</td>
<td>MAT 115 Mathematics for Middle &amp; Elementary Teachers I</td>
</tr>
<tr>
<td>Dropped</td>
<td>MAT 121 Mathematics for Business</td>
</tr>
<tr>
<td>Dropped</td>
<td>MAT 125 Technical Mathematics</td>
</tr>
<tr>
<td>Dropped</td>
<td>MAT 215 Mathematics for Middle &amp; Elementary Teachers II</td>
</tr>
<tr>
<td>Dropped</td>
<td>MATH 109 Technical Mathematics</td>
</tr>
<tr>
<td>Dropped</td>
<td>MATH 151 Mathematics for Elementary Education I</td>
</tr>
<tr>
<td>Dropped</td>
<td>MATH 152 Mathematics for Elementary Education II</td>
</tr>
<tr>
<td>Dropped</td>
<td>MATH 211 Mathematics for Elementary Teachers I</td>
</tr>
<tr>
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<td>MATH 212 Mathematics for Elementary Teachers II</td>
</tr>
<tr>
<td>Dropped</td>
<td>STA 200 Statistics: A Force in Human Judgment</td>
</tr>
<tr>
<td>Dropped</td>
<td>STA 291 Statistical Methods</td>
</tr>
<tr>
<td>MAT 100 College Algebra Workshop</td>
<td>MT 100 College Algebra Workshop</td>
</tr>
<tr>
<td>MAT 105 Business Mathematics</td>
<td>MT 105 Business Mathematics</td>
</tr>
<tr>
<td>MAT 110 Applied Mathematics</td>
<td>MT 110 Applied Mathematics</td>
</tr>
<tr>
<td>MAT 1101 Logic and Reasoning</td>
<td>MT 1101 Logic and Reasoning</td>
</tr>
<tr>
<td>MAT 1102 Statistics</td>
<td>MT 1102 Statistics</td>
</tr>
<tr>
<td>MAT 1103 Algebra and Graphing</td>
<td>MT 1103 Algebra and Graphing</td>
</tr>
<tr>
<td>MAT 1104 Consumer Math, Geometry and Measurement</td>
<td>MT 1104 Consumer Math, Geometry and Measurement</td>
</tr>
<tr>
<td>MAT 116 Technical Mathematics</td>
<td>MT 115 Technical Mathematics</td>
</tr>
<tr>
<td>MAT 126 Technical Algebra and Trigonometry</td>
<td>MT 125 Technical Algebra and Trigonometry</td>
</tr>
<tr>
<td>Dropped</td>
<td>MT 139 Instructor Consent Required AAS Mathematics: (Topic)</td>
</tr>
<tr>
<td>MAT 146 Contemporary College Mathematics</td>
<td>MT 145 Contemporary College Mathematics</td>
</tr>
<tr>
<td>MAT 150 College Algebra</td>
<td>MT 150 College Algebra and Functions</td>
</tr>
<tr>
<td>MAT 155 Trigonometry</td>
<td>MT 155 Trigonometry</td>
</tr>
<tr>
<td>MAT 160 Precalculus</td>
<td>MT 160 Precalculus</td>
</tr>
<tr>
<td>MAT 165 Finite Mathematics and its Applications</td>
<td>MT 165 Finite Mathematics and its Applications</td>
</tr>
<tr>
<td>MAT 170 Brief Calculus with Applications</td>
<td>MT 170 Brief Calculus with Applications</td>
</tr>
<tr>
<td>MAT 175 Calculus I</td>
<td>MT 175 Calculus I</td>
</tr>
<tr>
<td>MAT 185 Calculus II</td>
<td>MT 185 Calculus II</td>
</tr>
<tr>
<td>MAT 205 Mathematics for Elementary and Middle School Teachers I</td>
<td>MT 205 Mathematics for Elementary and Middle School Teachers I</td>
</tr>
<tr>
<td>MAT 206 Mathematics for Elementary and Middle School Teachers II</td>
<td>MT 206 Mathematics for Elementary and Middle School Teachers II</td>
</tr>
<tr>
<td>MAT 261 Introduction to Number Theory</td>
<td>MT 261 Introduction to Number Theory</td>
</tr>
<tr>
<td>MAT 275 Calculus III</td>
<td>MT 275 Calculus III</td>
</tr>
<tr>
<td>MAT 285 Differential Equations</td>
<td>MT 285 Differential Equations</td>
</tr>
<tr>
<td>STA 220 Statistics</td>
<td>ST 291 Statistical Methods</td>
</tr>
</tbody>
</table>
## Historical Mathematics Course Transitions

Below is a table clarifying the math course transition that took place Fall 2004. Courses with the MT prefix that are below the 100-level are transitional courses. MT courses between 100 and 139 are specifically designed for occupational/technical programs. Courses numbered 140 and above are designed as transfer courses.

<table>
<thead>
<tr>
<th>New Course</th>
<th>Credit</th>
<th>Prereq. Course</th>
<th>Replaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT 050 Dev. Math Workshop</td>
<td>1-2</td>
<td>None</td>
<td>MAH 065, MTH 199</td>
</tr>
<tr>
<td>MT 055 Pre-Algebra</td>
<td>3</td>
<td>None</td>
<td>MAH 060, MTH 100</td>
</tr>
<tr>
<td>MT 065 Basic Algebra w/ Measurement</td>
<td>3</td>
<td>MT 055</td>
<td>MAH 070, MTH 110,</td>
</tr>
<tr>
<td>MT 075 Pre-College Geometry</td>
<td>3</td>
<td>MT 055</td>
<td>MAH 075</td>
</tr>
<tr>
<td>MT 100 College Algebra Workshop</td>
<td>2</td>
<td>MAH 100</td>
<td></td>
</tr>
<tr>
<td>MT 105 Business Math</td>
<td>3</td>
<td>MT 065</td>
<td>MAH 121</td>
</tr>
<tr>
<td>MT 110 Applied Math</td>
<td>3</td>
<td>MT 065</td>
<td>MAH 151</td>
</tr>
<tr>
<td>MT 115 Technical Math</td>
<td>3</td>
<td>MT 065</td>
<td>MAH 125, MTH 120, MTH 130, MTH 150</td>
</tr>
<tr>
<td>MT 120 Intermediate Algebra w/ Applications</td>
<td>3</td>
<td>MT 065</td>
<td>MAH 083, MA 108, MTH 160</td>
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<tr>
<td>MT 122 Intermediate Algebra A Functional Approach</td>
<td>4</td>
<td>MT 065</td>
<td>MAH 080</td>
</tr>
<tr>
<td>MT 125 Technical Algebra &amp; Trigonometry</td>
<td>3</td>
<td>MT 065</td>
<td>MTH 170, MTH 175, MTH 101</td>
</tr>
<tr>
<td>MT 139 AAS Mathematics Application (Topic)</td>
<td>1-3</td>
<td>MT 120 or MT 122</td>
<td>MT 107</td>
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<tr>
<td>MT 145 Contemporary College Mathematics</td>
<td>3</td>
<td>MT 120 or MT 122</td>
<td>MT 109</td>
</tr>
<tr>
<td>MT 150 College Algebra</td>
<td>3</td>
<td>MT 120 or MT 122 or MT 125</td>
<td>MT 109</td>
</tr>
<tr>
<td>MT 155 Trigonometry</td>
<td>3</td>
<td>MT 120 or MT 122 or MT 125</td>
<td>MT 109</td>
</tr>
<tr>
<td>MT 190 Mathematics Workshop</td>
<td>1–2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mathematics Crosswalk of Courses for Purpose of Pre-requisites

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
<th>Replaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 110 - Analytical Geometry and Trigonometry</td>
<td>4</td>
<td>MT 160 - Pre-calculus</td>
</tr>
<tr>
<td>MA 162 - Finite Mathematics and Its Applications</td>
<td>3</td>
<td>MT 165 - Finite Mathematics and Its Applications</td>
</tr>
<tr>
<td>MA 123 - Elementary Calculus</td>
<td>3</td>
<td>MT 170 - Brief Calculus with Applications</td>
</tr>
<tr>
<td>MA 113 - Calculus I</td>
<td>4</td>
<td>MT 175 - Calculus I</td>
</tr>
<tr>
<td>MA 114 - Calculus II</td>
<td>4</td>
<td>MT 185 - Calculus II</td>
</tr>
<tr>
<td>MA 213 - Calculus III</td>
<td>4</td>
<td>MT 275 - Calculus III</td>
</tr>
<tr>
<td>MA 214 - Calculus IV</td>
<td>3</td>
<td>MT 285 - Differential Equations</td>
</tr>
</tbody>
</table>
# Biology Crosswalk

This table includes changes made to Biology courses effective Fall 2010.

<table>
<thead>
<tr>
<th>New Course #</th>
<th>Old Course #</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 026</td>
<td>BSL 025</td>
<td>Orientation to College Biology</td>
</tr>
<tr>
<td>BIO 112</td>
<td>BIO 103</td>
<td>Basic Ideas of Biology</td>
</tr>
<tr>
<td>BIO 113</td>
<td>BIO 111</td>
<td>Introduction to Biology Lab</td>
</tr>
<tr>
<td>BIO 114</td>
<td>BSL 102</td>
<td>Biology I</td>
</tr>
<tr>
<td>BIO 115</td>
<td>BSL 100</td>
<td>Biology Laboratory I</td>
</tr>
<tr>
<td>BIO 116</td>
<td>BSL 103</td>
<td>Biology II</td>
</tr>
<tr>
<td>BIO 117</td>
<td>BSL 101</td>
<td>Biology Laboratory II</td>
</tr>
<tr>
<td>BIO 118</td>
<td>--------------</td>
<td>Microbes and Society</td>
</tr>
<tr>
<td>BIO 220</td>
<td>BIO 204</td>
<td>The Genetic Perspective</td>
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<tr>
<td>Dropped</td>
<td>BSL 214</td>
<td>Medical Microbiology</td>
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<tr>
<td>Dropped</td>
<td>BSL 244</td>
<td>Principles of Environmental Science</td>
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<td>PGY 206</td>
<td>Elementary Physiology</td>
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## General Education Biology Courses

<table>
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<tbody>
<tr>
<td>BIO 120</td>
<td>BIO 102</td>
<td>Human Ecology</td>
</tr>
<tr>
<td>BIO 121</td>
<td>-</td>
<td>Introduction to Ecology Laboratory</td>
</tr>
<tr>
<td>BIO 122</td>
<td>BSL 116</td>
<td>Introduction to Conservation Ecology</td>
</tr>
<tr>
<td>BIO 124</td>
<td>BSL 120</td>
<td>Principles of Ecology</td>
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## Ecology Courses

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<td>BIO 130</td>
<td>BSL 109</td>
<td>Aspects of Human Biology</td>
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<tr>
<td>BIO 135</td>
<td>BSL 107</td>
<td>Basic Anatomy and Physiology w/ Lab</td>
</tr>
<tr>
<td>BIO 137</td>
<td>BSL 110</td>
<td>Human Anatomy and Physiology I</td>
</tr>
<tr>
<td>BIO 139</td>
<td>BSL 111</td>
<td>Human Anatomy and Physiology II</td>
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## Anatomy and Physiology Courses

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<td>BIO 140</td>
<td>BIO 106/BSL 140</td>
<td>Botany</td>
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<tr>
<td>BIO 141</td>
<td>BIO 106/BSL 140 and BIO 107</td>
<td>Botany with Laboratory</td>
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<tr>
<td>BIO 142</td>
<td>BIO 104/BSL 160</td>
<td>Zoology</td>
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<tr>
<td>BIO 143</td>
<td>BIO 104/BSL 160 and BIO 105</td>
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## Organismal Biology Courses

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<td>BIO 152</td>
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<td>Principles of Biology II</td>
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<td>Principles of Biology Laboratory II</td>
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## Biology Majors Courses (No Changes)

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<td>The Genetic Perspective</td>
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<td>BSL 214</td>
<td>Medical Microbiology</td>
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<td>Dropped</td>
<td>BSL 244</td>
<td>Principles of Environmental Science</td>
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<td>PGY 206</td>
<td>Elementary Physiology</td>
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<tr>
<td>BIO 224</td>
<td>BSL 215</td>
<td>Introduction to Molecular and Cell Biology</td>
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<tr>
<td>BIO 225</td>
<td>BSL 212</td>
<td>Medical Microbiology w/ Lab</td>
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<td>BIO 226</td>
<td>BIO 208</td>
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<tr>
<td>BIO 227</td>
<td>BIO 208/209</td>
<td>Principles of Microbiology with Laboratory</td>
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## Molecular and Microbiology Courses

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<td>BSL 299</td>
<td>Selected Topics in Biology: Topic</td>
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## Crosswalk for Chemistry Courses

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<tr>
<td>CHE 120</td>
<td>The Joy of Chemistry*</td>
<td>CHM 101</td>
<td>Chemistry: A Cultural Approach</td>
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<td>CHE 125</td>
<td>The Joy of Chemistry Laboratory*</td>
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<tr>
<td>CHE 130</td>
<td>Introductory General and Biological Chemistry*</td>
<td>CHM 100</td>
<td>Introductory General and Biological Chemistry</td>
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<td>CHE 140</td>
<td>Introductory General Chemistry*</td>
<td>CHE 104</td>
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<td>CHE 145</td>
<td>Introductory General Chemistry Laboratory*</td>
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<td>Introductory General Chemistry Laboratory</td>
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<tr>
<td>CHE 150</td>
<td>Introduction to Organic and Biological Chemistry*</td>
<td>CHE 106</td>
<td>Introduction to Inorganic, Organic, and Biochemistry</td>
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<tr>
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<td>Introduction to Organic and Biological Chemistry Laboratory*</td>
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<tr>
<td>CHE 160</td>
<td>Preparation for General College Chemistry</td>
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<td>CHE 170</td>
<td>General College Chemistry I*</td>
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<td>CHE 180</td>
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<td>CHE 183</td>
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<tr>
<td>CHE 185</td>
<td>General College Chemistry Laboratory II*</td>
<td>CHM 107</td>
<td>General College Chemistry Laboratory II</td>
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<tr>
<td>CHE 220</td>
<td>Analytical Chemistry*</td>
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<tr>
<td>CHE 270</td>
<td>Organic Chemistry I*</td>
<td>CHE 230</td>
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<td>CHE 275</td>
<td>Organic Chemistry Laboratory I*</td>
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<td>CHE 280</td>
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<td>Selected Topics in Chemistry: (Topic)</td>
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<td>Selected Topics in Chemistry Laboratory: (Topic)</td>
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*General Education Status
## Crosswalks

### Crosswalk - Art

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<th>New Courses</th>
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<td>ART 100</td>
<td>Introduction to Art</td>
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<td>ART 104</td>
<td>Introduction to African Art</td>
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<tr>
<td>ART 105</td>
<td>Ancient through Medieval Art History</td>
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<td>ART 106</td>
<td>Renaissance Through Modern Art History</td>
</tr>
<tr>
<td>ART 112</td>
<td>2-Dimensional Design</td>
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<td>ART 113</td>
<td>3-Dimensional Design</td>
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<tr>
<td>ART 201</td>
<td>Ancient Art History</td>
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<td>ART 202</td>
<td>Medieval Art</td>
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<td>ART 203</td>
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<td>ART 204</td>
<td>Modern Art</td>
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<td>ART 208</td>
<td>Introduction to Art Education</td>
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<td>ART 211</td>
<td>Life Drawing</td>
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<td>ART 221</td>
<td>Painting II</td>
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<td>ART 240</td>
<td>Ceramics</td>
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<td>ART 241</td>
<td>Ceramics II</td>
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### Crosswalk - Foreign Language

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<td>FRE 201</td>
<td>Intermediate French I</td>
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<tr>
<td>GER 101</td>
<td>Elementary German I</td>
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<tr>
<td>GER 102</td>
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<td>GER 201</td>
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<td>RAE 150</td>
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<td>SED 203</td>
<td>Sign Language III</td>
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<td>SED 204</td>
<td>Sign Language IV</td>
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<td>SPA 201</td>
<td>Intermediate Spanish I</td>
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<td>SPA 202</td>
<td>Intermediate Spanish II</td>
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### Crosswalk - General College Studies

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<td>GE 100 Introduction to College</td>
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<tr>
<td>GEN 102 Foundations of Learning</td>
<td>GE 101 Strategies for Academic Success</td>
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<tr>
<td>AGR 101 The Economics of Food and Agriculture</td>
<td>GEN 101 The Economics of Food and Agriculture</td>
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<td>GEN 103 Principles of Peer Mentoring</td>
<td>GE 103 Principles of Peer Mentoring</td>
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<td>GEN 104 Applied Principles of Peer Mentoring</td>
<td>GE 104 Applied Principles of Peer Mentoring</td>
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<tr>
<td>GEN 120 Service Learning</td>
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<tr>
<td>GEN 122 The Exemplary Tutor</td>
<td>GE 122 The Exemplary Tutor</td>
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<td>GEN 123 The Exemplary Reading Tutor</td>
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<tr>
<td>GEN 125 Applied Meta-Thinking</td>
<td>GE 130 Introduction to Information Resources</td>
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<td>GEN 130 Introduction to Information Resources</td>
<td>GEN 131 Basic Library Research and Resources</td>
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<td>GEN 131 Basic Library Research and Resources</td>
<td>GEN 140 Development of Leadership</td>
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<td>GEN 140 Development of Leadership</td>
<td>GEN 150 Basic Computer Skills</td>
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<td>GEN 150 Basic Computer Skills</td>
<td>GEN 175 Career and Life Skills Development</td>
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<td>GEN 225 Lifelong Learning Applications</td>
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<td>GEN 276 Employment and Professional Skills</td>
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### Crosswalk - Music

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<tr>
<td>Dropped</td>
<td>MUC 171 Brass Ensemble</td>
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<tr>
<td>Dropped</td>
<td>MUC 174 University Chorale</td>
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<tr>
<td>MUS 100 Introduction to Music</td>
<td>MUS 100 Introduction to Music</td>
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<tr>
<td>MUS 120 Music Technology I</td>
<td>MUS 120 Music Technology I</td>
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<tr>
<td>MUS 121 Music Technology II</td>
<td>MUS 121 Music Technology II</td>
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<tr>
<td>MUS 150 Class Instruction in Piano I</td>
<td>MUS 150 Class Instruction in Piano</td>
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<td>MUS 151 Class Instruction in Piano II</td>
<td>MUS 151 Class Instruction in Piano</td>
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<td>MUS 152 Class Instruction in Piano III</td>
<td>MUS 152 Class Instruction in Piano</td>
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<td>MUS 153 Class Instruction in Piano IV</td>
<td>MUS 153 Class Instruction in Piano</td>
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<tr>
<td>MUS 155 Voice Class for Non-Music Majors</td>
<td>MUC 155 Voice Class for Non-Music Majors</td>
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<tr>
<td>Dropped</td>
<td>MUS 170 Music Theory Aural</td>
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<td>MUS 171 Music Theory Written</td>
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<td>MUS 172 Music Theory Aural</td>
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<td>MUS 173 Music Theory Written</td>
</tr>
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<td>MUS 174 Theory for Non Music Majors</td>
<td>MUS 174 Theory for Non Music Majors</td>
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<tr>
<td>MUS 192 University Chorus</td>
<td>MUC 174 &amp; MUC 192 University Chorale and University Singers</td>
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<tr>
<td>MUS 206 American Music History</td>
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<td>MUS 220 Symphonic Music</td>
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<tr>
<td>MUS 222 History and Sociology of Rock Music</td>
<td>MUS 222 History and Sociology of Rock Music</td>
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<tr>
<td>MUS 260 Teaching Music for the Elementary Grades I</td>
<td>MUS 260 Teaching Music for the Elementary Grades I</td>
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<tr>
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### Crosswalk - Philosophy

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<td>Introduction to Philosophy: Knowledge and Reality</td>
</tr>
<tr>
<td>PHI 110</td>
<td>Medical Ethics</td>
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<td>PHI 130</td>
<td>Ethics</td>
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<td>PHI 150</td>
<td>Business Ethics</td>
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<td>PHI 260</td>
<td>History of Philosophy I: From Greek Beginnings to the Middle Ages</td>
</tr>
<tr>
<td>PHI 270</td>
<td>History of Philosophy II: From the Renaissance to the Present Era</td>
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### Crosswalk - Political Science

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<tr>
<td>POL 210</td>
<td>Introduction to European Politics: East and West</td>
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<tr>
<td>POL 212</td>
<td>Culture and Politics in Developing Nations</td>
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<td>POL 235</td>
<td>World Politics</td>
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<td>POL 255</td>
<td>State Government</td>
</tr>
<tr>
<td>POL 280</td>
<td>Issues in Public Policy</td>
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<td>POL 299</td>
<td>Special Topics in Political Science</td>
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**NOTE:** POL 271 removed from general education status.

### Crosswalk - Physics

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<td>Introductory Physics I</td>
</tr>
<tr>
<td>PHY 152</td>
<td>Introductory Physics II</td>
</tr>
<tr>
<td>PHY 160</td>
<td>Physics and Astronomy for Elementary Teachers</td>
</tr>
<tr>
<td>PHY 161</td>
<td>Introductory Physics I Laboratory</td>
</tr>
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<td>PHY 162</td>
<td>Introductory Physics II Laboratory</td>
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<td>PHY 171</td>
<td>Applied Physics</td>
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<td>PHY 172</td>
<td>Physics for Health Sciences</td>
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<td>PHY 201</td>
<td>College Physics I</td>
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<td>PHY 202</td>
<td>College Physics I Laboratory</td>
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<td>PHY 203</td>
<td>College Physics II</td>
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<td>PHY 204</td>
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<td>PHY 231</td>
<td>General University Physics I</td>
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<td>PHY 241</td>
<td>General University Physics I Laboratory</td>
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**Deactivated Courses:** PHY 211, PHY 212, PHY 213, PHY 231, PHY 232, PHY 241, PHY 242.
### Crosswalk - Psychology

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<td>PSY 110 General Psychology</td>
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<tr>
<td>PSY 180 Human Relations</td>
<td>PY 180 Human Relations</td>
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<td>PSY 185 Human Potential</td>
<td>PY 185 Human Potential</td>
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<tr>
<td>PSY 230 Psychosocial Aspects of Death and Dying</td>
<td>PY 230 Psychosocial Aspects of Death and Dying</td>
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<td>PSY 297 Psychology of Aging</td>
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### Crosswalk - Religion

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<td>RS 101 Introduction to Religion Studies</td>
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<tr>
<td>REL 102 Philosophy of Religion</td>
<td>RS 102 Philosophy of Religion</td>
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<td>REL 120 Introduction to the Old Testament</td>
<td>RS 120 Introduction to the Old Testament</td>
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<td>REL 121 Introduction to the New Testament</td>
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<td>REL 130* Introduction to Comparative Religion</td>
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*Cross-listed with ANT 130

### Crosswalk - Theatre

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### Crosswalk - Women's and Gender Studies

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## Crosswalks

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<td>CAD 292 Industrial Applications</td>
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## Crosswalk - Cosmetology

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<td>CRJ 218 Police Supervision</td>
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## Appendix

### Crosswalk – Dental Assisting/Dental Hygiene

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366
### Crosswalk - Energy Systems

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<td>ESP 212 Power Plant Operations II</td>
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### Crosswalk - Engineering & Electronics Technology (Previously MIT: Engineering Technology)

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**Crosswalk - Global Studies**

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**Crosswalk - Homeland Security/Emergency Management**

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**Crosswalk - Human Services**

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<td>HMS 265 Working with Disabilities in Human Services</td>
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**Crosswalk - Radiography**

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<td>REA 122  Construction and Blueprints</td>
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<td>REA 200  Real Estate Principles II</td>
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<td>REA 202  Real Estate Investments I</td>
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<td>REA 203  Commercial and Industrial Property</td>
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<td>REA 205  Farm Brokerage</td>
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<td>REA 212  Real Estate Investments II</td>
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<tr>
<td>REA 220  Real Estate Brokerage Management</td>
<td>RE 220  Real Estate Brokerage Management</td>
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<td>REA 221  Basic Income Approach to Property Validation</td>
<td>RE 221  Basic Income Approach to Property Validation</td>
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<td>REA 222  Uniform Standards of Professional Appraisal</td>
<td>RE 222  Uniform Standards of Professional Appraisal</td>
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<tr>
<td>REA 225  Real Estate Finance</td>
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<tr>
<td>REA 230  Real Estate Law</td>
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<tr>
<td>REA 299  Selected Topics in Real Estate</td>
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## Crosswalk - Computer and Information Technologies

(Previously listed under Computer Information Technology/ Information Technology/ Computer Information Systems Technology)

<table>
<thead>
<tr>
<th>New Courses</th>
<th>Courses that are equivalent to New Courses</th>
<th>Courses requiring program coordinator approval for substitution</th>
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<tbody>
<tr>
<td>CIT 103 Computer Fundamentals</td>
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<tr>
<td>CIT 105 Introduction to Computers</td>
<td>CIS 100/ CIT 105</td>
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<tr>
<td>CIT 111 Computer Hardware and Software</td>
<td>IT 105 &amp; IT 205/ CIT 111</td>
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<tr>
<td>CIT 120 Computational Thinking</td>
<td>CIS 120/ CIT 120</td>
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<tr>
<td>CIT 125 Introduction to GIS</td>
<td>IT 160</td>
<td>New - Comparable to IT 160</td>
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<tr>
<td>CIT 130 Productivity Software</td>
<td>CIS 130/ CIT 130</td>
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<tr>
<td>CIT 140 JavaScript I</td>
<td>NIS 152/ CIT 140</td>
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<tr>
<td>CIT 141 PHP I</td>
<td>CIS 155</td>
<td>New - Comparable to IT 141</td>
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<tr>
<td>CIT 142 C++ I</td>
<td>CIS 155</td>
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<tr>
<td>CIT 145 PERL I</td>
<td>NIS 150</td>
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<tr>
<td>CIT 147 Programming I: Language</td>
<td>IT 130</td>
<td>New - Comparable to IT 132</td>
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<tr>
<td>CIT 148 Visual Basic I</td>
<td>CIS 148/ CIT 148</td>
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<tr>
<td>CIT 149 Java I</td>
<td>CIS 149/ CIT 149</td>
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<tr>
<td>CIT 150 Internet Technologies</td>
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<tr>
<td>CIT 155 Web Page Development</td>
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<td>CIT 157 Web Site Design and Production</td>
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<tr>
<td>CIT 160 Introduction to Networking Concepts</td>
<td>NIS 160/ CIS 210</td>
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<tr>
<td>CIT 161 Network Fundamentals</td>
<td>IT 120/ CIT 160</td>
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<tr>
<td>CIT 162 Home and Small Office Networks</td>
<td>IT 121</td>
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<tr>
<td>CIT 163 Small-Medium Business or ISP</td>
<td>IT 123</td>
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<tr>
<td>CIT 164 Introduction to Routing and Switching</td>
<td>IT 223</td>
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<tr>
<td>CIT 165 Network Design and Support</td>
<td>IT 225</td>
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<tr>
<td>CIT 170 Database Design Fundamentals</td>
<td>IT 170/ CIT 170/ CIS 270</td>
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<tr>
<td>CIT 171 SQL I</td>
<td>IT 147/ CIS 147/ CIT 171</td>
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<tr>
<td>CIT 180 Security Fundamentals</td>
<td>IT 250/ CIT 180</td>
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<tr>
<td>CIT 182 Perimeter Defense</td>
<td>IT 250/ CIT 180</td>
<td>New - Comparable to IT 254</td>
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<tr>
<td>CIT 184 Attacks and Exploits</td>
<td>IT 122</td>
<td>New - Comparable to IT 252</td>
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<tr>
<td>CIT 210 Routing Protocols and Concepts</td>
<td>IT 122</td>
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<tr>
<td>CIT 211 LAN Switching and Wireless</td>
<td>IT 220/ CIT 282</td>
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<tr>
<td>CIT 212 Accessing the WAN</td>
<td>IT 222/ CIT 283</td>
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<tr>
<td>CIT 213 MS Client/ Server Config</td>
<td>CIT 213</td>
<td>New - Comparable to NIS 211 and NIS 213</td>
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<td>CIT 214 Infrastructure Admin</td>
<td>NIS 214</td>
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<td>Course Title</td>
<td>Prerequisites</td>
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<tr>
<td>CIT 217</td>
<td>UNIX/Linux Administration</td>
<td>CIT 217</td>
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<td>CIT 218</td>
<td>UNIX/Linux Net Infrastructure</td>
<td>CIT 218</td>
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<tr>
<td>CIT 219</td>
<td>Internet Protocols</td>
<td>CIT 269</td>
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<tr>
<td>CIT 221</td>
<td>Computer Graphics</td>
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<td>CIT 223</td>
<td>Computer Animation</td>
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<tr>
<td>CIT 225</td>
<td>GIS Software Tools</td>
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<td>CIT 229</td>
<td>Selected Topics in GIS</td>
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<tr>
<td>CIT 232</td>
<td>Help Desk Operations</td>
<td>IT 237</td>
</tr>
<tr>
<td>CIT 234</td>
<td>Advanced Productivity Software</td>
<td>CIS 230</td>
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<tr>
<td>CIT 236</td>
<td>Advanced Data Organization Software</td>
<td>CIS 230/CIT 234 &amp; 236</td>
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<tr>
<td>CIT 241</td>
<td>PHP II</td>
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<td>CIT 242</td>
<td>C++ II</td>
<td>CIS 252</td>
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<tr>
<td>CIT 246</td>
<td>2-D Game Development: Language</td>
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<tr>
<td>CIT 247</td>
<td>Programming II: Language</td>
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<tr>
<td>CIT 248</td>
<td>Visual Basic II</td>
<td>CIS 248/CIT 248</td>
</tr>
<tr>
<td>CIT 249</td>
<td>Java II</td>
<td>CIS 249/CIT 249</td>
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<tr>
<td>CIT 253</td>
<td>Data-Driven Web Pages: Topic</td>
<td>IT 235/CIT 253</td>
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<td>CIT 255</td>
<td>Web Server Administration</td>
<td>NIS/275/CIT 255</td>
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<td>CIT 257</td>
<td>Applied Internet Technologies</td>
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<tr>
<td>CIT 258</td>
<td>Internet Technologies Seminar</td>
<td>CIT 294</td>
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<tr>
<td>CIT 260</td>
<td>Network Installation and Troubleshooting</td>
<td>CIT 260/NIS 270</td>
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<tr>
<td>CIT 261</td>
<td>MS Active Directory Services</td>
<td>CIT 261/NIS 216</td>
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<tr>
<td>CIT 262</td>
<td>MS Network Infrastructure</td>
<td>CIT 262</td>
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<tr>
<td>CIT 264</td>
<td>Microsoft Server Administration</td>
<td>CIT 264</td>
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<tr>
<td>CIT 265</td>
<td>MA Application Servers</td>
<td>CIT 265</td>
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<tr>
<td>CIT 266</td>
<td>MS Enterprise Administration</td>
<td>CIT 266</td>
</tr>
<tr>
<td>CIT 271</td>
<td>SQL II</td>
<td>CIT 271</td>
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<tr>
<td>CIT 276</td>
<td>3-D Game Development: Language</td>
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<tr>
<td>CIT 277</td>
<td>Programming III: Language</td>
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<tr>
<td>CIT 278</td>
<td>Visual Basic III</td>
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<tr>
<td>CIT 284</td>
<td>Computer Forensics</td>
<td>IT 255</td>
</tr>
<tr>
<td>CIT 285</td>
<td>MS Windows OS Security</td>
<td>IT 258</td>
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<td>CIT 286</td>
<td>UNIX/Linux OS Security</td>
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<td>CIT 287</td>
<td>Cisco OS Security</td>
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<tr>
<td>CIT 288</td>
<td>Network Security</td>
<td>CIT 289</td>
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<tr>
<td>CIT 290</td>
<td>Internship</td>
<td>CIT 290/CIS 280</td>
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<tr>
<td>CIT 291</td>
<td>CIT Capstone</td>
<td>CIS 220/CIT 291/CIS 200/ CIS 280/ IT 291/ IT 295</td>
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<tr>
<td>CIT 295</td>
<td>Independent Problems in CIT: Topic</td>
<td>CIT 295</td>
</tr>
<tr>
<td>CIT 299</td>
<td>Special Topics in CIT: Topic</td>
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### Crosswalk - Computerized Manufacturing and Machining

(Previously listed under Machine Tool Technology)

<table>
<thead>
<tr>
<th>New Courses</th>
<th>Old Courses</th>
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<tbody>
<tr>
<td>CMM 118 Metrology/ Control Charts</td>
<td>MTT 118 Metrology/ Control Charts</td>
</tr>
<tr>
<td>CMM 120 Applied Machining I</td>
<td>MTT 120 Applied Machining I</td>
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<tr>
<td>CMM 122 Applied Machining II</td>
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<tr>
<td>CMM 124 Applied Machining</td>
<td>MTT 124 Applied Machining</td>
</tr>
<tr>
<td>CMM 132 CAD/ CAM/ CNC</td>
<td>MTT 132 CAD/ CAM/ CNC</td>
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<tr>
<td>CMM 138 Intro to Programming &amp; CNC Machines</td>
<td>MTT 138 Intro to Programming &amp; CNC Machines</td>
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<tr>
<td>CMM 150 Shop Theory</td>
<td>MTT 150 Shop Theory</td>
</tr>
<tr>
<td>CMM 151 Machinery's Handbook and Metallurgy</td>
<td>MTT 151 Machinery's Handbook and Metallurgy</td>
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<tr>
<td>CMM 152 Jigs, Fixtures and Gaging</td>
<td>MTT 152 Jigs, Fixtures and Gaging</td>
</tr>
<tr>
<td>CMM 153 Mold Theory</td>
<td>MTT 153 Mold Theory</td>
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<tr>
<td>CMM 154 Die Theory</td>
<td>MTT 154 Die Theory</td>
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<tr>
<td>CMM 155 Jigs, Fixtures and Gaging Lab</td>
<td>MTT 155 Jigs, Fixtures and Gaging Lab</td>
</tr>
<tr>
<td>CMM 160 Basic Bench and Machine Processes</td>
<td>MTT 160 Basic Bench and Machine Processes</td>
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<tr>
<td>CMM 168 Special Topics in Computerized Manufacturing &amp; Machining</td>
<td>MTT 168 Special Topics in Machine Tool Technology</td>
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<tr>
<td>CMM 169 Special Topics in Computerized Manufacturing &amp; Machining</td>
<td>MTT 169 Special Topics in Machine Tool Technology</td>
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<tr>
<td>CMM 210 Industrial Machining I</td>
<td>MTT 210 Industrial Machining I</td>
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<td>CMM 212 Industrial Machining II</td>
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<td>CMM 214 Industrial Machining</td>
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<tr>
<td>CMM 218 Advanced Machining Techniques for Manufacturing</td>
<td>MTT 218 Advanced Machining Techniques for Manufacturing</td>
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<tr>
<td>CMM 220 Advanced Industrial Machining I</td>
<td>MTT 220 Advanced Industrial Machining I</td>
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<td>CMM 220 Advanced Industrial Machining II</td>
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<td>CMM 224 Advanced Industrial Machining</td>
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<tr>
<td>CMM 230 Conversational Programming</td>
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<tr>
<td>CMM 234 CNC Machines &amp; Coding Practices</td>
<td>MTT 234 CNC Machines &amp; Coding Practices</td>
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<tr>
<td>CMM 240 Introduction to 3-D Programming</td>
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<tr>
<td>CMM 244 Advance Programming/ Setup Practices</td>
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<td>CMM 298 Practicum</td>
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<tr>
<td>CMM 299 Cooperative Education Program</td>
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### Crosswalk - Digital Game and Simulation Design

(Previously listed under Digital Game Design)

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<th>New Courses</th>
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<tbody>
<tr>
<td>DGD 132 Introduction to 3D Graphics</td>
<td>IT 131 Introduction to Digital 3-D Game Graphics</td>
</tr>
<tr>
<td>DGD 232 3D Character Development</td>
<td>IT 232 3-D Digital Game Character Development</td>
</tr>
<tr>
<td>DGD 234 3D Animation</td>
<td>IT 231 3-D Digital Game Animation</td>
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### Crosswalk - Engineering and Electronics Technology

<table>
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<tr>
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<tbody>
<tr>
<td>ELT 103</td>
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<tr>
<td>Introduction to Engineering</td>
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### Crosswalk - Industrial Safety

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<td>ISX 101</td>
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<tr>
<td>Introduction to Industrial Safety</td>
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### Crosswalk - Industrial Technology

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<tr>
<td>ITE 233</td>
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<tr>
<td>Statistical Process Control</td>
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<td>ITE 250</td>
<td>INDT 250</td>
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<tr>
<td>Team Dynamics and Problem Solving</td>
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### Crosswalk - Math

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<td>Mathematics Workshop</td>
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### Crosswalk - Medical Information Technology

<table>
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<tr>
<td>MIT 103</td>
<td>OST 103</td>
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<tr>
<td>Medical Office Terminology</td>
<td>Medical Office Terminology</td>
</tr>
<tr>
<td>MIT 104</td>
<td>OST 104</td>
</tr>
<tr>
<td>Medical Insurance</td>
<td>Introduction to Medical Insurance</td>
</tr>
<tr>
<td>MIT 106</td>
<td>OST 106</td>
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<tr>
<td>Introduction to Medical Transcription</td>
<td>Introduction to Medical Transcription</td>
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<tr>
<td>MIT 204</td>
<td>OST 204</td>
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<tr>
<td>Medical Coding</td>
<td>Medical Coding</td>
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<tr>
<td>MIT 205</td>
<td>OST 205</td>
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<tr>
<td>Advanced Medical Coding</td>
<td>Advanced Medical Coding</td>
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<td>MIT 206</td>
<td>OST 206</td>
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<tr>
<td>Medical Transcription</td>
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<tr>
<td>MIT 208</td>
<td>OST 208</td>
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<tr>
<td>Inpatient Coding</td>
<td>Introduction to Hospital Coding</td>
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<tr>
<td>MIT 212</td>
<td>OST 212</td>
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<tr>
<td>Medications</td>
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<td>MIT 217</td>
<td>OST 217</td>
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<td>Medical Office Procedures</td>
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<td>MIT 227</td>
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<td>Medical Office Software</td>
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<td>MIT 228</td>
<td>OST 228</td>
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<td>Electronic Medical Records</td>
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<td>MIT 230</td>
<td>OST 230</td>
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### Crosswalk - Psychology

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<td>PSY 298</td>
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<td>Essentials of Abnormal Psychology</td>
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### Crosswalk - Reading

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<td>CMS 185</td>
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### Crosswalk - Transitional Mathematics

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<tr>
<td>Intermediate Algebra</td>
<td>NEW COURSE</td>
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</table>
Fall 2012 Kentucky Statewide General Education Student Learning Outcomes

Kentucky’s Statewide General Education Student Learning Outcomes are mapped to the American Association of Colleges and Universities’ (AAC&U) Liberal Education for America’s Promise (LEAP) Essential Learning Outcomes—a guiding vision and national benchmarks for college learning and liberal education in the 21st Century. The following abbreviations are used:

- **WC & OC**—Written and Oral Communications
- **AH**—Arts and Humanities
- **QR**—Quantitative Reasoning
- **NS**—Natural Sciences
- **SB**—Social and Behavioral Sciences

Students should prepare for the twenty-first century by gaining:

Knowledge of human cultures and the physical and natural worlds
• Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

General Education Student Learning Outcomes:
• (WC & OC): Write clear and effective prose in several forms, using conventions appropriate to audience (including academic audiences), purpose, and genre.
• (AH): Utilize basic formal elements, techniques, concepts and vocabulary of specific disciplines within the Arts and Humanities.
• (AH): Demonstrate how social, cultural, and historical contexts influence creative expression in the arts and humanities.
• (AH): Evaluate the significance of human expression and experience in shaping larger social, cultural, and historical contexts.
• (AH): Evaluate enduring and contemporary issues of human experience.
• (QR): Illustrate and communicate mathematical and/or statistical information symbolically, visually and/or numerically.
• (QR): Apply an appropriate model to the problem to be solved.
• (NS): Demonstrate an understanding of the methods of science inquiry.
• (NS): Explain the basic concepts and principles in one or more of the sciences.
• (NS): Apply scientific principles to interpret and make predictions in one or more of the sciences.
• (NS): Explain how scientific principles relate to issues of personal and/or public importance.
• (SB): Demonstrate knowledge of at least one area of the social and behavioral sciences.
• (SB): Apply knowledge, theories, and research methods, including ethical conduct, to analyze problems pertinent to at least one area of the social and behavioral sciences.
• (SB): Understand and demonstrate how at least one area of the social and behavioral sciences conceptualizes diversity and the ways it shapes human experience.
• (SB): Integrate knowledge of at least one area of the social and behavioral sciences into issues of personal or public importance.
• (SB): Communicate effectively using the language and terminology germane to at least one area of the social and behavioral sciences.

Intellectual and practical skills, including
• inquiry and analysis,
• critical and creative thinking,
• written and oral communication,
• quantitative literacy,
• information literacy,
• teamwork and problem solving

General Education Student Learning Outcomes:
• (WC & OC): Listen and speak competently in a variety of communication contexts, which may include public, interpersonal, and/or small-group settings.
• (WC & OC): Write clear and effective prose in several forms, using conventions appropriate to audience (including academic audiences), purpose, and genre.
• (WC & OC): Find, analyze, evaluate, and cite pertinent primary and secondary sources, including academic databases, to prepare speeches and written texts.
• (WC & OC): Identify, analyze, and evaluate statements, assumptions, and conclusions representing diverse points of view, construct informed, sustained, and ethical arguments in response.
• (WC & OC): Plan, organize, revise, practice, edit, and proofread to improve the development and clarity of ideas.
• (AH): Utilize basic formal elements, techniques, concepts and vocabulary of specific disciplines within the Arts and Humanities.
• (AH): Distinguish between various kinds of evidence by identifying reliable sources and valid arguments.
• (AH): Demonstrate how social, cultural, and historical contexts influence creative expression in the arts and humanities.
• (AH): Evaluate the significance of human expression and experience in shaping larger social, cultural, and historical contexts.
• (QR): Interpret information presented in mathematical and/or statistical forms.
• (QR): Illustrate and communicate mathematical and/or statistical information symbolically, visually and/or numerically.
• (QR): Determine when computations are needed and to execute the appropriate computations
• (QR): Make inferences, evaluate assumptions, and assess limitations in estimation modeling and/or statistical analysis.
• (NS): Demonstrate an understanding of the methods of science inquiry.
• (NS): Explain the basic concepts and principles in one or more of the sciences.
• (NS): Apply scientific principles to interpret and make predictions in one or more of the sciences.
• (NS): Explain how scientific principles relate to issues of personal and/or public importance.
• (SB): Apply knowledge, theories, and research methods, including ethical conduct, to analyze problems pertinent to at least one area of the social and behavioral sciences.
• (SB): Understand and demonstrate how at least one area of the social and behavioral sciences conceptualizes diversity and the ways it shapes human experience.
• (SB): Integrate knowledge of at least one area of the social and behavioral sciences into issues of personal or public importance.

Personal and social responsibility, including
• civic knowledge and engagement (local and global),
• intercultural knowledge and competence,
• ethical reasoning and action,
• foundations and skills for lifelong learning

General Education Student Learning Outcomes:
• (WC & OC): Listen and speak competently in a variety of communication contexts, which may include public, interpersonal, and/or small-group settings.
• (WC & OC): Write clear and effective prose in several forms, using conventions appropriate to audience (including academic audiences), purpose, and genre.
• (WC & OC): Identify, analyze, and evaluate statements, assumptions, and conclusions representing diverse points of view, construct informed, sustained, and ethical arguments in response.
• (AH): Evaluate the significance of human expression and experience in shaping larger social, cultural, and historical contexts.
• (QR): Illustrate and communicate mathematical and/or statistical information symbolically, visually and/or numerically.
• (QR): Apply an appropriate model to the problem to be solved.
• (QR): Make inferences, evaluate assumptions, and assess limitations in estimation modeling and/or statistical analysis.
• (NS): Explain how scientific principles relate to issues of personal and/or public importance.
• (SB): Apply knowledge, theories, and research methods, including ethical conduct, to analyze problems pertinent to at least one area of the social and behavioral sciences.
• (SB): Understand and demonstrate how at least one area of the social and behavioral sciences conceptualizes diversity and the ways it shapes human experience.
• (SB): Integrate knowledge of at least one area of the social and behavioral sciences into issues of personal or public importance.

Integrative learning, including
• synthesis and advanced accomplishment across general and specialized skills

General Education Student Learning Outcomes:
• (WC & OC): Listen and speak competently in a variety of communication contexts, which may include public, interpersonal, and/or small-group settings.
• (WC & OC): Write clear and effective prose in several forms, using conventions appropriate to audience (including academic audiences), purpose, and genre.
• (WC & OC): Find, analyze, evaluate, and cite pertinent primary and secondary sources, including academic databases, to prepare speeches and written texts.
• (WC & OC): Identify, analyze, and evaluate statements, assumptions, and conclusions representing diverse points of view, construct informed, sustained, and ethical arguments in response.
• (WC & OC): Plan, organize, revise, practice, edit, and proofread to improve the development and clarity of ideas.
• (AH): Evaluate enduring and contemporary issues of human experience.
• (NS): Apply an appropriate model to the problem to be solved.
• (NS): Make inferences, evaluate assumptions, and assess limitations in estimation modeling and/or statistical analysis.
• (NS): Apply scientific principles to interpret and make predictions in one or more of the sciences.
• (NS): Explain how scientific principles relate to issues of personal and/or public importance.
• (SB): Demonstrate knowledge of at least one area of the social and behavioral sciences.
• (SB): Apply knowledge, theories, and research methods, including ethical conduct, to analyze problems pertinent to at least one area of the social and behavioral sciences.
• (SB): Understand and demonstrate how at least one area of the social and behavioral sciences conceptualizes diversity and the ways it shapes human experience.
• (SB): Integrate knowledge of at least one area of the social and behavioral sciences into issues of personal or public importance.
• Communicate effectively using the language and terminology germane to at least one area of the social and behavioral sciences.
A++ - 1101013389 ................................................................. 117
Academic Advising .......................................................... 58
Academic Bankruptcy (Readmission after Two or More Years) .................................................. 67
Academic Calendar .............................................................. 4
Academic Credentials Awarded ........................................ 68
Academic Curricula ............................................................. 79
Academic Policies and Rules .............................................. 65
Academic Probation, Academic Suspension, and Reinstatement ................................................. 66
Academic Services .............................................................. 58
Academic/Career Mobility Program in Nursing - 5138017049 .................................................... 176
Academic/Career Mobility Program in Nursing – Practical Nursing - 5139014009 ......................... 176
Accounting - 5202013119 .................................................... 97
Accounting- 5202014049 ........................................................ 95
Accounting Recordkeeping Specialist - 5202013429 ............................................................... 97
Accounting Track - 520201701 ................................................ 93
Acoutsical Carpenter - 4602013119 ........................................ 122
Administrative - 5204023039 .................................................. 105
Administrative Assistant - 5204024019 ....................................... 103
Administrative Track - 520402701 .............................................. 103
Admission ................................................................. 46
Admission and Registration Procedures ........................................ 46
Admission to Programs ..................................................... 75
Adult Agriculture .............................................................. 69
Advanced Biotechnician Certificate - 4101013030 ................................................................. 92
Advanced Business Administration - 5202013129 ............................................................... 97
Advanced Catering - 1205033079 .................................................. 126
Advanced Culinary Arts - 1205033069 ............................................... 126
Advanced Firefighter - 4302033029 .................................................. 145
Advanced Food and Beverage Management - 1205033069 .................................................... 126
Advanced Imaging in Radiography - 5109073029 ............................................................... 190
Advanced Imaging in Radiography - Magnetic Resonance Imaging Track - 5109073029 .................. 190
Advanced Integrated Technology - 1504997019 ............................................................... 79
Advanced Nursing Assistant - 5139023019 ................................................................. 175
Advanced Phlebotomy Technician - 5110043049 ............................................................... 109
Advanced Placement Program ........................................... 62
Advanced Practice Respiratory Therapist - 5109067049 .......................................................... 191
Advertising Design Track - 500406701 ................................................................. 196
African American Studies - 0501033019 ................................................................. 80
Agricultural Technician - 103013009 ................................................................. 81
Agricultural Technology -103014009 ................................................................. 81
Agriculture Diesel Technician Track - 470605701 ............................................................... 130
Agriculture Equipment Mechanic Helper - 4706053109 ........................................................ 132
Agriculture Equipment Technician - 4706054039 .............................................................. 131
Agriculture Technology - 103017019 ................................................................. 80
Air Conditioning Technology - 4702017019 ................................................................. 81
Airframe and Power Plant Maintenance Technician - 4706084049 ............................................ 90
Airframe Maintenance Technician - 4706083029 ............................................................. 89
Airframe Maintenance Technician - 4706083069 ............................................................. 90
Alternative Energy – 1504993099 ................................................................. 84
Alternative Energy Track - 1504997009 ................................................................. 84
American Council on Education .................................................. 63
Animation - 1003043029 ................................................................. 200
Animation Track - 100304403 ................................................................. 200
Animation Track - 100304701 ................................................................. 199
Appalachian Studies - 0501223069 ................................................................. 82
Appeal ................................................................. 57
Appeal Process ........................................................................ 53
Applications Track – 110101711 ................................................................. 114
Applied Engineering Technology – 1504997029 ............................................................... 83
Applied Process Technologies - 4103017029 ................................................................. 84
Applying for Admission ............................................................... 46
Apprentice Cosmetology Instructor - 1204013019 ............................................................... 123
Apprenticeship - 1500004059 ................................................................. 138
Apprenticeship Studies - 4799997010 ................................................................. 85
Apprenticeship Track – 150000701 ................................................................. 136
ARC Cutter - 4805083099 ................................................................. 203
ARC Welder - 4805083029 ................................................................. 204
Architectural Technology - 1513037019 ................................................................. 85
Archival Management - 5401053029 ................................................................. 151
Art History Track - 5007043039 ................................................................. 86
Articulation Agreements .............................................................. 63
Arts Administration - 5007043019 ................................................................. 86
Arts and Humanities .............................................................. 73
Ashland Community and Technical College ............................................................. 6, 59
Associate in Applied Science (A.A.S.) Curricula .......................................................... 79
Associate in Applied Science (A.S) ................................................................. 68
Associate in Applied Science: ................................................................. 76
Associate in Arts (AA) and Associate in Science (AS) ...................................................... 68
Associate in Arts ................................................................. 76, 78
Associate in Fine Arts (A.F.A.) Curricula ...................................................... 206
Associate in Fine Arts (AFA) ................................................................. 58
Associate in Science ................................................................. 76, 78
Audio/Video 1003043049 ................................................................. 200
Audio/Video Track - 100304405 ................................................................. 200
Audio/Video Track - 100304704 ................................................................. 199
Automated Manufacturing Track - 1504997003 ............................................................. 83
Automatic Transmission/Transaxle Technician - 4706043079 .................................................... 88
Automation Technician – 1500003229 ................................................................. 141
Automotive Air Conditioning Mechanic - 4706043019 ...................................................... 88
Automotive Electrician - 4706043039 ................................................................. 88
Automotive Painter - 4706033049 ................................................................. 109
Automotive Painter Helper - 4706033029 ................................................................. 110
Automotive Parts/Service Writer - 4706044029 ............................................................... 87
Automotive Parts/Service Writer Track - 470604702 ........................................................... 87
Automotive Technician - 4706044019 ................................................................. 87
Automotive Technician Track - 470604701 ................................................................. 86
Automotive Technology .............................................................. 86
Automotive Technology - 4706047019 ................................................................. 87
Aviation Electronics - 4706083089 ................................................................. 90
Aviation Maintenance Technology - 4706087019 ............................................................... 88
Aviation Maintenance Technology - 4706087029 ............................................................... 89
AWS National Skills Standards Level I - 4805083089 ............................................................... 204

B
Backhoe Operator - 4902023019 ................................................................. 150
Baking - 1205033019 ................................................................. 126
Basic Biotechnician Certificate - 4101013020 ................................................................. 91
Basic Business Administration - 5202013139 ............................................................... 97
Basic Business Presentation - 5204023119 ................................................................. 105
Basic Cardiac Ultrasound Technology - 5109103059 ............................................................... 130
Culinary Arts - 1205033049 ......................................................... 126
Culinary Arts - 1205034029 ......................................................... 125
Culinary Arts - 1205037029 ......................................................... 125
Culinary Arts Degree Track - 120503702 ...................................... 125
Culinary Arts Professional Development - 1205033099 ................. 126
Cultural Studies Courses ................................................................. 74
Customized Industry Training ......................................................... 70

Data Entry Operator - 5204023079 ................................................. 105
Dean's List .......................................................................................... 67
Degree ............................................................................................... 78
Dental Assisting - 5106024019 ......................................................... 178
Dental Assisting/Dental Hygiene Integrated Program ......................... 127
Dental Hygiene - 5106027019 ......................................................... 127
Dental Hygiene - 5106027040 ......................................................... 127
Dental Laboratory Technology - 5106033019 .................................. 129
Dental Laboratory Technology - 5106037019 .................................. 128
Design & Technology – 5004097019 .................. .......................... 197
Design Assistant – 5004093019 ....................................................... 198
Desktop Publishing - 5204023099 ..................................................... 105
desktop Publishing Specialist - 5204024029 .......................... 104
Desktop Publishing Track - 520402704 ............................................. 103
detailer - 1513013089 .................................................................. 111
diagnostic Medical Sonography - 5109107019 ............................. 129
diesel ENGINE mechanic - 4706053079 ........................................ 132
diesel Mechanics Assistant - 4706053159 ......................................... 132
diesel Steering & Suspension Mechanic - 4706053179 ....................... 133
diesel Technology - 4706057039 .................................................... 130
digital Design - 1003043059 .......................................................... 200
digital Design Track - 100304404 ..................................................... 200
digital Design Track - 100304703 ..................................................... 199
digital Filmmaking Track - 500406703 ............................................. 196
digital Game and Simulation Design - 1100303029 ......................... 133
digital Imaging Assistant - 1003013059 ............................................ 202
digital Media Design - 5004083019 ................................................. 196
digital Photography – 5004093029 ................................................ 199
digital Production Artist - 1003014019 ............................................ 201
digital Production Artist Track - 100301702 ..................................... 201
digital Production Assistant - 100301305 ........................................ 201
digital Telephony - 1500004109 ....................................................... 140
digital Telephony Technician – 1500003119 ................................... 141
Diploma ............................................................................................. 69, 77, 78
direct Support work - 4407013039 ................................................. 155
Domestic Air Conditioner and Furnace Installer - 4702013029 .......... 82
Drafting Assistant – 1513013079 ..................................................... 111
Drug-Free Policy .............................................................................. 55
Drywall er - 4602013039 ................................................................. 122
dual Credit ........................................................................................ 64
dual Enrollment/Consortium Agreements ........................................ 52

Early Childhood Administrator - 1907093059 .................................. 159
Eastern Kentucky University ................................................................ 61

Education - 1315017019 ................................................................. 77, 134
Electrical Construction - 4603023029 ............................................. 163
Electrical Engineering Technology – 1442013029 .......................... 158
Electrical Motor Control Level I - 4603023079 ................................ 163
Electrical Motor Control Level II - 4603023089 .............................. 162
Electrical Technology - 4603024049 ................................................. 162
Electrical Technology - 4603027039 ................................................. 162
Electrical/Electronics Systems Mechanic - 4706053059 .................... 133
Electrician Trainee Level I - 4603023039 ........................................ 163
Electrician Trainee Level II - 4603023059 ......................................... 163
Electricians Track - 150901703 ......................................................... 170
Electrocardiograph Technician - 5108013079 ................................. 170
Electrocardiographic and Cardiac Monitoring Technician - 510903049 ... 192
Electro-hydraulic Technician - 4703033169 ....................................... 166
Electromechanical Systems Track - 150499704 ................................ 83
Electronic Health Records Specialist – 5107163069 ......................... 102
Electronic Medical Records Track - 510716707 ................................ 101
Electronics – 1500004019 ............................................................... 137
Electronics Engineering Track - 150499706 ....................................... 83
Electronics Technician – 1500003069 ................................................ 140
Electronics Tester – 1500003089 ....................................................... 140
Electronics Track – 150000707 .......................................................... 136
Elizabethtown Community and Technical College ......................... 17, 59
Emergency Medical Technician - 5109042010 ............................... 145
Emergency Medical Technician Certificate .................................... 70
Energy Efficiency and Analysis – 1505033079 ............................... 136
Energy Efficiency Electrical Controls Technician – 1505033049 .......... 135
Energy Systems - 1505037019 .......................................................... 134
Energy Technologies - 1505037029 .................................................. 135
Energy Utility Technician – 1505033029 .......................................... 136
Engine Repairer - 4706043089 .......................................................... 88
Engineering and Electronics Technology - 1500007019 .................... 136
Engineering Design Technician – 1500004069 ................................ 138
Engineering Operations Track - 150901701 ....................................... 171
Engineering Related – PLTW – 1515993019 .................................. 188
English Assessment and Course Placement .................................... 49
Entrepreneurship – 5202013379 ....................................................... 97
Environmental Control System Service – 4702013039 .................... 82
Environmental Science Technology - 1505077019 .......................... 142
Environmental System Repair Helper - 4702013049 ......................... 82
Environmental Technology ............................................................... 142
Equine Management – 5202013399 ................................................. 107
Equine Management Track – 520201710 .......................................... 107
Equine Studies - 0105074019 ............................................................ 144
Equine Studies - 0105077019 ............................................................ 143
Esthetician – 1204093019 ................................................................. 123
Exercise Rider - 0105073019 ............................................................ 144
Exploratory Machining - 480503309 .................................................. 161
Exploratory Machining I - 480503319 ................................................. 119

Federal Student Loans ..................................................................... 52
FERPA ............................................................................................. 56
Filmmaking – From Script to Screen - 5006023019 ......................... 207
Final Exams ..................................................................................... 67
Finance - 5202013329 ................................................................. 207
Finance Track - 520201714 ............................................................... 94
Financial Aid .................................................................................. 52
Financial and Customer Services ..................................................... 144
Financial and Customer Services Certificate – 5208033019 ............. 144
Financial Assistant - 5204024049 ..................................................... 104
<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course Code</th>
<th>Credits</th>
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<tr>
<td>Financial Assistant Clerk</td>
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<td>Financial Assistant Track</td>
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<td>Financial Delinquency</td>
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<td>Financial Perspectives</td>
<td>5202013159</td>
<td>97</td>
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<td>Financial Record Keeper</td>
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<td>Finish Carpenter</td>
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<td>Finish Plumber</td>
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<td>Fire Chief</td>
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<td>Fire Officer</td>
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<td>Fire Rescue Training for Business, Industry and Municipal Government</td>
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<td>Fire Science Track</td>
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<td>Fire/Rescue Technology</td>
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<td>First Year Plumber Mechanic</td>
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<td>Fluid Power Mechanic</td>
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<td>Fluid Power Mechanic</td>
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<td>Food and Beverage Management</td>
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<td>Food and Beverage Management Degree Track</td>
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<td>Food and Beverage Management Degree Track</td>
<td>1205034039</td>
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<tr>
<td>Foreign Languages</td>
<td></td>
<td>73, 74</td>
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<td>Foundation Skills</td>
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<tr>
<td>Front End Mechanic</td>
<td>4706043099</td>
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<td>Front-End Loader Operator</td>
<td>4902023039</td>
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<td>Fully General Education Certified</td>
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<tr>
<td>Fundamentals of Culinary Arts</td>
<td>1205033029</td>
<td>126</td>
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<td>Fundamentals of Mechatronics</td>
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<td>Funeral Service</td>
<td>-1203017019</td>
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<tr>
<td>Furniture Baker</td>
<td>4807033029</td>
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<td>Furniture Making Fundamentals</td>
<td>5002013029</td>
<td>187</td>
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<tr>
<td>Furniture Studio</td>
<td>5002013059</td>
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</tr>
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G

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<thead>
<tr>
<th>Course Name</th>
<th>Course Code</th>
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<tbody>
<tr>
<td>Gas Metal Arc Welding</td>
<td>4805083149</td>
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<tr>
<td>Gas Service Technician</td>
<td>1509033040</td>
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</tr>
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<td>Gas Tungsten Arc Welding</td>
<td>4805083159</td>
<td>204</td>
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<td>Gas Welder</td>
<td>4805083039</td>
<td>203</td>
</tr>
<tr>
<td>Gateway Community and Technical College</td>
<td></td>
<td>19, 59</td>
</tr>
<tr>
<td>General</td>
<td>5109103039</td>
<td>130</td>
</tr>
<tr>
<td>General Business</td>
<td>5202013169</td>
<td>98</td>
</tr>
<tr>
<td>General Education Certifications</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>General Education Requirements</td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>General Medical Equipment Service Provider</td>
<td>1500003169</td>
<td>141</td>
</tr>
<tr>
<td>General Occupational/Technical Studies</td>
<td>3099997017</td>
<td>146</td>
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<td>General Occupational/Technical Studies</td>
<td></td>
<td>76, 146</td>
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<tr>
<td>General Track</td>
<td>510910703</td>
<td>129</td>
</tr>
<tr>
<td>General Vascular Track</td>
<td>510910701</td>
<td>129</td>
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<tr>
<td>Geographic Information Systems Technology</td>
<td></td>
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<td>Geographic Information Systems Technology</td>
<td>4507023019</td>
<td>147</td>
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<td>Global Studies</td>
<td>3020013010</td>
<td>147</td>
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<td>Global Studies</td>
<td>3020017019</td>
<td>147</td>
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<tr>
<td>Grading System</td>
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<td>65</td>
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<tr>
<td>Graduation Requirements</td>
<td></td>
<td>67</td>
</tr>
<tr>
<td>Graduation With Honors</td>
<td></td>
<td>67</td>
</tr>
<tr>
<td>Graphic Design</td>
<td>5004094019</td>
<td>197</td>
</tr>
<tr>
<td>Graphic Design</td>
<td>5204023239</td>
<td>157</td>
</tr>
<tr>
<td>Graphic Design Track</td>
<td>500409701</td>
<td>197</td>
</tr>
<tr>
<td>Graphic Design Track</td>
<td>520402707</td>
<td>156</td>
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<tr>
<td>Greenhouse Operations</td>
<td>0106013029</td>
<td>153</td>
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<td>Greenhouse Production</td>
<td>10613019</td>
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</tr>
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H

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Hazard Community and Technical College</td>
<td></td>
<td>21, 59</td>
</tr>
<tr>
<td>Hazardous Materials Technician</td>
<td>1505073019</td>
<td>142</td>
</tr>
<tr>
<td>Health and Wellness Technology</td>
<td></td>
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<td>Health and Wellness Technology</td>
<td>5109997019</td>
<td>148</td>
</tr>
<tr>
<td>Health Education</td>
<td></td>
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<tr>
<td>Health Information Technology</td>
<td>5107077019</td>
<td>149</td>
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<tr>
<td>Health Information Technology (Offered by Hazard Community and Technical College)</td>
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<tr>
<td>Health Information Technology (Practicums are arranged onsite in student vicinity)</td>
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<td>Health Technology</td>
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<td>Health Physics</td>
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<td>Health Science Technology</td>
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<td>Heating, Ventilation, and Air Conditioning Mechanic</td>
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<td>Heavy Duty Brake Mechanic</td>
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<td>133</td>
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<td>Heavy Duty Drive Train Mechanic</td>
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<td>Heavy Equipment Operation</td>
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<td>150</td>
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<tr>
<td>Henderson Community College</td>
<td></td>
<td>23, 60</td>
</tr>
<tr>
<td>Heritage</td>
<td></td>
<td>73, 74</td>
</tr>
<tr>
<td>High School Students</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>Historic Information Management</td>
<td></td>
<td>77, 151</td>
</tr>
<tr>
<td>Historic Preservation Technology</td>
<td>3012013019</td>
<td>151</td>
</tr>
<tr>
<td>History and Functions of KCTCS</td>
<td></td>
<td>151</td>
</tr>
<tr>
<td>Homeland Security/Emergency Management</td>
<td>4399997019</td>
<td>152</td>
</tr>
<tr>
<td>Homeland Security/Emergency Management Specialist</td>
<td>4399993019</td>
<td>152</td>
</tr>
<tr>
<td>Homeland Security/Emergency Management</td>
<td></td>
<td>152</td>
</tr>
<tr>
<td>Hopkinsville Community College</td>
<td></td>
<td>25, 60</td>
</tr>
<tr>
<td>Horsemanship Track</td>
<td>010507402</td>
<td>144</td>
</tr>
<tr>
<td>Horsemanship Track</td>
<td>010507702</td>
<td>144</td>
</tr>
<tr>
<td>Horticulture</td>
<td>0106017019</td>
<td>152</td>
</tr>
<tr>
<td>Horticulture Sales</td>
<td>0106013119</td>
<td>153</td>
</tr>
<tr>
<td>Hospital Admissions Specialist</td>
<td>510163029</td>
<td>102</td>
</tr>
<tr>
<td>Hospitality Management</td>
<td>5202013179</td>
<td>98</td>
</tr>
<tr>
<td>Hospitality Management</td>
<td>520201703</td>
<td>94</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td></td>
<td>78</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>5202013359</td>
<td>98</td>
</tr>
<tr>
<td>Human Resource Management Track</td>
<td>520201715</td>
<td>94</td>
</tr>
<tr>
<td>Human Services</td>
<td>4407017000</td>
<td>154</td>
</tr>
<tr>
<td>Humanities</td>
<td></td>
<td>73, 74</td>
</tr>
<tr>
<td>Hydraulic Excavator Operator</td>
<td>4902023059</td>
<td>150</td>
</tr>
</tbody>
</table>

I

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Industrial Chemical Technology</td>
<td>4103017019</td>
<td>155</td>
</tr>
<tr>
<td>Industrial Electrician Track</td>
<td>460302401</td>
<td>163</td>
</tr>
<tr>
<td>Industrial Electrician Track</td>
<td>460302701</td>
<td>162</td>
</tr>
<tr>
<td>Industrial Electronics</td>
<td>1500004079</td>
<td>138</td>
</tr>
<tr>
<td>Industrial Electronics Technician I</td>
<td>1500003129</td>
<td>141</td>
</tr>
</tbody>
</table>
KCTCS Online Learn on Demand Programs .................................................. 77
KCTCS Online ......................................................................................... 76
KCTCS Transfer Contacts ......................................................................... 58
Kentucky Child Care Provider - 1907093049 .............................................. 159
Kentucky Community and Technical College Guarantee ....................... 67
Kentucky Medication Aide - 5139012030 .................................................. 178
Kentucky Medication Aide - 5139012030 .................................................. 179
Kentucky State University ........................................................................ 61
Klin Building for Professional Pottery - 5007113029 ............................... 185
KY Adult Education Services .................................................................. 55

L

Landscape Installation - 0106013049.......................................................... 153
Landscape Planning - 0106013059 .............................................................. 154
Landscape Technology - 0106014009 ......................................................... 153
Last Day to Enter an Organized Class ......................................................... 51
Law Enforcement – 4301033049 ................................................................. 124
Law Enforcement Track – 430103702 ......................................................... 124
Lawn Maintenance - 0106013069 ............................................................... 154
Layout Artist - 5004063029 .......................................................................... 197
Leadership - 5202013199 ........................................................................... 98
Leakage and Corrosion Control Technician - 1509033020 ....................... 173
Lean Manufacturing Facilitator – 1507023119 ......................................... 188
Learn on Demand College Readiness Program ........................................ 78
Learning Laboratories .................................................................................. 54
Legal Administrative Track - 520402705 ...................................................... 103
Legal Office Assistant - 5204024059 ........................................................... 104
Legal Receptionist - 5204023149 ................................................................. 105
Libraries ........................................................................................................ 54
Library Information Technology - 5204023159 .......................................... 157
Library Information Technology Track - 520402709 ................................ 156
Lineman - 4103013049 ................................................................................. 85
Lineman Technology Track - 410301703 ...................................................... 85
Locomotive Electrical Technician - 4902993029 ....................................... 160
Locomotive Technology ............................................................................. 160
Logistics and Operation Management ....................................................... 77, 160
Logistics and Operations Management – 5202037019 ......................... 160
Logistics Management – 5202033019 ......................................................... 160
Lower Division University Courses that Fulfill General Education Requirements ........................................ 75

M

Machine Tool Operator I - 4805033109 ....................................................... 119
Machine Tool Operator II - 4805033119 ..................................................... 119
Machinist - 4805034079 ........................................................................... 118
Madisonville Community College ............................................................... 31, 60
Maintenance Plumber - 4605033049 ......................................................... 184
Maintenance Technician – 15000003059 .................................................. 140
Management - 5202013209 ..................................................................... 98
Management Track - 520201708 ............................................................... 94
Management Track - 520201711 ................................................................. 106
Manual Transmission/Drive Train Technician - 4706043059 ...................... 88
Manufacturing Engineering Technology - 1506137029 ......................... 161
Manufacturing Engineering Technology .................................................... 160
Manufacturing Industrial Technology ......................................................... 162
Marine Engineering Track – 490399702 ..................................................... 166
Marine Industry - 4903993029 ................................................................. 167
Marine Logistics Operations Track – 490399703 ..................................... 167
Marine Technology – 4903997019 ................................................................. 166
Marine Technology Business – 4903993019 .................................................. 167
Marine Technology ...................................................................................... 77, 166
Marketing and Retailing Track - 520201712 ................................................... 106
Masonry ....................................................................................................... 167
Massage Therapy - 5109993019 ................................................................. 148
Massage Therapy Track - 510999701 ........................................................... 148
Mathematics Assessment and Course Placement ......................................... 48
Mathematics ............................................................................................. 78
Maysville Community and Technical College ............................................... 33, 60
Measurement and Regulation Technician - 150903030 .................................. 173
Mechanical – 1500004069 ......................................................................... 139
Mechanical Engineering Technology – 1442013019 ................................... 158
Mechanical Technician – 1500003149 ......................................................... 141
Mechanical Track – 150000706 ................................................................. 137
Mechanics Track – 150901705 ..................................................................... 171
Mechatronics Systems Operating Technician: Siemens International
Mechatronics Systems Certification Level I - 1500003179 ................................. 168
Mechatronics Systems Track - 150499705 .................................................... 83
Mechatronics Systems ................................................................................. 168
Mechatronics Operator - 1504993089 ............................................................ 80
Medical Assistant - 5139012020 ................................................................. 179
Medical Administrative Assistant - 5107164019 ............................................. 101
Medical Administrative Services .................................................................. 168
Medical Administrative Track - 510716705 .................................................... 101
Medical Assisting - 5108014020 ................................................................. 169
Medical Assisting - 5108017029 ................................................................. 169
Medical Assistance ...................................................................................... 168
Medical Coding - 5107163079 ..................................................................... 102
Medical Coding and Reimbursement Specialist - 5107033029 ....................... 168
Medical Coding Track - 510716706 ............................................................. 101
Medical Equipment and Instrumentation Track – 150000710 .................... 137
Medical Equipment Service Technician - 1500004119 ............................... 140
Medical Information Technology - 5107167019 ........................................... 100
Medical Information Technology (Internship and practicum
arranged on-site in student vicinity) .......................................................... 76, 77
Medical Information Technology .................................................................. 76, 100
Medical Office Administrative Assistant # - 5108013069 ............................ 170
Medical Office Clinical Assistant # - 5108013059 ........................................ 169
Medical Office Insurance Billing and Coding # - 5108013049 ....................... 169
Medical Office Limited Radiography - 5108013139 ..................................... 170
Medical Office Management Track – 510716709 ....................................... 101
Medical Receptionist - 5107163049 ............................................................. 102
Medical Receptionist .................................................................................. 77
Medical Record Coding Specialist- 5107073019 .......................................... 149
Medical Records Specialist - 5107164069 .................................................... 101
Medical Transcription Track - 510716708 ..................................................... 101
Medical Transcriptionist – 5107163089 ....................................................... 102
Medical Unit Coordinator - 5107013019 ....................................................... 102
Medium and Heavy Truck Mechanic Helper - 4708053149 ......................... 133
Medium and Heavy Truck Technician - 4708054049 .................................... 132
Medium and Heavy Truck Technician Track - 470805703 ................................ 131
Message from President McCall .................................................................. 3
Microsoft Enterprise Administrator - 1101013419 ......................................... 117
Microsoft Network Administrator - 1101013439 ........................................... 117
Military Service Experience ....................................................................... 64
Milwoker - 4807033039 ............................................................................. 206
Mining Technician Assistant I - 1509013019 ................................................. 171
Mining Technician Assistant II - 1509013029 ............................................. 171
Mining Technician I - 1509013039 .............................................................. 172
Mining Technician II - 1509013049 .............................................................. 172
Minning Technology - 1509017019 ............................................................. 170
Mission Statement ...................................................................................... 4
MIT: Electrical Technology .......................................................................... 162
MIT: Industrial Maintenance Technology ..................................................... 164
Mobile Air Conditioning Mechanic - 4708053028 ....................................... 133
Modularized Credit Courses ........................................................................ 65
Morehead State University ........................................................................... 61
Motor Controls Electrician Track - 460302403 ............................................... 163
Motor Controls Electrician Track - 460302703 ............................................... 163
Motorcycle Technology - 4706117019 ....................................................... 172
Motor-Grader Operator - 4902032049 ........................................................... 150
Multimedia - 1003043019 ......................................................................... 200
Multimedia - 1003044019 ......................................................................... 199
Multimedia - 1003047019 ......................................................................... 199
Multimedia Certificate in Communication Arts - 5004063039 ..................... 197
Multimedia Track - 100304401 ................................................................. 200
Multiple Associate Degrees ......................................................................... 67
Murray State University .............................................................................. 61
Museum Management - 5401053019 .......................................................... 151
Music Technology Track - 5007043059 ....................................................... 86
Music Track - 050122303 ............................................................................ 82
Music Track - 5007043049 ......................................................................... 86
N
Nail Technician - 1204013029 ...................................................................... 123
National Board for Respiratory Care (NBRC) Examination ......................... 64
National Vocational Technical Honor Society .............................................. 55
Natural Gas Technology ............................................................................. 173
Natural Sciences .......................................................................................... 72
Net+ - 1101013399 ..................................................................................... 117
Network Administration Track - 110101708 ................................................ 115
Network Technologies Specialist - 1101013369 .......................................... 117
Network Technologies Track - 110101713 .................................................... 115
Non-Classroom Learning Experiences ......................................................... 65
Non-Degree/Non-Credential Students .......................................................... 46
Northern Kentucky University ....................................................................... 61
Nuclear Medicine and Molecular Imaging Technology - 5109057039 ............ 174
Nuclear Medicine and Molecular Imaging Technology .................................. 173
Nursery Operations - 0106013089 ............................................................... 154
Nursery Production - 0106013079 ............................................................... 154
Nursing - 5138017009 ................................................................................. 175
Nursing - 5138017069 ................................................................................. 177
Nursing – Academic/Career Mobility Program ............................................ 175
Nursing - Integrated Nursing ........................................................................ 176
Nursing - Practical Nursing .......................................................................... 176
Nursing ......................................................................................................... 78
Nursing Assistant – Advanced ...................................................................... 175
Nursing Modular Track- 513801704 ............................................................... 175
Nursing Standard Track - 513801705 ............................................................. 175
Nursing ......................................................................................................... 77, 78, 174
O
Occupational Therapy Assistant - 5108037009 ............................................. 179
Office Assistant - 5204024039 ................................................................. 104
Office Systems - 5202013219 ..................................................................... 99
Office Systems - 5202014019 ................................................................. 96
Office Systems Technology – 5204027039 .................................................. 103
Office Systems Technology ......................................................................... 77, 102
Offset Press Operator - 1003013039 ............................................................ 202
Online Programs .......................................................................................... 76
Operating Engineer - 4902024019 ................................................................. 150
Operations Management - 5202013369 ...................................................... 161
Operations Management - 5202013369 ...................................................... 99
Operators Track – 150901702 ................................................................. 170
Oral Communications ............................................................................ 71
Organizational Leadership - 5202014029 .................................................... 96
Ornamental Horticulture - 0106014029 ..................................................... 153
Other Degree and/or Credential Requirements ....................................... 74
Other Training Options ........................................................................... 71
Outside Plant Technician – 1505033039 .................................................... 136
Overview ................................................................................................... 52
Owensboro Community and Technical College ........................................ 36, 60

P

Painter, Interior Finish - 4602013049 ............................................................ 122
Painter, Paper Hanger - 4602013129 ........................................................... 122
Paraeducator - 1315013019 ....................................................................... 134
Paralegal Technology - 2203023019 ............................................................ 180
Paralegal Technology - 2203027019 ............................................................ 180
Paramedic Technology - 5109043020 ........................................................ 181
Paramedic Technology - 5109047010 ........................................................ 181
Payment Plan Options ............................................................................. 50
Payroll Accounting Specialist - 5202013439 ............................................... 99
Personal Financial Liability - Withdrawing or All "E"s .................................. 53
Personal Trainer – 5109993029 ................................................................ 148
Pharmacist (CFA: Compounding) - 5108053029 ....................................... 181
Pharmacist (CFA: Compounding) II - 5108054029 ................................... 181
Pharmacy Technology .............................................................................. 181
Phi Theta Kappa Honor Society ................................................................ 56
Phlebotomist - 5110043019 ...................................................................... 109
Phlebotomist # - 5108013109 .................................................................. 170
Phlebotomy for the Health Care Worker - 5110043039 ............................ 109
Physical Therapist Assistant ................................................................... 182
Physician’s Office Laboratory - 5110043029 ............................................. 109
Pipeline Welder - 4805083109 .................................................................. 204
Placement .................................................................................................. 54
Plastics Processing - 1506073049 ............................................................... 183
Plastics Processing .................................................................................... 183
PLC Programmer Track - 150409707 .......................................................... 83
Plumber Estimator - 4605033099 ................................................................. 184
Plumber Mechanic - 4605034019 ................................................................. 183
Plumber’s Helper - 4605031219 ................................................................ 184
Plumbing Technology - 4605037019 ............................................................ 183
Policies and Procedures ............................................................................ 55
Policies Related to Enrollment .................................................................. 65
Policies Related to Graduation .................................................................. 67
Polysomnographic Technologist - 5109084029 ......................................... 191
Power Plant Maintenance Technician - 4706083019 ............................... 89
Power Plant Maintenance Technician - 4706083079 ............................... 90
Power Plant Operations - 1505033019 ....................................................... 135
Power Plant Operator - 1504099059 ........................................................... 80
Power Plant Operator - 4103013029 ............................................................ 85
Power Plant Operator Track - 410301702 ..................................................... 84
Practical Nurse - 5139014039 .................................................................... 178
Practical Nurse – Track 2 – Traditional Modified - 5139014029 .............. 178
Practical Nurse – Track 3 – Modular - 513901403 ...................................... 178
Practical Nurse Track 1 – Traditional - 513901401 ...................................... 178
Practical Nursing - 5139014049 ................................................................. 177
Pre-Licensing Real Estate - 5202013239 ....................................................... 99
Presswork and Die Maintenance Technician Level I – 4703033209 ............ 166
Presswork and Die Maintenance Technician Level II – 4703033219 .......... 166
Preventive Maintenance Mechanic - 4706053199 ...................................... 133
Previous College Work ............................................................................. 47
Print Manufacturing – 1003014029 ............................................................ 201
Print Manufacturing Track - 100301701 ..................................................... 201
Print Shop Assistant - 1003013029 ............................................................. 202
Printing - 1003017019 ................................................................................. 201
Privacy and Release of Student Records ............................................... 56
Process Technician Track – 4103017019 ..................................................... 155
Production Design – 5004094039 ............................................................... 198
Production Design Track – 500409703 ....................................................... 197
Production Line Welder - 4805083059 ......................................................... 204
Productivity Software Specialist - 1101013299 ....................................... 116
Professional Craft: Pottery ....................................................................... 184
Professional Liability Insurance ................................................................ 51
Professional Raku Pottery - 5007113019 ................................................... 185
Professional Studio Artist - 5002017019 ...................................................... 185
Programming - 1101013429 ................................................................... 117
Programming Track - 110101709 ............................................................... 115
Project Lead the Way ............................................................................... 188
Project Management Track- 520402719 .................................................... 156
Public Utility Transfer Contacts ............................................................... 61

Q

Quality Auditor - 1507023109 ................................................................... 189
Quality Control - 1506133049 ................................................................... 161
Quality Leader - 1507023079 ................................................................... 189
Quality Management - 5202013229 ......................................................... 99
Quality Management Systems - 1507027019 .......................................... 188
Quality Management Systems ................................................................ 76, 77, 168
Quality Monitor - 1507023069 ................................................................. 189
Quality Specialist I - 1507023089 .............................................................. 189
Quality Specialist II - 1507023099 .............................................................. 189
Quality Support - 1507023059 ................................................................. 189
Quality Technician - 1507024029 ............................................................... 188
Quantitative Reasoning ........................................................................... 71

R

Radiation Control Technician - 5122053039 ............................................... 149
Radiography - 5109077029 ...................................................................... 189
Reading Assessment and Course Placement ........................................... 49
Reading ..................................................................................................... 78
Readmission after Two or More Years: Academic Bankruptcy ............... 47
Ready to Work: Assistance for Low-Income Parents .............................. 54
Real Estate - 521501700 .......................................................................... 190
Real Estate Management Track - 520201706 ............................................. 95
Real Estate Management Track – 520201713 ........................................... 106
Real Estate Pre-Brokerage Management – 5202013409 ......................... 107
Real Estate Pre-Licensing – 5215013029 .................................................. 107
Real Estate Pre-Licensing - 5215013029 .................................................... 191
Real Estate ................................................................................................. 190
Receptionist - 5204023089 ..................................................................... 106
Records Management - 5401053039 ......................................................... 151
Refrigeration Mechanic - 4702013059 ......................................................... 82
Refunds ..................................................................................................... 51
Release of Information Data Specialist – 5107073039 ............................ 149
Repair Technician I - 4706113019 .............................................................. 172
Repair Technician II - 4706113029 ............................................................ 172
<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck Driver Training</td>
<td>388</td>
</tr>
<tr>
<td>Tuition and Charges</td>
<td>50</td>
</tr>
<tr>
<td>Tune-up Mechanic</td>
<td>88</td>
</tr>
<tr>
<td>Turf Grass / Landscaping Management Track</td>
<td>100</td>
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<td>Turf Grass/Landscaping Management Track</td>
<td>95</td>
</tr>
<tr>
<td>Twenty-first Century Life Skills - 3201073019</td>
<td>79</td>
</tr>
<tr>
<td>Two-Dimensional Studies - 5007063019</td>
<td>202</td>
</tr>
<tr>
<td>Undercarriage Mechanic</td>
<td>133</td>
</tr>
<tr>
<td>Underground Mechanic/Electrician</td>
<td>171</td>
</tr>
<tr>
<td>Underground Operator</td>
<td>171</td>
</tr>
<tr>
<td>Underground Supervisor</td>
<td>171</td>
</tr>
<tr>
<td>University of Kentucky</td>
<td>61</td>
</tr>
<tr>
<td>University of Louisville</td>
<td>61</td>
</tr>
<tr>
<td>Vascular</td>
<td>130</td>
</tr>
<tr>
<td>Vascular Track</td>
<td>129</td>
</tr>
<tr>
<td>Visual Art</td>
<td>207</td>
</tr>
<tr>
<td>Visual Communication</td>
<td>196</td>
</tr>
<tr>
<td>Visual Communication: Advertising and Design</td>
<td>196</td>
</tr>
<tr>
<td>Visual Communication: Multimedia</td>
<td>199</td>
</tr>
<tr>
<td>Visual Communication: Printing</td>
<td>201</td>
</tr>
<tr>
<td>Visual Communication: Visual Arts</td>
<td>202</td>
</tr>
<tr>
<td>Voice and Data Wiring Installer Level I</td>
<td>164</td>
</tr>
<tr>
<td>Voice and Data Wiring Installer Level II</td>
<td>164</td>
</tr>
<tr>
<td>Voice and Data Wiring Technician</td>
<td>164</td>
</tr>
<tr>
<td>Volumetric Medical Imaging</td>
<td>202</td>
</tr>
<tr>
<td>Volumetric Medical Imaging</td>
<td>202</td>
</tr>
<tr>
<td>Waste Processing Attendant</td>
<td>142</td>
</tr>
<tr>
<td>Wastewater Treatment Plant Attendant</td>
<td>143</td>
</tr>
<tr>
<td>Wastewater Treatment Plant Operator</td>
<td>143</td>
</tr>
<tr>
<td>Water Treatment Plant Attendant</td>
<td>143</td>
</tr>
<tr>
<td>Water Treatment Plant Operator</td>
<td>143</td>
</tr>
<tr>
<td>Web Administration</td>
<td>117</td>
</tr>
<tr>
<td>Web Design</td>
<td>200</td>
</tr>
<tr>
<td>Web Design – 5204023249</td>
<td>157</td>
</tr>
<tr>
<td>Web Design – 520402708</td>
<td>156</td>
</tr>
<tr>
<td>Web Design – 1003043039</td>
<td>200</td>
</tr>
<tr>
<td>Web Design – 100304702</td>
<td>199</td>
</tr>
<tr>
<td>Web Programming - 1101013439</td>
<td>117</td>
</tr>
<tr>
<td>Welder Helper</td>
<td>203</td>
</tr>
<tr>
<td>Welding Technology</td>
<td>202</td>
</tr>
<tr>
<td>West Kentucky Community and Technical College</td>
<td>43, 61</td>
</tr>
<tr>
<td>Western Kentucky University</td>
<td>61</td>
</tr>
<tr>
<td>Wheelhouse Management Track</td>
<td>166</td>
</tr>
<tr>
<td>Wind System Technologies</td>
<td>136</td>
</tr>
<tr>
<td>Women’s and Gender Studies</td>
<td>205</td>
</tr>
<tr>
<td>Wood Manufacturing Technology</td>
<td>205</td>
</tr>
<tr>
<td>Wood Studio Technician</td>
<td>186</td>
</tr>
<tr>
<td>Wood Technologist</td>
<td>205</td>
</tr>
<tr>
<td>Wood/Furniture Design Track</td>
<td>186</td>
</tr>
<tr>
<td>Work and Lean</td>
<td>55</td>
</tr>
<tr>
<td>Work Based Learning Experiences</td>
<td>65</td>
</tr>
<tr>
<td>Writing</td>
<td>78</td>
</tr>
<tr>
<td>Written Communication</td>
<td>71</td>
</tr>
<tr>
<td>Zoo Animal Technician</td>
<td>206</td>
</tr>
<tr>
<td>Zoo Animal Technology</td>
<td>206</td>
</tr>
</tbody>
</table>

388
Compliance with Regulations

The Kentucky Community and Technical College System is committed to a policy of providing educational opportunities to all qualified students regardless of economic or social status, and will not discriminate based on race, color, religion, sex, marital status, beliefs, age, national origin, sexual orientation, or physical or mental disability.

Compliance with Title IX of the Educational Amendments of 1972, which prohibits sex discrimination, and with Title VI of the Civil Rights Act of 1964 is coordinated by the Director of Employment, Affirmative Action and Equal Opportunity, Kentucky Community and Technical College System, 300 North Main Street, Versailles, KY 40383, (859) 256-3100. Efforts to comply with the laws and regulations applicable to people with disabilities, as required by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, are coordinated by the Director of Employee Relations, 300 North Main Street, Versailles, KY 40383.

Questions concerning compliance with regulations may be directed to the Kentucky Community and Technical College System Director of Human Resources, 300 North Main Street, Versailles, KY 40383, (859) 256-3338, or to the Director of the Office of Civil Rights, U.S. Department of Education, Philadelphia, PA.

The Kentucky Community and Technical College System is in compliance with the Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act Amendment of 1990. Questions may be directed to the KCTCS Student Affairs Division or the Director of Human Resources’ Office at each college.

Questions about admission to any college in the Kentucky Community and Technical College System should be directed to the appropriate admissions office.