Contents

Letter from the Chancellor ....................... 3
The Officers of the District ...................... 4
The Board of Trustees ............................ 4
Academic Calendar ............................... 5

All Roads Lead to MCC .......................... 6

Admission Information
Eligibility ........................................ 7
Program Admission ............................ 7
College Admission ............................. 7
Admission of High School Students ........... 7
Admission to JCCC Programs .................. 7
Program Eligibility ................................ 8
International Students ........................ 9
Placement Testing ............................... 9
Resident Classification ........................ 9
Help for Service Members .................... 10
Determining Resident Status ................. 10
Certifying Residency ........................... 10

Financial Information
Tuition and Fees ............................... 11
Refund Schedule ............................... 11
Financial Aid ................................. 11

Academic Information
Academic Evaluation ........................... 12
Honors .......................................... 12
Satisfactory Progress .......................... 13
Academic Record .............................. 13
Academic Forgiveness ........................ 13
Transcripts ..................................... 13

Credit by Certification ......................... 13
Credit by Examination ....................... 13
Credit for Advanced Standing ............... 13
Family Educational Rights and Privacy .... 13
Attendance ..................................... 14
Dropping a Course ............................ 14
Withdrawal from College ..................... 14
Student Load ................................... 14
Student Conduct ................................ 14
Student Disciplinary Procedure .......... 14
Student Grievances ............................ 14

Student Services
Academic Advising .............................. 15
Employment Resources ....................... 15
Counseling ..................................... 15
Support Services ............................. 15
Student Activities ............................ 17
Athletics ....................................... 17
Fitness Centers ................................ 17
Kansas City Area Student Exchange ....... 17
Educational Opportunities Center (EOC) .. 17
Alumni Association ............................ 17

General Information
History of MCC ............................... 18
Philosophy ...................................... 18
MCC Mission .................................... 18
Educational Services ......................... 19
Compliance With Federal Laws and Regulations ................. 20
Definitions of Academic Terms ............. 21
Accreditation .................................. 25
<table>
<thead>
<tr>
<th>College</th>
<th>Campus</th>
<th>Telephone</th>
<th>Fax</th>
<th>Address</th>
<th>City, State</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMINISTRATIVE CENTER</td>
<td></td>
<td>(816) 759-1000</td>
<td>(816) 759-1158</td>
<td>3200 Broadway</td>
<td>Kansas City, MO</td>
</tr>
<tr>
<td>BLUE RIVER COMMUNITY COLLEGE</td>
<td>BLUE SPRINGS CAMPUS</td>
<td>(816) 655-6000</td>
<td>(816) 655-6014</td>
<td>1501 West Jefferson Street</td>
<td>Blue Springs, MO</td>
</tr>
<tr>
<td>INDEPENDENCE CAMPUS</td>
<td></td>
<td>(816) 220-6500</td>
<td>(816) 220-6511</td>
<td>20301 East 78 Highway</td>
<td>Independence, MO</td>
</tr>
<tr>
<td>LONGVIEW COMMUNITY COLLEGE</td>
<td></td>
<td>(816) 672-2000</td>
<td>(816) 672-2025</td>
<td>500 SW Longview Road</td>
<td>Lee’s Summit, MO</td>
</tr>
<tr>
<td>MAPLE WOODS COMMUNITY COLLEGE</td>
<td></td>
<td>(816) 437-3000</td>
<td>(816) 437-3049</td>
<td>2601 NE Barry Road</td>
<td>Kansas City, MO</td>
</tr>
<tr>
<td>PENN VALLEY COMMUNITY COLLEGE</td>
<td>MAIN CAMPUS</td>
<td>(816) 759-4000</td>
<td>(816) 759-4161</td>
<td>3201 Southwest Trafficway</td>
<td>Kansas City, MO</td>
</tr>
<tr>
<td>PIONEER CAMPUS</td>
<td></td>
<td>(816) 482-5000</td>
<td>(816) 482-5041</td>
<td>2700 East Eighteenth Street</td>
<td>Kansas City, MO</td>
</tr>
<tr>
<td>BUSINESS &amp; TECHNOLOGY COLLEGE</td>
<td></td>
<td>(816) 482-5210</td>
<td>(816) 482-5256</td>
<td>1755 Universal Avenue</td>
<td>Kansas City, MO</td>
</tr>
</tbody>
</table>

An on-line copy of the MCC 2003-2004 Catalog can be found at [www.kcmetro.edu](http://www.kcmetro.edu)

Serving the four Missouri counties of metropolitan Kansas City
An Equal Opportunity/Affirmative Action Employer
Success. It is a word not taken lightly at the Metropolitan Community Colleges. Blue River, Longview, Maple Woods, Penn Valley, and the Business & Technology College are dedicated to helping you succeed. Our concern goes beyond your college career. Success in your community, your neighborhood and your family are equally important. We strive to make your development while in college as complete and well-rounded as possible.

This is an exciting time to be a student at the Metropolitan Community Colleges. The impact of technology on work and learning, the accessibility and growing interdependence of the world’s cultures and economies, and the rapid pace of change create unparalleled opportunities for learning. Blue River, Longview, Maple Woods, Penn Valley, and the Business & Technology College are committed to providing you access to the programs and opportunities that will empower you to become the very best you are capable of being.

The MCC district works hard to stay on the cutting edge of new educational initiatives while maintaining a learner-centered environment in traditional, liberal arts disciplines. Our focus is to maintain a high standard of educational excellence, to value the diversity of our students, programs, and services; to expand technology for instruction; to maintain a supportive and caring environment; and to develop ever stronger relationships with our community partners. Our dedication to quality education and student support is without question. The instructors and support staff care about your welfare and future.

We will continue to develop innovative programs and curricula that address the needs of the communities we serve. We look forward to working with the students of the Kansas City area, as together we create and share a future in which we can all be proud and productive participants.

Wayne E. Giles, Chancellor
The Board of Trustees

Seated (left to right): David L. Disney; David R. Buie, president; and Chuck James, vice president. Standing (left to right): J. Robert Ashcroft, Jeffrey A. Grubb, and Robert H. Martin.

The Officers of the District

Wayne E. Giles, Chancellor

Allan H. Tunis, Vice Chancellor of Administrative Services

Donald S. Doucette, Vice Chancellor of Education and Technology

Jack Bitzenburg, President, Business & Technology College

Malcolm T. Wilson, President, Blue River Community College

Fred L. Grogan, President, Longview Community College

Merna S. Saliman, President, Maple Woods Community College

Jacqueline I. Snyder, President, Penn Valley Community College
<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spring Semester 2003</strong></td>
<td>First day of classes, day and evening Monday, Jan. 13</td>
</tr>
<tr>
<td></td>
<td>First Saturday class Saturday, Jan. 18</td>
</tr>
<tr>
<td></td>
<td>Martin Luther King Jr. holiday (no classes) Monday, Jan. 20</td>
</tr>
<tr>
<td></td>
<td>Campus Inservice Day (no classes, day or evening) Tuesday, Jan. 21</td>
</tr>
<tr>
<td></td>
<td>Midterm Friday, Mar. 7</td>
</tr>
<tr>
<td></td>
<td>Spring break March 10-15</td>
</tr>
<tr>
<td></td>
<td>Classes resume Monday, Mar. 17</td>
</tr>
<tr>
<td></td>
<td>Last day for withdrawal without assessment Friday, Apr. 11</td>
</tr>
<tr>
<td></td>
<td>Last Saturday class Saturday, May 3</td>
</tr>
<tr>
<td></td>
<td>Last day of classes, day and evening Tuesday, May 6</td>
</tr>
<tr>
<td></td>
<td>Reading Day, evening finals begin Wednesday, May 6</td>
</tr>
<tr>
<td></td>
<td>Day finals begin Thursday, May 8</td>
</tr>
<tr>
<td></td>
<td>Saturday finals Saturday, May 10</td>
</tr>
<tr>
<td></td>
<td>Last day for evening finals Tuesday, May 13</td>
</tr>
<tr>
<td></td>
<td>Last day for day (only) finals Wednesday, May 14</td>
</tr>
<tr>
<td></td>
<td>Commencement Thursday, May 15</td>
</tr>
<tr>
<td><strong>Summer Session 2003</strong></td>
<td>First day of classes, day and evening Monday, June 2</td>
</tr>
<tr>
<td></td>
<td>Independence Day observed Friday, July 4</td>
</tr>
<tr>
<td></td>
<td>Last day for withdrawal without assessment Wednesday, July 9</td>
</tr>
<tr>
<td></td>
<td>Last day of classes, day and evening Wednesday, July 23</td>
</tr>
<tr>
<td></td>
<td>Finals, day and evening Thursday, July 24</td>
</tr>
<tr>
<td><strong>Fall Semester 2003</strong></td>
<td>New Faculty Orientation Aug. 20 and 21</td>
</tr>
<tr>
<td></td>
<td>Campus Inservice Day Friday, Aug. 22</td>
</tr>
<tr>
<td></td>
<td>First day of Saturday classes Saturday, Aug. 23</td>
</tr>
<tr>
<td></td>
<td>First day of classes, day and evening Monday, Aug. 25</td>
</tr>
<tr>
<td></td>
<td>Labor Day holiday Monday, Sept. 1</td>
</tr>
<tr>
<td></td>
<td>Midterm Friday, Oct. 17</td>
</tr>
<tr>
<td></td>
<td>District Inservice Day (no classes day and evening) Tuesday, Oct. 28</td>
</tr>
<tr>
<td></td>
<td>Last day for withdrawal without assessment Friday Nov. 14</td>
</tr>
<tr>
<td></td>
<td>Thanksgiving holiday begins at 4 p.m. Wednesday, Nov. 26</td>
</tr>
<tr>
<td></td>
<td>Classes resume Monday, Dec. 1</td>
</tr>
<tr>
<td></td>
<td>Last day of classes, day and evening Friday, Dec. 12</td>
</tr>
<tr>
<td></td>
<td>Last Saturday class Saturday, Dec. 13</td>
</tr>
<tr>
<td></td>
<td>Final exams, day and evening Dec. 15-19</td>
</tr>
<tr>
<td></td>
<td>Saturday finals Saturday, Dec. 20</td>
</tr>
<tr>
<td></td>
<td>Holiday break/offices closed Dec. 24-Jan. 1</td>
</tr>
<tr>
<td><strong>Spring Semester 2004</strong></td>
<td>Martin Luther King Jr. holiday (no classes) Monday, Jan. 19</td>
</tr>
<tr>
<td></td>
<td>Campus Inservice Day (no classes, day or evening) Tuesday, Jan. 20</td>
</tr>
<tr>
<td></td>
<td>First day of classes, day and evening Wednesday, Jan. 21</td>
</tr>
<tr>
<td></td>
<td>First Saturday class Saturday, Jan. 24</td>
</tr>
<tr>
<td></td>
<td>Faculty Convocation Day (no classes, day and evening) Wednesday, Feb. 25</td>
</tr>
<tr>
<td></td>
<td>Midterm Friday, March 12</td>
</tr>
<tr>
<td></td>
<td>Spring break March 15-19</td>
</tr>
<tr>
<td></td>
<td>Classes resume Monday, March 22</td>
</tr>
<tr>
<td></td>
<td>Last day for withdrawal without assessment Monday, April 19</td>
</tr>
<tr>
<td></td>
<td>Last Saturday class Saturday, May 8</td>
</tr>
<tr>
<td></td>
<td>Last day of classes, day and evening Wednesday, May 12</td>
</tr>
<tr>
<td></td>
<td>Reading Day, evening finals only Thursday, May 13</td>
</tr>
<tr>
<td></td>
<td>Final exams, day and evening May 14-19</td>
</tr>
<tr>
<td></td>
<td>Saturday final exams Saturday, May 15</td>
</tr>
<tr>
<td></td>
<td>Final exams, day only Thursday, May 20</td>
</tr>
<tr>
<td></td>
<td>Commencement Friday, May 21</td>
</tr>
<tr>
<td><strong>Summer Session 2004</strong></td>
<td>First day of classes, day and evening Monday, June 7</td>
</tr>
<tr>
<td></td>
<td>Independence Day observed Monday, July 5</td>
</tr>
<tr>
<td></td>
<td>Last day for withdrawal without assessment Wednesday, July 7</td>
</tr>
<tr>
<td></td>
<td>Last day of classes, day and evening Wednesday, July 28</td>
</tr>
<tr>
<td></td>
<td>Finals, day and evening Thursday, July 29</td>
</tr>
<tr>
<td><strong>Fall Semester 2004</strong></td>
<td>New Faculty Orientation Aug. 19 and 20</td>
</tr>
<tr>
<td></td>
<td>Campus Inservice Day Monday, Aug. 23</td>
</tr>
<tr>
<td></td>
<td>First day of classes, day and evening Tuesday, Aug. 24</td>
</tr>
<tr>
<td></td>
<td>First day of Saturday classes Saturday, Aug. 28</td>
</tr>
<tr>
<td></td>
<td>Labor Day holiday Monday, Sept. 6</td>
</tr>
<tr>
<td></td>
<td>Midterm Friday, Oct. 15</td>
</tr>
<tr>
<td></td>
<td>District Inservice Day (no classes day and evening) Tuesday, Oct. 26</td>
</tr>
<tr>
<td></td>
<td>Last day for withdrawal without assessment Monday, Nov. 15</td>
</tr>
<tr>
<td></td>
<td>Thanksgiving holiday begins at 4 p.m. Wednesday, Nov. 24</td>
</tr>
<tr>
<td></td>
<td>Classes resume Monday, Nov. 29</td>
</tr>
<tr>
<td></td>
<td>Last Saturday class Saturday, Dec. 11</td>
</tr>
<tr>
<td></td>
<td>Last day of classes, day and evening Monday, Dec. 13</td>
</tr>
<tr>
<td></td>
<td>Reading Day, evening finals only Tuesday, Dec. 14</td>
</tr>
<tr>
<td></td>
<td>Final exams, day and evening Dec. 15-20</td>
</tr>
<tr>
<td></td>
<td>Saturday finals Saturday, Dec. 18</td>
</tr>
<tr>
<td></td>
<td>Last day for day finals Tuesday, Dec. 21</td>
</tr>
<tr>
<td></td>
<td>Holiday break/offices closed Dec. 24-Jan. 1</td>
</tr>
</tbody>
</table>
ALL ROADS LEAD TO MCC

No matter where people live in the greater Kansas City metropolitan area, they’re just minutes away from one of the five Metropolitan Community Colleges. There’s Blue River, with its two campuses in Blue Springs and Independence; Business & Technology College, located near I-435 and Front Street; Longview to the south; Maple Woods in the Northland; and Penn Valley in Midtown.

Location, location, location

Longview’s campus overlooks Longview Lake in Lee’s Summit and sits on 147 acres of land donated to MCC by the daughters of R.A. Long, a pioneer lumberman. The campus’s seven buildings include an exceptional Recreational Center and one that houses the college’s automotive technology program.

The 205-acre Maple Woods campus along Highway 152 in the Northland, gets its name from nearby sugar maple trees, the largest stand west of the Appalachians. The campus’s eight buildings includes a veterinary technology building and a Human Services Center, which provides housing for human services agencies as well as the college’s child care and fitness facility.

Located next to Penn Valley Park is the main campus of Penn Valley Community College, 3201 Southwest Trafficway. The massive enclosed campus includes the Francis Child Development Institute and the Anna and Kemper Carter Center for Visual Arts and Imaging Technology.

Blue River Community College serves eastern Jackson County, with campuses at 1501 West Jefferson in Blue Springs and at 20301 East 78 Highway in Independence. The Independence campus is home to the Western Missouri Public Safety Training Institute, with its Police and Fire Academies and EMT training.

MCC’s newest college is the Business & Technology College (BTC) which has provided a home for many of MCC’s technical training and business services for several years. Thanks to a recent expansion, the BTC now offers a 56,500 sq. ft. meeting and exhibition hall.

NOTE

This catalog contains information that will familiarize you with the Metropolitan Community Colleges. Contents of this catalog are current as of the March 2003 publication. Material in the catalog relates to the operations and activities of the Metropolitan Community Colleges and is for informational purposes only. It does not represent enforceable contractual obligations of the Metropolitan Community Colleges. The colleges reserve the right to modify their programs, course offerings, printed schedules, rules, regulations and operations at any time. Information about these changes is available from members of the counseling and advising staffs of any of the Metropolitan Community Colleges. Check out MCC’s web site at www.kcmetro.edu.
ELIGIBILITY

Students who want to enroll in the Metropolitan Community Colleges have several avenues that lead to admission: a high school diploma, a General Education Development (GED) Test that certifies the equivalency of high school graduation, or home-school graduation. International students are also welcome on the MCC campuses.

In some cases, those who are 18 and older and who haven’t graduated from high school or obtained a GED may be admitted as special students. During their first term, the college limits them to 12 credit hours and then re-evaluates their status during subsequent enrollments. High school students under 18 may be admitted if recommended by their principal or counselor and if their application is approved by the appropriate college official.

PROGRAM ADMISSION

Students who meet the above requirements are admitted to the college. However, some MCC programs carry special requirements as well. These are listed on the chart on page 8.

COLLEGE ADMISSION

To apply for admission, a student must follow these steps:

1. Complete the Application for Admission and return it to the admissions/records office.
2. Request that the appropriate transcripts be sent to the admissions office.
   a. First-time college students should ask the high school they last attended to send a transcript to the college.
   b. Students who have taken the GED test given by the Missouri State Department of Elementary and Secondary Education should have their scores sent to the college.
   c. Students who are transferring from another college or university should submit a transcript from each school attended.
   d. Home-school students must provide documentation as required by Missouri State Statute 167.031.2 (2)(a), R.S. MO.
   e. Students who are enrolled at a college or university other than MCC may take MCC courses as a visiting student.

Students seeking admission to MCC should send their applications and required documents to the admissions/records office several months or weeks before classes begin. Once received, the admissions/records office will send a letter confirming admission and notifying each student how, when and where to enroll in classes.

ADMISSION OF HIGH SCHOOL STUDENTS

High school students who want to enroll at MCC must obtain permission from a parent or legal guardian. They may take a limited class schedule but only after getting approval from their high school official and the appropriate MCC administrator. After this approval, students should complete an Application for Admission, which is available in the admissions office.

MCC’s dual credit program offers college credit for courses as part of daily scheduled classes at area high schools. The cost is $33 per credit hour. High school students must talk to their high school counselor regarding eligibility requirements before enrolling.

**NOTE:** The Metropolitan Community Colleges do not give high school credit.

ADMISSION TO JCCC PROGRAMS

The Metropolitan Community College District and Johnson County Community College (JCCC) have developed affiliate agreements that allow Missouri students to enroll in certain programs at resident tuition and fee rates. MCC students who want to study under these agreements must first talk with a JCCC advisor/counselor before being admitted to these programs.

Steps to Enroll in JCCC Classes

If you are a new student, complete an application for admission to both MCC and JCCC. Take the placement test at an MCC campus. Once you are officially accepted into the degree program at the cooperative school, each semester you must:

1. Register for classes at JCCC during official registration days listed in the JCCC credit bulletin. It is your responsibility to contact JCCC for enrollment dates.
2. Take a copy of your JCCC course schedule to one of the MCC campuses and register for the equivalent affiliate courses during official registration days.
3. Pay tuition and fees at an MCC campus by the designated date. Pay lab fees at JCCC (if applicable). Students requesting financial aid should apply through MCC.
4. Provide a copy of your student course schedule and paid receipt to the JCCC admissions office before the JCCC payment deadline.

Additional notes:

- MCC will pay for tuition at the cooperative school for courses not offered at an MCC campus. If you elect to take a course at the cooperative school that is offered at MCC, you will be responsible for paying the out-of-state tuition at the cooperative school.
- If you apply for financial aid through JCCC, you will not be considered part of the reverse affiliate program and will be charged out-of-state tuition.
In addition to the requirements for admission to the college, students must meet specific conditions before they may enroll in certain occupational programs. For many of these, a student must make application and be accepted for the program. Information about how to apply for these programs is provided on the pages listed below, and further information is available from academic advisors or counselors.

<table>
<thead>
<tr>
<th>Program</th>
<th>College</th>
<th>Is Special Application Required?</th>
<th>Special Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Assisting</td>
<td>Penn Valley</td>
<td>Yes. See page 49</td>
<td>High school diploma, 2.5 GPA, or GED certificate; ENGL 101 with a minimum grade of C.</td>
</tr>
<tr>
<td>Emergency Medical Technician</td>
<td>Penn Valley</td>
<td>Yes. See page 50</td>
<td>High School Diploma or GED certificate. The student must be at least 18 years old when the EMTP 150 course is completed.</td>
</tr>
<tr>
<td>Fire Academy</td>
<td>Blue River</td>
<td>Yes. See page 54</td>
<td>High school diploma, GED. Must be at least 18 years of age. No felony or misdemeanor convictions. Good driving record. Apply in person at the Fire Academy.</td>
</tr>
<tr>
<td>Ford Automotive Student Service Educational</td>
<td>Longview</td>
<td>Yes. See page 38</td>
<td>Early application, approval by a Ford, Mazda, or Lincoln-Mercury dealer, high school diploma or GED certificate, and satisfactory performance on screening examination, reading comprehension, basic mathematics and Bennet mechanical comprehension.</td>
</tr>
<tr>
<td>General Motors Automotive Service Educational</td>
<td>Longview</td>
<td>Yes. See page 38</td>
<td>Early application, approval by a General Motors dealer, high school diploma or GED certificate, and satisfactory performance on screening examination, reading comprehension, basic mathematics and Bennet mechanical comprehension.</td>
</tr>
<tr>
<td>Health Information Technology</td>
<td>Penn Valley</td>
<td>Yes. See page 57</td>
<td>Minimum 2.5 grade point average in high school and previous college courses or GED score of 245.</td>
</tr>
<tr>
<td>Medical Transcription</td>
<td>Penn Valley</td>
<td>Yes. See page 75</td>
<td>Minimum GPA 2.5, typing minimum 45 words per minute, completion of ENGL 101 and OFSC 195 or equivalent.</td>
</tr>
<tr>
<td>Police Academy</td>
<td>Independence Campus</td>
<td>Yes. See page 78</td>
<td>High school diploma, GED. Must be at least 18 years of age. No felony or misdemeanor convictions. Good driving record. Apply in person at the Police Academy.</td>
</tr>
<tr>
<td>Practical Nursing</td>
<td>Penn Valley</td>
<td>Yes. See page 79</td>
<td>High school diploma or GED certificate. Satisfactory placement test scores. Satisfactory HOBET test scores in general mental ability, spelling, natural sciences, judgment and vocational adjustment. The student must be at least 18 years old when the program is completed.</td>
</tr>
<tr>
<td>Professional Nursing</td>
<td>Penn Valley</td>
<td>Yes. See page 79</td>
<td>High school diploma or GED certificate. Satisfactory NET (Nurse Entrance Test) scores in reading comprehension and basic math, completion of prerequisite courses with minimum grade of C and 2.5 or better cumulative GPA, and passing required medical examination. The student must be at least 19 years old when the program is completed.</td>
</tr>
<tr>
<td>Occupational Therapy Assistant</td>
<td>Penn Valley</td>
<td>Yes. See page 76</td>
<td>Completion of prerequisite courses with a minimum grade of C to include anatomy/physiology if taken prior to acceptance into the program. Satisfactory performance on the placement test in reading achievement, English, and/or TOEFL and math.</td>
</tr>
<tr>
<td>Paramedic</td>
<td>Penn Valley</td>
<td>Yes. See page 50</td>
<td>EMTP 150 with a minimum grade of C or a Missouri EMT license.</td>
</tr>
<tr>
<td>Physical Therapist Assistant</td>
<td>Penn Valley</td>
<td>Yes. See page 78</td>
<td>High school diploma or GED certificate, completion of prerequisite courses with minimum grade of C and satisfactory performance on examination in verbal skills and/or TOEFL examination.</td>
</tr>
<tr>
<td>Radiologic Technology</td>
<td>Penn Valley</td>
<td>Yes. See page 82</td>
<td>Completion of prerequisite courses with minimum grade of C and a minimum overall GPA of 2.5.</td>
</tr>
<tr>
<td>Respiratory Care JCCC</td>
<td>Penn Valley</td>
<td>Yes. See page 83</td>
<td>Completion of prerequisite courses with minimum grade of C and a minimum overall 2.0 GPA.</td>
</tr>
<tr>
<td>Sign Language Interpreter Training</td>
<td>Maple Woods</td>
<td>Yes. See page 85</td>
<td>Application by midsemester of Spring. Completion of SIGN 101 and 102.</td>
</tr>
<tr>
<td>Surgical Technology</td>
<td>Penn Valley</td>
<td>Yes. See page 86</td>
<td>High school diploma or GED certificate. Satisfactory placement test scores. Satisfactory HOETB test scores in general mental ability, spelling, natural sciences, judgment and vocational adjustment. Must be at least 17 years old when the program is completed.</td>
</tr>
<tr>
<td>Veterinary Technology</td>
<td>Maple Woods</td>
<td>Yes. See page 88</td>
<td>Application by March 15 for fall enrollment. Completion of BIOL 106.</td>
</tr>
</tbody>
</table>
### INTERNATIONAL STUDENTS

#### Application Procedure for International Students
To be considered for admission, all applicants must complete requirements listed below:

- **Submit a $50 application fee in U.S. dollars.** This is a nonrefundable fee that will be applied to your first semester’s tuition.
- **Submit a completed Application for Admission for International Students.** This form must be completely filled in and submitted by the prospective student.
- **Bank Statement and Affidavit of Support.**
- **Official School Transcripts** (translated to English).
- **Transfer Clearance Form.** If you are transferring from another U.S. school, you must also submit a Transfer Clearance Form. The International Student Advisor at the college you are now attending must fill it out.
- **English Placement Test.** It is the policy of the Metropolitan Community Colleges that all non-native speakers of English take the Applied Language Institute’s English Placement Test. This test is only offered at Penn Valley Community College. Students will be placed at the appropriate level of instruction in the Applied Language Institute based on the results of the English Placement Test. TOEFL is not required for admission.
- **Applied Language Institute.** The Applied Language Institute offers comprehensive English as a Second Language instructional programs for academic, personal or professional reasons. Grammar, composition, reading/vocabulary and speaking/listening classes are available at the beginning, intermediate and advanced levels. Day and evening sections are offered. Students wishing to attend ESL classes must take the placement test given by the institute. For more information about enrollment requirements, program curriculum and class scheduling, call (816) 759-4041.

#### Application Deadlines

**Students from Overseas**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>August 1</td>
</tr>
<tr>
<td></td>
<td>May 1</td>
</tr>
<tr>
<td>Summer Semester</td>
<td>August 1</td>
</tr>
<tr>
<td></td>
<td>May 15</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>January 2</td>
</tr>
<tr>
<td>Winter Semester</td>
<td>November 1</td>
</tr>
<tr>
<td>Winter Semester</td>
<td>January 2</td>
</tr>
<tr>
<td>Summer Semester</td>
<td>May 15</td>
</tr>
</tbody>
</table>

#### PLACEMENT TESTING
To help students succeed, most MCC students must take placement tests in reading, writing and mathematics. Visiting students who have enrollment approval from their home schools are exempt from this requirement. Otherwise, placement tests are required for the following groups of students:

1. All first-time students taking 6 hours or more.
2. Returning or transfer students taking 6 or more credit hours who have not successfully completed a college-level reading, English and math course with a grade of C or better.
3. Students whose native language is not English are strongly encouraged to take the CELSA test, which is given only at Penn Valley.
4. Students who have taken an ACT test within the last 2 years may use those scores in place of the writing and reading portions of the test. The math portion of the test will be required. Bring ACT scores to the Testing Center and we will evaluate them. Visiting students who have approval for enrollment from their home campuses will not be required to test.
5. All first-time students taking any math or English course.

- Based on their test scores, all students will be placed in the appropriate reading, English and mathematics classes. Students with low scores are required to take classes designed to boost their reading, writing or math skills.
- Students with disabilities who need testing accommodations must contact the Access Office before scheduling their tests.
- MCC’s required entry-level competencies for students have been set by the reading, English and math departments.

#### RESIDENT CLASSIFICATION
Student tuition and fees are determined by the following definitions and criteria.

#### Definitions

**Domicile.** A student establishes residency within a state with the intent of making it a permanent home for an indefinite period.

**Residency or Resident Status.** A student obtains this status after proving a residency has been established within a state.

**Adult Student.** This is a student who is 21 or older.

**Unemancipated Minor Student.** This is a student less than 21 years old who is still under the care, custody or support of parents or legal guardians.

**Emancipated Minor Student.** This is a student less than 21 years old who is not under the care, custody or support of parents or legal guardians.

**District.** The Metropolitan Community College District includes the following Missouri school districts: Belton, Blue Springs, Center, Fort Osage, Grandview, Hickman Mills, Independence, Kansas City, Lee’s Summit, North Kansas City, Park Hill and Raytown.

**District Resident.** This is a person who lives within the MCC District.

**Nondistrict Missouri Resident.** This is a person who lives in Missouri but not within the MCC District.

**Nonresident.** This is a person who lives in the United States but not in the state of Missouri.

**International Student.** This is a foreign national who is in the United States on an approved visa.

#### Resident Status

**Adult Student.** If a nonresident adult student provides sufficient proof of the establishment of a domicile within the district, then that student will be considered a district resident at the next enrollment.
HELP FOR SERVICE MEMBERS

MCC is a Servicemember Opportunity College (SOC), one of more than 1000 colleges and universities that provide advantages, including credit for military education, for military members and their families and veterans. Call (816) 759-4101 for more information.

In addition, for those who qualify, MCC provides a 100% tuition and textbook refund for students called into active duty or given military transfer orders and must withdraw from classes prior to completing the semester. Contact the campus registrar’s office for refund information.

DETERMINING RESIDENT STATUS

Students are responsible for proving their resident status.

Evidence of Eligibility
Attending an institution of higher education will be regarded only as temporary presence in the district or state of Missouri. Therefore, students do not gain or lose resident status by attending the Metropolitan Community Colleges.

Definitive Evidence
The following offers sufficient proof of domicile.
1. Presence within the district or the state of Missouri for a period of 12 months and sufficient proof of intent to make the district or state of Missouri a permanent home for an indefinite period.
2. Presence within the district or the state of Missouri for the purpose of retirement, full-time employment, professional practice or conducting business full-time.

Supporting Evidence
The following will be given significant weight, but will not conclusively prove establishment of domicile.
1. Continuous presence in the district or state of Missouri during those periods when a person is not enrolled as a student.
2. Marriage to a district or Missouri resident and living with that resident spouse.

3. Substantial reliance on sources from within the district or state of Missouri, particularly financial support.
4. Maintaining a former domicile within the district or state of Missouri, but being absent from that domicile.
5. Ownership of a home within the district or state of Missouri.

Other Evidence
Although the following factors indicate an intent to make the district or state of Missouri a permanent home for an indefinite period, they will be given less weight than those in the previous section. These factors will help determine status only in borderline cases.
1. Voter registration.
2. Part-time employment.

CERTIFYING RESIDENCY

Each student must pay fees and tuition to the Metropolitan Community College District based on his or her residence classification. If there’s any possibility the student may owe the district more in fees and tuition than what has been assessed, it’s the student’s responsibility to raise the issue during registration.

Certificate of Residency
If there’s a question concerning residency, the student will be required to complete a Certificate of Residency form during enrollment.

Penalty for Giving False Residency Information
A student who intentionally gives false or inaccurate information on a Certificate of Residency or who fails to inform the college of a change of address that alters his or her residence classification will face the following penalties:
1. The student may be expelled from the college.
2. The student’s academic records will not be certified to any agency until he or she has made up the difference between the tuition and fees already paid and the amount actually owed by someone of his or her resident classification.

If a nonresident adult student provides sufficient proof of the establishment of a domicile within the state of Missouri, then that student will be considered a nondistrict Missouri resident at the next enrollment.

Unemancipated Minor Student
MCC assumes that an unemancipated minor student lives with his or her parents or legal guardians. If the parents or legal guardians establish a domicile within the district, the student will be considered a district resident at the next enrollment.

Once an unemancipated minor student has established resident status under this rule, the student may continue to qualify for resident status as long as he or she is continuously enrolled at MCC (excluding summer terms). The student will retain this status even if his or her parents or legal guardians move outside of the district.

Emancipated Minor Students
The domicile of emancipated minor students will be determined as if they were adults. A minor may become emancipated through marriage, formal court action, abandonment or leaving the home of his or her parents or legal guardians. However, the mere absence of a student from the home of his or her parents or legal guardian does not prove emancipation. A minor will not be eligible for emancipation as long as he or she is taken as an income tax deduction by someone other than a spouse.

Members of the Military
Students will not gain or lose their resident status because of military service.

If a person on active military duty is stationed within the district before receiving military orders, that person, his or her spouse and unemancipated minor children will be considered district residents.

If a person on active military duty is stationed within Missouri but outside the district before receiving military orders, that person, his or her spouse and unemancipated minor children will be considered nondistrict Missouri residents.

If a member of the military is assigned under orders to attend a Missouri college or university as a full-time student, that person, his or her spouse and unemancipated minor children will be classified like nonmilitary personnel.
FINANCIAL INFORMATION

TUITION AND FEES

The schedule for tuition and fees is approved annually by the Metropolitan Community College’s board of trustees. For information on current tuition and fee charges, please call the cashier’s office at any of the locations listed below.

- Blue River: (816) 655-6020
- BTC: (816) 482-5610
- Longview: (816) 672-2020
- Maple Woods: (816) 437-3019
- Penn Valley: (816) 759-4020

Textbooks

Full-time students should expect to pay about $300 per semester for textbooks. All required books and lab manuals may be purchased at MCC’s bookstores.

Lab and Studio Fees

For some courses or programs — such as biology, chemistry, fine arts, and nursing — students may have to pay a laboratory or studio fee for each contact hour. Contact hours are those hours that students must spend in a lab or studio each week. They are not the same as credit hours.

District Residents 65 and Older

Any resident of the district who is 65 or older may attend classes on a space-available basis without paying tuition. Some classes require a lab or studio fee.

Loss or Damage to District Property

A student may be asked to reimburse the district for the loss of or damage to district property. For example, students must pay for unreturned library books. If payment is not made after a student receives written notice, the student will not be allowed to enroll in any MCC class, will not be allowed to check out any further property, and official college records, including transcripts and grades, will be withheld. Privileges will be reinstated once the debt is paid.

Returned Checks

Checks returned by the bank are deposited a second time. If a check is returned again, the student’s account is placed on restriction and charged the amount of the check plus a fee of $25. Students on restriction can’t enroll or receive grades or transcripts. They also lose check-writing privileges at all MCC campuses for one year.

Tuition Payment Plan

Stop by the campus cashier’s office for information on tuition payment plan options.

REFUND SCHEDULE

Student withdrawal prior to the first day of classes ................. 100% refund
Student withdrawal during the first 12.5% of the academic period ...... 50% refund
Student withdrawal during the second 12.5% of the academic period ................. 25% refund
Student withdrawal after 25% of the academic period ...... No refund

If students withdraw from one class and later decide to enroll in another, they will be charged full tuition and fees for the added class even though they didn’t receive a 100% refund for the dropped class. However, in most cases students may add and drop classes at the same time with no additional charge as long as the credit hours remain the same.

Since refunds for students receiving financial aid may be different, they should refer to the financial aid information booklet.

FINANCIAL AID

One goal of the Metropolitan Community Colleges is to make higher education available and affordable to all area residents regardless of their personal finances. MCC students can take advantage of a variety of grants, loans, scholarships and part-time employment programs to help pay for their education. The federal government and state of Missouri fund some of these programs, while others are supported by contributions made to the MCC Foundation Alumni Association by private citizens and civic organizations.

Students may pick up a financial aid booklet at any of the college’s financial aid offices. This booklet contains information about student aid programs, including eligibility requirements, how to apply and what expectations and responsibilities recipients must meet. For more information contact one of the following financial aid offices:
- Blue River, (816) 655-6066
- Longview, (816) 672-2066
- Maple Woods, (816) 437-3066
- Penn Valley, (816) 759-4066
- BTC, (816) 482-5210
Academic Information

Academic Evaluation

For each course taken for college credit, students earn grades that become part of their permanent records. The Metropolitan Community Colleges use the following grading system:

- **A** Superior performance.
- **B** Highly satisfactory performance.
- **C** Average performance.
- **D** Below average, but passing performance.
- **F** Unsatisfactory performance or failure.
- **W** Withdrawal from class. This grade is given to a student who has either withdrawn from class during the second or third quarter of the term or who has been doing satisfactory work and withdrawn during the last quarter of the term.
- **S** Average or better (C or above) performance for assigned work when a student chooses the satisfactory-unsatisfactory option.
- **U** Below average (D or F) performance for assigned work when a student chooses the satisfactory-unsatisfactory option. No credit or grade points are assigned.
- **P** Passing or better performance for assigned work completed in a continuing education or noncredit class.
- **I** Incomplete work. A student receives this grade when he or she has completed all but a small part of the required coursework. The instructor decides there’s an acceptable reason (for example, a serious illness) why he or she hasn’t completed all of it. If the student makes up the work during the following semester, the instructor will change the incomplete to a letter grade. If the work isn’t made up, the incomplete will become an F on the student’s permanent record.

Audit

A student may decide at the time of registration to attend a class but receive no credit for it.

Grade Reports

Final grade reports are normally mailed to each student’s address of record at the end of the semester. Grades also are available through Metro Touch, the district’s voice response system.

Audit

Students may elect to audit a course rather than receive a grade. Students must pay the regular fee, but are not expected to complete assignments or take tests. Class attendance is optional. To sign up for an audit, students must complete a form from the records office at time of enrollment.

Satisfactory-unsatisfactory Option

Each semester, students may select one course to receive either a satisfactory or unsatisfactory mark rather than a traditional letter grade. If they do average or better work (A, B, or C), they receive an S. They receive a U for less than average work (D or F). Students may only apply 15 credit hours of S marks toward a degree.

To sign up for the satisfactory-unsatisfactory option, students must fill out a form from the admissions office before the end of the first quarter of the term.

Scholarship Points

These are number values assigned to each letter grade that help determine a student’s grade point average.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Scholarship Points Per Credit Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>W (withdrawal)</td>
<td>0</td>
</tr>
<tr>
<td>S (satisfactory)</td>
<td>0</td>
</tr>
<tr>
<td>U (unsatisfactory)</td>
<td>0</td>
</tr>
<tr>
<td>P (passing)</td>
<td>0</td>
</tr>
<tr>
<td>Au (audit)</td>
<td>0</td>
</tr>
</tbody>
</table>

Grade Point Average (GPA)

To determine a student’s GPA, multiply the number of credit hours for each course by the number of scholarship points assigned to that grade. Add together the scholarship points from all classes and then divide that figure by the total number of credit hours attempted. When calculating GPA, do not include classes for which a student has received an S or W or when duplicate courses have been repeated.

Repeating Classes

Students may repeat a class as often as they wish to try to improve their grades. Although all the grades earned in a particular course will be included on their MCC academic record, only the last grade will be used to determine GPA. Other colleges and universities may have different policies.

Final Exams

Final exams are given in all MCC classes, and students must take them. Toward the end of each semester, the administration at each MCC campus puts together a final exam schedule for all faculty members and students.

Students who have done satisfactory course work but who miss the final exam may be allowed to make it up if the instructor believes the reason for missing the exam was reasonable. However, if a student misses the exam and has no reasonable explanation for missing it, the instructor may give the student an F.

Students who can’t take a final exam because of illness or another valid reason should take the following steps:

1. Notify the instructor as soon as possible and provide a reason for their absence so the instructor can give them a grade of I.
2. Make up the final exam as soon as possible to remove the grade of I.

HONORS

An honor student must be enrolled in six semester hours or more and have a semester grade point average of 3.5 or higher for all courses in which scholarship points were earned. Each campus also has its own special honors programs. For more information, contact the academic advisors or counselors at the appropriate MCC campus.
According to federal law, the only people who have access to student records are MCC faculty and staff members carrying out the business of the college. This includes those who maintain the student’s records, counsel the student or provide academic advice.

**ACADEMIC FORGIVENESS**

Academic forgiveness is available to those students whose prior record may not reasonably reflect the student’s current maturity with respect to motivation, attitude, and abilities, i.e., consisting primarily of D and F grades. The courses must have been taken at least seven years ago. Academic forgiveness will apply to all the credits attempted or completed during the requested period of enrollment. These courses will not be calculated in the MCC GPA, but they will still be transcripted. See the dean of instruction’s office on each campus for more information.

**TRANSCRIPTS**

The records office will provide transcripts of a student’s academic record after receiving a written request. Official copies of the transcript, which bear the MCC seal, will be sent directly to other colleges and universities. However, transcripts issued to a student will not have the college seal. MCC charges a fee for providing transcripts.

**CREDIT BY CERTIFICATION**

Credit for noncollege experience may be given to entering freshmen and other students who meet certain certification guidelines. However, only experiences that relate specifically to a program offered by MCC will be eligible for certification credit.

**CREDIT BY EXAMINATION**

Entering freshmen and other students may be given credit in certain subjects by passing examinations. Only 30 semester hours of credit may be earned this way.
ATTENDANCE

The college expects students to attend every meeting of every course they’re enrolled in. If attendance is a problem, MCC may dismiss a student from class for the following reasons:

1. If a student has been absent for two consecutive weeks or the equivalent time period during a shorter term.
2. If the student has missed one-third of sessions scheduled for the class that semester.

In some cases, due to the subject matter of the course, an instructor may enforce an even stricter attendance policy. However, if a student has a valid reason for being absent, he or she should consult with the instructor who may grant the student permission to make up the work.

DROPPING A COURSE

Students may drop classes at any time throughout the semester; however, they must officially withdraw from courses by submitting a drop form to the records office. If a student officially withdraws from a class during the first three-fourths of the term, he or she will receive an F. Students who withdraw during the final quarter of the term will receive a W.

Students who withdraw during the final quarter of the term will receive a W. If a student has been absent for two consecutive weeks or the equivalent time period during a shorter term, he or she will receive a W.

The completed form should be returned to the admissions/records office as soon as possible because the date the form is processed becomes the official date of withdrawal on a student’s permanent record. That date may determine the student’s semester grades. For example, if a student withdraws from a class during the last quarter of the semester and he or she is doing unsatisfactory work, then the recorded grade will be an F.

Students who receive federal or state financial aid may be asked to repay money if they have withdrawn from all of their courses.

**If You Stop Attending Class**

Students are responsible for withdrawing from classes they stop attending. A student who fails to officially withdraw might receive an F for the class.

STUDENT LOAD

A full load is carrying at least 12 credit hours during the fall and spring semesters and at least six hours during the summer term. However, if students want to complete 62 credit hours and earn an Associate degree in four semesters, they must take 15 or 16 hours each semester. For some programs requiring more than 62 credit hours, students may need to take 18 hours each semester.

Students with unsatisfactory academic records may be limited to taking less than a full load. However, students with superior records may receive permission to carry more than 18 hours.

STUDENT CONDUCT

The Metropolitan Community Colleges expect students to conduct themselves in a manner appropriate for an educational setting. This includes complying with federal, state and municipal laws prohibiting certain activities in general and others that pertain to public school property and college-sponsored functions. Among these prohibited activities are civil disobedience, immoral conduct, libel, forgery, gambling, theft, vandalism, and the use and sale of alcoholic beverages and narcotics. Students who act inappropriately or who show disruptive behavior may be disciplined by MCC as well as face criminal charges.

In addition to demonstrating honesty and integrity, students are expected to comply with all policies, regulations and procedures of the Metropolitan Community Colleges. They should follow the college traffic code and the directions of all college representatives acting in an official capacity.

For more complete information about the Student Code of Conduct, please consult PRP7.35010 in the Metropolitan Community College manual of Policies, Regulations, and Procedures, which is available in the library, or from the office of the dean of student development.

STUDENT DISCIPLINARY PROCEDURE

A student who is charged with misconduct, which requires disciplinary action, may request a hearing by the student conduct committee. This request is made through the dean of student services. The committee will determine if the misconduct charge is justified and if disciplinary action is appropriate. The committee also may recommend to the college president how the student should be disciplined.

STUDENT GRIEVANCES

According to MCC regulations and procedures, a student who has complaints about a course should first talk with the instructor or instructors involved. If the issue cannot be resolved, then the student should go to the appropriate department chairperson. If the student is still not satisfied, then he or she should discuss the situation with the dean of instructional services. If the problem persists at this level, then the dean of instructional services will appoint a faculty committee to resolve the issue.

Students who have complaints about things outside the classroom should see the dean of student services.
STUDENT SERVICES

ACADEMIC ADVISING

Academic advisors are available to assist students with selecting classes and creating schedules each semester or term as needed. Advisors are familiar with and help students access MCC programs and services. They are also familiar with the academic programs and transfer requirements of the colleges and universities to which MCC students transfer. They are therefore able to provide valuable assistance to students throughout their stay at MCC.

For those interested in transferring, the counseling or development center has large catalog collections from four-year colleges and universities as well as information about requirements needed for specific programs at other area institutions.

EMPLOYMENT RESOURCES

Employment resources offers assistance with job-seeking skills and identifying employment on and off campus.

The employment resources’ Internet-based job bank, Project HIRE (Helping Industry Recruit Employees), is a job resource for the Kansas City regional area. See www.ProjectHIRE.net.

Additional services include: on-campus employment (student regular and federal work-study), on-campus recruiting, career fairs, résumé writing assistance, growing occupations, and job resource materials.

COUNSELING

MCC’s professional counselors are available to assist students with their career, educational, and personal concerns. Students may schedule individual conferences with counselors.

As part of the enrollment process at MCC, students can talk with a counselor who will help them select a program of study that best fits their interests, values and career goals. Then, throughout their stay at MCC, the college encourages them to meet regularly with their counselors or advisors to further discuss their educational progress and future plans. Inventories that help students assess their skills, interests, values and personality style for career planning purposes are available through the counseling or development center.

SUPPORT SERVICES

Child Care Centers

So parents with small children can attend classes, MCC provides child care centers at the following sites: Longview, Maple Woods and Penn Valley. Educational programs are also available for children age two-and-a-half to five. For more information, call the centers:

Longview, (816) 672-2140
Maple Woods, (816) 468-8780
Penn Valley, (816) 759-4140

Every full-time staff person at the child care centers is trained in early childhood education. Penn Valley offers its own program in Child Growth and Development. Call (816) 759-4440 to learn more about the program.

Parking

Students can obtain free parking stickers at the following campus locations:

Blue River, information desk
Longview, public safety office
Maple Woods, public safety office
Penn Valley, public safety office

Textbooks and College Bookstores

Full-time students should expect to pay about $300 for books each semester.

MCC owns and operates each campus bookstore according to guidelines set by the administration and approved by the chancellor and board of trustees. Book prices are set by the publishers, and MCC, like all colleges, uses a standard markup over the cost of each book. For textbooks, MCC bookstores mark up prices 25%. Trade books, whose prices typically appear on their covers, are marked up by 35 to 40%.

At the end of each semester or term, the MCC bookstores buy back used textbooks from students for about 50% of the new book prices. These used textbooks will be made available at reduced prices to students who need them for the following term.
College Libraries

Each of the Metropolitan Community Colleges has an extensive collection of library books for class work, research, and pleasure reading. In addition to books and periodicals, the libraries feature Internet access, microfilm, video and audio. Remote access to electronic databases is available to students.

Students attending one campus can use materials from any of the other MCC libraries. Borrowing procedures are similar on all campuses. Reciprocal borrowing cards are available for use at other institutions.

MCC libraries (Blue River, Longview, Maple Woods and Penn Valley) belong to the Missouri Bibliographic Information User System (MOBIUS), a consortium of over 50 academic Missouri libraries. In addition to the 169,647 items owned by the MCC libraries, library users will have access to over 15 million items owned by other libraries in the MOBIUS system.

The MOBIUS consortium has a rapid statewide deliver system for interlibrary loan materials. MCC libraries belong to the WIL (Western Inter Library Organization) cluster. Other members of the cluster are Avila, Rockhurst, Midwestern Baptist Theological Seminary, St. Paul School of Theology, and William Jewell.

More information is available at the library website, which is located at http://www.kcmetro.edu/lib.

Computer Lab Services

All MCC campuses provide computer labs for student use — including Internet access — although some are restricted to specific programs such as math and science. Check with each campus for more information about hours of operation and available services.

E-mail Access

All MCC students taking classes for credit may obtain an e-mail address and have access to e-mail messages. This allows them to electronically communicate with instructors, other students, MCC’s many student service providers and anyone anywhere in the world.

Disability Services

Each MCC campus has an Access Office that provides assistance for any student with documented physical, learning, psychiatric, brain injury, or other disabilities at no cost above tuition/fees. Arrangements can be made for aids and adjustments to help ensure equal access to programs and services. Please apply as early as possible so that accommodations can be arranged in a timely manner. For more information, or to make an appointment, call:

Blue River
Blue Springs, (816) 655-6077
Independence, (816) 220-6520

Longview, (816) 672-2254
Maple Woods, (816) 437-3192
Penn Valley, (816) 759-4089

For TTY users, please call through Relay Missouri at 711- or 800-735-2966.

For more information visit the MCC website at: www.kcmetro.edu/access.html

ABLE Program. The ABLE program (Academic Bridges to Learning Effectiveness), offered at Longview and Penn Valley, provides a more intensive level of services for students with learning disabilities or brain injuries to help them make the transition to a traditional college or the workplace. A learning disabilities specialist works individually with each student to design a program that fits his or her needs. The student also takes special courses to learn basic skills, communication skills, and college survival strategies.

By providing a structured curriculum, as well as extra counseling and academic support, the ABLE program gives students a solid foundation for success. Additional fees are charged for students opting to enroll in this program. For information about ABLE, call Longview at (816) 672-2366 or Penn Valley at (816) 759-4717. Visit the ABLE website at www.kcmetro.edu/programs/able.html.

Learning Assistance Centers

Each campus has a learning assistance center or teaching/learning center where students can receive individualized or small-group tutoring for many of their courses. Daily labs are scheduled to provide help with writing, math and accounting either on a walk-in basis or by appointment. Math study groups and computer-assisted instruction are also available.

Other noncredit services are offered to help students improve their study skills. These include listening and note-taking, reducing test anxiety, test-taking strategies and research paper pointers. All of these services are provided free to currently enrolled students.

Reading Study Centers

Reading study centers also offer MCC students services such as diagnostic testing, tutoring and special classes. These reading classes range from basic skill building in word recognition and spelling to advanced levels of critical and speed reading. Individualized programs can be designed to fit students’ special needs. For more information about MCC’s reading study centers, call the following campuses:

Blue River, (816) 655-6139
Longview, (816) 672-2665
Maple Woods, (816) 437-3197

Reentry Programs

For adults who have been away from school for several years, MCC has special reentry programs to make the transition from working or homemaking back to the classroom as easy as possible. Reentry students receive individualized attention from counselors and advisors and referrals to special MCC services. For instance, the Reentry Center at Longview provides a place to connect with other adult students, have a hot beverage, and get answers to questions from the Reentry staff. Longview and Blue River also offer a four-credit section of ENGL 101 designed to make the transition to college easier by teaching composition as well as college success skills. At all campuses, a counselor oversees a special tuition and child care grant program for single parents and displaced homemakers.

To find out more about these programs, call the campuses at the following numbers:

Blue River, (816) 655-6077
Longview, (816) 672-2237
Maple Woods, (816) 437-3095
Penn Valley, (816) 759-4089
BTC, (816) 482-5210

Project Success

The Student Support Services program (SSS) at Penn Valley is one of the Federal TRIO programs funded through the U.S. Department of Education. SSS is appropriately called Project Success on the Penn Valley campus. Project Success is designed to ensure the success of
250 low-income, first generation college students and persons with a documented disability each academic year by providing:

- academic tutoring that supplements the classroom experience,
- transfer coordination to expose the participants to the opportunities that await them at four-year colleges and universities,
- personal counseling to assist with managing the daily stress that can interfere with academic progress, and
- cultural enrichment to extend the social dimensions of the participants served.

These expanded services increase the likelihood of success. Call the Project Success office, 759-4313, to schedule an appointment or visit its web site: kcmetro.edu/pennvalley/success.

**STUDENT ACTIVITIES**

All MCC campuses sponsor activities that include student body organizations, special interest clubs, student publications, and athletics. The campuses also have coordinating boards for campus activities that plan and implement activities as well as work to promote a mutual understanding with students, faculty, staff, and administration and represent the student body. At Longview, this organization is the Student Government. At Maple Woods and Blue River, the coordinating board is the Student Activities Council, and Penn Valley offers a Student Advisory Council.

Each campus also supports a chapter of Phi Theta Kappa (a national two-year college honor society) and a student newspaper. Longview offers an intercollegiate debate and forensics team, which is open to all MCC students. At Longview, Blue River and Penn Valley, students also produce their own fine arts publications.

**ATHLETICS**

MCC offers students the chance to participate in intramural sports and recreational sports. In addition, three campuses are involved in intercollegiate athletics. As members of the Region XVI National Junior College Athletic Association (NJCAA), Longview and Maple Woods field baseball teams. Longview also competes in volleyball and cross country for women, while Maple Woods offers women’s softball. Penn Valley, which is a member of the Greater Kansas City Community College Conference, has men’s and women’s basketball teams.

**FITNESS CENTERS**

Each MCC campus has a fitness center or access to one near by. Students pay a small fee to use the centers each term. All feature excellent equipment, locker rooms, towel service, fitness coordinators and a variety of fitness, aerobics and wellness classes. In addition, the Longview recreational center includes a huge swimming pool. Since each campus has its own use and operating procedures, please call the following numbers for more information.

- Blue River, (816) 655-6050
- Longview, (816) 672-2400
- Maple Woods, (816) 437-3555
- Penn Valley, (816) 759-4222

**KANSAS CITY AREA STUDENT EXCHANGE**

If MCC doesn’t offer a course a full-time student (one enrolled in at least 12 credit hours) wants to take, then he or she may enroll in that course at another area college without paying additional fees. The following area colleges belong to the Kansas City Area Student Exchange (KCASE): Avila College, Kansas City, Mo.; Baker University, Baldwin, Kan.; Central Missouri State University, Warrensburg, Mo.; Kansas City Art Institute, Kansas City, Mo.; Park College, Parkville, Mo.; Rockhurst University, Kansas City, Mo.; and the University of Missouri-Kansas City, Mo. Contact the admissions and records office at any of the MCC campuses for more information.

**EDUCATIONAL OPPORTUNITIES CENTER (EOC)**

The Educational Opportunity Center (EOC) provides prospective college students with the following services: career counseling, assistance in selecting a college, assistance in completing college application forms, information about financial aid and assistance in completing financial aid application forms. Students already enrolled in college may take advantage of the counseling services.

The EOC is funded by the U.S. Office of Education. Although it’s intended to be used primarily by low-income students, EOC services are available to all MCC students. The center is located at 3100 Main, Suite 100, Kansas City, Mo. 64111. For more information about EOC, call (816) 759-4400.

**ALUMNI ASSOCIATION**

Since its forerunner’s founding in 1915, MCC has touched the lives of more than 600,000 students. MCC’s Foundation Alumni Association allows former students to maintain a link with their alma mater. The Foundation-Alumni Association sponsors programs and activities that strengthen the colleges’ ties to the community and enhance MCC’s reputation as a place for lifelong learning. Among the activities are networking opportunities and social events.

All former MCC students are invited to participate. Alumni are encouraged to contribute to the MCC annual fundraising campaign. These contributions allow the alumni association to provide scholarships and books for students and assist faculty, programs, awards, and visiting artists. Call the MCC Foundation-Alumni Association at (816) 759-1195 for more information.
Although the Metropolitan Community College (MCC) District was established in 1964, its roots originate with the Junior College Division of the Kansas City Polytechnic Institute, which was founded in 1915. Just four years later, this division and the Business Training, Engineering and Nurses Training divisions were combined to become the Junior College of Kansas City. It earned the distinction of being the first two-year college in the United States to award the associate degree.

By 1921, the Junior College added evening classes. As enrollment continued to increase over the next two decades, the Junior College outgrew its first downtown location at 11th and Locust Streets and moved to 3845 McGee. Following World War II, the college expanded its academic offerings to include various kinds of occupational training. It also began attracting more and more students from outlying communities beyond Kansas City, Mo.

From its inception and until 1964, the college was part of the Kansas City School District. Then in May 1964, the voters of suburban school districts — Belton, Center, Grandview, Hickman Mills, Lee’s Summit, North Kansas City and Raytown — joined with the citizens of the Kansas City School District to create the Metropolitan Community College District.

Just five years after formation of the MCC District, Longview, Maple Woods and Penn Valley opened to replace the single institution known as the Metropolitan Junior College. During both the 1980s and ’90s, MCC continued its phenomenal growth with the Blue Springs, Fort Osage, Independence and Park Hill School Districts all voting to join the district.

A Blue Spring campus was established in 1984 and an Independence campus in 1995. In 1997, these campuses became Blue River Community College. MCC’s business services and technical training facility, the Business & Technology Center, opened in 1995. After several expansions, it became the Business & Technology College in 2001.

**PHILOSOPHY**

The five Metropolitan Community Colleges are dedicated to serving the educational needs of the community. The college programs are intended to help students understand themselves, the society of which they are a part and the universe in which they live.

At the same time, the colleges provide opportunities for students to develop occupational skills. Faculty and administrators cooperate to create an environment that stimulates intellectual growth and nurtures academic freedom for students and instructors alike. The programs offered are intended to encourage lifelong learning.

Finally, the MCC employees are committed to providing equal opportunity for all persons regardless of age, creed, race or gender.

**MCC MISSION**

The Metropolitan Community Colleges, as comprehensive postsecondary institutions, provide access to affordable, responsive, quality education and training opportunities in a supportive and caring environment that values diverse constituencies and enables individuals to successfully pursue lifelong educational and career goals.

In order to accomplish this mission, the board of trustees has empowered the chancellor, as executive officer, to implement its policies. The chancellor, with the other officers of the District, will provide leadership in the implementation of the mission and goals of the District.

The following purpose statements declare how the MCC will carry out the mission of the District:

**Purpose Statements**

In pursuit of MCC’s mission, the District will:

- Offer a broad range of educational and training opportunities including developmental, general education, transfer, occupational, and continuing and community education through District colleges and in affiliation with other educational institutions.

- Provide and promote access to and accommodations in District programs to all qualified individuals, including those with disabilities.

- Enhance the learning environment through a variety of delivery systems.

- Guide student learning through the pre-enrollment assessment of basic skills and mandatory placement in appropriate courses.
• Provide indicators of individual academic growth through general education assessments.
• Demonstrate the effectiveness of instruction through the assessment of course, program and degree outcomes.
• Support activities which enhance student learning outside the classroom including community service, cocurricular, extracurricular, and cultural experiences and opportunities.
• Support student development through services designed to facilitate the achievement of academic, career and personal goals.
• Provide opportunities for community participation in social, cultural, and intellectual activities of the colleges.
• Demonstrate awareness and appreciation of diversity within and outside the college community.
• Develop and maintain articulation agreements which facilitate efficient transfer.
• Respond to requests for out-of-district educational services when they are compatible with the mission and resources of the District and consistent with the guidelines of the Coordinating Board for Higher Education.
• Foster collaborative efforts with community-based organizations, agencies, businesses and industries, and other educational institutions.
• Base decisions on a planning system that is responsive to technical, demographic, economic and employment data.
• Support and coordinate centralized services for all units through the Administrative Center.

EDUCATIONAL SERVICES

To meet the various needs of its community and students, MCC provides a number of educational programs.

Transfer Programs

Liberal arts and sciences courses and programs at MCC are often identical to those offered in the first two years at four-year colleges and universities. Many students choose to get their Associate in Arts, Computer Science, Engineering, or Science degrees at MCC before transferring to another school for their junior and senior years. In fact, MCC has developed transfer and articulation agreements with a number of nearby colleges and universities. This insures that credits earned at MCC will be accepted at these other schools.

Academic advisors and counselors are always available to discuss these transfer options, which can lead to four-year degrees in the following areas: anthropology, art, biology, business administration, chemistry, computer science, criminal justice, economics, education, engineering, English, foreign language, geography, geology, history, human services, journalism, law, mathematics, music, pharmacy, philosophy, physical education, physics, political science, psychology, social science, social work, sociology, speech and theater arts.

Occupational Programs

MCC offers more than 70 occupational programs that prepare students for immediate employment or career advancement in order to succeed in some of today’s exciting, fast-paced professions.

MCC confers an associate in applied science degree in many technical areas ranging from general business and veterinary science to electronics and manufacturing technology. Although not originally designed for transfer, MCC has several articulation agreements built upon the A.A.S. degree, including general business, drafting, electronics technology, construction management, automotive management and merchandising, human services, and others.

Students should be particularly careful to select appropriate courses to meet both A.A.S degree requirements at MCC and bachelor’s degree requirements at a four-year college or university. Students need to discuss their plans with an academic advisor.

Other programs of one year or less lead to a certificate of proficiency. All courses are taught by experienced instructors who keep up with current trends and developments in their respective fields of expertise.

Here’s a sampling of these programs: business and administrative assistant, health services, mechanical and engineering technologies, computer support and telecommunications technician, electronics, fire science, hospitality management, travel and tourism, paralegal, manufacturing technology, and child growth and development.

Basic Skills Courses

MCC students take placement tests in English, reading and mathematics. These results help them select the best courses to meet their academic needs. For those who need extra help, each MCC campus offers basic skill courses, as well as other special classes that focus on spelling, critical thinking skills and college success skills, such as note-taking, studying, goal-setting and time management. Students also can take advantage of one-on-one assistance at each campus’ teaching/learning center.

Employee Training

Many Kansas City-area businesses and organizations also look to MCC for specialized, efficient and cost-effective training and skill assessments for their employees. This training may come in the form of a short seminar, single class or an entire program of classes. These can be taught during regular work hours, lunch breaks or after work, either on-site at a business or organization or at the Business & Technology College (BTC), located at Interstate 435 and Front Street in Kansas City. BTC instructors and consultants are experts in their fields who feel comfortable working with adults at all skill levels.

Some of the training programs available through the BTC include ISO 9000, electronics, manufacturing technology, industrial technology, environmental health and safety, welding, AutoCAD and customer service, among others. The BTC also offers classes in workforce skills such as reading, writing, math, communications, computers, supervision, teamwork and negotiations.

In some cases, employees earn college credit or Continuing Education Units (CEUs) for their time spent in training. CEUs are recorded and student transcripts can be provided. Students who have met minimum course requirements also may request Certificates of Completion for their course work.

During the past few years, the BTC has helped hundreds of businesses give their employees the level of skills needed to assure continued success. For more information about the services available at the BTC, call (816) 482-5210.
Community Education Courses

MCC also offers cultural and general interest classes to area adults, as well as courses to help them update their occupational skills or retrain for new careers. Although these don’t qualify for college credit, some do earn Continuing Education Units (CEUs).

Courses cover topics such as arts and crafts, business, career enhancement, computer training, domestic skills and self-improvement, hobbies, legal or financial information, and recreation and sports.

College for Kids, another MCC offering, is just what the name implies: a variety of hands-on classes specially designed for children ages five and up. Some examples of the courses offered include the Business of Babysitting, Creative Writing, Digging for Dinosaurs, Modeling, Science Good Enough to Eat, Travel the Internet and Tae Kwon Do, among others.

For more information about any of these programs, call these numbers:
- Blue River, (816) 220-6585
- Longview, (816) 672-2030
- Maple Woods, (816) 437-3011

Cancellation of Classes

The colleges may find it necessary to cancel classes because of insufficient enrollment or other circumstances. Whenever possible, a section will be cancelled before the first meeting and enrolled students will be notified. If a suitable alternate course isn’t available, students will receive a complete refund of tuition and fees for the canceled courses.

Schedule of Classes

At MCC, the academic year is divided into two 16-week semesters—one beginning in August and the other in January. An eight-week summer session starts in June. Some courses of different lengths begin at various times during the year.

Day-time classes are scheduled five days a week, usually between 8 a.m. and 4 p.m. Evening classes are offered between 4:30 and 10 p.m. Monday through Thursday and occasionally on Friday. Some Saturday classes may be available.

Americans with Disabilities Act

The Metropolitan Community Colleges complies with the Americans with Disabilities Act and does not discriminate in admission or access to its programs on the basis of disabilities. If you need any accommodations due to a disability, contact the access professional at Blue Springs, (816) 655-6077 or 1-800-735-2966 (TT relay); Independence, (816) 220-6520 or 1-800-735-2966 (TT relay); Longview, (816) 672-2254 or (816) 672-2114 (TT relay); Maple Woods, (816) 437-3192 or 1-800-735-2966 (TT relay); Penn Valley, (816) 759-4089 or 1-800-735-2966 (TT relay).

Any other location, contact (816) 759-1164 or 1-800-735-2966 (TT relay).

Sexual Harassment

The Metropolitan Community Colleges strongly believe that the classroom and workplace should be free of sexual harassment, including unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct or communication of a sexual nature. Sexual harassment will not be tolerated either in the classroom or in the workplace. Sexual harassment is prohibited by Federal and State law as well as Board of Trustee Policy. Anyone found to be in violation of such laws or policy will be subject to serious disciplinary action, including expulsion and termination. If you have questions or believe that you have been subjected to sexual harassment, you should refer to the statement on sexual harassment which is distributed to all students, or contact the college counseling department or the college president’s office.

Family Educational Rights and Privacy Act

In accordance with the Family Educational Rights and Privacy Act of 1974, only directory information about students or former students may be disclosed to any person or agency without the written permission of the student. At the request of the student, even directory information will be withheld. Upon written request the student may inspect information in her or his official file and will be given the opportunity to challenge any information which he or she considers inaccurate.

COMPLIANCE WITH FEDERAL LAWS AND REGULATIONS

Certification of Accuracy

I certify that the statements in this catalog are a true and accurate representation of the policies of the Metropolitan Community Colleges.

Wayne E. Giles
Chancellor

Nondiscrimination

The Metropolitan Community College District is committed to a policy of nondiscrimination on the basis of age, color, creed, disability, marital or parental status, national origin, race, religion, or gender in admissions, educational programs or activities, and employment, as specified by federal laws Title VI; Title VII; Title IX, section 504; the Americans with Disabilities Act; and state laws and regulations.

Inquiries may be addressed to the following persons:

MCC District:
- Allan Tunis, 3200 Broadway, Kansas City, Missouri 64111-2429; telephone (816) 759-1000
- Blue River Community College:
  - Jon Burke, 1501 W. Jefferson St., Blue Springs, Missouri 64015-7242; telephone (816) 655-6118
- Longview Community College:
  - Janet Cline, 500 SW Longview Road, Lee’s Summit, Missouri 64081-2105, telephone (816) 672-2326
- Maple Woods Community College:
  - Marilyn Donatello, 2601 NE Barry Road, Kansas City, Missouri 64156-1299; telephone (816) 437-3175
- Penn Valley Community College:
  - Lisa Minis, 3201 Southwest Trafﬁckway, Kansas City, Missouri 64111-2764; telephone (816) 759-4114
- Business & Technology College:
  - Gene Schieber, 7775 Universal, Kansas City, Missouri 64120-2427; telephone (816) 482-5612

or to the Assistant Secretary for Civil Rights, U.S. Department of Education, 330 C Street, Washington, D.C. 20202; telephone 1-800-421-3481.
College rules concerning the confidentiality of student records are available on request from the admissions/records office.

Nonimmigrant Alien Students
The Metropolitan Community Colleges are authorized under Federal law to enroll nonimmigrant alien students.

Drug Free Schools and Communities Act
The Metropolitan Community Colleges subscribe to the Drug Free Schools and Communities Act. Board Policy expressly forbids the possession, use and/or distribution on college premises of alcohol, illegal drugs and all other controlled substances. The Metropolitan Community Colleges will distribute annually to all students and employees information about its drug prevention program, including information relative to college sanctions for violation of the Board Policy, legal sanctions, health risks and drug and alcohol counseling, treatment and/or rehabilitation programs.

Right to Know
The Metropolitan Community Colleges comply with the provisions of the Crime Awareness and Campus Security Act of 1990. This act requires the district to collect, prepare, publish and distribute to all current and prospective students and employees, campus crime statistics and security policies. This information is published on an annual basis in the Student Right to Know and Compliance Report, and is available through the MCC web site at www.kcmetro.edu/crimereport.html. Printed copies of the report are available at the campuses through the public safety office and dean of students offices or by calling (816) 759-1070.

Other Information
Other information which must, according to Federal laws and regulations, be included in the catalog may be found on the pages indicated.

You may request information from one of the offices listed below:

College Relations Coordinator
Blue River Community College
Telephone (816) 220-6546
20301 East 78 Highway
Independence, MO 64057

College Relations Coordinator
Longview Community College
Telephone (816) 672-2362
500 Longview Road
Lee's Summit, MO 64081-2105

College Relations Coordinator
Maple Woods Community College
Telephone (816) 437-3167
2601 NE Barry Road
Kansas City, MO 64156-1299

College Relations Coordinator
Penn Valley Community College
Telephone (816) 759-4320
3201 Southwest Trafficway
Kansas City, MO 64111-2764

College Relations Coordinator
Business & Technology College:
Telephone (816) 482-5612.
7775 Universal
Kansas City, MO 64120-2427

DEFINITIONS OF ACADEMIC TERMS

ACADEMIC ADVISING. Counselors and advisors assist students in selecting programs of study and courses to meet their program requirements.

ACADEMIC YEAR. This includes the summer session of classes that begins in June and ends in July, the first or fall semester that begins in August and ends in December and the second or spring semester that begins in January and ends in May.

ACCREDITATION. An educational institution or program must maintain certain standards that qualify its graduates for admission to higher institutions or to professional practice. The Metropolitan Community College District is accredited by the North Central Association of Colleges and Schools. Various programs in the District are accredited by specialized accrediting agencies. (See page 25.)

ADVANCED STANDING. MCC may grant credit hours to students who have completed acceptable courses at another college or university. These credit hours may be applied toward a degree program.

ARTICULATION AGREEMENTS. These are formal and informal agreements and/or transfer guides that allow students to smoothly transfer course credits from one school to other, including from high school to college and from college to college. A complete list of these agreements is available in each MCC counseling center. Please work with your counselor/advisor to determine degree plans.

ASSOCIATE’S DEGREE. A student who successfully completes a course of study that requires at least 62 credit hours, approximately half of the credits required in a bachelor’s degree program at a four-year college or university, is awarded an associate’s degree.

AUDITING A COURSE. This means enrolling in a course for no credit and no letter grade. (“Au” appears on grade reports.) Students who audit courses must pay the regular fee, but they are not expected to complete assignments or take tests. Class attendance is optional. Ordinarily students will not be permitted to audit the laboratory section of a course or classes that are primarily spent in the laboratory.

BACHELOR’S DEGREE. This is the title awarded by a college or university to a student who completes a course of study that typically lasts at least four years and requires at least 124 credit hours.

BOARD POLICY. The Board of Trustees of the Metropolitan Community College District establish principles that direct the operation of the District in certain subject areas. (See sections on College Procedure, District Regulation and District Procedure.)

CATALOG NUMBER. Each course offered by MCC is identified by four letters and three numbers. For example, PSYC 140 is Psychology 140 General Psychology.

CERTIFICATE PROGRAM. Students enroll in an integrated series of courses to study a specific occupation. A one-year, full-time program usually includes 30 to 40 credit hours of classes and results in the awarding of a diploma known as a certificate of proficiency. However, some certificate programs include only 15 to 20 credit hours and result in the awarding of a certificate of completion.
COLLEGE PROCEDURE. This is a written statement, approved by the MCC chancellor and college president, that outlines the systematic steps each college will take to carry out Board policies, District regulations and District procedures. (See sections on Board Policy, District Regulation and District Procedure.)

COLLOQUIA. While under the guidance of an instructor, a student or group of students study a topic or problem in a specific academic area.

COMMENCEMENT. An annual ceremony that recognizes the previous year’s candidates for graduation.

CONFERENCE HOURS. These are announced times set aside by each college instructor for meeting with students, either by appointment or on a drop-in basis.

CONTACT HOUR. This is a 50-minute period of educational, course-related activity, whether it’s held in a classroom, laboratory, playing field, studio or other setting.

CONTINUING EDUCATION. These are both credit and noncredit courses, seminars, workshops and other educational activities offered by MCC that traditionally target adults.

CONTINUING EDUCATION UNIT (CEU). Typically, a CEU is awarded for each 10 contact hours of noncredit continuing education course work. This nationally recognized measure of educational achievement is recorded by the National Registry of Continuing Education, which makes transcripts available to students completing these courses.

COREQUISITE. This is a course that must be taken during the same term or semester as another course.

COUNSELING. This professional service helps students get a better understanding of their personal potential as well as their problems by using modern psychological principles.

COURSE. An instructor leads a planned series of educational experiences focused on a particular subject. These may take the form of lectures, discussions, recitations, laboratory exercises and studio activities.

COURSE DESCRIPTION. These are written statements explaining the subject matter to be covered during a particular course.

CREDIT. The college recognizes that a student has fulfilled a requirement leading to a degree or certificate.

CREDIT BY CERTIFICATION. This is credit awarded to a student for knowledge obtained from an accepted noncollege experience. These certification recommendations are governed by national education groups such as the American Council on Education and Armed Forces Guidelines.

CREDIT COURSE. This course is part of a program leading to a degree or certificate. Students who successfully complete it receive a stated number of credits.

CREDIT HOUR. This is the standard measuring unit for college work that leads to a degree or certificate. Usually a credit hour represents 750 minutes of lecture time or 1,500 minutes of laboratory activity or perhaps a longer time period for other kinds of educational experiences.

CREDIT BY EXAMINATION. In some cases, students may receive credit by scoring well on an examination that measures their knowledge of a particular subject without taking a college course. The exam may be a standardized test prepared by a national organization or one created and given by a college instructor. Students will pay a fee for taking the latter test.

CURRICULUM. When completed, this series of required and elective courses entitle a student to a degree or certificate. This is also known as a program of study.

DEGREE. This is a title given to a student by a college or university after successful completion of a prescribed course of study. Community colleges traditionally award the associate’s degree at the end of a program requiring a minimum of 62 credit hours, while four-year schools award the bachelor’s degree for programs requiring at least 124 credit hours. Master’s and doctor’s degrees are awarded for study beyond the level of bachelor’s degree. (For information about degrees offered by MCC, see pages 26 and 34.)

DIRECTORY INFORMATION. This includes the following student information: name, address, telephone number, date and place of birth, major field of study, college activities or sports involvement, height and weight of a student athlete, degrees and honors received, dates attended current college and the name of the previous school attended. According to Public Law 93-380, the Family Education Rights and Privacy Act of 1974, directory information is the only data that a college is permitted to release without a student’s written consent. At the request of a student, the college will withhold directory information as well.

DISCIPLINE. This is a subject or field of study in which courses are taught, such as art, automotive technology, engineering, English or nursing.

DISTANCE EDUCATION. MCC provides alternative course delivery for students whose schedule or location make it difficult to take courses or complete a degree. MCC offers live interactive telecourses on the local cable channels, closed circuit courses between the colleges in the metropolitan area, and a wide range of courses via the World Wide Web. For more information on distance education opportunities, visit our web site at http://distance.kcmetro.edu or call (816) 759-4490.

DISTRICT PROCEDURE. This is a written statement, approved by the MCC chancellor, that outlines the systematic steps the District will take to carry out Board policies or District regulations.

DISTRICT RESIDENT. This is a person who lives within the boundaries of the Metropolitan Community College District, which includes the following Missouri school districts: Belton, Blue Springs, Center, Fort Osage, Grandview, Hickman Mills, Independence, Kansas City, Lee’s Summit, North Kansas City, Park Hill and Raytown.

DUAL CREDIT. High school students enrolled in college-level courses receive both high school and college credit for completing these courses.

ELECTIVE. This course is not specifically required for a degree or certificate program; however, it is counted toward the total credit hours needed for graduation.

EMPLOYMENT COORDINATORS. Assist students and community members in all aspects of job acquisition.

FACULTY. The teachers, counselors and librarians comprise the faculty of a college.

FEDERAL WORK-STUDY PROGRAM. This is a federal financial-aid program that allows enrolled students who need financial assistance to earn income by working on campus or for an approved off-campus agency.
FINANCIAL AID. This can be a grant, loan or scholarship that helps a student pay tuition or other educational costs. Financial aid may come from governmental, institutional or private sources.

FULL-TIME STUDENT. This is a student who is taking at least 12 credit hours during the fall or spring semester or at least six credit hours during the summer term.

GED. The General Educational Development test is given to people who have not earned a high school diploma. Those who pass the test, which is sponsored by the Missouri State Department of Elementary and Secondary Education, are awarded a Certificate of High School Equivalence.

GENERAL EDUCATION. These classes are intended to help students understand themselves, society in general, the physical universe and the arts, as well as help them become responsible human beings and good citizens. (For more information, see page 27.)

GRADE POINT AVERAGE (GPA). This is a mathematical way of evaluating a student’s academic performance by assigning a number value (or scholarship point) to each letter grade. To determine GPA, multiply the number of credit hours for each course by the number of scholarship points assigned to that grade. Add together the scholarship points from all classes and then divide that figure by the total number of credit hours attempted. The following chart shows how many scholarship points to assign to each letter grade.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Scholarship Points Per Credit Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>W (withdrawal)</td>
<td>0</td>
</tr>
<tr>
<td>S (satisfactory)</td>
<td>0</td>
</tr>
<tr>
<td>U (unsatisfactory)</td>
<td>0</td>
</tr>
<tr>
<td>P (passing)</td>
<td>0</td>
</tr>
<tr>
<td>Au (audit)</td>
<td>0</td>
</tr>
</tbody>
</table>

For example, during one semester if a student made the following grades in the following courses, the GPA would be 2.7.

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Grade</th>
<th>Scholarship Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 101</td>
<td>5</td>
<td>A 20</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>C 6</td>
</tr>
<tr>
<td>HIST 120</td>
<td>3</td>
<td>B 9</td>
</tr>
</tbody>
</table>

MATH 120 3 D 3
TOTAL 14 D 3
38 divided by 14 = 2.7

(For a complete discussion of grading practices and grade-point averages, see page 12.)

GRADUATION REQUIREMENTS. A student must satisfactorily complete the required courses in a particular field of study in order to receive a degree or certificate.

GRANT. These are funds given to a student to help pay tuition or other educational costs. A grant does not reflect academic achievement, rather it is given for athletic accomplishments, contribution to the college or because of financial need.

HOME SCHOOLS. Some students receive the equivalent of an elementary and secondary school education in their homes.

HONORS. This is the formal recognition of superior academic achievement. (For more information about college honors, see page 12.)

INTERCOLLEGIATE ACTIVITIES. Individual MCC students or teams of students compete against other colleges. For instance, Longview participates in baseball, volleyball, and cross country; Maple Woods in baseball and softball; and Penn Valley in basketball.

INTERDISCIPLINARY COURSE. This is a course that covers material from two or more subjects or fields of study.

INTERNATIONAL STUDENT. MCC allows the enrollment of foreign nationals who are in the United States on an approved visa.

INTRAMURAL ACTIVITIES. These are organized activities, such as sports, in which students attending the same college compete against one another.

INTERNSHIP. A student participates in on-the-job training on-site at a cooperating firm or organization. This experience is arranged and overseen by a college instructor.

KCASE. The Kansas City Area Student Exchange group is an association of colleges and universities that participate in a limited student exchange program. (See page 17.)

KC REACHE. The Metropolitan Community Colleges are members of the Kansas City Regional Access Consortium for Higher Learning (KC REACHE). This partnership is dedicated to bringing college-level courses into the home through interactive distance learning.

LABORATORY HOURS. This is time set aside to do practical applications of theories presented in class.

LEARNING ASSISTANCE CENTER. Each of the colleges provides a center to help students succeed in their courses. This includes offering services such as diagnostic testing, tutoring and basic skills instruction in areas such as language, math and reading.

LECTURE HOURS. Instructors orally present their course material and then discuss it with students.

MAJOR. This is the primary field of study—such as English, history or math—for a student pursuing a four-year degree.

MCC. This is the accepted acronym for the Metropolitan Community College District, which is comprised of Blue River, Longview, Maple Woods and Penn Valley Community Colleges and the Business & Technology College. The District’s legal name is the Junior College District of Metropolitan Kansas City, Missouri.

METROT Touch (816) 753-3270. This is MCC’s phone system for enrolling, adding/dropping classes, checking one’s schedule or grades, or the like. Some restrictions apply. Speech or hearing impaired students may call 1-800-735-2966 (text telephone) or 1-800-735-2466 (voice).

MINOR. (1) This is a secondary field of study—such as English, history or math—for a student pursuing a four-year degree. (2) This is a person below the age of 21.

Nondistrict Missouri Resident. This is a person who lives in Missouri but not within the boundaries of the Metropolitan Community College District, which includes the following school districts: Belton, Blue Springs, Center, Fort Osage, Grandview, Hickman Mills, Independence, Kansas City, Lee’s Summit, North Kansas City, Park Hill and Raytown.
OCCUPATIONAL DEGREE PROGRAM. This is a series of required and elective courses that prepare a student for immediate employment or job advancement. After completing these courses, the student earns an Associate in Applied Science degree.

OCCUPATIONAL EDUCATION. These training programs provide students with meaningful, in-demand job skills and help them achieve economic independence.

OUT-OF-STATE RESIDENT. This is a person whose permanent resident is not in the state of Missouri.

PLACEMENT TEST. New students take this exam to determine what level of courses—in subjects such as reading, English and math—they should enroll in.

PRACTICUM. This is a course that covers practical applications of theories already studied.

PREREQUISITE. This is a course — usually part of a series — that must be taken before a student can enroll in a subsequent course. When courses have a prerequisite, they’re indicated in the course descriptions, which begin on page 91 of this catalog.

PROGRAM FOR ADULT COLLEGE EDUCATION (PACE). This program is designed for working adults who want to pursue an Associate in Arts degree. Classes are conveniently offered to fit work schedules.

PROGRAM OF STUDY. This is a series of required and elective courses that lead to a degree or certificate. Curriculum is a synonymous term.

READING/STUDY CENTER. This center provides courses, a walk-in lab, work analysis and individual help for reading comprehension, rate and vocabulary. Appointments with professional staff members for reading and study skills improvement are also available. Contact each campus for information about individual evaluations and diagnostic services.

REGULAR STUDENT EMPLOYMENT. Allows students enrolled at MCC to work on campus. Positions are available on an as needed basis according to the hiring department.

RESIDENT CLASSIFICATION. To determine tuition payments, students are grouped according to where their permanent residences are located. This procedure is established by the Missouri Coordinating Board for Higher Education.

REGISTRATION. During this process students select courses, choose sections by day and hour, enroll in classes and pay tuition.

SATISFACTORY PROGRESS. Students must maintain a certain grade point average and level of progress toward a degree or certificate in order to continue receiving financial aid. More specifically, they must meet these two criteria:

1. They must achieve a minimum cumulative grade-point average (GPA).

<table>
<thead>
<tr>
<th>Number of Semester Hours Attempted</th>
<th>Minimum Grade-Point Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>1.00</td>
</tr>
<tr>
<td>30</td>
<td>1.50</td>
</tr>
<tr>
<td>45</td>
<td>1.75</td>
</tr>
<tr>
<td>60</td>
<td>2.00</td>
</tr>
</tbody>
</table>

2. After attempting 12 credit hours, the student must maintain a ratio of at least 33 percent credit hours earned to credit hours attempted. For more information, consult the counseling center or the financial aid handbook.

SCHOLARSHIP. In recognition of academic achievement, students receive money to help them pay tuition or other costs of education.

SCHOLARSHIP POINTS. These are values assigned to letter grades for the purpose of computing a student’s grade point average. (See Grade Point Average.)

SECTION. This is an individual class that meets at a particular time and is led by a specific instructor.

SEMESTER. This is a 16-week division of the academic year. The first or fall semester begins in August and ends in December, while the second or spring semester begins in January and ends in May.

SEMINAR. Although an instructor leads this class, students are deeply involved through discussion and research.

STANDARD OF STUDENT CONDUCT. This is a code of behavior required of students enrolled at MCC. (See page 14.)

STUDENT LOAD. This is the number of courses or credit hours a student enrolls in during a semester or term. Although a full load is 12 hours, a student who wants to complete a 62-hour degree in four semesters must register for 15 to 16 hours per term. To enroll in more than 18 hours, a student must get special permission.

STUDIO HOURS. A student enrolled in courses such as art or music spends time practicing the theories taught in classes.

TELEPHONE REGISTRATION. Students may enroll in one or more courses by telephone. (See MetroTouch.)

TERM. This is how the academic year is divided. There are three terms: two 16-week semesters in the fall and spring and one eight-week summer session.

TRANSFER DEGREE PROGRAM. This is a series of required and elective courses that prepare students to continue their studies at a four-year college or university. Before transferring, students earn one of the following MCC degrees: Associate in Arts, Associate in Computer Science, Associate in Engineering and Associate in Science.

TUITION. This is the fee charged students for attending a college.

UNDERGRADUATE. This student is enrolled in a community college or in the first four years of a university program. In contrast, a graduate student has completed a bachelor’s degree.

WORKSHOP. A relatively small group of people take part in a brief, intensive educational program that emphasizes problem-solving.

WORK-STUDY PROGRAM. This is a federal financial-aid program that allows students who need financial assistance to earn income by working on campus or for an approved off-campus agency. Whenever possible, students’ work assignments are related to what they’re studying.
The Metropolitan Community College District—including Blue River Community College, Longview Community College, Maple Woods Community College, Penn Valley Community College, and the Business & Technology College—is accredited by the North Central Association of Colleges and Schools. For information on this accreditation or to review accreditation materials, please contact the Office of the Chancellor at (816) 759-1050.

In addition to the institutional accreditation, the programs listed below are individually accredited by the indicated agencies.

<table>
<thead>
<tr>
<th>COLLEGE</th>
<th>PROGRAM</th>
<th>ACCREDITING AGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longview</td>
<td>Automotive Technology</td>
<td>National Automotive Technicians’ Educational Foundation (NATEF)</td>
</tr>
<tr>
<td>Maple Woods</td>
<td>Veterinary Technology</td>
<td>American Veterinary Medical Association</td>
</tr>
<tr>
<td>Penn Valley</td>
<td>Dental Assisting</td>
<td>American Dental Association Commission on Dental Accreditation</td>
</tr>
<tr>
<td></td>
<td>Emergency Medical Technician—Paramedic</td>
<td>Missouri State Department of Emergency Medical Service</td>
</tr>
<tr>
<td></td>
<td>Health Information Technology</td>
<td>Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the Council on Accreditation of the American Health Information Management Association</td>
</tr>
<tr>
<td>Human Services</td>
<td></td>
<td>Council for Standards in Human Services Education</td>
</tr>
<tr>
<td>Practical Nursing</td>
<td></td>
<td>Missouri State Board of Nursing National League for Nursing</td>
</tr>
<tr>
<td>Professional Nursing</td>
<td></td>
<td>Missouri State Board of Nursing National League for Nursing</td>
</tr>
<tr>
<td>Occupational Therapy Assistant</td>
<td></td>
<td>Accreditation Council for Occupational Therapy Education, American Occupational Therapy Association</td>
</tr>
<tr>
<td>Physical Therapist Assistant</td>
<td></td>
<td>Commission on Accreditation in Physical Therapy Education</td>
</tr>
<tr>
<td>Radiologic Technology (Radiography)</td>
<td></td>
<td>Joint Review Committee on Education in Radiologic Technology</td>
</tr>
<tr>
<td>Respiratory Care</td>
<td></td>
<td>Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the Committee on Accreditation for Respiratory Care (CoARC) (Through JCCC)</td>
</tr>
<tr>
<td>Surgical Technology</td>
<td></td>
<td>Accreditation of Allied Health Education Professionals (CAAHEP)</td>
</tr>
<tr>
<td>Blue River Police Academy</td>
<td></td>
<td>Peace Officer Standards and Training rogram (POST)</td>
</tr>
<tr>
<td>Fire Academy</td>
<td></td>
<td>Missouri Division of Fire Safety International Fire Servic Training Association</td>
</tr>
<tr>
<td>Business &amp; Technology College</td>
<td>Manufacturing Technology</td>
<td>NIMS Mastercam</td>
</tr>
</tbody>
</table>
# Index

district residents 65 and older 11
dropping a course 14
Drug Free Schools and Communities Act 21
e-mail access 16
Educational Opportunities Center 17
educational services 19
eligibility 7
employee training 19
employment resources 15
exams 12
Family Educational Rights and Privacy Act 13, 20
federal laws and regulations
Americans with Disabilities Act 20
compliance 20
Drug Free Schools and Communities Act 21
Family Educational Rights and Privacy Act 20
Nondiscrimination 20
Nonimmigrant Alien Students 21
right to know 21
sexual harassment 20
final exams 12
financial aid 11
financial information 11
fitness centers 17
general information 6, 18
grade point average 12, 23
grading 12, 23
grievances 14
help for service members 10
honors 12
Independence campus 2, 6
international students 9
Kansas City Area Student Exchange 17, 23
Kansas City REACHE 23
lab and studio fees 11
learning assistance centers 16
libraries 16
Longview Community College 2, 6
loss or damage to district property 11
Maple Woods Community College 2, 6
Metropolitan Community Colleges accreditation 25
board of trustees 4
educational services 19
history 18
mission 18
officers of the district 4
philosophy 18
purpose statements 18
MetroTouch 23
nondiscrimination 20
nonimmigrant alien students 21
North Central Association of Colleges and Schools 25
occupational programs 19
parking 15
Penn Valley Community College 2, 6
Phi Theta Kappa 17
Pioneer campus 2
placement testing 9
program admission 7
program eligibility 8
Project Success 16
reading study centers 16
records, student 13
reentry programs 16
refund schedule 11
placement testing 9
program admission 7
program eligibility 8
Project Success 16

A
ABLE program 16
academic advising 15
academic evaluation 12
academic calendar 5
academic forgiveness 13
academic information 12
academic record 13
accreditation 25
Administrative Center 2
admission information 7
admission to JCCC programs 7
advising 15
Alumni Association 17
Americans with Disabilities Act 20
athletics 17
attendance 14
audit 12

B
basic skills 19
Blue River Community College 2, 6
Blue Springs campus 2, 6
bookstores 15
Business & Technology College 2, 6, 19

C
calendar 5
Cancellation of classes 20
certifying residency 10
child care centers 15
community education courses 20
compliance with federal laws and regulations 20
computer lab services 16
continuing education units 19
counseling 15
credit by certification 13
credit by examination 13
credit for advanced standing 13

d
day care centers 15
definitions of academic terms 21
determining resident status 10
disability services 16
disciplinary procedure 14
district map. See Inside Front Cover

E
e-mail access 16
Educational Opportunities Center 17
educational services 19
eligibility 7
employee training 19
employment resources 15
exams 12
Family Educational Rights and Privacy Act 13, 20
federal laws and regulations
Americans with Disabilities Act 20
compliance 20
Drug Free Schools and Communities Act 21
Family Educational Rights and Privacy Act 20
Nondiscrimination 20
Nonimmigrant Alien Students 21
right to know 21
sexual harassment 20
final exams 12
financial aid 11
financial information 11
fitness centers 17
general information 6, 18
grade point average 12, 23
grading 12, 23
grievances 14
help for service members 10
honors 12
Independence campus 2, 6
international students 9
Kansas City Area Student Exchange 17, 23
Kansas City REACHE 23
lab and studio fees 11
learning assistance centers 16
libraries 16
Longview Community College 2, 6
loss or damage to district property 11
Maple Woods Community College 2, 6
Metropolitan Community Colleges accreditation 25
board of trustees 4
educational services 19
history 18
mission 18
officers of the district 4
philosophy 18
purpose statements 18
MetroTouch 23
nondiscrimination 20
nonimmigrant alien students 21
North Central Association of Colleges and Schools 25
occupational programs 19
parking 15
Penn Valley Community College 2, 6
Phi Theta Kappa 17
Pioneer campus 2
placement testing 9
program admission 7
program eligibility 8
Project Success 16
reading study centers 16
records, student 13
reentry programs 16
refund schedule 11
placement testing 9
program admission 7
program eligibility 8
Project Success 16

R
reading study centers 16
records, student 13
reentry programs 16
refund schedule 11
placement testing 9
program admission 7
program eligibility 8
Project Success 16
right to know 21

S
satisfactory progress 13, 24
satisfactory-unsatisfactory
  Option 12
schedule of classes 20
scholarship points 12
senior residents 11
service members, help for 10
sexual harassment 20
student activities 17
student conduct 14
student disciplinary procedure 14
student grievances 14
student load 14
student rights and privacy Act 13
student services 15
support services 15

T
textbooks 11, 15
transcripts 13
transfer programs 19
tuition and fees 11

W
withdrawal from college 14
Programs

Transfer Degree Programs ........................................................................................................... 2
  The Associate in Arts Degree .................................................................................................. 3
  The Associate in Computer Science Degree ..................................................................... 5
  The Associate in Engineering Degree ............................................................................... 7
  The Associate in Science Degree .................................................................................... 8
  PACE Program for Adult College Education ................................................................... 9

Occupational Certificate and Degree Programs
  Certificates .................................................................................................................................. 10
  Associate in Applied Science Degree .................................................................................... 10
  Graduation Requirements for A.A.S. Degrees ....................................................................... 10
  Location of Occupational Programs .................................................................................... 11
Transfer Degree Programs

DEGREES

The Metropolitan Community Colleges award four degrees that can be transferred to a four-year college or university. They are:

- Associate in Arts
- Associate in Computer Science
- Associate in Engineering
- Associate in Science

These transfer degree programs are described on the following pages.

NOTE: Transfer requirements vary for different majors and/or for different four-year colleges and universities. In some cases, an associate degree equals the first two years of a bachelor’s degree, while in other cases, an associate degree may not be necessary to transfer. Therefore, it’s very important for students to meet with an advisor or counselor early on to make sure they’re enrolling in classes that will transfer. Students are also encouraged to select as soon as possible the four-year college or university where they’ll complete their bachelor’s degree as well as their major area of study.

DEGREE GRADUATION REQUIREMENTS

Credentials

Each graduation candidate must have on file in the admissions office the following documents:

1. A transcript of all high school work or scores from the General Education Development (GED) Test or state-required documentation for home-school graduates.
2. Transcripts of all prior college work.

NOTE: High school transcripts are not required from students who have successfully completed 15 semester hours of credit at another accredited college or university.

Scholarship

Each graduate must achieve a minimum 2.0 grade point average on a four-point grading scale.

Enrollment

Each graduate must meet one of the following requirements:

1. They must complete at least 15 credit hours at an MCC campus and be enrolled during the academic year they qualify for a degree.
2. They must complete a minimum of 56 credit hours at an MCC campus if they are not enrolled during the academic year they qualify for a degree.

Total Credits

Each MCC graduate must successfully complete at least 62 credit hours, although some degrees require more. (See specific requirements on the following pages.)

Students earning any of the four associate degrees offered by MCC must take several general education courses. For the Associate in Arts degree, at least 62 credits are required — 45 of them in general education classes and 12-17 hours in electives. The Associate in Computer Science, Associate in Engineering, and Associate in Science also require an area of specialization. In addition to these general education and specialization courses, students must take electives that will bring their total number of credits up to the amount required for the degree. Only courses numbered 100 or higher can be applied toward the degree.

Students who plan to earn a bachelor’s degree in certain fields, such as education or nursing, are required to take very specific courses. MCC has negotiated many transfer and articulation agreements with four-year universities and colleges that outline a specific program of study for successful transfer. Students should meet with an advisor or counselor for transfer information and assistance in selecting the right classes. Similarly, students who transfer to MCC from another accredited college or university are encouraged to meet with an advisor or counselor to determine how many of their previous credits will transfer and which classes they will still need to take.

State Requirement

Missouri law states that all college or university graduates should complete a course covering the federal and state constitutions as well as American history and government. Students who transfer from out-of-state schools should check with the MCC counseling or development center to find out how they can meet this requirement.

Application for a Degree

The semester before completing all of their degree requirements, prospective MCC graduates must file an application for receiving their degrees with the admissions/records office. Once the form is filed, students will receive an evaluation and additional information. Visit the admissions/records page at www.kcmetro.edu for more information.
THE ASSOCIATE IN ARTS DEGREE

MCC’s Associate in Arts degree generally provides the first two years of college work a student might complete at a four-year college or university. The program includes 45 hours of general education courses, as well as enough electives to reach the required 62 credit hours. The general education classes strengthen students’ basic skills and provide them with knowledge to competently function in a variety of environments: school, work and day-to-day life. These classes also give them opportunities to apply critical-thinking and communication skills, to achieve an awareness of natural, social and political environments, and to value the importance of lifelong learning.

Students who plan to earn an Associate in Arts degree should meet with an advisor or counselor to make sure they’re taking the right classes. This degree prepares them for further study in any of the following areas:

- Art
- Biology
- Business Administration
- Chemistry
- Criminal Justice
- Economics
- Education
- English
- Foreign Language
- General Business
- Geography
- Geology
- History
- Human Sciences
- Human Services
- Journalism
- Mass Communications
- Mathematics
- Music
- Nursing
- Philosophy
- Physical Education
- Physics
- Political Science
- Predentistry
- Prelaw
- Premedicine
- Psychology
- Social Work
- Sociology
- Speech and Theater Arts
- Teacher Education

Degree Requirements
To receive an Associate of Arts degree, students must complete the following:

1. The graduation requirements for transfer degrees listed on page 26.
2. The general education requirements listed below.
3. Sufficient electives to bring their total number of credits to 62.

General Education Requirements
American Institutions–6 credits
Rationale: The American Institutions requirement will enable students to understand and participate in the political institutions of the United States and Missouri, and to critically evaluate relationships among cultural, historical, and social environments. Such study will also enhance students’ communication, critical thinking, and problem solving skills.

Complete two courses from the following (one must be HIST):

- HIST 120 American History I
- HIST 121 American History II
- POLS 135 Introduction to Political Science
- POLS 136 Introduction to American National Politics
- POLS 137 Introduction to State and Local Politics

If a student has not completed one course which is the equivalent of HIST 120, HIST 121, POLS 135, POLS 136, or POLS 137 at a Missouri institution of higher education, the student must arrange with his/her home MCC college to satisfy the Missouri Constitution requirement either through additional course work or special exam.

Communications–9 credits
Rationale: The Communications requirement will provide students with opportunities to practice and hone active listening, effective speaking, analytical reading, and purposeful writing. Students will draw on analytical and creative thought processes to find and retrieve reliable information, evaluate the relevance of source material, synthesize and draw conclusions from ideas, reflect upon their own and others’ ideas/experiences, and conceptualize new ways of perceiving ideas. They will design carefully reasoned and creative presentations, both spoken and written.

Complete each of the following:

- ENGL 101 Composition and Reading I
- ENGL 102 Composition and Reading II
- SPDR 100 Fundamentals of Speech or
- SPDR 102 Fundamentals of Human Communication

Humanities–9 credits
Rationale: The Humanities requirement will engage students in content and activities in which they must demonstrate their ability to deal with abstractions, complexities, and subtleties of thought and language, and to understand the aesthetic value of human creativity. Students will develop intellectual agility that allows for lifelong learning, adaptability, and appreciation of differences.

Complete one 3-credit course in each of any three different areas. One of the courses must be in literature or philosophy.

- Art History – any course
- Literature – any course
- Foreign Language – any course (101 or above) or
  - SIGN 101 Conversational American Sign Language I or
  - SIGN 102 Conversational American Sign Language II
- History
  - HIST 133 Western Civilization I or
  - HIST 134 Western Civilization II
- Humanities – any course
- Music
  - MUSI 108 Music Appreciation or
  - MUSI 116 Evolution of Jazz
- Philosophy – any course
- Speech and Drama
  - SPDR 103 Interpersonal Communication
  - SPDR 104 Discussion and Group Leadership
  - SPDR 110 Argumentation and Debate
  - SPDR 112 Oral Interpretation of Literature
  - SPDR 114 Theater and Western World
  - SPDR 128 Introduction to Film
- Mass Communications
  - MSCM 112 Introduction to Modern Communications

Degree Requirements
To receive an Associate of Arts degree, students must complete the following:

1. The graduation requirements for transfer degrees listed on page 26.
2. The general education requirements listed below.
3. Sufficient electives to bring their total number of credits to 62.

General Education Requirements
American Institutions–6 credits
Rationale: The American Institutions requirement will enable students to understand and participate in the political institutions of the United States and Missouri, and to critically evaluate relationships among cultural, historical, and social environments. Such study will also enhance students’ communication, critical thinking, and problem solving skills.

Complete two courses from the following (one must be HIST):

- HIST 120 American History I
- HIST 121 American History II
- POLS 135 Introduction to Political Science
- POLS 136 Introduction to American National Politics
- POLS 137 Introduction to State and Local Politics

If a student has not completed one course which is the equivalent of HIST 120, HIST 121, POLS 135, POLS 136, or POLS 137 at a Missouri institution of higher education, the student must arrange with his/her home MCC college to satisfy the Missouri Constitution requirement either through additional course work or special exam.

Communications–9 credits
Rationale: The Communications requirement will provide students with opportunities to practice and hone active listening, effective speaking, analytical reading, and purposeful writing. Students will draw on analytical and creative thought processes to find and retrieve reliable information, evaluate the relevance of source material, synthesize and draw conclusions from ideas, reflect upon their own and others’ ideas/experiences, and conceptualize new ways of perceiving ideas. They will design carefully reasoned and creative presentations, both spoken and written.

Complete each of the following:

- ENGL 101 Composition and Reading I
- ENGL 102 Composition and Reading II
- SPDR 100 Fundamentals of Speech or
- SPDR 102 Fundamentals of Human Communication

Humanities–9 credits
Rationale: The Humanities requirement will engage students in content and activities in which they must demonstrate their ability to deal with abstractions, complexities, and subtleties of thought and language, and to understand the aesthetic value of human creativity. Students will develop intellectual agility that allows for lifelong learning, adaptability, and appreciation of differences.

Complete one 3-credit course in each of any three different areas. One of the courses must be in literature or philosophy.

- Art History – any course
- Literature – any course
- Foreign Language – any course (101 or above) or
  - SIGN 101 Conversational American Sign Language I or
  - SIGN 102 Conversational American Sign Language II
- History
  - HIST 133 Western Civilization I or
  - HIST 134 Western Civilization II
- Humanities – any course
- Music
  - MUSI 108 Music Appreciation or
  - MUSI 116 Evolution of Jazz
- Philosophy – any course
- Speech and Drama
  - SPDR 103 Interpersonal Communication
  - SPDR 104 Discussion and Group Leadership
  - SPDR 110 Argumentation and Debate
  - SPDR 112 Oral Interpretation of Literature
  - SPDR 114 Theater and Western World
  - SPDR 128 Introduction to Film
- Mass Communications
  - MSCM 112 Introduction to Modern Communications
Mathematics– 3 credits
Rationale: The Mathematics requirement will enhance the students’ ability to think critically; use mathematics to solve problems; use quantitative processes to analyze, evaluate, and interpret solutions; and communicate ideas using mathematical language and symbols.

MATH 119 College Mathematics or higher-numbered MATH course

Natural Sciences–9 credits
Rationale: The Natural Sciences requirement will enable students to demonstrate understanding of natural environments and methods for gaining such knowledge including the scientific method and empirical methods of scientific inquiry.

Complete two laboratory sciences—one in biological science and one in physical science. The physical sciences include the following disciplines: chemistry, geology, physical geography, meteorology, physical science and physics.

Social Sciences–6 credits
Rationale: The Social Sciences requirement will help students develop a more complete understanding of the social environment and broaden social and historical knowledge bases. Completion of this requirement will enhance students’ skills in critical thinking, problem solving and communication.

Complete one course from two different areas. Courses selected for the American Institutions or Humanities requirement will not fulfill the Social Science requirement.

Economics - any course
Geography
- GEOG 105 World Geography
- GEOG 111 Geography of the Western World
- GEOG 112 Geography of the Eastern World
- GEOG 113 Cultural Geography
- GEOG 114 Introduction to Geography
- GEOG 207 Geography of the U.S. and Canada

History - any course
Social Sciences - any course
Political Science - any course
Psychology - any course
Sociology - any course
Anthropology - any course

Learning Enhancement Requirements
Rationale: Learning enhancement requirements provide special opportunities for pursuit of individual learning objectives and to achieve interdisciplinary, human diversity, or integrative study objectives. The courses may fulfill any other requirement for the Associate in Arts degree.

• A course designated Writing Intensive will allow the student to develop greater, deeper, and more permanent command of the content material and to produce gains in problem solving abilities and critical thinking skills. Writing Intensive courses will contribute to the clarity of thought and ability to express ideas more precisely. This course may be used to meet the requirements of any other area. English 101 will be a prerequisite for any writing intensive course.

Electives–12-17 credits
Rationale: Electives will prepare students for a life of learning by expanding choices and enriching possibilities. These electives encourage a wide range of courses that explore insights into several fields of inquiry, develop an active understanding of the natural world, and allow an opportunity to apply communication skills.

• Courses numbered 100 or above may be applied to bring the total number of credit hours to the minimum of 62 credit hours required for the degree. The student may apply up to four hours of credit selected from music performance and up to four hours of credit from physical education activity courses.

Total credits required for the A.A. degree 62
The Associate in Computer Science degree is a preprofessional program that prepares students to transfer to a four-year college or university. It should not be confused with the Associate in Applied Science degree in Computer Science/Information Systems and Computer Software that prepares students for immediate employment.

Because computer science requirements vary at each four-year college or university, students should check with the school they plan to transfer to or an advisor or counselor to make sure they're taking the right classes. There are three areas of concentration for the Associate in Computer Science degree.

1. Engineering and mathematics
2. Business
3. Computer science

A concentration in engineering and mathematics meets the requirements needed to transfer to the 130-credit hour Bachelor of Science degree in Computer Science offered by the University of Missouri-Rolla.

### Degree Requirements
In order to receive the degree of Associate in Computer Science, the student must complete the requirements for all degrees listed on page 26 and the course requirements listed below.

#### Business Emphasis

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>Composition and Reading II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I and</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>or</strong></td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics</td>
<td>6</td>
</tr>
<tr>
<td>LAB Course</td>
<td>BIOL 101, 104, 106, CHEM 111, 115, GEOL 101, PHSC 101, PHYS 130 or 220</td>
<td>5</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>General Education Electives</strong></td>
<td>3-6</td>
</tr>
</tbody>
</table>

### Computer Science Emphasis

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>Composition and Reading II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I and</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>or</strong></td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics</td>
<td>6</td>
</tr>
<tr>
<td>LAB Course</td>
<td>BIOL 101, 104, 106, CHEM 111, 115, GEOL 101, PHSC 101, PHYS 130 or 220</td>
<td>5</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>General Education Electives</strong></td>
<td>3-6</td>
</tr>
</tbody>
</table>

#### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 121</td>
<td>Intro to Computer Science</td>
<td></td>
</tr>
<tr>
<td>CSIS 131</td>
<td>Object-Oriented Programming I</td>
<td></td>
</tr>
<tr>
<td>CSIS/</td>
<td>MATH 141  Discrete Structures for Computer Science I</td>
<td></td>
</tr>
<tr>
<td>CSIS 221</td>
<td>Intro to Computer Architecture</td>
<td></td>
</tr>
<tr>
<td>CSIS 231</td>
<td>Computing Theory II</td>
<td></td>
</tr>
<tr>
<td>CSIS/</td>
<td>MATH 241  Discrete Structures for Computer Science II</td>
<td></td>
</tr>
<tr>
<td>CSIS 250</td>
<td>ASSEMBLER Programming</td>
<td></td>
</tr>
<tr>
<td>CSIS 271</td>
<td>Data Structures &amp; Algorithm Analysis</td>
<td>18</td>
</tr>
<tr>
<td>CSIS 271</td>
<td>Data Structures &amp; Algorithm Analysis</td>
<td>18</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology &amp; Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 130</td>
<td>PASCAL Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 140</td>
<td>COBOL Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 250</td>
<td>ASSEMBLER Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 270</td>
<td>Object-Oriented Analysis &amp; Design</td>
<td>3</td>
</tr>
<tr>
<td>ECON 210</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 211</td>
<td>Principles of Economics II</td>
<td></td>
</tr>
<tr>
<td>MATH 120</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 180</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>Electives</td>
<td>CSIS, HUMN, or Science</td>
<td>11-12</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** | 63-67
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 120</td>
<td>College Algebra and</td>
<td></td>
</tr>
<tr>
<td>MATH 130</td>
<td>Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MATH 150</td>
<td>Precalculus</td>
<td>5-6</td>
</tr>
<tr>
<td>MATH 180</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 190</td>
<td>Analytic Geometry &amp; Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH 115</td>
<td>Statistics or</td>
<td></td>
</tr>
<tr>
<td>MATH 210</td>
<td>Analytic Geometry &amp; Calculus III</td>
<td>3-5</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**: 62

---

### Engineering and Mathematics Emphasis

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>Composition and Reading II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I and</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II</td>
<td></td>
</tr>
</tbody>
</table>

*Two of the following:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science</td>
<td></td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 101</td>
<td>Technology &amp; Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 130</td>
<td>PASCAL Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 140</td>
<td>COBOL Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 250</td>
<td>ASSEMBLER Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 270</td>
<td>Object-Oriented Analysis &amp; Design</td>
<td>3</td>
</tr>
<tr>
<td>ECON 210</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 211</td>
<td>Principles of Economics II (Microeconomics)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 120</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 180</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>3</td>
</tr>
</tbody>
</table>

*Electives: CSIS, HUMN, or Science 11-12*

**Total Credit Hours Required**: 63-67

---

**LAB Course**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 101, 104, 106, CHEM 111, 115, GEOL 101 PHSC 101, PHYS 130 or 220</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**SPDR 100**

*Fundamentals of Speech 3*

**General Education Elective**

*3-6*

---

**Total Credit Hours Required**: 62

---

**Total Credit Hours Required**: 63-67
The Associate in Engineering degree is a preprofessional program that prepares students to transfer to a four-year college or university offering a Bachelor of Science degree in Engineering. Most MCC students transfer to the University of Missouri-Columbia, the University Missouri-Kansas City or the University of Missouri-Rolla. Students should check the catalog of the school they plan to transfer to or speak with an engineering program advisor or counselor to make sure they’re taking the right classes.

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>Composition and Reading II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or HIST 121</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>American History II</td>
<td></td>
</tr>
<tr>
<td>ECON 110</td>
<td>Intro to Economics</td>
<td></td>
</tr>
<tr>
<td>ECON 210</td>
<td>Macroeconomics or</td>
<td></td>
</tr>
</tbody>
</table>

*Two of the following:*

- POLS 135 Introduction to Political Science
- POLS 136 Introduction to American National Politics
- POLS 137 Introduction to State and Local Politics

### Specific Program Requirements

*The following courses can be taken at any campus:*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111</td>
<td>General College Chemistry I and</td>
<td></td>
</tr>
<tr>
<td>CHEM 112</td>
<td>General College Chemistry II* or</td>
<td></td>
</tr>
<tr>
<td>CHEM 115</td>
<td>Engineering Chemistry</td>
<td>5-10</td>
</tr>
<tr>
<td>ENGR 101</td>
<td>Intro to the Profession</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 104</td>
<td>FORTRAN for Engineers or</td>
<td></td>
</tr>
<tr>
<td>CSIS 135</td>
<td>FORTRAN Programming</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 113</td>
<td>CAD &amp; Microcomputer Applications or</td>
<td></td>
</tr>
<tr>
<td>DRAF 152</td>
<td>Engineering Graphics &amp; CADD I</td>
<td>3-5</td>
</tr>
<tr>
<td>ENGR 229</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 180</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 190</td>
<td>Analytic Geometry &amp; Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH 210</td>
<td>Analytic Geometry &amp; Calculus III</td>
<td>5</td>
</tr>
<tr>
<td>MATH 230</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 220</td>
<td>Engineering Physics I</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 221</td>
<td>Engineering Physics II</td>
<td>5</td>
</tr>
</tbody>
</table>

*Two of the following four courses:*

- ENGR 223 Thermodynamics
- ENGR 230 Dynamics
- ENGR 233 Circuit Analysis I
- ENGR 240 Mechanics of Materials 6-8

### Total Credit Hours Required

64-71

*Depending on transfer requirements, CHEM 112 may be waived by the division chairperson (Must be in writing)*
The Associate in Science degree program prepares students to transfer to a four-year college or university to major in either biology or chemistry. Because requirements vary at each four-year college or university, students should check with the school they plan to transfer to or an advisor or counselor to make sure they’re taking the right classes. The Associate in Science degree for Chemistry has been approved by the University of Missouri-Kansas City and Avila College and meets the schools’ first two-year requirements for the Bachelor of Science degree in Chemistry. The Associate in Science degree for Biology has been approved by Avila College and Saint Mary College and meets the schools’ first two-year requirements for the Bachelor of Science degree in Biology.

Degree Requirements
In order to receive the Associate in Science degree, the student must complete the requirements for all degrees listed on page 26, the general education requirements listed below and the specialized education requirements for either Biology or Chemistry.

### BIOLOGY

**General Education Requirements**

- ENGL 101 Composition and Reading I 3
- ENGL 102 Composition and Reading II 3
- SPDR 100 Fundamentals of Speech 3
- HIST 120 American History I and
- HIST 121 American History II

*or*

Two of the following:

- POLS 135 Introduction to Political Science
- POLS 136 Introduction to American National Politics

**Specific Program Requirements**

The following courses can be taken at any campus:

- BIOL 104 General Botany 5
- BIOL 106 General Zoology 5
- BIOL Elective: 108 or above excluding 117 & 118 5
- CHEM 111 General College Chemistry I 5
- CHEM 112 General College Chemistry II 5
- CHEM 221 Organic Chemistry I and
- CHEM 222 Organic Chemistry II

*or*

- PHYS 130 General Physics I and
- PHYS 131 General Physics II 10
- MATH 120 College Algebra 3
- MATH 130 Trigonometry 3
- Special Program Electives 6

**Total Credit Hours Required** 62

### CHEMISTRY

**General Education Requirements**

- ENGL 101 Composition and Reading I 3
- ENGL 102 Composition and Reading II 3
- SPDR 100 Fundamentals of Speech 3
- HIST 120 American History I and
- HIST 121 American History II

*or*

Two of the following:

- POLS 135 Introduction to Political Science
- POLS 136 Introduction to American National Politics
- POLS 137 Introduction to State and Local Politics

*or*

Two of the following:

- SOSC 150 Foundations of Social Science I and
- SOSC 151 Foundations of Social Science II 6

**Specific Program Requirements**

The following courses can be taken at any campus:

- CHEM 111 General College Chemistry I 5
- CHEM 112 General College Chemistry II 5
- CHEM 221 Organic Chemistry I 5
- CHEM 222 Organic Chemistry II 5
- MATH 180 Analytic Geometry & Calculus I 5
- MATH 190 Analytic Geometry & Calculus II 5
- MATH 210 Analytic Geometry & Calculus III 5
- PHYS 220 Engineering Physics I 5
- PHYS 221 Engineering Physics II 5
- Special Program Electives 4

**Total Credit Hours Required** 64
Since 1979, PACE has been the Longview Community College program that connects the working and nontraditional students with a valuable educational experience. The mission of PACE is to provide a strong foundation for the acquisition and application of knowledge in preparation for lifetime learning. PACE focuses on increasing access to higher education for those students who have time and place constraints due to work or family commitments. PACE has an outreach program that can bring Longview to the workplace by offering classes at off-campus locations.

PACE offers a unique delivery of courses required for the associate in arts degree. It has a degree plan for full-time students who want to complete their degree within six semesters. PACE classes can be combined with other classes offered by the college to create a convenient schedule. Credits earned through this program will transfer to four-year institutions.

The hallmark of PACE is convenience. Student support services are available at times when the working student is able to access them. The program offers both traditional and interdisciplinary classes for the student who wants to complete a college degree or fulfill personal educational goals at times and places that best fit the student’s schedule. Courses are scheduled to minimize trips to the LVCC campus. Students can make one trip to campus per week and attend two classes. Students can enroll in the traditional 16-week course or a more accelerated format.

Many classes offered through PACE utilize instructional technology to enhance learning and to allow more time and place flexibility for completing course work. Technologies currently used include Internet, web-assisted, and ITV (cable).

**Interactive TV (ITV)**

Classes delivered over cable TV allow a student to be able to view either Comcast (channel 25) or Time Warner Cablevision (channel 17) from their homes. Students viewing from home interact with the instructor by using the telephone. Students may also attend class at the studio classroom.

**Internet**

Some classes offered through PACE are delivered completely through the Internet. Minimal or no time is spent on campus. Students choosing this course delivery format must have reliable access to the Internet. An Internet Service Provider (ISP) will be necessary to access the Internet from home.

**Web-Assisted**

These classes combine classroom attendance with course work on the Internet. Because some of the course requirements are completed on the Internet, the time required on campus is reduced. Students must have reliable access to the Internet.

For more information, call the PACE office at (816) 672-2461. Hours are Monday-Thursday: 8 a.m. to 6:30 p.m.; Friday: 8 a.m. to 4:30 p.m.; closed Saturday and Sunday.
Occupational Certificate and Degree Programs

Certificates

In addition to two-year Associate degrees, the Metropolitan Community Colleges awards certificates to students who complete various occupational programs. While each college offers some of the same certificates, others are offered only at one of the MCC colleges. The chart on the following page shows where each program is available. In most cases, any general education requirements for a certificate can be taken at any of the colleges. Students are required to complete the courses for the certificates with a cumulative GPA of at least 2.0.

Associate in Applied Science Degree

MCC also awards the Associate in Applied Science degree for various occupations. Again, while each college offers some of the same Applied Science degrees, others are offered only at one of the colleges. The chart on the following page shows where each degree program is available.

Graduation Requirements for A.A.S. Degrees

Credentials

Each graduation candidate must have on file in the admissions office the following documents:

1. A transcript of all high school work or scores from the General Education Development (GED) Test or state-required documentation for home-school graduates.
2. Transcripts of all prior college work.

NOTE: If a student has successfully completed 15 semester hours at another accredited college or university, then high school transcripts are not required.

Scholarship

Each graduate must achieve a minimum 2.0 grade point average on a four-point grading scale.

Enrollment

Each graduate must meet one of the following requirements:

1. They must complete at least 15 credit hours at an MCC campus and be enrolled during the academic year they qualify for a degree or certificate.
2. They must complete a minimum of 56 credit hours at an MCC campus if they are not enrolled during the academic year they qualify for a degree.

Total Credits

Graduates must successfully complete a course of study that requires at least 62 credit hours for an Associate in Applied Science degree.

Each degree or certificate program includes both general education requirements and specialized requirements. Some programs also require general education electives or restrictive electives to bring students’ total credits to the number needed for a degree. Specific requirements for each program are described on pages 36 to 88. The degree programs are presented alphabetically, but certificate programs are grouped with the related degree program.

Only courses numbering 100 or higher can be used to earn credit toward degrees and certificates. Students who transfer credits to MCC from another accredited college or university should meet with an advisor or counselor to make sure they have taken the right classes.

State Requirement

Missouri law states that all college or university graduates should complete a course covering the federal and state constitutions as well as American history and government. Students who transfer from out-of-state schools should check with the MCC counseling or development center to find out how they can meet this requirement.

Application for a Degree

The semester before completing all of their degree requirements, prospective MCC graduates must file an application for receiving their degrees with the admissions/records office. Once the form is filed, students will receive an evaluation and additional information. Visit the admissions/records page at www.kcmetro.edu for more information.
# LOCATION OF OCCUPATIONAL PROGRAMS

<table>
<thead>
<tr>
<th>ARTS</th>
<th>PV</th>
<th>MW</th>
<th>LV</th>
<th>BR</th>
<th>BTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic Design</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Prepress Technician</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUSINESS</th>
<th>PV</th>
<th>MW</th>
<th>LV</th>
<th>BR</th>
<th>BTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td></td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Accounting Assistant</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Accounting Clerk</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Computerized Accounting</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Tax Accounting</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Administrative Assistant</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Administrative Support Asst.</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Administrative Support Spec.</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>General Business</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Supervision</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Entrepreneurial Studies</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Supply Chain Logistics</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Information/Word Processing</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Management</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Marketing &amp; Retailing</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Office Management</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMPUTERS</th>
<th>PV</th>
<th>MW</th>
<th>LV</th>
<th>BR</th>
<th>BTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computerized Office Systems</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Computer Support Technology</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Database Management w/Access</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Database Management for Web</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Database Management w/SQL</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Database Application Developer w/Oracle</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Database Application Admin. w/Oracle</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Information/Word Processing</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Multimedia Technology I &amp; II</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Networking</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Technical Support</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Telecommunications Technology</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>PV</th>
<th>MW</th>
<th>LV</th>
<th>BR</th>
<th>BTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Assisting</td>
<td>D/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Information Technology</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coding Specialist</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Transcription</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational Therapy Assistant</td>
<td>D/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paramedic (includes EMT)</td>
<td>D/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Therapist Assistant</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical Nursing</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Nursing</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiologic Technology</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory Care††</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical Technology</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary Technology</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HUMAN SCIENCES</th>
<th>PV</th>
<th>MW</th>
<th>LV</th>
<th>BR</th>
<th>BTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Growth &amp; Development</td>
<td>D/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fashion Design</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fashion Merchandising</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Design††</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOCIAL SERVICES</th>
<th>PV</th>
<th>MW</th>
<th>LV</th>
<th>BR</th>
<th>BTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correctional Science</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Juvenile Services</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Fire Science Technology</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Public Safety ††</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Employment Services</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Human Services</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Correctional Services</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Drug Addiction Services</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Generalist</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Mental Health Services</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Workers in Devel. Disabilities</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Youth Care Services</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Youth Development Worker</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Youth Work</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Paralegal Technology</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Police Academy</td>
<td>C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Fire Science Technology</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Hospitality Management ††</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INDUSTRIAL/TECHNICAL</th>
<th>PV</th>
<th>MW</th>
<th>LV</th>
<th>BR</th>
<th>BTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive Technology</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Automotive Cooperative Ed. F</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Collision Repair Technology†</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Ford ASSET, GM ASE †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Electrical Systems †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Mechanical or M echanical †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Construction Management</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drafting &amp; Design Engineering</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engr. &amp; Drafting †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Safety and Health Specialist</td>
<td>D/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generalist</td>
<td>D/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Specialist</td>
<td>D/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grounds &amp; Turf Management</td>
<td>D/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horticulture ††</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Industrial Technologies</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Bricklayert</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Construction Carpentry †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Construction Cement Masons †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Construction Ironworking †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Construction Laborer †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Electronics Technology</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Electronics Engineering Tech.</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Glazierst</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Heating, Vent. &amp; Air Cond.</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Industrial Electrical</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Industrial Maintenance</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Inside Wiring †</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Laborer</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Millwright</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Painter</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Stationary Engineer</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Land Surveying</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Occupational Education</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Manufacturing Technology</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Pre-Apprenticeship</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Quality Assurance Technology</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
<tr>
<td>Railroad ††</td>
<td></td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
<td>D/C</td>
</tr>
</tbody>
</table>

† Apprenticehip programs
†† Articulated with Johnson County Community College

+ Coop with Area Vo-Tech schools
ACCOUNTING

Offered at all colleges

This program offers students four options: an Associate in Applied Science degree and three certificates of proficiency: Accounting Clerk, Computerized Accounting, and Accounting Assistant. With either a degree or certificate, students are prepared for immediate employment as an accounting paraprofessional.

General Education Requirements
ENGL 101 Composition and Reading I 3
ENGL 102 Composition and Reading II 3
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
MATH 100 Mathematics for Business or
MATH 110 Intermediate Algebra or
MATH 120 College Algebra 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
BSAD 101 Accounting Principles I 3
BSAD 102 Accounting Principles II 3
BSAD 109 Principles of Supervision or
BSAD 204 Business Management 3
BSAD 151 Personal Finance or
ECON 210 Macroeconomics or
ECON 211 Principles of Economics II 3
BSAD 153 General Ledger Accounting Systems, PC 3
BSAD 154 Managerial Accounting or
BSAD 201 Cost Accounting 3
BSAD 155 Accounting Problems–Spreadsheet 3
BSAD 178 Business Communications or
BSAD 220 Business Letters and Reports 3
BSAD 202 Intermediate Accounting I 3
BSAD 240 Accounting Capstone Course 3
BSAD 254 Business Law I or
BSAD 255 Business Law II or
BSAD 270 Legal Environment of Business 3
BSAD 252 Individual Income Tax 3
BSAD 256 Accounting Internship 3
CSIS 115 Intro to Microcomputer Applications 3

9 hours from courses listed below
BSAD 100*, 109, 120, 135, 151, 154, 201, 203, 205, 254, 255, 270
ECON 210, 211

*May be used as an elective if taken prior to BSAD 101

Total Credit Hours Required 66

Computerized Accounting Certificate

Specific Program Requirements
BSAD 101 Accounting Principles I 3
BSAD 120 Human Relations in Business 3
BSAD 150 Business Essentials 3
BSAD 153 General Ledger Accounting Systems, PC 3
BSAD 155 Accounting Problems – Spreadsheet 3
BSAD 178 Business Communications 3
CSIS 115 Intro to Microcomputer Applications 3

Total Credit Hours Required 30

Accounting Assistant Certificate

Specific Program Requirements
BSAD 101 Accounting Principles I 3
BSAD 113 Special Problems in Business (Time Management) 1
CSIS 115 Intro to Microcomputer Applications 3
MATH 100 Mathematics for Business 3
OFSC 181 Electronic Office Procedures 3
SPDR 103 Interpersonal Communication 3

Total Credit Hours Required 16
### Administrative Assistant

#### Offered at all colleges

This program offers students either an Associate in Applied Science degree as an Administrative Assistant or two certificate options: Administrative Support Assistant and Administrative Support Specialist.

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFSC 101</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 159</td>
<td>Professional Development</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 162</td>
<td>Keyboarding Applications/Typewriting II</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 163</td>
<td>Keyboarding Applications/Typewriting III</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 171</td>
<td>Machine Transcription and Calculation</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications or</td>
<td></td>
</tr>
<tr>
<td>BSAD 220</td>
<td>Business Letters and Reports</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 181</td>
<td>Electronic Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 193</td>
<td>Internship I or</td>
<td></td>
</tr>
<tr>
<td>OFSC 194</td>
<td>Internship II or</td>
<td>3-5</td>
</tr>
<tr>
<td>OFSC 195</td>
<td>Word Processing Concepts</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 190</td>
<td>Office Management</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 210</td>
<td>Intro to Desktop Publishing</td>
<td>3</td>
</tr>
</tbody>
</table>

##### Electives: OFSC, BSAD or CSIS 6-8

**Total Credit Hours Required**: 62

---

### Administrative Support Assistant Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFSC 101</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 159</td>
<td>Professional Development</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 161</td>
<td>Keyboarding Applications/Typewriting I</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 181</td>
<td>Electronic Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 195</td>
<td>Word Processing Concepts</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**: 15

---

### Administrative Support Specialist Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFSC 101</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 159</td>
<td>Professional Development</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 161</td>
<td>Keyboarding Applications/Typewriting I</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 162</td>
<td>Keyboarding Applications/Typewriting II</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 171</td>
<td>Machine Transcription and Calculation</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications or</td>
<td></td>
</tr>
<tr>
<td>BSAD 220</td>
<td>Business Letters and Reports</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 181</td>
<td>Electronic Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 195</td>
<td>Word Processing Concepts</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 200</td>
<td>Advanced Word Processing or</td>
<td></td>
</tr>
<tr>
<td>OFSC 210</td>
<td>Introduction to Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 150</td>
<td>Medical Terminology</td>
<td></td>
</tr>
<tr>
<td>OFSC 200</td>
<td>Advanced Word Processing</td>
<td></td>
</tr>
<tr>
<td>OFSC 210</td>
<td>Introduction to Desktop Publishing</td>
<td></td>
</tr>
<tr>
<td>OFSC 215</td>
<td>Advanced Desktop Publishing</td>
<td></td>
</tr>
<tr>
<td>CSIS 215</td>
<td>Advanced Microcomputer Applications</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**: 33

---

### Automotive Technology

#### Offered at Longview

This program leads to the Associate in Applied Science degree and prepares students for jobs in the automotive industry. Two options that are open to all qualified students are Mechanical and Merchandising. The Mechanical option prepares students to work as mechanics in dealerships, service centers, independent garages or service stations. The Merchandising option prepares students to work as assistant service manager, automotive service center trainee, automotive salesperson, factory service representative, parts counterperson or service salesperson.

The Collision Repair Technology option, which includes courses offered by participating articulation agreement schools, prepares students to work as collision repair technicians.

An additional two options—General Motors Automotive Service Educational Program and Ford Automotive Student Service Educational Training Program—have special admission requirements.

The Automotive Technology Certificate is a 49-credit hour offering at the Longview campus.

---

### Collision Repair Degree

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 175</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>MATH 100</td>
<td>Mathematics for Business</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PHSC 101</td>
<td>Physical Science I or</td>
<td></td>
</tr>
<tr>
<td>PHSC 107</td>
<td>Foundations of Physical Science or</td>
<td></td>
</tr>
<tr>
<td>PHYS 101</td>
<td>Introductory Physics</td>
<td>4-5</td>
</tr>
<tr>
<td>BIOL 150</td>
<td>Medical Terminology</td>
<td></td>
</tr>
<tr>
<td>OFSC 200</td>
<td>Advanced Word Processing</td>
<td></td>
</tr>
<tr>
<td>OFSC 210</td>
<td>Introduction to Desktop Publishing</td>
<td></td>
</tr>
<tr>
<td>OFSC 215</td>
<td>Advanced Desktop Publishing</td>
<td></td>
</tr>
<tr>
<td>CSIS 215</td>
<td>Advanced Microcomputer Applications</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**: 33
### Specific Program Requirements

**BSAD 100** Introduction to Accounting 3  
**BSAD 109** Principles of Supervision 3  
**CSIS 115** Intro to Microcomputer Applications 3  
**EHSS 100** Intro to Environmental Health and Safety 3

### Specific Program Requirements Must be taken at Longview

**AUTO 120** MIG and Structural Welding 3  
**AUTO 125** Structural Analysis and Damage Repair 6  
**AUTO 130** Non-Structural Analysis and Damage Repair 6  
**AUTO 135** Plastics and Adhesives 3  
**AUTO 140** Automotive Painting 4  
**AUTO 141** Automotive Refinishing 4  
**AUTO 166** Automotive Electrical Systems 6  
**AUTO 172** Automotive Suspension and Steering 4  
**AUTO 264** Air Conditioning 4

**Total Credit Hours Required** 71-72

---

### Collision Repair Technician Certificate

**Specific Program Requirements Must be taken at Longview**

**AUTO 120** MIG and Structural Welding 3  
**AUTO 125** Structural Analysis and Damage Repair 6  
**AUTO 130** Non-Structural Analysis and Damage Repair 6  
**AUTO 135** Plastics and Adhesives 3  
**AUTO 140** Automotive Painting 4  
**AUTO 141** Automotive Refinishing 4  
**AUTO 166** Automotive Electrical Systems 6  
**AUTO 172** Automotive Suspension and Steering 4  
**AUTO 264** Air Conditioning 4

**Total Credit Hours Required** 40

---

### FORD/ASSET DEGREE

<table>
<thead>
<tr>
<th>General Education Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 Composition and Reading I 3</td>
</tr>
<tr>
<td>ENGL 175 Technical Writing 3</td>
</tr>
<tr>
<td>SPDR 100 Fundamentals of Speech 3</td>
</tr>
<tr>
<td>MATH 100 Mathematics for Business 3</td>
</tr>
<tr>
<td>HIST 120 American History I or 121 American History II or</td>
</tr>
<tr>
<td>POLS 135 Introduction to Political Science or 136 Introduction to American National Politics or</td>
</tr>
<tr>
<td>SOSC 151 Foundations of the Social Sciences II 3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**CSIS 115** Intro to Microcomputer Applications 3

**Specific Program Requirements Must be taken at Longview**

**AUTO 105** Cooperative Work Experience I 3  
**AUTO 106** Cooperative Work Experience II 3  
**AUTO 107** Cooperative Work Experience III 3  
**AUTO 108** Cooperative Work Experience IV 3  
**AUTO 150** Automotive Power Plants 6  
**AUTO 160** Diagnosis and Repair 6  
**AUTO 166** Automotive Electrical Systems 6  
**AUTO 172** Automotive Suspension and Steering 4  
**AUTO 174** Automotive Power Trains 4  
**AUTO 176** Emissions and Fuel Control Systems 6  
**AUTO 260** Advanced Diagnosis 6  
**AUTO 264** Air Conditioning 4  
**AUTO 272** Automatic Transmissions 6  
**AUTO 277** Specialized Electronics Training 6

**Total Credit Hours Required** 88

---

### GENERAL MOTORS/ASEP DEGREE

<table>
<thead>
<tr>
<th>General Education Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 Composition and Reading I 3</td>
</tr>
<tr>
<td>ENGL 175 Technical Writing 3</td>
</tr>
<tr>
<td>SPDR 100 Fundamentals of Speech 3</td>
</tr>
<tr>
<td>MATH 100 Mathematics for Business 3</td>
</tr>
<tr>
<td>HIST 120 American History I or 121 American History II or</td>
</tr>
<tr>
<td>POLS 135 Introduction to Political Science or 136 Introduction to American National Politics or</td>
</tr>
<tr>
<td>SOSC 151 Foundations of the Social Sciences II 3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**CSIS 115** Intro to Microcomputer Applications 3

**Specific Program Requirements Must be taken at Longview**

**AUTO 105** Cooperative Work Experience I 3  
**AUTO 106** Cooperative Work Experience II 3  
**AUTO 107** Cooperative Work Experience III 3  
**AUTO 108** Cooperative Work Experience IV 3  
**AUTO 150** Automotive Power Plants 6  
**AUTO 160** Diagnosis and Repair 6  
**AUTO 166** Automotive Electrical Systems 6  
**AUTO 172** Automotive Suspension and Steering 4  
**AUTO 174** Automotive Power Trains 4  
**AUTO 176** Emissions and Fuel Control Systems 6  
**AUTO 260** Advanced Diagnosis 6  
**AUTO 264** Air Conditioning 4  
**AUTO 272** Automatic Transmissions 6  
**AUTO 277** Specialized Electronics Training 6

**Total Credit Hours Required** 88
MECHANICAL DEGREE

General Education Requirements
ENGL 101 Composition and Reading I 3
ENGL 175 Technical Writing 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
MATH 100 Mathematics for Business 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
BSAD 109 Principles of Supervision 3
BSAD 135 Entrepreneurship or
CSIS 115 Intro to Microcomputer Applications 3

Specific Program Requirements
Must Be Taken At Longview
AUTO 150 Automotive Power Plants 6
AUTO 160 Diagnosis and Repair 6
AUTO 166 Automotive Electrical Systems 6
AUTO 170 Automotive Braking Systems 4
AUTO 172 Automotive Suspension and Steering 4
AUTO 174 Automotive Power Trains 4
AUTO 176 Emissions and Fuel Control Systems 6
AUTO 264 Air Conditioning 4
AUTO 272 Automatic Transmissions 6
AUTO 279 Automotive Electronic Systems 6

Total Credit Hours Required 73

MERCHANDISING DEGREE

General Education Requirements
ENGL 101 Composition and Reading I 3
ENGL 175 Technical Writing 3
MATH 100 Mathematics for Business 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
BSAD 100 Introduction to Accounting or
BSAD 101 Accounting Principles I 3
BSAD 106 Principles of Salesmanship 3
BSAD 109 Principles of Supervision 3
BSAD 112 Retailing Principles 3
BSAD 135 Entrepreneurship 3
BSAD 205 Marketing 3
BSAD  Elective 3

Specific Program Requirements
Must Be Taken At Longview
AUTO 100 Automotive Internship I or
BSAD 127 Management Internship I 3
AUTO 101 Automotive Internship II or
BSAD 128 Management Internship II 3
AUTO 150 Automotive Power Plants 6
AUTO 160 Diagnosis and Repair 6
AUTO 166 Automotive Electrical Systems 6
AUTO 170 Automotive Braking Systems 4
AUTO Elective 3

Total Credit Hours Required 67

Automotive Technology Certificate

Specific Program Requirements
The following courses can be taken at any campus:
BSAD 135 Entrepreneurship or
CSIS 115 Introduction to Microcomputer Applications 3

Specific Program Requirements
Must be taken at Longview
AUTO 150 Automotive Power Plants 6
AUTO 160 Diagnosis and Repair 6
AUTO 166 Automotive Electrical Systems 6
AUTO 170 Automotive Braking Systems 4
AUTO 172 Automotive Suspension and Steering 4
AUTO 174 Automotive Power Trains 4
AUTO 176 Emission and Fuel Control Systems 6
AUTO 264 Air Conditioning 4
AUTO 272 Automatic Transmissions 6

Total Credit Hours Required 49
Child Growth and Development

**Offered at Penn Valley**

This program, which leads to either an Associate in Applied Science degree or a certificate of proficiency, prepares students for jobs in child care. Requirements for the degree and certificate are listed below.

### Admission to the Program

To be admitted to the program, students must complete the following application process:

2. Complete a "Request for Child Abuse or Neglect/Criminal Record." (Every student must complete this process, which involves completing a form and being fingerprinted.) Information received by Penn Valley pertinent to this process will be used solely for Penn Valley’s internal purposes in determining the suitability of the applicant for admission to the program.
3. Complete the Penn Valley admissions process.

---

**Family Studies Emphasis**

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>Composition and Reading II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td>3</td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

**Must Be Taken At Penn Valley**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDCG 113</td>
<td>Child Growth and Development I</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 114</td>
<td>Child Development Observation</td>
<td>1</td>
</tr>
<tr>
<td>CDCG 118</td>
<td>Family Development</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 130</td>
<td>Creative Experiences for Young Children</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 200</td>
<td>Music and Movement For Children or</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 261</td>
<td>Parenting or</td>
<td></td>
</tr>
<tr>
<td>HUSC 200</td>
<td>Entrepreneurship in Human Sciences</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 201</td>
<td>Language Development</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 216</td>
<td>Child Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 217</td>
<td>Literature for Children</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 220</td>
<td>Child Care Management</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 221</td>
<td>Issues and Theories in Child Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 234</td>
<td>Program Planning/Families</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 248</td>
<td>Family Development Internship I or</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 249</td>
<td>Child Development Internship I</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 254</td>
<td>Child Development Internship II: Families</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 260</td>
<td>Education of the Exceptional Child</td>
<td>3</td>
</tr>
</tbody>
</table>

**HUSC 100** | Careers in Human Sciences                  | 3       |
**HUSC 108** | Nutrition                                  | 3       |
**HUSC 162** | Marriage and the Family                    | 3       |

**Total Credit Hours Required** 67

---

**Infant/Toddler Emphasis**

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>Composition and Reading II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td>3</td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

**Must Be Taken At Penn Valley**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDCG 113</td>
<td>Child Growth and Development I</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 114</td>
<td>Child Development Observation</td>
<td>1</td>
</tr>
<tr>
<td>CDCG 115</td>
<td>Child Growth and Development II: Infant/Toddler</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 130</td>
<td>Creative Experiences for Young Children</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 200</td>
<td>Music and Movement For Children or</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 261</td>
<td>Parenting or</td>
<td></td>
</tr>
<tr>
<td>HUSC 200</td>
<td>Entrepreneurship in Human Sciences</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 201</td>
<td>Language Development</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 216</td>
<td>Child Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 217</td>
<td>Literature for Children</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 220</td>
<td>Child Care Management</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 221</td>
<td>Issues and Theories in Child Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 230</td>
<td>Program Planning:Infant/Toddler</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 248</td>
<td>Family Development Internship I or</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 249</td>
<td>Child Development Internship I</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 250</td>
<td>Child Development Internship II: Infant/Toddler</td>
<td>3</td>
</tr>
<tr>
<td>CDCG 260</td>
<td>Education of the Exceptional Child</td>
<td>3</td>
</tr>
<tr>
<td>HUSC 100</td>
<td>Careers in Human Sciences</td>
<td>3</td>
</tr>
<tr>
<td>HUSC 108</td>
<td>Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HUSC 162</td>
<td>Marriage and the Family</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** 67

---

**Preschool Emphasis**

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>Composition and Reading II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td>3</td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td>3</td>
</tr>
</tbody>
</table>

**HUSC 200** | Entrepreneurship in Human Sciences         | 3       |
**HUSC 108** | Nutrition                                  | 3       |
**HUSC 162** | Marriage and the Family                    | 3       |

**Total Credit Hours Required** 67

---

16
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics 3
PSYC 140 General Psychology 3
General Education Electives 3

Specific Program Requirements
Must be taken at Penn Valley
CDCG 113 Child Growth and Development I 3
CDCG 114 Child Development Observation 1
CDCG 116 Child Growth and Development II: Preschool 3
CDCG 130 Creative Experiences for Young Children 3
CDCG 200 Music and Movement For Children or CDCG 261 Parenting or HUSC 200 Entrepreneurship in Human Sciences 3
CDCG 201 Language Development 3
CDCG 216 Child Health and Safety 3
CDCG 217 Literature for Children 3
CDCG 220 Child Care Management 3
 CDCG 221 Issues and Theories in Child Growth and Development 3
CDCG 231 Program Planning:Preschool 3
CDCG 248 Family Development Internship I or CDCG 249 Child Development Internship I 3
CDCG 251 Child Development Internship II: Preschool 3
CDCG 260 Education of the Exceptional Child 3
HUSC 100 Careers in Human Sciences 3
HUSC 108 Nutrition 3
 HUSC 162 Marriage and the Family 3
Total Credit Hours Required 67

SCHOOL AGE CARE EMPHASIS

General Education Requirements
ENGL 101 Composition and Reading I 3
ENGL 102 Composition and Reading II 3
SPDR 100 Fundamentals of Speech 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics 3
PSYC 140 General Psychology 3
General Education Electives 3

Specific Program Requirements
Must be taken at Penn Valley
CDCG 113 Child Growth and Development I 3
CDCG 114 Child Development Observation 1
CDCG 117 Child Growth and Development II: School Age Care 3
CDCG 130 Creative Experiences for Young Children 3
CDCG 200 Music and Movement For Children or CDCG 261 Parenting or
HUSC 200 Entrepreneurship in Human Sciences 3
CDCG 201 Language Development 3
CDCG 216 Child Health and Safety 3
CDCG 217 Literature for Children 3
CDCG 220 Child Care Management 3
CDCG 221 Issues and Theories in Child Growth and Development 3
CDCG 232 Program Planning:School Age Care 3
CDCG 248 Family Development Internship I or CDCG 249 Child Development Internship I 3
CDCG 252 Child Development Internship II: School Age Care 3
CDCG 260 Education of the Exceptional Child 3
HUSC 100 Careers in Human Sciences 3
HUSC 108 Nutrition 3
HUSC 162 Marriage and the Family 3
Total Credit Hours Required 67

SPECIAL NEEDS EMPHASIS

General Education Requirements
ENGL 101 Composition and Reading I 3
ENGL 102 Composition and Reading II 3
SPDR 100 Fundamentals of Speech 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics 3
PSYC 140 General Psychology 3
General Education Electives 3
### Specific Program Requirements

**Must be taken at Penn Valley**
- CDCG 113 Child Growth and Development I 3
- CDCG 114 Child Development Observation 1
- CDCG 119 Child Growth and Development II: Special Needs 3
- CDCG 130 Creative Experiences for Young Children 3
- CDCG 200 Music and Movement For Children or CDCG 261 Parenting 3
- HUSC 200 Entrepreneurship in Human Sciences 3
- CDCG 201 Language Development 3
- CDCG 216 Child Health and Safety 3
- CDCG 217 Literature for Children 3
- CDCG 220 Child Care Management 3
- CDCG 221 Issues and Theories in Child Growth and Development 3
- CDCG 233 Program Planning: Special Needs 3
- CDCG 249 Child Development Internship I or CDCG 249 Child Development Internship II: Special Needs 3
- CDCG 253 Child Development Internship II: Special Needs 3
- CDCG 260 Education of the Exceptional Child 3
- HUSC 100 Careers in Human Sciences 3
- HUSC 108 Nutrition 3
- HUSC 162 Marriage and the Family 3

**Total Credit Hours Required** 67

### Child Growth and Development Certificate

#### Specific Program Requirements
- ENGL 101 Composition and Reading I 3

#### Specific Program Requirements
**Must be taken at Penn Valley**
- CDCG 113 Child Growth and Development I 3
- CDCG 114 Child Development Observation 1
- CDCG 115 Child Growth and Development II: Infant/Toddler or Preschool 3
- CDCG 116 Child Growth and Development II: School-Age Care 3
- CDCG 130 Creative Experiences for Young Children 3
- CDCG 201 Language Development 3
- CDCG 216 Child Health and Safety 3
- CDCG 217 Literature for Children 3
- CDCG 221 Issues and Theories in Child Growth and Development 3
- CDCG 249 Child Development Internship I 3
- CDCG 260 Education of the Exceptional Child 3
- CDCG 261 Parenting 3
- HUSC 100 Careers in Human Sciences 3
- HUSC 108 Nutrition 3

**Total Credit Hours Required** 40

---

### COMPUTER SCIENCE/INFORMATION SYSTEMS AND COMPUTER SOFTWARE

**Offered at all colleges**

In the area of computer science and information systems, MCC offers students three options. The first is the Associate of Arts in Computer Science degree, which allows them to transfer to a four-year college or university to earn a Bachelor’s degree in Computer Science or Computer Information Systems.

A second option is the Associate of Applied Science degree in Computer Information Systems, which prepares students for entry-level jobs with emphasis in either Computer Information System Programming, Database Management, Multimedia Technology, Networking, Technical Support, or Specialty Area.

The third option leads to a certificate of proficiency in either Computer Information Systems Programming, Computer Support Technology, Database Management, Multimedia Technology, Telecommunications, or Networking and is designed to prepare students for career advancement and to provide technical knowledge about computer technology for persons who may have a degree in another area. The most current requirements for the degree and certificates can be obtained from the Advising Office at each campus.

#### COMPUTER INFORMATION SYSTEMS PROGRAMMING EMPHASIS

**General Education Requirements**
- ENGL 101 Composition and Reading I 3
- SPDR 100 Fundamentals of Speech 3
- HIST 120 American History I or HIST 121 American History II or POLS 135 Introduction to Political Science or POLS 136 Introduction to American National Politics or POLS 137 Introduction to State and Local Politics or SOSC 151 Foundations of the Social Sciences II
- MATH 110 Intermediate Algebra or Above 3

**General Education Electives** 6

**Specific Program Requirements**
- BSAD 120 Human Relations in Business 3
- BSAD 178 Business Communications 3
- CSIS 101 Technology and Information Management 3
- CSIS 115 Intro to Microcomputer Applications 3
- CSIS 151 Microcomputer Operating Systems Concepts 3

**Five of the following:**
- BSAD 150, CSIS 111, CSIS 161, CSIS 162, CSIS 177, CSIS 181, CSIS 191, Beginning Programming Course 15

**Specific Emphasis Requirements**
- CSIS 177 Database Applications and Design with Access 3
- CSIS Electives numbered 200 or above 3
At most, two of the following programming courses:
CSIS 121, CSIS 125, CSIS 131, CSIS 135, CSIS 140, CSIS 152, CSIS 155, CSIS 250 3-6

At least one of the following:
CSIS 225, CSIS 231, CSIS 240, CSIS 252, CSIS 255 3-6

Total Credit Hours Required 63

Computer Information Systems Programming Certificate

Specific Program Requirements
CSIS 101 Technology and Information Management 3
CSIS 115 Intro to Microcomputer Applications 3
CSIS 161 Telecommunications and Network Fundamentals 3
CSIS 177 Database Applications and Design with Access 3

Two of the following:
CSIS 121 Introduction to Computer Science
CSIS 125 Visual BASIC Programming
CSIS 131 Object-Oriented Programming I
CSIS 135 FORTRAN Programming
CSIS 140 COBOL Programming
CSIS 152 Java Programming
CSIS 155 C++ Programming
CSIS 250 ASSEMBLER Programming 6

One of the following:
CSIS 122 Advanced Visual BASIC Programming
CSIS 123 Computing Theory II
CSIS 124 Advanced COBOL Programming
CSIS 125 Advanced Java Programming
CSIS 126 Advanced C++ Programming 3
CSIS Electives: Numbered 200 or above 9

Total Credit Hours Required 30

Computer Support Technology I Certificate

Specific Program Requirements
BSAD 120 Human Relations in Business 3
BSAD 150 Business Essentials 3
BSAD 178 Business Communications 3
CSIS 101 Technology and Information Management 3
CSIS 111 Microcomputer Hardware Concepts 3
CSIS 115 Intro to Microcomputer Applications 3
CSIS 151 Microcomputer Operating Systems Concepts 3
CSIS 161 Telecommunications and Network Fundamentals 3
CSIS 181 Application Support Technologies 3
CSIS 191 Computer Support Practicum 3

Total Credit Hours Required 30

Computer Support Technology II Certificate

Specific Program Requirements
BSAD 120 Human Relations in Business 3
BSAD 150 Business Essentials 3
BSAD 178 Business Communications 3
CSIS 101 Technology and Information Management 3
CSIS 111 Microcomputer Hardware Concepts 3
CSIS 115 Intro to Microcomputer Applications 3
CSIS 151 Microcomputer Operating Systems Concepts 3
CSIS 161 Telecommunications and Network Fundamentals 3
CSIS 162 Introduction to Multimedia 3
CSIS 171 LAN Novell Netware 3
CSIS 181 Application Support Technologies 3
CSIS 191 Computer Support Practicum 3
CSIS 215 Advanced Microcomputer Applications 3
CSIS 251 Advanced Microcomputer Operating Systems Concepts 3
CSIS Elective numbered 145 or above 3

Total Credit Hours Required 45

DATABASE MANAGEMENT EMPHASIS

General Education Requirements
ENGL 101 Composition and Reading I 3
SPDR 100 Fundamentals of Speech 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
MATH 110 Intermediate Algebra or Above 3
General Education Electives 6
### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 120</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 151</td>
<td>Microcomputer Operating Systems Concepts</td>
<td>3</td>
</tr>
</tbody>
</table>

Five of the following:
- BSAD 150, CSIS 111, CSIS 161, CSIS 162, CSIS 177, CSIS 181, CSIS 191
- CSIS: Beginning Programming Course 15

### Specific Emphasis Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 125</td>
<td>Visual BASIC Programming or C++ Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 177</td>
<td>Database Applications and Design with Access</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 277</td>
<td>Database Programming with Access and Adv Access</td>
<td>3</td>
</tr>
</tbody>
</table>

Two of the following:
- CSIS 161: Telecommunications and Network Fundamentals
- CSIS 162: Intro to Multimedia
- CSIS 225: Advanced Visual BASIC Programming
- CSIS 255: Advanced C++ Programming
- CSIS 290: Computer Science/Info Systems Field Project 6

Total Credit Hours Required 63

---

### Database Administrator with ORACLE Certificate

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 121</td>
<td>Introduction to Computer Science or</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 125</td>
<td>Visual BASIC Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 143</td>
<td>Relational Database Design for ORACLE</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 144</td>
<td>Introduction to SQL with ORACLE</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 145</td>
<td>ORACLE Database Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 161</td>
<td>Telecommunications and Network Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 172</td>
<td>LAN Windows Server</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 178</td>
<td>Internetworking with TCP/IP</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 280</td>
<td>Database Administration with ORACLE</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 283</td>
<td>Database Backup and Recovery with ORACLE</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 284</td>
<td>Database Performance Tuning with ORACLE</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours Required 30

---

### Database Management with ACCESS Certificate

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 125</td>
<td>Visual BASIC Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 177</td>
<td>Database Application and Design with ACCESS</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 179</td>
<td>Web SQL Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 277</td>
<td>Database Programming with ACCESS and Advanced ACCESS Features</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 290</td>
<td>Computer Science/Information Systems Field Project</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours Required 15

---

### Database Management with SQL Server Certificate

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 172</td>
<td>LAN Windows Server</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 177</td>
<td>Database Applications and Design with ACCESS</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 257</td>
<td>Implementing a Database in Microsoft SQL Server</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 258</td>
<td>System Administration for Microsoft SQL Server</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 290</td>
<td>Computer Science/Information Systems Field Project</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours Required 15

---

### Database Management with Web-Based Applications (Java) Certificate

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 128</td>
<td>Web Development</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 144</td>
<td>Introduction to SQL using ORACLE</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 152</td>
<td>Java Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 179</td>
<td>Web SQL Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 252</td>
<td>Advanced Java Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 279</td>
<td>Web Database Programming (Java)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours Required 18
### Database Management with Web-Based Applications (Visual Track) Certificate

**SPECIFIC PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 128</td>
<td>Web Development</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 125</td>
<td>Visual BASIC Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 177</td>
<td>Database Applications and Design with ACCESS</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 179</td>
<td>Web SQL Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 225</td>
<td>Advanced Visual BASIC Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 279</td>
<td>Web Database Programming (Visual Track)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** 18

### Multimedia Technology I Certificate

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Introduction to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 151</td>
<td>Microcomputer Operating Systems Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 162</td>
<td>Introduction to Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 125</td>
<td>Visual BASIC Programming or</td>
<td></td>
</tr>
<tr>
<td>CSIS 152</td>
<td>Java Programming or</td>
<td></td>
</tr>
<tr>
<td>CSIS 155</td>
<td>C++ Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** 15

### Multimedia Technology II Certificate

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 120</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 151</td>
<td>Microcomputer Operating Systems Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 225</td>
<td>Advanced Visual BASIC Programming</td>
<td></td>
</tr>
<tr>
<td>CSIS 252</td>
<td>Advanced Java Programming</td>
<td></td>
</tr>
<tr>
<td>CSIS 255</td>
<td>Advanced C++ Programming</td>
<td></td>
</tr>
<tr>
<td>CSIS 262</td>
<td>Advanced Multimedia Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 290</td>
<td>Computer Science/Information Systems Field Project</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** 30

### Multimedia Technology Emphasis

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td>3</td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 110</td>
<td>Intermediate Algebra or Above</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 120</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 151</td>
<td>Microcomputer Operating Systems Concepts</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 150</td>
<td>Beginning Programming Course</td>
<td>15</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** 63

### Networking Emphasis

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td>3</td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 110</td>
<td>Intermediate Algebra or Above</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 120</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 151</td>
<td>Microcomputer Operating Systems Concepts</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 150</td>
<td>Beginning Programming Course</td>
<td>15</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** 30
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 151</td>
<td>Microcomputer Operating Systems Concepts</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Five of the following:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BSAD 150, CSIS 111, CSIS 161, CSIS 162,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSIS 177, CSIS 181, CSIS 191, CSIS Beginning Programming Course</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td><strong>Specific Emphasis Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>CSIS 171</td>
<td>LAN Novell Netware</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 174</td>
<td>Technologies Used on Local Area Networks</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 175</td>
<td>Service and Support of Local Area Networks</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Two of the following:</td>
<td></td>
</tr>
<tr>
<td>CSIS 177</td>
<td>Database Applications and Design with Access</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 251</td>
<td>Advanced Microcomputer Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSIS</td>
<td>A beginning programming course</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours Required</strong></td>
<td>63</td>
</tr>
</tbody>
</table>

**Networking Certificate**

**SPECIFIC PROGRAM REQUIREMENTS**

- CSIS 151 Microcomputer Operating Systems Concepts [3 credits]
- CSIS 161 Telecommunications and Network Fundamentals [3 credits]
- CSIS 171 LAN Novell Netware [3 credits]
- CSIS 174 Technologies Used on Local Area Networks [3 credits]
- CSIS 175 Service and Support of Local Area Networks [3 credits]

**Total Credit Hours Required** [15 credits]

**SPECIALTY AREA EMPHASIS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 120</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Five of the following:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BSAD 150, CSIS 111, CSIS 161, CSIS 162,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSIS 177, CSIS 181, CSIS 191, CSIS Beginning Programming Course</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td><strong>Specific Emphasis Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 151</td>
<td>Microcomputer Operating Systems Concepts</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Education Requirements**

- ENGL 101 Composition and Reading I [3 credits]
- SPDR 100 Fundamentals of Speech [3 credits]
- HIST 120 American History I or HIST 121 American History II [3 credits]
- POLS 135 Introduction to Political Science or POLS 136 Introduction to American National Politics [3 credits]
- POLS 137 Introduction to State and Local Politics [3 credits]
- SOSC 151 Foundations of the Social Sciences I [3 credits]
- MATH 110 Intermediate Algebra or Above [3 credits]

**General Education Electives** [6 credits]

**Specific Program Requirements**

- BSAD 162 Intro to Multimedia [3 credits]
- CSIS 171 LAN Novell Netware [3 credits]
- CSIS 215 Advanced Microcomputer Applications [3 credits]
- CSIS 251 Advanced Microcomputer Operating Systems Concepts [3 credits]
- CSIS Elective Numbered 145 or above [3 credits]

**Total Credit Hours Required** [63 credits]
# Computerized Office Systems Certificate

## Specific Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 100</td>
<td>Introduction to Accounting</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 151</td>
<td>Microcomputer Operating Systems Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 177</td>
<td>Database Applications and Design with ACCESS</td>
<td>3</td>
</tr>
<tr>
<td>CSOF 112</td>
<td>Spreadsheet Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 191</td>
<td>Computer Support Practicum</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 195</td>
<td>Word Processing Concepts</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 197</td>
<td>Office Management</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 210</td>
<td>Introduction to Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>ART 102</td>
<td>Computers in Design I or</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 161</td>
<td>Telecommunications and Network Fundamentals or</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 200</td>
<td>Advanced Word Processing or</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 215</td>
<td>Advanced Desktop Publishing or</td>
<td>3</td>
</tr>
<tr>
<td>OFSC/OFSC</td>
<td>Approved Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours Required</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

## CORRECTIONAL SCIENCE

*Offered at Longview and Penn Valley*
*(See also Police Science page 78.)*

This program leads to the Associate in Applied Science degree and provides practical knowledge and skills for three kinds of students. First are those who plan to work with youths in detention, residential facilities or group homes. Second are those who want to work as correctional officers on the local, state or federal level. Third are those already employed at adult or juvenile correctional agencies or at residential youth care centers.

## DRUG ADDICTION SERVICES EMPHASIS

### General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td>3</td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU 101</td>
<td>Intro to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/</td>
<td>HUMS 105 Principles of Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/</td>
<td>HUMS 118 Legal Aspects of Corrections</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: **63-64**

## JUVENILE SERVICES EMPHASIS

### General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td>3</td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td>3</td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU 101</td>
<td>Intro to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/</td>
<td>HUMS 105 Principles of Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/</td>
<td>HUMS 118 Legal Aspects of Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/</td>
<td>HUMS 126 Corrections and the Community</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/</td>
<td>PSYC 162 Correctional Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/</td>
<td>SOCI 165 Criminology</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/</td>
<td>SOCI 169 Family Violence and Sexual Abuse</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>CRJU 201</td>
<td>Criminal Justice Practicum</td>
<td></td>
</tr>
<tr>
<td>HUMS 201</td>
<td>Human Services Practicum and</td>
<td></td>
</tr>
<tr>
<td>HUMS 203</td>
<td>Colloquia I 3-4</td>
<td></td>
</tr>
<tr>
<td>CRJU 233</td>
<td>Principles of Management in Criminal Justice Systems or</td>
<td></td>
</tr>
<tr>
<td>CRJU/ HUMS 236</td>
<td>Correctional Administration 3</td>
<td></td>
</tr>
<tr>
<td>CRJU 244</td>
<td>Group and Individual Counseling or</td>
<td></td>
</tr>
<tr>
<td>PSYC 210</td>
<td>Interviewing and Interpersonal Communications 3 Electives 6</td>
<td></td>
</tr>
</tbody>
</table>

**Specific Emphasis Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU/SOCI 168</td>
<td>Juvenile Delinquency 3</td>
</tr>
<tr>
<td>CRJU/HUMS 166</td>
<td>Behavior Management 3</td>
</tr>
<tr>
<td>CRJU/HUMS 275</td>
<td>Alcohol and Drug Addiction 3</td>
</tr>
<tr>
<td>PSYC 245</td>
<td>Adolescent Psychology 3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** 63-64

---

**MENTAL HEALTH SERVICES EMPHASIS**

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I 3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II 3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology 3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology 3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech 3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU 101</td>
<td>Intro to Criminal Justice 3</td>
</tr>
<tr>
<td>CRJU/HUMS 105</td>
<td>Principles of Corrections 3</td>
</tr>
<tr>
<td>CRJU 118</td>
<td>Legal Aspects of Corrections 3</td>
</tr>
<tr>
<td>CRJU/HUMS 126</td>
<td>Corrections and the Community 3</td>
</tr>
<tr>
<td>CRJU/PSYC 162</td>
<td>Correctional Psychology 3</td>
</tr>
<tr>
<td>CRJU/SOCI 165</td>
<td>Criminology 3</td>
</tr>
<tr>
<td>CRJU/SOCI 169</td>
<td>Family Violence and Sexual Abuse 3</td>
</tr>
<tr>
<td>CRJU 201</td>
<td>Criminal Justice Practicum or</td>
</tr>
<tr>
<td>HUMS 201</td>
<td>Human Services Practicum and</td>
</tr>
<tr>
<td>HUMS 203</td>
<td>Colloquia I 3-4</td>
</tr>
<tr>
<td>CRJU 233</td>
<td>Principles of Management in Criminal Justice Systems or</td>
</tr>
<tr>
<td>CRJU/HUMS 236</td>
<td>Correctional Administration 3</td>
</tr>
</tbody>
</table>

**Correctional Science Certificate**

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU/HUMS 105</td>
<td>Principles of Corrections 3</td>
</tr>
<tr>
<td>CRJU 118</td>
<td>Legal Aspects of Corrections 3</td>
</tr>
<tr>
<td>CRJU/HUMS 126</td>
<td>Corrections and the Community 3</td>
</tr>
<tr>
<td>CRJU/PSYC 162</td>
<td>Correctional Psychology 3</td>
</tr>
<tr>
<td>CRJU 233</td>
<td>Principles of Management in Criminal Justice System or</td>
</tr>
<tr>
<td>CRJU/HUMS 236</td>
<td>Correctional Administration 3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I 3</td>
</tr>
<tr>
<td>HUMS/PSYC 210</td>
<td>Interviewing and Interpersonal Communications 3</td>
</tr>
<tr>
<td>CRJU/HUMS/SOCI Electives</td>
<td>9</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required** 30
DENTAL ASSISTING

Offered at Penn Valley

This program, which leads to either an Associate of Applied Science degree or a certificate of proficiency, prepares the student to enter the workforce as a trained dental auxiliary. Graduates of this program are eligible to take the national certifying examination given by the Dental Assisting National Board.

Admission to the Dental Assisting Program

Because enrollment in the program is limited, a student must meet the requirements and apply for admission.

Requirements

1. High school diploma or GED certificate.
2. Completion of college placement tests.
3. Admission to Penn Valley Community College.
4. Grade point average of 2.5 or higher.
5. Student must have completed ENGL 101 with a grade of C or better.

Application Procedure

1. New students send application for admission to Penn Valley Community College and have all high school, GED, and college records sent to the records office.
2. Request a program application form from the program coordinator.
3. Return completed program application by June 1 for admission to the class beginning in August.
4. Applications will be screened for completeness and qualified applicants will be notified of an interview time.
5. The most qualified applicants will be selected based on the following criteria:
   a. Results of college placement tests.
   b. Academic performance and completion of prerequisites.

DENTAL ASSISTING DEGREE

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>Composition and Reading II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 110</td>
<td>Intermediate Algebra (or higher)</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Humanities electives</td>
<td>9</td>
</tr>
</tbody>
</table>

Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 109</td>
<td>Anatomy and Physiology</td>
<td>6</td>
</tr>
<tr>
<td>BIOL 208</td>
<td>Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
</tbody>
</table>

Specific Program Requirements

Must be taken at Penn Valley

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENA 100</td>
<td>Developmental Dentistry</td>
<td>3</td>
</tr>
<tr>
<td>DENA 105</td>
<td>Dental Lab Procedures</td>
<td>2</td>
</tr>
<tr>
<td>DENA 110</td>
<td>Chairside Assisting I</td>
<td>5</td>
</tr>
<tr>
<td>DENA 115</td>
<td>Dental Radiology I</td>
<td>3</td>
</tr>
<tr>
<td>DENA 125</td>
<td>Clinical Practice I</td>
<td>2</td>
</tr>
<tr>
<td>DENA 126</td>
<td>Dental Assistant Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>DENA 200</td>
<td>Body Structure and Function</td>
<td>2</td>
</tr>
<tr>
<td>DENA 205</td>
<td>Dental Biomaterials</td>
<td>2</td>
</tr>
<tr>
<td>DENA 210</td>
<td>Chairside Assisting II</td>
<td>2</td>
</tr>
<tr>
<td>DENA 215</td>
<td>Dental Radiology II</td>
<td>1</td>
</tr>
<tr>
<td>DENA 250</td>
<td>Clinical Practice II</td>
<td>4</td>
</tr>
<tr>
<td>DENA 225</td>
<td>Dental Office Management</td>
<td>2</td>
</tr>
<tr>
<td>DENA 260</td>
<td>Dental Assistant Seminar II</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: 76

Dental Assisting Certificate

Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

Specific Program Requirements

Must be taken at Penn Valley

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENA 100</td>
<td>Developmental Dentistry</td>
<td>3</td>
</tr>
<tr>
<td>DENA 105</td>
<td>Dental Laboratory Procedures</td>
<td>2</td>
</tr>
<tr>
<td>DENA 110</td>
<td>Chairside Assisting I</td>
<td>5</td>
</tr>
<tr>
<td>DENA 115</td>
<td>Dental Radiology I</td>
<td>3</td>
</tr>
<tr>
<td>DENA 125</td>
<td>Clinical Practice I</td>
<td>2</td>
</tr>
<tr>
<td>DENA 126</td>
<td>Dental Assistant Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>DENA 200</td>
<td>Body Structure and Function</td>
<td>2</td>
</tr>
<tr>
<td>DENA 205</td>
<td>Dental Biomaterials</td>
<td>2</td>
</tr>
<tr>
<td>DENA 210</td>
<td>Chairside Assisting II</td>
<td>2</td>
</tr>
<tr>
<td>DENA 215</td>
<td>Dental Radiology II</td>
<td>1</td>
</tr>
<tr>
<td>DENA 225</td>
<td>Dental Office Management</td>
<td>2</td>
</tr>
<tr>
<td>DENA 250</td>
<td>Clinical Practice II</td>
<td>4</td>
</tr>
<tr>
<td>DENA 260</td>
<td>Dental Assistant Seminar II</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: 39
DRAFTING AND DESIGN ENGINEERING TECHNOLOGY

Offered at the Business & Technology College

This program leads to the Associate in Applied Science degree and gives students basic skills necessary for industrial jobs.

General Education Requirements
ENGL 101 Composition and Reading I 3
ENGL 102 Composition and Reading II 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
MATH 103 Technical Math I and
MATH 104 Technical Math II or
MATH 120 College Algebra and
MATH 130 Trigonometry 6
PHYS 130 General Physics I and
PHYS 131 General Physics II or
PHYS 112 Technical Physics 5-10
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Business & Technology College
DRAF 152 Engineering Graphics and CADD I 5
DRAF 153 Descriptive Geometry 3
DRAF 155 Architectural Drafting 3
DRAF 258 Principles of Design 3
DRAF 262 Technical Illustration 3
DRAF 268 Structural Design 3
DRAF 269 CADD II 4
DRAF 270 CADD Applications 2
DRAF Drafting Electives 4-5
MATE 130 Machining for Mechanical Drafting 5
Electives* 1-7

Total Credit Hours Required 62

* Must be from the following disciplines: BSAD, CSIS, CSOF, DRAF, MATE, MATH, PHYS.

EMERGENCY MEDICAL TECHNICIAN–PARAMEDIC

Offered at Penn Valley

This program, which leads to either an Associate in Applied Science degree or a certificate of proficiency, prepares students to work in the emergency medical services field. Graduates are eligible to take the national registry exam for paramedics.

Admission to the Paramedic Program
Because enrollment in the program is limited, a student must meet the requirements and apply for admission.

Requirements
1. High school diploma or GED certificate.
2. Admission to Penn Valley Community College.
3. Student must be 18 years of age by completion of the Emergency Medical Technician-Basic course.
4. Student must be enrolled in or have completed EMTP 150 (or have a current EMT license) and a college anatomy and physiology course.

Applications Procedure
1. New students send application for admission to Penn Valley Community College and have all high school, GED, and college records sent to the Records Office.
2. Request a program application form from the Program Coordinator.
3. Return completed program application by June 1 for admission to the program beginning in August or by November 1 for admission to the program beginning in January.
4. Applications will be screened for completeness and qualified applicants will be notified of an interview time.
5. The most qualified applicants will be selected based on the following criteria:
   a. Results of college placement tests.
   b. Academic performance and completion of prerequisites.
   c. Missouri EMT licensure or pending reciprocity.
   d. Field experience.

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
MATH 110 Intermediate Algebra 3
PSYC 140 General Psychology 3
SOCI 160 Sociology 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Penn Valley
EMTP 150 Emergency Medical Technician-Basic 8
EMTP 240 Intro to Paramedic Care 4
EMTP 241 Prehospital Assessment Techniques 4
EMTP 242 Medical Emergencies 3
EMTP 243 Paramedic Pharmacology 4.5
EMTP 244 OB, Pediatrics, ACLS 2.5
EMTP 245 Trauma Management 2.5

Specific Program Requirements
Must be taken at Penn Valley
BIOL 108 Introductory Anatomy and Physiology 5
BIOL 150 Medical Terminology 2
CHEM 105 Introductory Chemistry 5

26
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMTP 246</td>
<td>Prehospital Care Integration</td>
<td>2.0</td>
</tr>
<tr>
<td>EMTP 247</td>
<td>Paramedic Hospital Clinicals</td>
<td>9.0</td>
</tr>
<tr>
<td>EMTP 248</td>
<td>Paramedic Field Internship</td>
<td>5.5</td>
</tr>
<tr>
<td>EMTP 249</td>
<td>Pediatric Advanced Life Support</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours Required</strong></td>
<td>76.0</td>
</tr>
</tbody>
</table>

**EMT–Paramedic Certificate**

**Specific Program Requirements**

*Must be taken at Penn Valley*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 108</td>
<td>Introductory Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>EMTP 150</td>
<td>Emergency Medical Technician-Basic</td>
<td>8</td>
</tr>
<tr>
<td>EMTP 240</td>
<td>Introduction to Paramedic Care</td>
<td>4</td>
</tr>
<tr>
<td>EMTP 241</td>
<td>Prehospital Assessment Techniques</td>
<td>4</td>
</tr>
<tr>
<td>EMTP 242</td>
<td>Medical Emergencies</td>
<td>3</td>
</tr>
<tr>
<td>EMTP 243</td>
<td>Paramedic Pharmacology</td>
<td>4.5</td>
</tr>
<tr>
<td>EMTP 244</td>
<td>Obstetrics, Pediatrics, and ACLS</td>
<td>2.5</td>
</tr>
<tr>
<td>EMTP 245</td>
<td>Trauma Management</td>
<td>2.5</td>
</tr>
<tr>
<td>EMTP 246</td>
<td>Prehospital Care Integration</td>
<td>2</td>
</tr>
<tr>
<td>EMTP 247</td>
<td>Paramedic Hospital Clinicals</td>
<td>9</td>
</tr>
<tr>
<td>EMTP 248</td>
<td>Field Internship</td>
<td>5.5</td>
</tr>
<tr>
<td>EMTP 249</td>
<td>Pediatric Advanced Life Support (PALS) Provider</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours Required</strong></td>
<td>51</td>
</tr>
</tbody>
</table>

**ENVIRONMENTAL HEALTH AND SAFETY TECHNOLOGY**

*Offered at the Business & Technology College*

This program leads to three Associate in Applied Science degrees or three certificates. This program provides a specialized technical background necessary to work in the field of environmental health and safety.

**ENVIRONMENTAL HEALTH AND SAFETY TECHNOLOGY EMPHASIS**

*Offered at the Business & Technology College*

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or HIST 121 American History II</td>
<td>3</td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

*Must be taken at Business & Technology College*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 109</td>
<td>Anatomy and Physiology</td>
<td>6</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry or CHEM 111 General College Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 205</td>
<td>Organic Chemistry or CHEM 221 Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>GEOL 103</td>
<td>Environmental Geology</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 101</td>
<td>Hazardous Material Management and Emergency Response</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 110</td>
<td>Properties and Hazards of Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 200</td>
<td>Safety and Health Regulations and Standards</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 201</td>
<td>Transportation and Storage of Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 203</td>
<td>Environmental Regulations</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 204</td>
<td>Emergency Preparedness and Planning</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 205</td>
<td>Principles of Industrial Hygiene or</td>
<td></td>
</tr>
<tr>
<td>EHSS 218</td>
<td>Industrial Processes and Hazard Control</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 210</td>
<td>Incident and Accident Investigation or</td>
<td></td>
</tr>
<tr>
<td>EHSS 211</td>
<td>Workers Compensation Legislation for EHS</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 213</td>
<td>EHS Program Development and Management</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 217</td>
<td>Concepts of Waste Minimization, Recycling and Pollution Prevention</td>
<td>3</td>
</tr>
<tr>
<td>MATH 103</td>
<td>Technical Math I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours Required</strong></td>
<td>64</td>
</tr>
</tbody>
</table>
### Environmental Health and Safety Technology Certificate

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**Must be taken at Business & Technology College**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHSS 101</td>
<td>Hazardous Material Management and Emergency Response Operations</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 110</td>
<td>Properties and Hazards of Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 200</td>
<td>Safety and Health Regulations and Standards</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 202</td>
<td>Transportation and Storage of Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 203</td>
<td>Environmental Regulations</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 204</td>
<td>Emergency Preparedness and Planning</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 205</td>
<td>Principles of Industrial Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 210</td>
<td>Incident and Accident Investigation or</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 211</td>
<td>Workers Compensation Legislation for EHS</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 213</td>
<td>EHS Program Development and Management</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 218</td>
<td>Industrial Processes and Hazard Control</td>
<td>3</td>
</tr>
<tr>
<td>MATH 103</td>
<td>Technical Math I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**

33

### Health and Safety Specialist Certificate

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**Must be taken at Business & Technology College**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHSS 101</td>
<td>Hazardous Material Management and Emergency Response Operations</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 110</td>
<td>Properties and Hazards of Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 200</td>
<td>Safety and Health Regulations and Standards</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 202</td>
<td>Transportation and Storage of Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 203</td>
<td>Environmental Regulations</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 204</td>
<td>Emergency Preparedness and Planning</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 205</td>
<td>Principles of Industrial Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 210</td>
<td>Incident and Accident Investigation or</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 211</td>
<td>Workers Compensation Legislation for EHS</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 213</td>
<td>EHS Program Development and Management</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 218</td>
<td>Industrial Processes and Hazard Control</td>
<td>3</td>
</tr>
<tr>
<td>MATH 103</td>
<td>Technical Math I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**

30

### Environmental Health and Safety Emphasis

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 109</td>
<td>Anatomy and Physiology</td>
<td>6</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry or</td>
<td></td>
</tr>
<tr>
<td>CHEM 111</td>
<td>General College Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 205</td>
<td>Organic Chemistry or</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 221</td>
<td>Organic Chemistry I</td>
<td>5</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**Must be taken at Business & Technology College**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHSS 101</td>
<td>Hazardous Material Management and Emergency Response Operations</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 110</td>
<td>Properties and Hazards of Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 200</td>
<td>Safety and Health Regulations</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**

30

### Environmental Emphasis

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>
Specific Program Requirements
BSAD 178 Business Communications 3
CHEM 105 Introductory Chemistry or
CHEM 111 General College Chemistry I 5
CHEM 205 Organic Chemistry or
CHEM 221 Organic Chemistry I 5
GEOL 103 Environmental Geology 3
PHYS 112 Technical Physics 5

Specific Program Requirements
Must be taken at Business & Technology College
EHSS 101 Hazardous Material Management and Emergency Response 3
EHSS 110 Properties and Hazards of Hazardous Materials 3
EHSS 200 Safety and Health Regulations and Standards 3
EHSS 202 Transportation and Storage of Hazardous Materials 3
EHSS 203 Environmental Regulations 3
EHSS 204 Emergency Preparedness and Planning 3
EHSS 213 EHS Program Development and Management 3
EHSS 217 Concepts of Waste Minimization, Recycling, Pollution Prevention 3
EHSS 220 Air Quality Management 3
EHSS 225 Water Quality Management 3
MATH 103 Technical Math I and
MATH 104 Technical Math II
or
MATH 106 Technical Algebra and Trigonometry 5-6

Total Credit Hours Required 65-66

Environmental Specialist Certificate

Specific Program Requirements
BSAD 178 Business Communications 3

Specific Program Requirements
Must be taken at Business & Technology College
EHSS 101 Hazardous Material Management and Emergency Response 3
EHSS 110 Properties and Hazards of Hazardous Materials 3
EHSS 200 Safety and Health Regulations and Standards 3
EHSS 202 Transportation and Storage of Hazardous Materials 3
EHSS 203 Environmental Regulations 3
EHSS 204 Emergency Preparedness and Planning or
EHSS 217 Concepts of Waste Minimization, Recycling, and Pollution Prevention 3
EHSS 213 EHS Program Development and Management 3
EHSS 220 Air Quality Management 3
EHSS 225 Water Quality Management 3

Total Credit Hours Required 63

Fashion Design Degree

Offered at Penn Valley
This program leads to an Associate in Applied Science degree and prepares students for careers in design and illustration.

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics 3
MATH 100 Mathematics for Business 3
PSYC 140 General Psychology 3
SOCI 160 Sociology 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
ART 110 Basic Drawing I 3
ART 130 Fashion Illustration I 3

Specific Program Requirements
Must be taken at Penn Valley
ART 131 Fashion Illustration II 3
BSAD 152 Fashion Merchandising 3
FASH 111 Fashion and Clothing Selection 3
FASH 112 Clothing Construction 3
FASH 118 Costume History 3
FASH 119 Fashion Promotion 3
FASH 211 Flat Pattern Design 3
FASH 212 Fashion and Household Fabrics 3
FASH 213 Advanced Clothing Construction 3
FASH 214 Fashion Design Portfolio 3
FASH 250 Computer Aided Fashion Design 3
FASH 251 Apparel Design Promotion 3
HUSC 200 Entrepreneurship in Human Sciences 3

Total Credit Hours Required 63

Fashion Merchandising Degree

Offered at Penn Valley
This program leads to an Associate in Applied Science degree and prepares students for jobs in fashion merchandising.

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics 3
MATH 100 Mathematics for Business 3
PSYC 140 General Psychology 3
SOCI 160 Sociology 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
BSAD 150 Business Essentials 3
BSAD 205 Marketing 3  
CSIS 115 Introduction to Microcomputer Applications 3  

Specific Program Requirements  
Must be taken at Penn Valley  
BSAD 152 Fashion Merchandising 3  
FASH 110 Fashion Products 3  
FASH 111 Fashion and Clothing Selection 3  
FASH 112 Clothing Construction 3  
FASH 118 Costume History 3  
FASH 119 Fashion Promotion 3  
FASH 212 Fashion and Household Fabrics 3  
FASH 213 Advanced Clothing Construction 3  
FASH 218 Fashion Field Experience I 3  
FASH 219 Fashion Field Experience II 3  
HUSC 200 Entrepreneurship in Human Sciences Elective 3  

Total Credit Hours Required 63

---

**FIRE ACADEMY**

Most metropolitan fire departments require FFI and FFII certification prior to employment. The Western Missouri Regional Fire Academy of the Blue River Community College satisfies all requirements for FFI and FFII as well as CPAT, Haz-Mat awareness, Haz-Mat operations, and EMT. The Academy offers two levels of firefighting training. Full-time day and part-time night classes are available.

Successful graduates of the Academy will obtain their state certification in the above mentioned areas.

---

**FIRE SCIENCE TECHNOLOGY DEGREE**

Offered at Blue River

This program, which offers an Associate in Applied Science degree and certificate, provides advanced professional training in fire science.

General Education Requirements  
ENGL 101 Composition and Reading I 3  
Two of the following:  
HIST 120 American History I  
HIST 121 American History II  
POLS 135 Introduction to Political Science  
POLS 136 Introduction to American National Politics  
POLS 137 Introduction to State and Local Politics  
SOSC 151 Foundations of the Social Sciences II 6  
MATH 100 Mathematics for Business or any MATH course above 100 3  
PSYC 140 General Psychology 3  
SPDR 100 Fundamentals of Speech 3  

SPECIFIC PROGRAM REQUIREMENTS  
Must be taken at Blue River  
EMTP 150 Emergency Medical Technician-Basic 8  
FSTE 169 Fire Prevention 3  
FSTE 170 Hazardous Materials Awareness and Operations 3  
FSTE 172 Fire Department Tactical Operations 3  
FSTE 179 Firefighter I 4  
FSTE 183 Incident and Disaster Management 3  
FSTE 189 Firefighter II 3  
FSTE 192 Suppression and Detection Systems 3  
FSTE 193 Fire Service Law 3  
FSTE 200 Fire Service Supervision 3  
FSTE 201 The Fire Service Manager 3  
FSTE 202 Fire Service Administration 3  
FSTE 203 Managing in Today’s Fire Service 3  
PHED 107 Physical Fitness I 1  
PHED 108 Physical Fitness II 1  
PHED 109 Physical Fitness III 1  

Total Credit Hours Required 66

---

**Fire Science Certificate**

Specific Program Requirements  
Must be taken at Blue River  
EMTP 150 Emergency Medical Technician-Basic 8  
FSTE 169 Fire Prevention 3  
FSTE 170 Hazardous Materials Awareness and Operations 3  
FSTE 179 Firefighter I 4  
FSTE 189 Firefighter II 3  
PHED 107 Physical Fitness I 1  
PHED 108 Physical Fitness II 1  
PHED 109 Physical Fitness III 1  

Total Credit Hours Required 2

---

**GENERAL BUSINESS DEGREE**

Offered at all colleges

This program offers an Associate in Applied Science degree and three certificates of completion.

General Education Requirements  
ECON 210 Principles of Economics I–Macroeconomics 3  
ENGL 101 Composition and Reading I 3  
ENGL 102 Composition and Reading II 3  
HIST 120 American History I or  
HIST 121 American History II or  
POLS 135 Introduction to Political Science or  
POLS 136 Introduction to American National Politics or  
POLS 137 Introduction to State and Local Politics 3  
MATH 110 Intermediate Algebra or  
MATH 119 College Mathematics or
MATH 120  College Algebra  3
PSYC 140  General Psychology  3
SPDR 100  Fundamentals of Speech  3

Specific Program Requirements
BSAD 101  Accounting Principles I  3
BSAD 102  Accounting Principles II  3
BSAD 120  Human Relations in Business  3
BSAD 150  Business Essentials  3
BSAD 178  Business Communications  3
BSAD 204  Business Management  3
BSAD 205  Marketing  3
BSAD 254  Business Law I or
BSAD 255  Business Law II or
BSAD 270  Legal Environment of Business  3
CSIS 101  Technology and Information Management  3
CSIS 115  Intro to Microcomputer Applications  3
Electives: Any course from BSAD, CSIS, CSOF, ECON, OFSC  12

Total Credit Hours Required  63

Entrepreneurial Studies Certificate
This program is designed for students who have a strong interest in exploring what it takes to own a successful business. It also provides insights to those working in companies, both large and small, who want to become better at what they currently do.

Specific Program Requirements
BSAD 127  Management Internship I  3
BSAD 135  Entrepreneurship  3
BSAD 150  Business Essentials  3
BSAD 178  Business Communications  3
CSIS 115  Introduction to Microcomputer Applications  3
Electives: BSAD, CSIS, CSOF, ECON, OFSC  12

Total Credit Hours Required  15

Supervision Certificate
This program, which leads to a certificate of proficiency, prepares new students for supervisory jobs and improves the performance of those already working as supervisors.

General Education Requirements
ENGL 101  Composition and Reading I  3
PSYC 140  General Psychology  3
SPDR 100  Fundamentals of Speech  3

Specific Program Requirements
BSAD 100  Introduction to Accounting or
BSAD 101  Accounting Principles I  3
BSAD 109  Principles of Supervision  3
BSAD 204  Business Management  3
BSAD 220  Business Letters and Reports  3
CSIS/CSOF  Elective  3
Electives: BSAD, CSIS, CSOF, ECON, OFSC or MATH 100  6

Total Credit Hours Required  30

Supply Chain Logistics Certificate
This program focuses on those who already participate in the logistics arena and want more knowledge plus proven insights from professionals in their field.

Specific Program Requirements
Electives: Must choose from the following disciplines: BSAD, CSIS, ECON, GEOG, SPDR 100, 102 or 103  3

Specific Program Requirements
Must be taken at Blue River Community College
BSAD 210  Logistics Management  3
BSAD 211  Operations Management  3
BSAD 212  Transportation Operations and Management  3
BSAD 213  Warehousing and Distribution Centers  3

Total Credit Hours Required  15

GRAPHIC DESIGN
Offered at Penn Valley
This program leads to the Associate in Applied Science degree and prepares students for jobs as graphic designers or commercial artists.

General Education Requirements
ART 108  Survey of Art or
ART 150  History of Art I or
ART 151  History of Art II  3
ENGL 101  Composition and Reading I  3
HIST  120  American History I or
HIST  121  American History II or
POL 135  Introduction to Political Science or
POL 136  Introduction to American National Politics or
POL 137  Introduction to State and Local Politics or
SOS 151  Foundations of the Social Sciences II  3
SPDR 100  Fundamentals of Speech  3
Electives: General Education  6

Specific Program Requirements
ART 100  Art Fundamentals I  3
ART 102  Computers in Design I  3
ART 110  Basic Drawing I  3
ART 115  Orientation to Graphic Communications  3
ART 139  Introduction to Photography  3
ART 202  Computers in Design II  3
ART 244  Digital Photography  3
ART  Elective  3

Specific Program Requirements
Must be taken at Penn Valley
ART 160  Graphic Design I  3
ART 200  Design  3
ART 254  Screen Printing I 3  
ART 255  Screen Printing II 3  
ART 260  Graphic Design II 3  
ART 261  Graphic Design III 3  
ART 264  Art Portfolio – Graphic Design 3  
Total Credit Hours Required 63  

Digital Prepress Technician Certificate

This program, which leads to a certificate of proficiency, is for students who want a career in printing and printers who want to update their skills.

Specific Program Requirements
Must be taken at Penn Valley
ART 102  Computers in Design I 3  
ART 115  Orientation to Graphic Communications 3  
ART 202  Computers in Design II 3  
ART 281  Introduction to Pre-Press 3  
ART 282  Image Input 3  
ART 283  Advanced Pre-Press 3  
ART 284  Pre-Internship 3  
Total Credit Hours Required 21  

Grounds and Turf Management

Offered at Longview

This program leads to an Associate in Applied Science degree and a certificate of proficiency in Grounds Maintenance and prepares students for jobs in the groundskeeping and turf management industry. The Horticultural certificate is offered through Johnson County Community College.

General Education Requirements
ECON 110  Introduction to Economics 3  
ENGL 101  Composition and Reading I 3  
HIST 120  American History I or  
HIST 121  American History II or  
POLS 135  Introduction to Political Science or  
POLS 136  Introduction to American National Politics or  
POLS 137  Introduction to State and Local Politics or  
SOSC 151  Foundations of the Social Sciences II 3  
MATH 100  Mathematics for Business 3  
PHED 117  Golf I 1  
PSYC 140  General Psychology 3  
SPDR 100  Fundamentals of Speech 3  

Specific Program Requirements
The following courses can be taken at any campus:
BIOL 104  General Botany 5  
BIOL 202  Ecology 5  
CHEM 105  Introductory Chemistry 5  

Specific Program Requirements
Must be taken at Longview
AGBS 100  Introduction to Urban Agribusiness 3  
AGBS 106  Landscape Design and Maintenance 3  
AGBS 107  Deciduous Trees and Shrubs 3  
AGBS 109  Pest Management/Turf and Ornamental 3  
AGBS 115  Soil Fertility and Fertilizers 3  
AGBS 135  Turfgrass Management I 3  
AGBS 145  Irrigation and Installation 3  
9 hours from the courses listed below:  
AGBS 108  Evergreens and Herbaceous Plants  
AGBS 140  Turfgrass Management II  
AGBS 151  Special Topics in Horticulture I  
AGBS 152  Special Topics in Horticulture II  
AGBS 153  Special Topics in Horticulture III  
AGBS 200  Occupational Internship  
AGBS 206  Advanced Landscape Design and Maintenance  
Total Credit Hours Required 64  

Grounds Maintenance Certificate

Specific Program Requirements
Must be taken at Longview
AGBS 100  Introduction to Urban Agribusiness 3  
AGBS 106  Landscape Design and Maintenance 3  
AGBS 107  Deciduous Trees and Shrubs 3  
AGBS 115  Soil Fertility and Fertilizers 3  
AGBS 135  Turfgrass Management I 3  
AGBS  Elective 3  
Total Credit Hours Required 18  

Horticulture Certificate

Offered at Johnson County Community College Coordinated through Longview

Specific Program Requirements
Must be taken at Longview
AGBS 106  Landscape Design and Maintenance 3  
AGBS 107  Deciduous Trees and Shrubs 3  
AGBS 135  Turfgrass Management I 3  
BSAD 135  Entrepreneurship 3  

Specific Program Requirement
Must be taken at Johnson County Community College
HORT 150  Vegetables, Fruits and Herbs 2  
HORT 160  Garden Center Operations 3  
HORT 215  Woody Plants II 3  
HORT 220  Herbaceous Plants 3  
HORT 225  Plant Problems 3  
HORT 230  Landscape Maintenance Techniques 4  
Total Credit Hours Required 30
HEALTH INFORMATION TECHNOLOGY

Offered at Penn Valley

This program offers an Associate in Applied Science degree and a Coding Specialist certificate. The program prepares students in all aspects pertaining to health records, including medical coding, Medicare compliance, analysis of documentation and computerization. Graduates of the A.A.S. program are eligible to take the national certification exam for registered health information technicians. The program is accredited by CAAHEP (Commission on Accreditation of Allied Health Education Programs).

Admission to the Program

Since enrollment is limited, students must apply for admission to the Health Information Technology program and meet the following requirements. Students must begin the program in the fall semester. Enrollees may be full- or part-time students.

1. Be admitted to Penn Valley.
2. Submit transcripts of high school and college work both to the Penn Valley admissions office and to the program coordinator.
3. Present a minimum grade point average of 2.5 in high school work or a minimum GED total score of 245 as well as a minimum grade point average of 2.5 in all previous college work.
4. Have a personal advising interview with the program coordinator.
5. Visit a medical record department, interview the director about the health information profession, and submit a report of the visit.
6. Complete application for the Health Information Technology Program.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 108</td>
<td>Intro to Anatomy and Physiology</td>
<td>5.0</td>
</tr>
<tr>
<td>BIOL 137</td>
<td>Intro to Pathology</td>
<td>4.0</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3.0</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences I</td>
<td>3.0</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3.0</td>
</tr>
<tr>
<td>ELECTIVE</td>
<td>(PSYC 140 Strongly Recommended)</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFSC 145</td>
<td>Support Software or</td>
<td></td>
</tr>
<tr>
<td>OFSC 195</td>
<td>Word Processing Concepts or</td>
<td></td>
</tr>
<tr>
<td>OFSC 200</td>
<td>Advanced Word Processing</td>
<td>3.0</td>
</tr>
<tr>
<td>CSOF 112</td>
<td>Spreadsheet Applications or</td>
<td></td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Three of the following:</td>
<td></td>
</tr>
<tr>
<td>CSOF 102, 103, 104, 106, 108</td>
<td></td>
<td>3.0</td>
</tr>
</tbody>
</table>

Specific Program Requirements

Must be taken at Penn Valley

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HITE 101</td>
<td>Intro to the Medical Records Profession</td>
<td>2.0</td>
</tr>
<tr>
<td>HITE 102</td>
<td>Health Record Systems, Analysis/Control</td>
<td>3.5</td>
</tr>
<tr>
<td>HITE 103</td>
<td>Medical Terminology for Medical</td>
<td>3.0</td>
</tr>
<tr>
<td>HITE 106</td>
<td>Health Statistics</td>
<td>3.0</td>
</tr>
<tr>
<td>HITE 108</td>
<td>Legal Aspects of Medical Records</td>
<td>2.0</td>
</tr>
<tr>
<td>HITE 109</td>
<td>Directed Practice I</td>
<td>2.5</td>
</tr>
<tr>
<td>HITE 110</td>
<td>Pharmacology</td>
<td>1.5</td>
</tr>
<tr>
<td>HITE 111</td>
<td>Intro to Medical Insurance and Office Procedures</td>
<td>1.5</td>
</tr>
<tr>
<td>HITE 200</td>
<td>Intro to Classification Systems</td>
<td>1.0</td>
</tr>
<tr>
<td>HITE 201</td>
<td>Quality Management</td>
<td>3.0</td>
</tr>
<tr>
<td>HITE 202</td>
<td>Classification Systems, Nomenclatures, Indexes and Registers I</td>
<td>4.0</td>
</tr>
<tr>
<td>HITE 203</td>
<td>Directed Practice II</td>
<td>2.0</td>
</tr>
<tr>
<td>HITE 206</td>
<td>Specialized Health Records Systems</td>
<td>2.0</td>
</tr>
<tr>
<td>HITE 207</td>
<td>Classification Systems, Nomenclatures, Indexes and Registers II</td>
<td>3.0</td>
</tr>
<tr>
<td>HITE 208</td>
<td>Directed Practice III</td>
<td>2.0</td>
</tr>
<tr>
<td>HITE 210</td>
<td>Classification Systems and Nomenclatures for Ambulatory Care</td>
<td>3.0</td>
</tr>
<tr>
<td>HITE 211</td>
<td>Organization and Administration in Health Information</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credit Hours Required 69.0

Coding Specialist Certificate

Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 115</td>
<td>Introduction to Microcomputer Applications</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Specific Program Requirements

Must be taken at Penn Valley

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 108</td>
<td>Introduction to Anatomy and Physiology</td>
<td>5.0</td>
</tr>
<tr>
<td>BIOL 137</td>
<td>Introduction to Pathology</td>
<td>4.0</td>
</tr>
<tr>
<td>HITE 103</td>
<td>Medical Terminology for Medical Records I</td>
<td>3.0</td>
</tr>
<tr>
<td>HITE 110</td>
<td>Pharmacology</td>
<td>1.5</td>
</tr>
<tr>
<td>HITE 111</td>
<td>Intro to Medical Insurance and Office Procedures</td>
<td>1.5</td>
</tr>
<tr>
<td>HITE 200</td>
<td>Intro to Classification Systems</td>
<td>1.0</td>
</tr>
<tr>
<td>HITE 202</td>
<td>Classification Systems, Nomenclatures, Indexes and Registers I</td>
<td>4.0</td>
</tr>
<tr>
<td>HITE 203</td>
<td>Directed Practice II</td>
<td>2.0</td>
</tr>
<tr>
<td>HITE 206</td>
<td>Specialized Health Records Systems</td>
<td>2.0</td>
</tr>
<tr>
<td>HITE 207</td>
<td>Classification Systems, Nomenclatures, Indexes and Registers II</td>
<td>3.0</td>
</tr>
<tr>
<td>HITE 208</td>
<td>Directed Practice III</td>
<td>2.0</td>
</tr>
<tr>
<td>HITE 210</td>
<td>Classification Systems and Nomenclatures for Ambulatory Care</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credit Hours Required 35.0
HOSPITALITY MANAGEMENT

Offered at Johnson County Community College
Coordinated throughout MCC at all locations.

This program leads to an Associate in Applied Science degree with three options: Chef Apprenticeship, Hotel/Motel, and Food and Beverage. It provides an overview of the various departmental functions, the position of the industries in the American economic system, and the functions and limitations of those types of establishments. MCC’s hospitality management program is offered in cooperation with the hospitality management program at Johnson County Community College. Students must be accepted into the program by both MCC and Johnson County Community College. The student is awarded the degree from JCCC upon successful completion of all requirements.

Program courses and credit hours are subject to change because of the requirement changes at the degree-granting institution. It is the student’s responsibility to check with an MCC counselor before enrollment.

CHEF APPRENTICESHIP DEGREE

Specific Program Requirements
Must be taken at one of the MCC campuses
CSOF 100 Introduction to Personal Computing 1
ENGL 101 Composition and Reading I 3
HUMN 140 Humanities for Today (Humanities or Art Elective) 3
MATH 100 Mathematics for Business 3
PSYC 140 General Psychology 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Johnson County Community College
HMEC 151 Nutrition and Meal Planning 3
HMGT 121 Hospitality Management Fundamentals 3
HMGT 123 Basic Food Preparation 3
HMGT 126 Food Management 4
HMGT 128 Supervisory Management 3
HMGT 130 Hospitality Law 3
HMGT 145 Food Production Specialties 3
HMGT 221 Design Techniques 3
HMGT 228 Advanced Hospitality Management 3
HMGT 230 Intermediate Food Preparation 3
HMGT 250 Introduction to Catering 3
HMGT 271 Seminar in Hospitality Management: Purchasing 3
HMGT 273 Seminar in Hospitality Management: Accounting 3
HMGT 275 Seminar in Hospitality Management: Internship 3
HMGT 277 Seminar in Menu Planning and Sales Promotion 3
HMGT 279 Beverage Control 3
HMGT 287 Culinary Arts Practicum V 2
HMGT 288 Culinary Arts Practicum VI 2
Total Credit Hours Required 74

FOOD AND BEVERAGE

Specific Program Requirements
Must be taken at one of the MCC campuses
CSOF 100 Introduction to Personal Computing 1
ENGL 101 Composition and Reading I 3
HUMN 140 Humanities for Today (Humanities or Art Elective) 3
MATH 100 Mathematics for Business 3
PSYC 140 General Psychology 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Johnson County Community College
HMEC 151 Nutrition and Meal Planning 3
HMGT 121 Hospitality Management Fundamentals 3
HMGT 123 Basic Food Preparation 3
HMGT 126 Food Management 4
HMGT 128 Supervisory Management 3
HMGT 130 Hospitality Law 3
HMGT 145 Food Production Specialties 3
HMGT 221 Design Techniques 3
HMGT 228 Advanced Hospitality Management 3
HMGT 230 Intermediate Food Preparation 3
HMGT 250 Introduction to Catering 3
HMGT 271 Seminar in Hospitality Management: Purchasing 3
HMGT 273 Seminar in Hospitality Management: Accounting 3
HMGT 275 Seminar in Hospitality Management: Internship 3
HMGT 277 Seminar in Menu Planning and Sales Promotion 3
HMGT 279 Beverage Control 3
HMGT 287 Culinary Arts Practicum V 2
HMGT 288 Culinary Arts Practicum VI 2
Total Credit Hours Required 74

HOTEL/MOTEL

Specific Program Requirements
Must be taken at one of the MCC campuses
CSOF 100 Introduction to Personal Computing 1
ENGL 101 Composition and Reading I 3
HUMN 140 Humanities for Today (Humanities or Art Elective) 3
MATH 100 Mathematics for Business 3
PSYC 140 General Psychology 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Johnson County Community College
HMEC 151 Nutrition and Meal Planning 3
HMGT 121 Hospitality Management Fundamentals 3
HUMAN SERVICES

Offered at Longview and Penn Valley

This program offers an Associate in Applied Science degree and five certificate options: Mental Health Technician, Drug Addiction Services, Youth Development Worker, Youth Work, and Workers in Developmental Disabilities. The program prepare students for career advancement or entry-level jobs that assist families with their social, behavioral, educational, or mental health needs.

CORRECTIONAL SERVICES EMPHASIS

General Education Requirements
BIOL 101 General Biology or
BIOL 132 Human Nutrition 3-5
CSIS 101 Technology and Information Management or
CSOF 105 Computer Survival 3
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
PSYC 140 General Psychology 3
PSYC 162 Correctional Psychology 3
SOCI 160 Sociology 3
SOSC 171 Comparative Ethnic and Cultural Studies 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Longview or Penn Valley
CRJU/ HUMS 126 Corrections in the Community 3
CRJU/ HUMS 236 Correctional Administration 3
HUMS 100 Introduction to Human Services 3
HUMS 105 Principles of Corrections 3
HUMS 163 Therapeutic Activities and Recreation 3
HUMS 168 Introduction to Practicum I 1
HUMS 201 Human Services Practicum I 3
HUMS 202 Human Services Practicum II 3
HUMS 203 Human Services Colloquia I 1
HUMS 204 Human Services Colloquia II 1
HUMS/ PSYC 210 Interviewing and Interpersonal Communications 3
HUMS 220 Social Welfare 3

Total Credit Hours Required 60-62

DRUG ADDICTION SERVICES EMPHASIS

General Education Requirements
BIOL 101 General Biology or
BIOL 132 Human Nutrition 3-5
CSIS 101 Technology and Information Management or
CSOF 105 Computer Survival 3
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
PSYC 140 General Psychology 3
PSYC 162 Correctional Psychology 3
SOCI 160 Sociology 3
SOSC 171 Comparative Ethnic and Cultural Studies 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Longview or Penn Valley
CRJU/ HUMS 275 Alcohol and Drug Addiction 3
CRJU/ HUMS 280 Addiction Counseling with Special Populations 3
CRJU/ HUMS 285 Addiction Client Management 3
HUMS 100 Introduction to Human Services 3
HUMS 163 Therapeutic Activities and Recreation 3
HUMS 168 Introduction to Practicum I 1
HUMS 172 Aging, Alcoholism and Medications 1
HUMS 175 Spirituality in Addiction Recovery 1
HUMS 176 Addiction Management 1
HUMS 177 Positive Dependency 1
HUMS 178 Women’s Issues in Addiction 1
HUMS 201 Human Services Practicum I 3
HUMS 202 Human Services Practicum II 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS 203</td>
<td>Human Services Colloquia I</td>
<td>1</td>
</tr>
<tr>
<td>HUMS 204</td>
<td>Human Services Colloquia II</td>
<td>1</td>
</tr>
<tr>
<td>HUMS/PSYC 210</td>
<td>Interviewing and Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 220</td>
<td>Social Welfare</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 148</td>
<td>Group Processes</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required:** 65-67

**Drug Addiction Services Certificate**

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**Must be taken at Longview or Penn Valley**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU/PSYC 162</td>
<td>Correctional Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/HUMS 275</td>
<td>Alcohol and Drug Addiction</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/HUMS 280</td>
<td>Addiction Counseling with Special Populations</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required:** 30

**Mental Health Technician Certificate**

**Specific Program Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>READ 108</td>
<td>College Success Skills</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**Must be taken at Longview or Penn Valley**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU/PSYC 162</td>
<td>Correctional Psychology or</td>
<td>3</td>
</tr>
<tr>
<td>CRJU/PSYC 210</td>
<td>Interviewing and Interpersonal Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required:** 23

**MENTAL HEALTH SERVICES EMPHASIS**

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 101</td>
<td>General Biology or</td>
<td></td>
</tr>
<tr>
<td>BIOL 132</td>
<td>Human Nutrition</td>
<td>3-5</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management or</td>
<td></td>
</tr>
<tr>
<td>CSOF 105</td>
<td>Computer Survival</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 162</td>
<td>Correctional Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 171</td>
<td>Comparative Ethnic and Cultural Studies</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**Must be taken at Longview or Penn Valley**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU/SOCI 169</td>
<td>Family Violence and Sexual Abuse</td>
<td>3</td>
</tr>
<tr>
<td>CRJU 230</td>
<td>Criminal Law II</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 100</td>
<td>Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 163</td>
<td>Therapeutic Activities and Recreation</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 168</td>
<td>Introduction to Practicum I</td>
<td>1</td>
</tr>
<tr>
<td>HUMS 171</td>
<td>Crisis Intervention</td>
<td>1</td>
</tr>
<tr>
<td>HUMS 190</td>
<td>Community Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 201</td>
<td>Human Services Practicum I</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 202</td>
<td>Human Services Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 203</td>
<td>Human Services Colloquia I</td>
<td>1</td>
</tr>
<tr>
<td>HUMS 204</td>
<td>Human Services Colloquia II</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required:** 64-66

**YOUTH CARE SERVICES EMPHASIS**

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 101</td>
<td>General Biology or</td>
<td></td>
</tr>
<tr>
<td>BIOL 132</td>
<td>Human Nutrition</td>
<td>3-5</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management or</td>
<td></td>
</tr>
<tr>
<td>CSOF 105</td>
<td>Computer Survival</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours Required:** 23
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 162</td>
<td>Correctional Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 171</td>
<td>Comparative Ethnic and Cultural Studies</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

Must be taken at Longview or Penn Valley

<table>
<thead>
<tr>
<th>CRNJ/</th>
<th>SOCI 168</th>
<th>Juvenile Delinquency</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMS 100</td>
<td>Introduction to Human Services</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUMS 160</td>
<td>Principles of Youth Work</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUMS 163</td>
<td>Therapeutic Activities and Recreation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUMS 166</td>
<td>Behavior Management Techniques for Children/Youths</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUMS 168</td>
<td>Introduction to Practicum I</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HUMS 201</td>
<td>Human Services Practicum I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUMS 202</td>
<td>Human Services Practicum II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUMS 203</td>
<td>Human Services Colloquia I</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HUMS 204</td>
<td>Human Services Colloquia II</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HUMS/</td>
<td>PSYC 210</td>
<td>Interviewing and Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>HUMS 220</td>
<td>Social Welfare</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PSYC 240</td>
<td>Child Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PSYC 245</td>
<td>Adolescent Psychology</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours Required: 63-65

---

**Workers in Developmental Disabilities Certificate**

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 243</td>
<td>Human Lifespan Development</td>
<td>4</td>
</tr>
<tr>
<td>READ 108</td>
<td>College Success Skills</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

Must be taken at Longview or Penn Valley

| HUMS 100 | Introduction to Human Services | 3 |
| HUMS 168 | Introduction to Practicum       | 1 |
| HUMS 201 | Human Services Practicum I      | 3 |
| HUMS 203 | Human Services Colloquia I      | 1 |
| HUMS 215 | Developmental Disabilities      | 4 |

Total Credit Hours Required: 25

---

**Youth Work Certificate**

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 245</td>
<td>Adolescent Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 160</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

Must be taken at Longview or Penn Valley

| HUMS 100 | Introduction to Human Services | 3 |
| HUMS 160 | Principles of Youth Work       | 3 |
| HUMS 168 | Introduction to Practicum       | 1 |
| HUMS 191 | Youth Development Seminar      | 1 |
| HUMS 201 | Human Services Practicum I      | 3 |
| HUMS 203 | Human Services Colloquia I      | 1 |

Total Credit Hours Required: 33
INDUSTRIAL TECHNOLOGIES

Offered at the Business & Technology College

This program offers 21 degree and certificate options. The Associate in Applied Science degree has 15 options: Bricklayer; Construction Carpentry; Construction Ironworking; Construction Cement Masons; Construction Laborer; Electronics Engineering Technology Electronics Technology; Glaziers; Heating, Ventilation and Air Conditioning; Industrial Electrical; Industrial Maintenance; Inside Wiring; Millwright; Painter; and Stationary Engineer. Certificates are: Heating, Ventilation and Air Conditioning; Industrial Electrical; Industrial Maintenance; Millwright; and Stationary Engineering. The requirements for the degree and certificates are listed below.

## BRICKLAYER EMPHASIS

### General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

- **BSAD 109** Principles of Supervision 3
- **CSIS 101** Technology and Information Management 3
- **CHEM 105** Introductory Chemistry or
- **CHEM 107** Preparatory General Chemistry or
- **PHYS 112** Technical Physics 5

### Specific Program Requirements

**Must be taken at Business & Technology College**

- **DRAF 169** Computer Aided Design I 3
- **EHSS 100** Introduction to Environmental Health and Safety 3
- **INTE 151** Industrial Rigging or
- **SRVY 135** Elementary Surveying 3
- **MATH 103** Technical Mathematics I 3
- **MATH 104** Technical Mathematics II 3
- **Bricklaying Apprenticeship (Credit by Certification*)** 30

**Total Credit Hours Required** 65

* Federally approved bricklaying apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 4000 clock hours of on-the-job training.

## CONSTRUCTION CARPENTRY EMPHASIS

### General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

- **BSAD 109** Principles of Supervision 3
- **CSIS 101** Technology and Information Management 3
- **CHEM 105** Introductory Chemistry or
- **CHEM 107** Preparatory General Chemistry or
- **PHYS 112** Technical Physics 5

### Specific Program Requirements

**Must be taken at Business & Technology College**

- **DRAF 169** Computer Aided Design I 3
- **EHSS 100** Introduction to Environmental Health and Safety 3
- **INTE 151** Industrial Rigging 3
- **MATH 103** Technical Mathematics I 3
- **MATH 104** Technical Mathematics II 3
- **Carpentry Apprenticeship (Credit by Certification*)** 30

**Total Credit Hours Required** 65

* Federally approved carpentry apprenticeship program that contains a minimum 540 clock hours of classroom instruction and 4000 clock hours of on-the-job training.
### CONSTRUCTION CEMENT MASON EMPHASIS

#### General Education Requirements
- ENGL 101 Composition and Reading I 3
- HIST 120 American History I or
- HIST 121 American History II or
- POLS 135 Introduction to Political Science or
- POLS 136 Introduction to American National Politics or
- POLS 137 Introduction to State and Local Politics or
- SOSC 151 Foundations of the Social Sciences II 3
- SPDR 100 Fundamentals of Speech 3

#### Specific Program Requirements
- BSAD 109 Principles of Supervision 3
- CSIS 101 Technology and Information Management 3
- CHEM 105 Introductory Chemistry or
- CHEM 107 Preparatory General Chemistry or
- PHYS 112 Technical Physics 5

#### Specific Program Requirements
- Must be taken at Business & Technology College
- DRAF 169 Computer Aided Design I 3
- EHSS 100 Introduction to Environmental Health and Safety 3
- MATE 201 Basic Metallurgy 3
- MATH 103 Technical Mathematics I 3
- MATH 104 Technical Mathematics II 3
- Ironworking Apprenticeship (Credit by Certification*) 30

#### Total Credit Hours Required
65

* Federally approved cement masons apprenticeship program that contains a minimum 540 clock hours of classroom instruction and 4000 clock hours of on-the-job training

### CONSTRUCTION IRONWORKING EMPHASIS

#### General Education Requirements
- ENGL 101 Composition and Reading I 3
- HIST 120 American History I or
- HIST 121 American History II or
- POLS 135 Introduction to Political Science or
- POLS 136 Introduction to American National Politics or
- POLS 137 Introduction to State and Local Politics or
- SOSC 151 Foundations of the Social Sciences II 3
- SPDR 100 Fundamentals of Speech 3

#### Specific Program Requirements
- BSAD 109 Principles of Supervision 3
- CSIS 101 Technology and Information Management 3
- CHEM 105 Introductory Chemistry or
- CHEM 107 Preparatory General Chemistry or
- PHYS 112 Technical Physics 5

#### Specific Program Requirements
- Must be taken at Business & Technology College
- DRAF 169 Computer Aided Design I 3
- EHSS 100 Introduction to Environmental Health and Safety 3
- MATH 103 Technical Mathematics I 3
- MATH 104 Technical Mathematics II 3
- SRYV 135 Elementary Surveying 3
- Construction Laborer Apprenticeship (Credit by Certification*) 30

#### Total Credit Hours Required
65

* Federally approved ironworking apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 4000 clock hours of on-the-job training

### ELECTRONICS ENGINEERING EMPHASIS

#### General Education Requirements
- ENGL 101 Composition and Reading I 3
- HIST 121 American History II or
- HIST 121 American History II or
- POLS 135 Introduction to Political Science or
- POLS 136 Introduction to American National Politics or
- POLS 137 Introduction to State and Local Politics or
- SOSC 151 Foundations of the Social Sciences II 3
- SPDR 100 Fundamentals of Speech 3
### Specific Program Requirements

- **CSIS 125** Visual Basic Programming *or*
- **CSIS 135** FORTRAN Programming *or*
- **CSIS 155** C++ Programming 3
- **CHEM 105** Introductory Chemistry *or*
- **CHEM 107** Preparatory General Chemistry 5
- **PHYS 112** Technical Physics 5

**Specific Program Requirements**

**Must be taken at Business & Technology College**

- **DRAF 169** Computer Aided Design I 3
- **EHSS 100** Introduction to Environmental Health and Safety 3
- **ELTE 110** Basic Electronics 3
- **ELTE 114** DC Circuit Analysis 3
- **ELTE 118** AC Circuit Analysis 3
- **ELTE 120** Analog Devices I 3
- **ELTE 130** Digital Electronics 3
- **ELTE 150** Operational Amplifiers 3
- **ELTE 220** Analog Devices II 3
- **ELTE 230** Microcomputer Architecture 3
- **ELTE 260** Communications Electronics 3
- **ELTE 270** Industrial Electronics 3
- **MATH 103** Technical Mathematics I *and*
- **MATH 104** Technical Mathematics II *or*
- **MATH 106** Technical Algebra and Trigonometry 5-6
- **INTE 271** Programmable Logic Controllers 3

**Total Credit Hours Required** 63-65

### ELECTRONICS TECHNOLOGY EMPHASIS

#### General Education Requirements

- **ENGL 101** Composition and Reading I 3
- **HIST 120** American History I *or*
- **POLS 135** Introduction to Political Science *or*
- **POLS 136** Introduction to American National Politics *or*
- **POLS 137** Introduction to State and Local Politics *or*
- **SOSC 151** Foundations of the Social Sciences II 3
- **SPDR 100** Fundamentals of Speech 3

**Specific Program Requirements**

- **CSIS 125** Visual Basic Programming *or*
- **CSIS 135** FORTRAN Programming *or*
- **CSIS 155** C++ Programming 3
- **CHEM 105** Introductory Chemistry *or*
- **CHEM 107** Preparatory General Chemistry *or*
- **PHYS 112** Technical Physics 5

**Specific Program Requirements**

**Must be taken at Business & Technology College**

- **DRAF 169** Computer Aided Design I 3
- **EHSS 100** Introduction to Environmental Health and Safety 3
- **ELTE 110** Basic Electronics 3
- **ELTE 114** DC Circuit Analysis 3
- **ELTE 118** AC Circuit Analysis 3
- **ELTE 120** Analog Devices I 3
- **ELTE 130** Digital Electronics 3
- **ELTE 150** Operational Amplifiers 3
- **ELTE 220** Analog Devices II 3
- **ELTE 230** Microcomputer Architecture 3
- **ELTE 260** Communications Electronics 3
- **ELTE 270** Industrial Electronics 3
- **MATH 103** Technical Mathematics I *and*
- **MATH 104** Technical Mathematics II *or*
- **MATH 106** Technical Algebra and Trigonometry 5-6
- **INTE 271** Programmable Logic Controllers 3

**Total Credit Hours Required** 64-65

### GLAZIERS EMPHASIS

#### General Education Requirements

- **ENGL 101** Composition and Reading I 3
- **HIST 120** American History I *or*
- **HIST 121** American History II *or*
- **POLS 135** Introduction to Political Science *or*
- **POLS 136** Introduction to American National Politics *or*
- **POLS 137** Introduction to State and Local Politics *or*
- **SOSC 151** Foundations of the Social Sciences II 3
- **SPDR 100** Fundamentals of Speech 3

**Specific Program Requirements**

- **BSAD 109** Principles of Supervision 3
- **CSIS 101** Technology and Information Management 3
- **CHEM 105** Introductory Chemistry *or*
- **CHEM 107** Preparatory General Chemistry *or*
- **PHYS 112** Technical Physics 5

**Specific Program Requirements**

**Must be taken at Business & Technology College**

- **DRAF 169** Computer Aided Design I 3
- **EHSS 100** Introduction to Environmental Health and Safety 3
- **SRVY 135** Elementary Surveying 3
- **MATH 103** Technical Mathematics I 3
- **MATH 104** Technical Mathematics II 3

Glazer Apprenticeship (Credit by Certification*) 30

**Total Credit Hours Required** 65

* Federally approved glazer apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 4000 clock hours of on-the-job training
## Heating, Ventilation and Air Conditioning Emphasis

### General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry or</td>
<td></td>
</tr>
<tr>
<td>CHEM 107</td>
<td>General Preparatory Chemistry or</td>
<td></td>
</tr>
<tr>
<td>PHYS 112</td>
<td>Technical Physics</td>
<td>5</td>
</tr>
</tbody>
</table>

## Specific Program Requirements

Must be taken at Business & Technology College

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC 109</td>
<td>Electricity for HVAC/R Technicians</td>
<td>4</td>
</tr>
<tr>
<td>HVAC 111</td>
<td>Principles of Heating, Ventilation and Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>HVAC 120</td>
<td>Fundamentals of Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVAC 135</td>
<td>Residential Heating and</td>
<td>4</td>
</tr>
<tr>
<td>HVAC 136</td>
<td>Air Conditioning I</td>
<td>4</td>
</tr>
<tr>
<td>HVAC 211</td>
<td>Design and Estimating</td>
<td>3</td>
</tr>
<tr>
<td>HVAC 221</td>
<td>Commercial Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVAC 230</td>
<td>Design and Distribution</td>
<td>4</td>
</tr>
<tr>
<td>HVAC</td>
<td>Electives</td>
<td>7-8</td>
</tr>
<tr>
<td>INTE 110</td>
<td>Industrial Electrical Principles</td>
<td>3</td>
</tr>
<tr>
<td>MATE 115</td>
<td>Blueprint Reading for Manufacturing Trades</td>
<td>2</td>
</tr>
<tr>
<td>MATH 103</td>
<td>Technical Mathematics I and</td>
<td></td>
</tr>
<tr>
<td>MATH 104</td>
<td>Technical Mathematics II or</td>
<td></td>
</tr>
<tr>
<td>MATH 106</td>
<td>Technical Algebra and Trigonometry</td>
<td>5-6</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: 62

## Industrial Electrical Emphasis

### General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry or</td>
<td></td>
</tr>
<tr>
<td>CHEM 107</td>
<td>Preparatory General Chemistry or</td>
<td></td>
</tr>
<tr>
<td>PHYS 112</td>
<td>Technical Physics</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Electives: CHEM, CSIS, INTE, PHYS</td>
<td>10</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

Must be taken at Business & Technology College

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAF 109</td>
<td>Blueprint Reading, Electrical</td>
<td>3</td>
</tr>
<tr>
<td>DRAF 169</td>
<td>Computer Aided Design I</td>
<td>3</td>
</tr>
<tr>
<td>EHSS 100</td>
<td>Introduction to Environmental Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>INTE 110</td>
<td>Industrial Electrical Principles</td>
<td>3</td>
</tr>
<tr>
<td>INTE 142</td>
<td>National Electric Code</td>
<td>3</td>
</tr>
<tr>
<td>INTE 175</td>
<td>Electric Motor Control I</td>
<td>3</td>
</tr>
<tr>
<td>INTE 271</td>
<td>Programmable Logic Controllers</td>
<td>3</td>
</tr>
<tr>
<td>INTE 273</td>
<td>Variable Speed Motor Drives and Controllers</td>
<td>3</td>
</tr>
<tr>
<td>INTE 275</td>
<td>Electric Motor Controls II</td>
<td>3</td>
</tr>
<tr>
<td>INTE 276</td>
<td>Electrical Troubleshooting</td>
<td>3</td>
</tr>
<tr>
<td>MATH 103</td>
<td>Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 104</td>
<td>Technical Mathematics II</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: 63

## Heating, Ventilation and Air Conditioning – Job Ready Certificate

### Specific Program Requirements

Must be taken at Business & Technology College

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC 111</td>
<td>Principles of Heating, Ventilation and Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>HVAC 120</td>
<td>Fundamentals of Refrigeration</td>
<td>4</td>
</tr>
<tr>
<td>HVAC 135</td>
<td>Residential Heating and</td>
<td>4</td>
</tr>
<tr>
<td>HVAC 136</td>
<td>Air Conditioning I</td>
<td>4</td>
</tr>
<tr>
<td>HVAC 230</td>
<td>Design and Distribution</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: 23
### Industrial Electrical Certificate

#### Specific Program Requirements
- **CSIS 101** Technology and Information Management 3
- Electives: CHEM, CSIS, INTE, PHYS 6

#### Specific Program Requirements
**Must be taken at Business & Technology College**
- **DRAF 109** Blueprint Reading, Electrical 3
- **EHSS 100** Introduction to Environmental Health and Safety 3
- **INTE 110** Industrial Electrical Principles 3
- **INTE 142** National Electric Code 3
- **INTE 175** Electric Motor Controls I 3
- **INTE 271** Programmable Logic Controllers 3
- **INTE 273** Variable Speed Drives and Controls 3
- **INTE 275** Electric Motor Controls II 3

**Total Credit Hours Required** 33

### INDUSTRIAL MAINTENANCE EMPHASIS

#### General Education Requirements
- **ENGL 101** Composition and Reading I 3
- **HIST 120** American History I or
- **HIST 121** American History II or
- **POLS 135** Introduction to Political Science or
- **POLS 136** Introduction to American National Politics or
- **POLS 137** Introduction to State and Local Politics or
- **SOSC 151** Foundations of the Social Sciences II 3
- **SPDR 100** Fundamentals of Speech 3

#### Specific Program Requirements
- **CSIS 101** Technology and Information Management 3
- **CHEM 105** Introductory Chemistry or
- **CHEM 107** General Preparatory Chemistry or
- **PHYS 112** Technical Physics 5
- Electives 3

**Must be taken at Business & Technology College**
- **DRAF 109** Blueprint Reading, Electrical 3
- **EHSS 100** Introduction to Environmental Health and Safety 3
- **INTE 110** Industrial Electrical Principles 3
- **INTE 122** Layout and Fabrication 3
- **INTE 140** Fundamentals of Industrial Maintenance 3
- **INTE 142** National Electric Code 3
- **INTE 150** Introduction to Fluid Power 3
- **INTE 151** Industrial Rigging 3
- **INTE 167** Welding I SMAW 3
- **INTE 175** Electric Motor Control I 3
- **MATE 115** Blueprint Reading for Manufacturing Trades 2
- **MATE 116** Geometric Dimensioning and Tolerancing Printreading 2
- **MATH 103** Technical Mathematics I 3
- **MATH 104** Technical Mathematics II 3

**Total Credit Hours Required** 63

### INSIDE WIRING EMPHASIS

#### General Education Requirements
- **ENGL 101** Composition and Reading I 3
- **HIST 120** American History I or
- **HIST 121** American History II or
- **POLS 135** Introduction to Political Science or
- **POLS 136** Introduction to American National Politics or
- **POLS 137** Introduction to State and Local Politics or
- **SOSC 151** Foundations of the Social Sciences II 3
- **SPDR 100** Fundamentals of Speech 3

#### Specific Program Requirements
**Must be taken at Business & Technology College**
- **DRAF 109** Blueprint Reading, Electrical 3
- **EHSS 100** Introduction to Environmental Health and Safety 3
- **ELEC 115** Inside Wiring I 3
- **ELEC 116** Inside Wiring II 3
- **ELEC 117** Inside Wiring III 3
- **ELEC 215** Inside Wiring IV 3
- **ELEC 216** Inside Wiring V 3
- **INTE 110** Industrial Electrical Principles 3
- **INTE 142** National Electric Code 3
- **INTE 175** Electric Motor Control I 3
- **INTE 271** Programmable Logic Controllers 3
- **INTE 275** Electric Motor Controls II 3
- **MATH 103** Technical Mathematics I 3
- **MATH 104** Technical Mathematics II 3

**Total Credit Hours Required** 62
### Millwright Emphasis

#### General Education Requirements
- **ENGL 101** Composition and Reading I 3
- **HIST 120** American History I or 3
- **HIST 121** American History II or 3
- **POLS 135** Introduction to Political Science or 3
- **POLS 136** Introduction to American National Politics or 3
- **POLS 137** Introduction to State and Local Politics or 3
- **SOSC 151** Foundations of the Social Sciences II 3
- **SPDR 100** Fundamentals of Speech 3

#### Specific Program Requirements
- **CSIS 101** Technology and Information Management 3
- **CHEM 105** Introductory Chemistry or 3
- **CHEM 107** Preparatory General Chemistry or 3
- **PHYS 112** Technical Physics 5

**Electives:** CHEM, CSIS, INTE, PHYS 6

#### Specific Program Requirements
- **Must be taken at Business & Technology College**
  - **DRAF 169** Computer Aided Design I 3
  - **EHSS 100** Introduction to Environmental Health and Safety 3
  - **INTE 110** Industrial Electrical Principles 3
  - **INTE 122** Layout and Fabrication 3
  - **INTE 140** Fundamentals of Industrial Maintenance 3
  - **INTE 150** Introduction to Fluid Power 3
  - **INTE 151** Industrial Rigging 3
  - **INTE 167** Welding I, SMAW 3
  - **INTE 168** Welding II, SMAW 3
  - **INTE 260** Pipe Fitting Fundamentals 3
  - **MATE 115** Blueprint Reading for Manufacturing Trades 2
  - **MATE 116** Geometric Dimensioning and Tolerancing Printreading 2
  - **MATH 103** Technical Mathematics I 3
  - **MATH 104** Technical Mathematics II 3

**Total Credit Hours Required:** 63

### Painter Option

#### General Education Requirements
- **ENGL 101** Composition and Reading I 3
- **HIST 120** American History I or 3
- **HIST 121** American History II or 3
- **POLS 135** Introduction to Political Science or 3
- **POLS 136** Introduction to American National Politics or 3
- **POLS 137** Introduction to State and Local Politics or 3
- **SOSC 151** Foundations of the Social Sciences II 3
- **SPDR 100** Fundamentals of Speech 3

#### Specific Program Requirements
- **CSIS 101** Technology and Information Management 3
- **CHEM 105** Introductory Chemistry or 3
- **CHEM 107** Preparatory General Chemistry or 3
- **PHYS 112** Technical Physics 5

#### Specific Program Requirements
- **Must be taken at Business & Technology College**
  - **BSAD 109** Principles of Supervision 3
  - **CSIS 101** Technology and Information Management 3
  - **CHEM 105** Introductory Chemistry or 3
  - **CHEM 107** Preparatory General Chemistry or 3
  - **PHYS 112** Technical Physics 5

#### Painter Apprenticeship (Credit by Certification*) 30

**Total Credit Hours Required:** 65

* Federally approved painter apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 4000 clock hours of on-the-job training

### Stationary Engineer Option

#### General Education Requirements
- **ENGL 101** Composition and Reading I 3
- **HIST 120** American History I or 3
- **HIST 121** American History II or 3
- **POLS 135** Introduction to Political Science or 3
- **POLS 136** Introduction to American National Politics or 3
- **POLS 137** Introduction to State and Local Politics or 3
- **SOSC 151** Foundations of the Social Sciences II 3
- **SPDR 100** Fundamentals of Speech 3

#### Specific Program Requirements
- **CHEM 105** Introductory Chemistry or 3
- **CHEM 107** Preparatory General Chemistry or 3
- **PHYS 112** Technical Physics 5
- **CSIS 101** Technology and Information Management 3

#### Specific Program Requirements
- **Must be taken at Business & Technology College**
  - **DRAF 109** Blueprint Reading, Electrical 3
  - **DRAF 169** Computer Aided Design I 3
  - **EHSS 100** Introduction to Environmental Health and Safety 3

**Total Credit Hours Required:** 31

---

**Millwright Certificate**

#### Specific Program Requirements
- **CSIS 101** Technology and Information Management 3

#### Specific Program Requirements
- **Must be taken at Business & Technology College**
  - **INTE 110** Industrial Electrical Principles 3
  - **INTE 122** Layout and Fabrication 3
  - **INTE 140** Fundamentals of Industrial Maintenance 3
  - **INTE 150** Introduction to Fluid Power 3
  - **INTE 151** Industrial Rigging 3
  - **INTE 167** Welding I, SMAW 3
  - **INTE 168** Welding II, SMAW 3
  - **INTE 260** Pipe Fitting Fundamentals 3
  - **MATE 115** Blueprint Reading for Manufacturing Trades 2
  - **MATE 116** Geometric Dimensioning and Tolerancing Printreading 2
  - **MATH 103** Technical Mathematics I 3
  - **MATH 104** Technical Mathematics II 3

**Total Credit Hours Required:** 63
HVAC 109 Electricity for HVAC/R Technicians 4
HVAC 111 Principles of heating, Ventilation and Air Conditioning 3
HVAC 120 Fundamentals of Refrigeration 4
HVAC 201 Stationary Engineering 3
HVAC 221 Commercial Refrigeration 4
HVAC 230 Design and Distribution 4
INTE 110 Industrial Electrical Principles 3
INTE 150 Introduction to Fluid Power 3
INTE 175 Electric Motor Controls I 3
INTE 271 Programmable Logic Controllers 3
MATH 103 Technical Mathematics I 3
MATH 104 Technical Mathematics II 3
Total Credit Hours Required 66

Stationary Engineer Certificate

Specific Program Requirements
Must be taken at Business & Technology College
DRAF 109 Blueprint Reading, Electrical 3
HVAC 109 Electricity for HVAC/R Technicians 4
HVAC 111 Principles of Heating, Ventilation and Air Conditioning 3
HVAC 120 Fundamentals of Refrigeration 4
HVAC 201 Stationary Engineering 3
HVAC 221 Commercial Refrigeration 4
INTE 110 Industrial Electrical Principles 3
INTE 150 Introduction to Fluid Power 3
INTE 175 Electric Motor Controls I 3
INTE 271 Programmable Logic Controllers 3
Total Credit Hours Required 33

INFORMATION/WORD PROCESSING DEGREE

Offered at all colleges

This program offers students two options: an Associate in Applied Science degree or a certificate of proficiency.

General Education Requirements
MATH 100 Mathematics for Business 3
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics 3
SPDR 100 Fundamentals of Speech 3
General Education Electives 6

Specific Program Requirements
BSAD 100 Introduction to Accounting or
BSAD 101 Accounting Principles I 3
CSIS 115 Intro to Microcomputer Applications 3
OFSC 101 Business English 3
OFSC 215 Advanced Desktop Publishing 3
OFSC 159 Professional Development 3
OFSC 162 Keyboarding Applications/Typewriting II 3
OFSC 163 Keyboarding Applications/Typewriting III 3
OFSC 171 Machine Transcription and Calculation 3
BSAD 178 Business Communications or
BSAD 220 Business Letters and Reports 3
OFSC 181 Electronic Office Procedures 3
OFSC 193 Internship I 3
OFSC 195 Word Processing Concepts 3
BSAD 190 Office Management 3
OFSC 200 Advanced Word Processing 3
OFSC 210 Intro to Desktop Publishing 3
Total Credit Hours Required 63

NOTE: OFSC 161 Keyboarding Applications/Typewriting I is not applicable to this degree

Information/Word Processing Certificate

Specific Program Requirements
OFSC 101 Business English 3
OFSC 210 Introduction to Desktop Publishing 3
OFSC 162 Keyboarding Applications/Typewriting II 3
OFSC 163 Keyboarding Applications/Typewriting III 3
OFSC 171 Machine Transcription and Calculation 3
BSAD 178 Business Communications or
BSAD 220 Business Letters and Reports 3
OFSC 181 Electronic Office Procedures 3
OFSC 195 Word Processing Concepts 3
BSAD 190 Office Management 3
OFSC 200 Advanced Word Processing 3
Electives: OFSC, BSAD or CSIS 2
Total Credit Hours Required 33
**INTERIOR DESIGN**

*Offered at Johnson County Community College  
Coordinated at MCC at all locations*

This program leads to an Associate of Applied Science degree. MCC's interior design program is offered in cooperation with the interior design program at Johnson County Community College. Associate’s degrees are offered in interior design, interior merchandising and interior entrepreneurship. Certificates are offered in interior products sales representative and interior design retail sales/manufacturers representative. Students must be accepted into the program by both MCC and JCCC. The student is awarded the degree or certificate from JCCC upon successful completion of all requirements.

---

**INTERIOR DESIGN EMPHASIS**

**Specific Program Requirements**  
*Must be taken at one of the MCC campuses*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 150</td>
<td>History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>ECON 110</td>
<td>Introduction to Economics or Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 100</td>
<td>Mathematics for Business</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Physical Education or Health</td>
<td>1</td>
</tr>
</tbody>
</table>

---

**Specific Program Requirements**  
*Must be taken at Johnson County Community College*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAF 261</td>
<td>Graphic Communications I for Interior Design</td>
<td>3</td>
</tr>
<tr>
<td>DRAF 264</td>
<td>CAD:Interior Design</td>
<td>3</td>
</tr>
<tr>
<td>DRAF 266</td>
<td>Graphic Communications II for Interior Design</td>
<td>3</td>
</tr>
<tr>
<td>FASH 135</td>
<td>Image Management</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 121</td>
<td>Interior Design I</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 122</td>
<td>Interior Design II</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 125</td>
<td>Interior Textiles</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 132</td>
<td>Interior Products</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 133</td>
<td>Furniture and Ornamentation/Antiquity to Renaissance</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 140</td>
<td>Draperies, Treatment and Construction</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 145</td>
<td>Upholstery Construction</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 147</td>
<td>Lighting Design and Planning</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 148</td>
<td>Furniture and Ornamentation/Oriental</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 223</td>
<td>Contract Design</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 231</td>
<td>Furniture and Ornamentation/Renaissance to 20th Century</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 234</td>
<td>Kitchen and Bath:Planning and Design</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 239</td>
<td>Capstone:Portfolio and Presentation</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 273</td>
<td>Seminar: Business Practices and Procedures</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 275</td>
<td>Seminar:Budgeting and Estimating</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 282</td>
<td>Interiors Internship I</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 284</td>
<td>Interiors Internship II</td>
<td>1</td>
</tr>
</tbody>
</table>

---

**Total Credit Hours Required**  
67

---

**INTERIOR ENTREPRENEURSHIP EMPHASIS**

**Specific Program Requirements**  
*Must be taken at one of the MCC campuses*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 150</td>
<td>History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>ECON 110</td>
<td>Introduction to Economics or Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 100</td>
<td>Mathematics for Business</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Physical Education or Health</td>
<td>1</td>
</tr>
</tbody>
</table>

---

**Specific Program Requirements**  
*Must be taken at Johnson County Community College*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAF 261</td>
<td>Graphic Communications I for Interior Design</td>
<td>3</td>
</tr>
<tr>
<td>DRAF 264</td>
<td>CAD:Interior Design</td>
<td>3</td>
</tr>
<tr>
<td>DRAF 266</td>
<td>Graphic Communications II for Interior Design</td>
<td>3</td>
</tr>
<tr>
<td>FASH 135</td>
<td>Image Management</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 121</td>
<td>Interior Design I</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 122</td>
<td>Interior Design II</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 125</td>
<td>Interior Textiles</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 127</td>
<td>Floral Design</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 132</td>
<td>Interior Products</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 133</td>
<td>Furniture and Ornamentation/Antiquity to Renaissance</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 223</td>
<td>Contract Design</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 234</td>
<td>Kitchen and Bath:Planning and Design</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 239</td>
<td>Capstone:Portfolio and Presentation</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 273</td>
<td>Seminar: Business Practices and Procedures</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 275</td>
<td>Seminar:Budgeting and Estimating</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 282</td>
<td>Interiors Internship I</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 284</td>
<td>Interiors Internship II</td>
<td>1</td>
</tr>
</tbody>
</table>

**Business/Marketing Electives**

*Recommended Electives:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITMD 140</td>
<td>Draperies, Treatments, and Construction</td>
<td>1</td>
</tr>
<tr>
<td>BUSE 131</td>
<td>Financial Planning for Small Business</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 145</td>
<td>Upholstery Construction</td>
<td>1</td>
</tr>
<tr>
<td>BUSE 140</td>
<td>FastTrack Feasibility Plan</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 147</td>
<td>Lighting Design and Planning</td>
<td>1</td>
</tr>
<tr>
<td>BUSE 142</td>
<td>FastTrack Business Plan</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 148</td>
<td>Furniture and Ornamentation:Oriental</td>
<td>1</td>
</tr>
<tr>
<td>BUSE 160</td>
<td>Legal Issues for Small Business</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 144</td>
<td>Principles of Management</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**  
67
MKT 121  Retail Management
BUS 145  Small Business Management
MKT 221  Sales Management
BUS 230  Marketing

**INTERIOR MERCHANDISING EMPHASIS**

### Specific Program Requirements
**Must be taken at one of the MCC campuses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 150</td>
<td>History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>ECON 110</td>
<td>Introduction to Economics or Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 210</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 100</td>
<td>Mathematics for Business</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Physical Education or Health</td>
<td>1</td>
</tr>
</tbody>
</table>

### Specific Program Requirements
**Must be taken at Johnson County Community College**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAF 261</td>
<td>Graphic Communications I for Interior Design</td>
<td>3</td>
</tr>
<tr>
<td>DRAF 264</td>
<td>CAD:Interior Design</td>
<td>3</td>
</tr>
<tr>
<td>FASH 125</td>
<td>Visual Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>FASH 135</td>
<td>Image Management</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 122</td>
<td>Interior Design II</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 125</td>
<td>Interior Textiles</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 132</td>
<td>Interior Products</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 133</td>
<td>Furniture and Ornamentation/Antiquity to Renaissance</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 231</td>
<td>Furniture and Ornamentation/Renaissance to 20th Century</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 239</td>
<td>Capstone:Portfolio and Presentation</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 273</td>
<td>Seminar:Business Practices and Procedures</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 275</td>
<td>Seminar:Budgeting and Estimating</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 282</td>
<td>Interiors Internship I</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 284</td>
<td>Interiors Internship II</td>
<td>1</td>
</tr>
<tr>
<td>MKT 134</td>
<td>Creative Retail Selling</td>
<td>3</td>
</tr>
<tr>
<td>ITMD: Electives*</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**: 67

*Recommended Electives:
- ITMD 127: Floral Design
- BUS 141: Prn of Management
- ITMD 145: Draperies, Treatments, and Construction
- BUS 145: Small Business Management
- ITMD 145: Upholstery Construction
- BUS 230: Marketing
- ITMD 147: Lighting Design and Planning
- MKT 121: Retail Management
- ITMD 148: Furniture and Ornamentation: Oriental
- MKT 221: Sales Management
- ITMD 223: Contract Design
- ITMD 234: Kitchen and Bath Planning and Design

---

**Interior Design Retail Sales/Manufacturers Representative Certificate**

### Specific Program Requirements
**Must be taken at one of the MCC campuses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 120</td>
<td>Human Relations in Business or</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 103</td>
<td>Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>MATH 100</td>
<td>Mathematics for Business or higher</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirement
**Must be taken at Johnson County Community College**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASH 125</td>
<td>Visual Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>FASH 135</td>
<td>Image Management</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 121</td>
<td>Interior Design I</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 125</td>
<td>Interior Textiles</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 132</td>
<td>Interior Products</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 275</td>
<td>Seminar:Budgeting and Estimating</td>
<td>2</td>
</tr>
<tr>
<td>ITMD 282</td>
<td>Interiors Internship I</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 284</td>
<td>Interiors Internship II</td>
<td>1</td>
</tr>
<tr>
<td>MKT 121</td>
<td>Retail Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 134</td>
<td>Creative Retail Selling</td>
<td>3</td>
</tr>
<tr>
<td>ITMD: Electives*</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**: 32

*Recommended Electives:
- ITMD 127: Floral Design
- ITMD 147: Lighting Design and Planning
- ITMD 140: Draperies, Treatments and Construction
- ITMD 231: Furniture and Ornamentation: Renaissance–20th Century
- ITMD 145: Upholstery Construction

---

**Interior Products Sales Representative Certificate**

### Specific Program Requirements
**Must be taken at one of the MCC campuses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 100</td>
<td>Mathematics for Business or higher</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirement
**Must be taken at Johnson County Community College**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASH 135</td>
<td>Image Management</td>
<td>1</td>
</tr>
<tr>
<td>ITMD 121</td>
<td>Interior Design I</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 125</td>
<td>Interior Textiles</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 132</td>
<td>Interior Products</td>
<td>3</td>
</tr>
<tr>
<td>ITMD 282</td>
<td>Interiors Internship I</td>
<td>1</td>
</tr>
<tr>
<td>MKT 134</td>
<td>Creative Retail Selling</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required**: 17
LAND SURVEYING DEGREE

Offered at Longview

This program leads to an Associate in Applied Science degree or certificate and provides students with the experience and knowledge they need to take the exam to become a land surveyor.

General Education Requirements
ENGL 101 Composition and Reading I 3
ENGL 102 Composition and Reading II 3
ENGL 175 Technical Writing 3
SPDR 100 Fundamentals of Speech 3
HIST 120 American History I or
HIST 121 American History II and either
ECON 110 Intro to Economics or
ECON 210 Macroeconomics (6)

Two of the following:
POLS 135 Introduction to Political Science
POLS 136 Introduction to American National Politics
POLS 137 Introduction to State and Local Politics 6

Specific Program Requirements
Must be taken at Longview
SRVY 135 Elementary Surveying 3
SRVY 136 Analysis of Survey Measurements 3
SRVY 139 Route and Construction Surveying 3
SRVY 235 Advanced Surveying 3
SRVY 236 legal Aspects of Surveying 3
SRVY 237 Land Surveying 3

Specific Program Requirements
Must be taken at Business & Technology College
DRAF 152 Engineering Graphics and CADD I 5
MATH 103 Technical Mathematics I 3
MATH 104 Technical Mathematics II 3

Total Credit Hours Required 66

Land Surveying Certificate
This certificate prepares an individual to take the state-licensing exam to become a Registered Land Surveyor with the state of Missouri.

Specific Program Requirements
Must be taken at Business & Technology College
MATH 103 Technical Mathematics I 3
MATH 104 Technical Mathematics II 3
DRAF 152 Engineering Graphics and CADD I 5

Specific Program Requirements
Must be taken at Longview
SRVY 135 Elementary Surveying 3
SRVY 137 Subdivision Planning and Layout or
SRVY 139 Route and Construction Surveying 3
SRVY 235 Advanced Surveying 3
SRVY 236 Legal Aspects of Surveying 3
SRVY 237 Land Surveying 3

Total Credit Hours Required 26

MANAGEMENT

Offered at all colleges

This program, which leads to an Associate in Applied Science degree, is for students who want to become business supervisors or managers or those who already have these positions. It provides them with classroom instruction and on-the-job training to reach their career goals.

ACCOUNTING SPECIALTY

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of Social Science II 3
MATH 100 Mathematics for Business or
MATH 110 Intermediate Algebra 3
MATH 115 Statistics 3
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Business & Technology College
BSAD 100 Introduction to Accounting or
BSAD 101 Accounting Principles I 3
BSAD 102 Accounting Principles II 3
BSAD 109 Principles of Supervision or
BSAD 120 Human Relations in Business 3
BSAD 127 Management Internship I 3
BSAD 128 Management Internship II 3
BSAD 129 Management Internship III 3
BSAD 135 Entrepreneurship or
BSAD 204 Business Management 3
BSAD 153 General Ledger Accounting Systems, PC or
CSIS 115 Intro to Microcomputer Applications or
CSIS Any Programming Language Course 3
BSAD 154 Managerial Accounting 3
BSAD 201 Cost Accounting 3
BSAD 202 Intermediate Accounting I or
BSAD 203 Intermediate Accounting II 3
BSAD 205 Marketing 3
BSAD 220 Business Letters and Reports 3
BSAD 252 Individual Income Tax 3
BSAD 254 Business Law I or
BSAD 255 Business Law II or
BSAD 270 Legal Environment of Business 3

Total Credit Hours Required 63
CONSTRUCTION MANAGEMENT SPECIALTY

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
MATH 100 Mathematics for Business or
MATH 110 Intermediate Algebra 3
SPDR 100 Fundamentals of Speech 3
Electives 6

Specific Program Requirements
BSAD 100 Introduction to Accounting or
BSAD 101 Accounting Principles I 3
BSAD 109 Principles of Supervision or
BSAD 120 Human Relations in Business 3
BSAD 127 Management Internship I 3
BSAD 128 Management Internship II 3
BSAD 129 Management Internship III 3
BSAD 135 Entrepreneurship or
BSAD 204 Business Management 3
BSAD 153 General Ledger Accounting Systems, PC or
CSIS 115 Intro to Microcomputer Applications or
CSIS Any Programming Language Course 3
BSAD 205 Marketing 3
BSAD 220 Business Letters and Reports 3
BSAD 254 Business Law I or
BSAD 255 Business Law II or
Total Credit Hours Required 66

ENVIRONMENTAL HEALTH AND SAFETY TECHNOLOGY SPECIALTY

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
MATH 100 Mathematics for Business or
MATH 110 Intermediate Algebra 3
SPDR 100 Fundamentals of Speech 3
Electives 6

Specific Program Requirements
BSAD 100 Introduction to Accounting or
BSAD 101 Accounting Principles I 3
BSAD 109 Principles of Supervision or
BSAD 120 Human Relations in Business 3
BSAD 127 Management Internship I 3
BSAD 128 Management Internship II 3
BSAD 129 Management Internship III 3
BSAD 135 Entrepreneurship or
BSAD 270 Legal Environment of Business 3
BSAD 125 Visual BASIC Programming 3
BSAD 130 PASCAL Programming 3
BSAD 140 COBOL Programming 3
BSAD 225 Advanced Visual BASIC Programming 3
BSAD 240 Advanced COBOL Programming 3
Total Credit Hours Required 63

COMPUTER SCIENCE/INFORMATION SYSTEMS SPECIALTY

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
MATH 100 Mathematics for Business or
MATH 110 Intermediate Algebra 3
SPDR 100 Fundamentals of Speech 3
Electives 6
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 128</td>
<td>Management Internship II</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 129</td>
<td>Management Internship III</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 135</td>
<td>Entrepreneurship or</td>
<td></td>
</tr>
<tr>
<td>BSAD 204</td>
<td>Business Management</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 153</td>
<td>General Ledger Accounting Systems, PC or</td>
<td></td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Intro to Microcomputer Applications or</td>
<td></td>
</tr>
<tr>
<td>CSIS</td>
<td>Any Programming Language Course</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 205</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 220</td>
<td>Business Letters and Reports</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 254</td>
<td>Business Law I or</td>
<td></td>
</tr>
<tr>
<td>BSAD 255</td>
<td>Business Law II or</td>
<td></td>
</tr>
<tr>
<td>BSAD 270</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

**Must be taken at Business & Technology College**

- EHSS 200 Safety and Health Regulations and Standards 3
- EHSS 202 Transportation and Storage of Hazardous Materials 3
- EHSS 203 Environmental Regulations 3
- EHSS 210 Incident and Accident Investigation or 3
- EHSS 211 Workers Compensation Legislation for EHS or 3
- EHSS 217 Concepts of Waste Minimization, Recycling and Pollution Prevention or 3
- EHSS 218 Industrial Processes and Hazard Control 3
- EHSS 213 EHS Program Development and Management 3

**Total Credit Hours Required** 63

---

### MARKETING AND RETAILING SPECIALTY

#### General Education Requirements

- ENGL 101 Composition and Reading I 3
- HIST 120 American History I or 3
- HIST 121 American History II or 3
- POLS 135 Introduction to Political Science or 3
- POLS 136 Introduction to American National Politics or 3
- POLS 137 Introduction to State and Local Politics or 3
- SOSC 151 Foundations of the Social Sciences II 3
- MATH 100 Mathematics for Business or 3
- MATH 110 Intermediate Algebra 3
- SPDR 100 Fundamentals of Speech 3
- Electives 6

#### Specific Program Requirements

- BSAD 100 Introduction to Accounting or 3
- BSAD 101 Accounting Principles I 3
- BSAD 109 Principles of Supervision or 3
- BSAD 120 Human Relations in Business 3
- BSAD 127 Management Internship I 3
- BSAD 128 Management Internship II 3
- BSAD 129 Management Internship III 3

**Total Credit Hours Required** 63

### TRAVEL AND TOURISM SPECIALTY

#### General Education Requirements

- ENGL 101 Composition and Reading I 3
- HIST 120 American History I or 3
- HIST 121 American History II or 3
- POLS 135 Introduction to Political Science or 3
- POLS 136 Introduction to American National Politics or 3
- POLS 137 Introduction to State and Local Politics or 3
- SOSC 151 Foundations of the Social Sciences II 3
- MATH 100 Mathematics for Business or 3
- MATH 110 Intermediate Algebra 3
- SPDR 100 Fundamentals of Speech 3
- Electives 6

#### Specific Program Requirements

- BSAD 100 Introduction to Accounting or 3
- BSAD 101 Accounting Principles I 3
- BSAD 109 Principles of Supervision or 3
- BSAD 120 Human Relations in Business 3
- BSAD 127 Management Internship I 3
- BSAD 128 Management Internship II 3
- BSAD 129 Management Internship III 3

**Total Credit Hours Required** 64
MANUFACTURING TECHNOLOGY

Offered at the Business & Technology College

This NIMS (National Institute of Metalworking Skills) Certified program, which leads to an Associate in Applied Science degree or a certificate of proficiency, is offered in conjunction with the Kansas City Chapter of the National Tooling and Machining Association. Requirements for the Manufacturing Technology degree, the Manufacturing Pre-Apprenticeship certificate, the Manufacturing Technology certificate, and Manufacturing Technology CNC certificate are listed below.

NOTE: The requirements for the degree are only part of the apprenticeship program sponsored by the Greater Kansas City Chapter of the National Tooling and Machining Association. Unless students also have been accepted as apprentices and have completed Association requirements, they will not be journeymen when they graduate. Therefore, a student with only a degree may be required by an employer to serve a full apprenticeship.

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or HIST 121</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or HIST 121</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech or</td>
<td></td>
</tr>
<tr>
<td>SPDR 102</td>
<td>Fundamentals of Human Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 109</td>
<td>Principles of Supervision or</td>
<td></td>
</tr>
<tr>
<td>BSAD 135</td>
<td>Entrepreneurship or</td>
<td></td>
</tr>
<tr>
<td>BSAD 204</td>
<td>Business Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry or</td>
<td></td>
</tr>
<tr>
<td>CHEM 107</td>
<td>General Preparatory Chemistry or</td>
<td></td>
</tr>
<tr>
<td>PHYS 112</td>
<td>Technical Physics</td>
<td>5</td>
</tr>
</tbody>
</table>

### Specific Program Requirements

Must be taken at Business & Technology College

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATE 100</td>
<td>Introduction to Manufacturing Technology</td>
<td>2</td>
</tr>
<tr>
<td>MATE 101</td>
<td>Machining and Tooling I</td>
<td>5</td>
</tr>
<tr>
<td>MATE 102</td>
<td>Machining and Tooling II</td>
<td>5</td>
</tr>
<tr>
<td>MATE 103</td>
<td>Machining and Tooling III and</td>
<td></td>
</tr>
<tr>
<td>MATE 104</td>
<td>Machining and Tooling IV or</td>
<td></td>
</tr>
<tr>
<td>MATE 105</td>
<td>Manufacturing Technology Internship I and</td>
<td>6</td>
</tr>
<tr>
<td>MATE 205</td>
<td>Manufacturing Technology Internship II</td>
<td>2</td>
</tr>
<tr>
<td>MATE 210</td>
<td>Computerized Numerical Control-Lathe</td>
<td>3</td>
</tr>
<tr>
<td>MATE 215</td>
<td>Computerized Numerical Control-Mill</td>
<td>3</td>
</tr>
<tr>
<td>MATH 103</td>
<td>Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 104</td>
<td>Technical Mathematics II</td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Credit Hours Required

- General Education Requirements: 36
- Specific Program Requirements: 73
- Total Credit Hours Required: 73

### Manufacturing Technology Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATE 100</td>
<td>Introduction to Manufacturing Technology</td>
<td>2</td>
</tr>
<tr>
<td>MATE 101</td>
<td>Machining and Tooling I</td>
<td>5</td>
</tr>
<tr>
<td>MATE 102</td>
<td>Machining and Tooling II</td>
<td>5</td>
</tr>
<tr>
<td>MATE 103</td>
<td>Machining and Tooling III and</td>
<td></td>
</tr>
<tr>
<td>MATE 104</td>
<td>Machining and Tooling IV or</td>
<td></td>
</tr>
<tr>
<td>MATE 105</td>
<td>Manufacturing Technology Internship I and</td>
<td>6</td>
</tr>
<tr>
<td>MATE 205</td>
<td>Manufacturing Technology Internship II</td>
<td>2</td>
</tr>
<tr>
<td>MATE 210</td>
<td>Computerized Numerical Control-Lathe</td>
<td>3</td>
</tr>
<tr>
<td>MATE 215</td>
<td>Computerized Numerical Control-Mill</td>
<td>3</td>
</tr>
<tr>
<td>MATH 103</td>
<td>Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 104</td>
<td>Technical Mathematics II</td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Credit Hours Required

- Total Credit Hours Required: 36

### Manufacturing Technology CNC Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATE 210</td>
<td>Computerized Numerical Control-Lathe</td>
<td>3</td>
</tr>
<tr>
<td>MATE 215</td>
<td>Computerized Numerical Control-Mill</td>
<td>3</td>
</tr>
<tr>
<td>MATE 220</td>
<td>Adv Computerized Numerical Control-Lathe/Mill</td>
<td></td>
</tr>
<tr>
<td>MATE 225</td>
<td>Mastercam I</td>
<td>3</td>
</tr>
<tr>
<td>MATE 226</td>
<td>Mastercam II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 227</td>
<td>Mastercam III</td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Credit Hours Required

- Total Credit Hours Required: 18

---

MATE 132 NIMS Level I Credentials Milling and
MATE 133 NIMS Level I Credentials Lathe-Chucking and
MATE 134 NIMS Level I Credentials Lathe-Turning and
MATE 135 NIMS Level I Credentials Surface Grinding or
MATE Electives 5
MATE 201 Basic Metallurgy 3
MATE 203 Process Planning and Production Problems 3
MATE 210 Computerized Numerical Control-Lathe 3
MATE 215 Computerized Numerical Control-Mill 3
MATH 103 Technical Math I 3
MATH 104 Technical Math II 3

---

50
Manufacturing Technology Pre-Apprenticeship

Specific Program Requirements
Must be taken at Business & Technology College
INTE 124 Employment Strategies for Industrial Technology and 5
READ 124 Study Skills or Electives 2
MATE 100 Introduction to Manufacturing Technology 2
MATE 101 Machining and Tooling I 5
MATE 102 Machining and Tooling II 5
MATE 114 Metrology 2
MATE 115 Blueprint Reading for Manufacturing Trades 2
MATH 103 Technical Mathematics I 3

Total Credit Hours Required 21

MEDICAL TRANSCRIPTION CERTIFICATE

Offered at Penn Valley

This program leads to a certificate in medical transcription. Students completing the program will be prepared to seek employment in a variety of medical settings or become self-employed transcriptionists. Medical transcriptionists spend the majority of their time typing documents such as medical histories, emergency room notes, consults, and radiology reports for the health record. Classes are held evenings and weekends.

Admission to the program
Enrollment is limited. Students must apply for admission and meet the following requirements:
1. Be admitted to Penn Valley.
2. Submit transcripts from each college previously attended to Penn Valley admissions and the program coordinator. If applicant has not attended college, high school transcripts should be submitted.
3. Complete a typing test with a minimum score of 45 words per minute.
4. Completion of ENGL 101 and OFSC 195 or equivalent.
5. Submit application to the medical transcription program coordinator by May 15.
6. Acceptance will be based on minimum GPA of 2.5 and timed typing test as above.

General Education Requirements
ENGL 101 Composition and Reading I 3

Specific Program Requirements
BIOL 108 Intro to Anatomy and Physiology 5
OFSC 159 Professional Development or BSAD, CSOF, OFSC Elective 3
OFSC 195 Word Processing Concepts or OFSC 145 Support Software or

Other Advanced Software Applications 3

Specific Program Requirements
Must be taken at Penn Valley
HITE 103 Medical Terminology for Medical Records I 3
MTRN 101 Medical Transcription I 5
MTRN 112 Medical Transcription II 5
MTRN 113 Medical Terminology for Medical Records II 3

Total Credit Hours Required 30

OCCUPATIONAL EDUCATION DEGREE

This program, which prepares students to become vocational educators, leads to an Associate of Applied Science degree. The program is a collaborative effort between 12 community colleges and four 4-year institutions.

General Education Requirements
BIOL 101 General Biology or CHEM 107 Preparatory General Chemistry or
PHYS 112 Technical Physics 5
ENGL 101 Composition and Reading I 3
HIST 120 American History I and
HIST 121 American History II or
SOSC 150 Foundations of Social Science I and
SOSC 151 Foundations of Social Science II or
Two of the following:
POLS 135 Introduction to Political Science
POLS 136 Introduction to American National Politics
POLS 137 Introduction to State and Local Politics 6
MATH 119 College Mathematics or
MATH 120 College Algebra 3
SPDR 100 Fundamentals of Speech 3
General Education Elective 3
Specific Program Requirements

Technical Education:
Must focus on a specific occupational area (Any combination of formal college coursework, occupational certification or CBEX) 24

Professional Education:*
New Teacher Institute 3
Development and Assessments of Vocational/Technical Curriculum 3
Principles of Teaching Technology and Industrial Education 3

Three of the following:
Occupational Analysis
Coordination of Cooperative Education
Vocational Guidance
Vocational Education for Handicapped Students
Philosophy of Vocational Education
Educational Psychology 9

Total Credit Hours Required 65

* Must be taken at one of the four-year teacher education institutions

OCCUPATIONAL THERAPY ASSISTANT
Offered at Penn Valley.

Certified occupational therapy assistants work under the supervision of a registered occupational therapist to provide care to individuals with varying physical and/or emotional challenges to obtain their maximum level of independence with self-care, and daily living and job skills. The occupational therapy assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. ACOTE’s telephone number c/o AOTA 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), 800 S. Frederick Ave., Suite 200, Gaithersburg, MD 20877-4150; phone, (301) 990-7979. After successful completion of the 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.

Admission to the Program
To be admitted to the program, students must meet certain requirements. All the requirements are listed in the Application Packet. Call (816) 759-4231 to request an application packet.

General Education Requirements
ENGL 101 Composition and Reading I 3
SPDR 100 Fundamentals of Speech 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American

OFFICE MANAGEMENT
Offered at all colleges

This program leads to either an Associate in Applied Science degree or a certificate of proficiency. Both prepare students for jobs as administrative assistants, administrative office coordinators or office managers. Requirements for the degree and certificate are listed below.

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American
National Politics or
POLS 137 Introduction to State and Local Politics or
MATH 100 Mathematics for Business 3
SPDR 100 Fundamentals of Speech 3
General Education Electives 6
## Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 100</td>
<td>Introduction to Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 101</td>
<td>Accounting Principles I</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 105</td>
<td>Personnel Management or</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 109</td>
<td>Principles of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 120</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 127</td>
<td>Management Internship I or</td>
<td></td>
</tr>
<tr>
<td>OFSC 193</td>
<td>Internship I</td>
<td>3-5</td>
</tr>
<tr>
<td>BSAD 254</td>
<td>Business Law I or</td>
<td></td>
</tr>
<tr>
<td>BSAD 255</td>
<td>Business Law II</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 101</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 145</td>
<td>Support Software or</td>
<td></td>
</tr>
<tr>
<td>OFSC 210</td>
<td>Intro to Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 159</td>
<td>Professional Development</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 162</td>
<td>Keyboarding Applications/Typewriting II</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications or</td>
<td></td>
</tr>
<tr>
<td>BSAD 220</td>
<td>Business Letters and Reports</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 181</td>
<td>Electronic Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 195</td>
<td>Word Processing Concepts</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 190</td>
<td>Office Management</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Introduction to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives: BSAD, OFSC or CSIS</td>
<td>2-3</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: **62**

**NOTE:** OFSC 161 Keyboarding Applications/Typewriting I is not applicable to this degree.

## Office Management Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 100</td>
<td>Introduction to Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 101</td>
<td>Accounting Principles I</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 105</td>
<td>Personnel Management or</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 109</td>
<td>Principles of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 120</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 254</td>
<td>Business Law I or</td>
<td></td>
</tr>
<tr>
<td>OFSC 101</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 127</td>
<td>Management Internship or</td>
<td></td>
</tr>
<tr>
<td>OFSC 193</td>
<td>Internship I</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 210</td>
<td>Intro to Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 159</td>
<td>Professional Development</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 162</td>
<td>Keyboarding Applications/Typewriting II</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>Business Communications or</td>
<td></td>
</tr>
<tr>
<td>BSAD 220</td>
<td>Business Letters and Reports</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 181</td>
<td>Electronic Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>OFSC 195</td>
<td>Word Processing Concepts</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 190</td>
<td>Office Management</td>
<td>3</td>
</tr>
<tr>
<td>BSAD 254</td>
<td>Business Law I or</td>
<td></td>
</tr>
<tr>
<td>BSAD 255</td>
<td>Business Law II or</td>
<td></td>
</tr>
<tr>
<td>BSAD 270</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: **33**

## Paralegal Technology Certificate

### General Education Requirements

- ENGL 101 Composition and Reading I 3
- ENGL 102 Composition and Reading II 3
- HIST 120 American History I or 3
- HIST 121 American History II or 3
- POLS 135 Introduction to Political Science or 3
- POLS 136 Introduction to American National Politics or 3
- POLS 137 Introduction to State and Local Politics or 3
- SOSC 151 Foundations of the Social Sciences II 3
- PSYC 140 General Psychology 3
- SOCI 160 Sociology 3
- SPDR 100 Fundamentals of Speech 3

### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS 101</td>
<td>Technology and Information Management or</td>
<td></td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Introduction to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>PARA:</td>
<td>Electives</td>
<td>12</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: **63**

**OFFERED AT PENN VALLEY**

This program leads to either an Associate in Applied Science degree or a certificate of proficiency. It teaches students to prepare and file legal documents, do legal research, and manage a law office.

### Specific Program Requirements

- PARA 122 Procedural Law 3
- PARA 171 Introduction to Legal Technology 3
- PARA 176 Legal Research 3
- PARA 177 Legal Writing 3
- PARA 185 Ethics for the Paralegal 3
- PARA 290 Internship in Paralegal Technology 3

Para: Electives 12

Total Credit Hours Required: **33**
### PHYSICAL THERAPIST ASSISTANT

*Offered at Penn Valley*

This program leads to an Associate in Applied Science degree and prepares students to assist physical therapists in treating patients with physical disabilities at various kinds of health care facilities.

#### Admission to the Program

Because enrollment in the program is limited, a student must meet the requirements and apply for admission.

#### Requirements

1. High school diploma or GED certificate
2. Minimum grade point average of 2.5 in all courses required for the physical therapist assistant program.
3. Minimum grade of C in all college biology courses attempted and in PTHA 151.
4. Satisfactory performance on an examination in English language skills (Test of English as a Foreign Language for international students).
5. Admission to Penn Valley.

#### Applications Procedure

1. Send application for admission to Penn Valley Community College admissions office along with a formal copy of your high school transcript, GED, and/or college transcript.
2. Contact the Counseling Center to discuss enrollment in classes.
3. Complete the following program prerequisites:
   - BIOL 100 Introduction to Cell Biology
   - BIOL 110 Human Anatomy
   - BIOL 150 Medical Terminology
   - PTHA 151 Introduction to Physical Therapy
4. Call for an application to the program before or during the spring semester.
5. Return completed application to the Program Coordinator by June 10.
6. Applicants will be screened and the most qualified applicants will be selected to enter the program in the fall.

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Prerequisite Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 100</td>
<td>Intro to Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 150</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>PTHA 151</td>
<td>Intro to Physical Therapy</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 109</td>
<td>Anatomy and Physiology</td>
<td>6</td>
</tr>
</tbody>
</table>

### POLICE ACADEMY

Missouri law requires as of August 28, 1966, every peace officer be certified prior to employment.

The Western Missouri Regional Police Academy of the Blue River Community College satisfies all entry-level requirements for this POST certification. The Academy offers two levels of basic police training: 470 hours and 855 hours.

Graduates of the Western Missouri Regional Police Academy 855 Hour Basic Training Program will qualify for the Police Science Certificate.

### POLICE SCIENCE

*Offered at Blue River*

(See also Correctional Science, page 47)

This program, which leads to either an Associate in Applied Science degree or a certificate of proficiency, provides students with training in both the theory and methods of modern law enforcement. It's geared toward those who plan a career in law enforcement as well as those already in the field who want to upgrade their knowledge and skills.

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU 101</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
</tbody>
</table>
CRJU 122  Procedural Law  3
CRJU 132  Community Relations  3
CRJU 165  Criminology  3
CRJU 169  Family Violence and Sexual Abuse  3
CRJU 203  Criminal Investigation I  3
CRJU 204  Criminal Investigation II  3
CRJU 223  Criminal Law I or
CRJU 230  Missouri Criminal Law  3
HUMS/PSYC 210  Interviewing and Interpersonal Communications  3
CRJU: Electives  15
Electives: EMT, PHED, PSYC, SOC  9

Total Credit Hours Required  63

Police Science Certificate

Specific Program Requirements
CRJU 101  Introduction to Criminal Justice  3
CRJU 111  Police Operational Procedures  3
CRJU 112  Traffic Control and Investigation  3
CRJU 122  Procedural Law  3
CRJU 203  Criminal Investigation I  3
CRJU 230  Missouri Criminal Law  3
CRJU Electives  6
Electives: EMT, PHED*, PSYC, SOC  6

Total Credit Hours Required  30

* Limit of 4 credit hours in PHED

PRACTICAL NURSING CERTIFICATE

Offered at Penn Valley

This program leads to a certificate of proficiency and prepares students to take the National Council of State Boards of Licensure Examination for Practical Nurses. Graduates who pass the exam can accept entry-level jobs as licensed LPNs.

Admission to the Program

Every student in the Practical Nursing program should be aware that the Missouri State Board of Nursing may refuse to issue a license to any person who has been found guilty of violating federal or state laws and for any of 14 causes listed in Section 335.066 of the Missouri Revised Statutes 1986. (Copies of this law are available from the Missouri State Board of Nursing.)

Accreditation

The National League for Nursing Accrediting Commission can be contacted as a resource for information on the nursing program. The league’s address is 350 Hudson St., New York, NY 10014; phone (212) 989-9393.

Qualifications and Procedures for New Students
1. Apply and be admitted to the Metropolitan Community Colleges.
2. Participate in the ASSET testing program to demonstrate acceptable skill levels.
3. Apply for admission to the practical nurse program.
4. Complete the HOBET test at or above the acceptable level.
5. International students must successfully complete the CELSA.

Specific Program Requirements
Must be taken at Penn Valley

PNUR 100  Personal and Vocational Concepts  1.0
PNUR 102  Fundamentals of Practical Nursing I  1.5
PNUR 103  Fundamentals of Practical Nursing II  8.5
PNUR 104  Body Structure and Function  2.0
PNUR 110  Pharmacology  3.5
PNUR 128  Mental Health Nursing  2.5
PNUR 132  The Child Bearing Family  4.0
PNUR 138  Nursing of the Adult I  9.0
PNUR 144  Nursing of the Adult II  8.0
PNUR 146  Leadership  3.0

Total Credit Hours Required  43.0

PROFESSIONAL NURSING

Offered at Penn Valley

This program leads to an Associate in Applied Science degree and prepares beginning students and licensed practical nurses to take the National Council of State Boards of Nursing Licensure Examination for Registered Nurses. Graduates who pass the exam can accept entry-level jobs in acute, intermediate and long-term health care facilities. Requirements for the degree are listed below.

Admission to the Program

Every student in the nursing program should be aware that the Missouri State Board of Nursing may refuse to issue a license to any person who has been found guilty of violating federal or state laws and for any of 14 causes listed in Section 335.066 of the Missouri Revised Statutes 1986. (Copies of this law are available from the Missouri State Board of Nursing.)

Accreditation

The National League for Nursing Accrediting Commission can be contacted as a resource for information on the nursing program. The league’s address is 350 Hudson St., New York, NY 10014; phone (212) 989-9393.

Qualifications and Procedures for New Students
1. Apply and be admitted to the Metropolitan Community Colleges.
2. Complete and submit to the Nursing Division Office a Nursing Program Application form.
3. Submit to the admissions office and the Nursing Division Office official transcripts for all high school work or a GED Certificate as well as official transcripts of all previous work at accredited colleges or technical schools.
4. Have a minimum 2.5 grade point average in all previous college and technical school work.
5. Achieve satisfactory scores on the ASSET and Nurse Entrance Tests.
6. Complete the following prerequisite courses (6-8 credit hours):

   - BIOL 100 Introduction to Cell Biology or
   - CHEM 105 Introductory Chemistry 3-5
   - PSYC 140 General Psychology 3

7. Science courses not older than five years.

Procedure for Students Transferring Credits from Another Professional Nursing Program

1. Submit to the records office and the Nursing Division office an official transcript of all courses taken in the previous nursing program.
2. Submit to the chairperson of the Penn Valley nursing program a letter of reference from the director of the previous nursing program.
3. Provide to the nursing program chairperson a school catalog for the previous nursing program.
4. At the request of the chairperson of the Penn Valley nursing program, submit course syllabi for all previous nursing courses.

Procedure for International Students from Non-English Speaking Countries

1. In addition to the steps in the procedure for new students, international students must successfully complete the CELSA test and the numerical portion of the ASSET test.
2. Students must demonstrate English proficiency (readiness for ENGL 101) before being eligible to take the Nurse Entrance Test.
3. Students need to follow procedures for new students.

Review of Applicants

After applicants have completed admission procedures for the college and pre-admission requirements for the program, they will be considered for admission to the program according to the date their application is received in the Nursing Division office. This includes both MCC and cumulative grade point averages of at least 2.5.

Satisfactory Progress

All nursing courses in the nursing curriculum must be passed with a grade of C or better. More than one withdrawal from any nursing course may make the student ineligible to continue in the Nursing Program. Students may reenroll in a nursing course only once after receiving a grade of D or F. No more than one nursing course may be repeated.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I</td>
<td></td>
</tr>
<tr>
<td>or HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
</tbody>
</table>

Prerequisite Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 100</td>
<td>Intro to Cell Biology or</td>
<td></td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry</td>
<td>3-5</td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNUR 126</td>
<td>Fundamentals of Professional Nursing</td>
<td>6</td>
</tr>
<tr>
<td>RNUR 131</td>
<td>Essential Nursing Concepts</td>
<td>2</td>
</tr>
<tr>
<td>RNUR 134</td>
<td>Mental Health Nursing</td>
<td>4</td>
</tr>
<tr>
<td>RNUR 141</td>
<td>Adult Nursing I</td>
<td>3</td>
</tr>
<tr>
<td>RNUR 230</td>
<td>Leadership/Management/Trends</td>
<td>2</td>
</tr>
<tr>
<td>RNUR 234</td>
<td>Child-Centered Nursing</td>
<td>4</td>
</tr>
<tr>
<td>RNUR 238</td>
<td>Adult Nursing II</td>
<td>5</td>
</tr>
<tr>
<td>RNUR 244</td>
<td>Adult Nursing III</td>
<td>7</td>
</tr>
</tbody>
</table>

Total Credit Hours Required 70-72

Estimated Costs of the Nursing Program

Tuition and Fees: See page 11

Approximate Costs*

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Supplies</td>
<td>$500.00</td>
</tr>
<tr>
<td>Nursing Textbooks</td>
<td>$1,000.00</td>
</tr>
</tbody>
</table>

* This amount does not include the cost of textbooks for required and elective courses other than those in nursing. The Metropolitan Community College District reserves the right to change tuition and fees without notice, and the cost of supplies and textbooks may increase.

LPN-ADN Bridge Program

This program allows licensed practical nurses to complete the requirements for an Associate in Applied Science degree by receiving credit for knowledge and skills they’ve mastered through clinical and work-related experience. Applicants must meet the same admission requirements for all students in the nursing program.

Qualifications and Procedures for New Students

1. Apply and be admitted to the Metropolitan Community Colleges.
2. Complete and submit to the Nursing Division office a Nursing Program Application form.
3. Submit to the admissions office and the Nursing Division office official transcripts for all high school work or a GED Certificate as well as official transcripts of all previous work at accredited colleges or technical schools.
4. Have a minimum 2.5 grade point average in all previous college and technical school work.
5. Achieve satisfactory scores on the ASSET and Nurse Entrance Tests.

6. Complete the following prerequisite courses (6-8 credit hours):
   - BIOL 100 Introduction to Cell Biology or CHEM 105 Introductory Chemistry 3-5
   - PSYC 140 General Psychology 3

7. Science courses not older than five years.

8. Submit to the director of the Penn Valley nursing program a copy of the LPN license for the State of Missouri. (Students must maintain a current license as long as they are enrolled in the nursing program.)

9. Submit to the director of the Penn Valley nursing program letters of recommendation from the director of the LPN program from which the student graduated and, if the student is currently employed, from the immediate supervisor.

Prerequisite Courses
BIOL 100 or CHEM 105, PSYC 140, BIOL 109, PSYC 243, BIOL 208, RNUR 115

Semester III
RNUR 234 Child Centered Nursing 4
RNUR 238 Adult Nursing II 5
ENGL 101 Composition and Reading I 3
SOCI 160 Sociology 3
Total 15

Semester IV
RNUR 244 Adult Nursing III 7
RNUR 230 Leadership/Management/Trends 2
SPDR 100 Fundamentals of Speech 3

The student must complete one of the following courses:
HIST 120 American History I or HIST 121 American History II or
POLS 135 Introduction to Political Science or POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics or
SOSC 151 Foundations of the Social Sciences II 3
Total 15

Total credit hours required for the degree 70-72

Transfer Nursing
For information about the transfer nursing program, see page 36

Quality Assurance Technology Certificate

This program leads to either an Associate of Applied Science degree or a certificate of proficiency. It provides new students or people who are already in the field with the quality assurance knowledge and skills they need to become quality planners, analysts, engineers, and managers.

General Education Requirements
ENGL 101 Composition and Reading I 3
ENGL 175 Technical Writing 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics 3
MATH 103 Technical Math I and
MATH 104 Technical Math II or
MATH 120 College Algebra and
MATH 130 Trigonometry 6
MATH 115 Statistics 3
PHYS 112 Technical Physics 5
SPDR 100 Fundamentals of Speech 3

Specific Program Requirements
Must be taken at Business & Technology College
QCAT 150 Introduction to Quality Assurance I 3
QCAT 151 Introduction to Quality Assurance II 3
QCAT 251 Process Quality Control 3
QCAT 261 Quality Statistical Applications 3
QCAT 270 Reliability Engineering and Metrology 3
QCAT 281 Design and Analysis of Experiments 3

Total Credit Hours Required 62

Quality Assurance Technology Certificate

Specific Program Requirements
Must be taken at Business & Technology College
MATH 115 Statistics 3
PHYS 112 Technical Physics 5

Specific Program Requirements
MATH 103 Technical Math I and
MATH 104 Technical Math II or
MATH 120 College Algebra and
MATH 130 Trigonometry 6
QCAT 150 Introduction to Quality Assurance I 3
QCAT 151 Introduction to Quality Assurance II 3
QCAT 251 Process Quality Control 3
QCAT 261 Quality Statistical Applications 3
QCAT 270 Reliability Engineering and Metrology 3
QCAT 281 Design and Analysis of Experiments 3

Total Credit Hours Required 32
RADIOLOGIC TECHNOLOGY

Offered at Penn Valley

This program leads to an Associate in Applied Science degree and prepares students for entry-level jobs as a radiologic technologist in a hospital or outpatient setting. Graduates are eligible to take the national certifying exam given by the American Registry of Radiologic Technologists.

Admission to the Program

Enrollment in this program is limited. Students must submit their transcripts and application for admission to the program coordinator by January 1. The application form may be obtained from the program coordinator, the counseling department, or the office of the division of life science.

Requirements for Admission

1. High school diploma or GED certificate.
2. Grade Point average of 2.5 in all courses completed prior to program admission.
3. Completion of BIOL 101 or BIOL 110 or one year of high school biology with a minimum grade of C within the last five years.
4. Completion of MATH 40 or MATH 43 or two semesters of high school algebra with a minimum grade of C within the last five years.
5. Completion of RATE 150 with a minimum grade of C within the last 5 years.
6. Admission to Penn Valley Community College.
7. Completion of a screening interview with the program coordinator or RATE faculty.

Application Process

1. Return the completed application for admission to the program coordinator.
2. Submit an application for admission to Penn Valley Community College.
3. Submit evidence of high school graduation or completed GED to the program coordinator.
4. Submit all high school and/or college transcripts to the program coordinator.

The program begins once each year in the summer session with RATE 160 Survey of Radiologic Technology.

Procedure for Students Transferring from Another Accredited Radiologic Technology Program.

1. Satisfy all requirements for admission to the program.
2. Submit transcript of all completed or attempted radiologic technology course work to the program coordinator.
3. Submit to the program coordinator a school catalog from the previously attended radiologic technology program.
4. Submit to the program coordinator a letter of reference from the director of the previously attended radiologic technology program.

5. Transfer of credit will be given on an individual basis and may require the completion of competency examinations or placement tests for admission to advanced course work in the program.

The student who is certified in radiologic technology and wishes to complete an Associate of Applied Science degree with emphasis in radiologic technology will be considered on an individual basis. This student will be required to satisfactorily complete a minimum of two courses in the radiologic technology program, in addition to BIOL 110, BIOL 150, ENGL 101, PSYC 140, and SPDR 100. The student who completed a program which led to certification in radiologic technology is encouraged to consult the program coordinator regarding eligibility for admission to the Penn Valley radiologic technology program.

Review of Applicants

After a qualified individual has completed the application procedure, they will be considered for admission according to the date of application to the radiologic technology program, GPA, and overall previous academic performance. Applicants whose academic records show an excessive number of withdrawals will be considered on an individual basis.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td></td>
</tr>
<tr>
<td>PSYC 140</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATE 150</td>
<td>Introduction to Radiologic Technology</td>
<td>1</td>
</tr>
<tr>
<td>RATE 160</td>
<td>Survey of Radiologic Technology</td>
<td>6</td>
</tr>
<tr>
<td>RATE 162</td>
<td>Image Processing</td>
<td>2</td>
</tr>
<tr>
<td>RATE 165</td>
<td>Patient Care</td>
<td>2</td>
</tr>
<tr>
<td>RATE 170</td>
<td>Radiologic Biology and Protection</td>
<td>3</td>
</tr>
<tr>
<td>RATE 171</td>
<td>Radiographic Exposures I</td>
<td>3</td>
</tr>
<tr>
<td>RATE 172</td>
<td>Radiographic Positioning I</td>
<td>3</td>
</tr>
<tr>
<td>RATE 173</td>
<td>Clinical Training I</td>
<td>3</td>
</tr>
<tr>
<td>RATE 174</td>
<td>Radiographic Exposures II</td>
<td>3</td>
</tr>
<tr>
<td>RATE 175</td>
<td>Clinical Training II</td>
<td>4</td>
</tr>
<tr>
<td>RATE 176</td>
<td>Radiographic Positioning II</td>
<td>3</td>
</tr>
<tr>
<td>RATE 178</td>
<td>Clinical Training III</td>
<td>4</td>
</tr>
<tr>
<td>RATE 278</td>
<td>Imaging Modalities and Pathology</td>
<td>3</td>
</tr>
<tr>
<td>RATE 279</td>
<td>Radiographic Positioning III</td>
<td>2</td>
</tr>
<tr>
<td>RATE 280</td>
<td>Clinical Training IV</td>
<td>4</td>
</tr>
<tr>
<td>RATE 281</td>
<td>Radiation Physics</td>
<td>3</td>
</tr>
<tr>
<td>RATE 282</td>
<td>Clinical Training V</td>
<td>4</td>
</tr>
<tr>
<td>RATE 283</td>
<td>Final Seminar</td>
<td>2</td>
</tr>
<tr>
<td>RATE 285</td>
<td>Special Procedures</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours Required 76
RAILROAD OPERATIONS TECHNOLOGY

Offered at Johnson County Community College
Coordinated at MCC at all locations

This program leads to an Associate of Applied Science degree. It offers two options: Railroad Conductor and Railroad Dispatcher. MCC’s Railroad Operations program is offered in cooperation with the railroad operations program at Johnson County Community College. Students must be accepted into the program by both MCC and JCCC. The student is awarded the degree from JCCC upon successful completion of all requirements.

Program course and credit hours are subject to change because of the requirement changes at the degree-granting institution. It is the student’s responsibility to check with an MCC counselor before enrollment.

### RAILROAD CONDUCTOR

**Specific Program Requirements**

**Must be taken at one of the MCC campuses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 150</td>
<td>Business Essentials</td>
<td>3</td>
</tr>
<tr>
<td>CSIS 115</td>
<td>Introduction to Microcomputer Applications</td>
<td>3</td>
</tr>
<tr>
<td>ECON 110</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 175</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 120</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 130</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>PHED</td>
<td>Elective</td>
<td>1</td>
</tr>
<tr>
<td>PHIL 200</td>
<td>Logic</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 110</td>
<td>Physics for Technology I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 111</td>
<td>Physics for Technology II</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

- **Total Credit Hours Required**: 68

- **Specific Program Requirements**
  - Must be taken at Johnson County Community College

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 138</td>
<td>Business Ethics</td>
<td>1</td>
</tr>
<tr>
<td>RRT 120</td>
<td>History of Railroading</td>
<td>3</td>
</tr>
<tr>
<td>RRT 121</td>
<td>Railroad Technical Careers</td>
<td>3</td>
</tr>
<tr>
<td>RRT 150</td>
<td>Railroad Operations</td>
<td>3</td>
</tr>
<tr>
<td>RRT 165</td>
<td>Railroad Safety, Quality and Environment</td>
<td>3</td>
</tr>
<tr>
<td>RRTD 122</td>
<td>Introduction to Railroad Dispatching</td>
<td>2</td>
</tr>
<tr>
<td>RRTD 271</td>
<td>Apprentice Railroad Dispatcher Training I</td>
<td>6</td>
</tr>
<tr>
<td>RRTD 272</td>
<td>Apprentice Railroad Dispatcher Training II</td>
<td>6</td>
</tr>
<tr>
<td>RRTD 275</td>
<td>Railroad Dispatching Field Observation</td>
<td>3</td>
</tr>
<tr>
<td>RRTD 276</td>
<td>Railroad Dispatching Field Application</td>
<td>5</td>
</tr>
</tbody>
</table>

- **Total Credit Hours Required**: 69

### RESPIRATORY CARE

Offered at Johnson County Community College
Coordinated through Penn Valley

This program, offered under the auspices of Johnson County Community College (JCCC), leads to an Associate of Applied Science degree and qualifies the student for the National Board for Respiratory Care examination process. Additional program information may be acquired from the counseling office at Penn Valley and from the academic director at JCCC (913) 469-2583.

#### Eligibility

To be considered for admission to the program, a student must complete all required college courses in English, mathematics, and science with a minimum grade of C and must have minimum overall college GPA of 2.0.

#### Admission to the Program

The number of MCC students admitted to the program is limited. In order to be certain that they will be considered for admission to the class which begins its specialized course work in June, an MCC student must complete the application process by the previous October 15. Applications are not considered until all required material has been submitted. If openings remain for MCC students after the initial applications have been reviewed, students who have missed the deadline will be considered if their applications are completed by February 15. Further information
is available in the counseling office at Penn Valley and from the academic director at JCCC.

Application Process
1. Complete the MCC admissions process.
2. Submit the following items to the Admissions/Records Office of Johnson County Community College, 12345 College Boulevard, Overland Park, Kansas 66210-1299. Phone (913) 469-8500, Ext. 3438.
   a. JCCC application form, including the Academic Criteria Worksheet.
   b. If the student has graduated from high school or completed the GED examination within the last five years, an official high school transcript or GED certificate.
   c. Official transcripts of all college work.
3. Arrange an interview with JCCC Respiratory Care Program faculty and bring a completed Respiratory Care Investigative Questionnaire to the interview. This form is available from the JCCC Respiratory Care program office, phone (913) 469-2583.

Selection of students for the program is determined by the ranking of applications according to the interview score, the overall college GPA, and the GPA in prerequisite courses. Further information is available from the Director of the Respiratory Care Program at JCCC.

Note: All English, mathematics, and science courses must be completed successfully before the student is eligible for the clinical courses at JCCC. Students may make application, however, if coursework will be completed by the clinical year.

RESPIRATORY CARE TRADITIONAL

Specific Program Requirements
Must be taken at one of the MCC campuses
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 110</td>
<td>Human Anatomy*</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 208</td>
<td>Microbiology*</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 210</td>
<td>Human Physiology*</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry*</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I*</td>
<td>3</td>
</tr>
<tr>
<td>MATH 110</td>
<td>Intermediate Algebra or</td>
<td>3</td>
</tr>
<tr>
<td>MATH 120</td>
<td>College Algebra*</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Communications Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Specific Program Requirements
Must be taken at Johnson County Community College
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 121</td>
<td>CPR I:Basic Life Support</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Healthcare Provider</td>
<td></td>
</tr>
<tr>
<td>RC 125</td>
<td>Beginning Principles of Respiratory Care</td>
<td>4</td>
</tr>
<tr>
<td>RC 130</td>
<td>Respiratory Care Equipment</td>
<td>4</td>
</tr>
<tr>
<td>RC 135</td>
<td>Cardiopulmonary Medicine I</td>
<td>1</td>
</tr>
<tr>
<td>RC 220</td>
<td>Cardiopulmonary Physiology</td>
<td>2</td>
</tr>
<tr>
<td>RC 230</td>
<td>Clinical Topics and Procedures I</td>
<td>4</td>
</tr>
<tr>
<td>RC 231</td>
<td>Clinical Topics and Procedures II</td>
<td>4</td>
</tr>
<tr>
<td>RC 233</td>
<td>Respiratory Care of Children</td>
<td>2</td>
</tr>
<tr>
<td>RC 235</td>
<td>Cardiopulmonary Medicine II</td>
<td>2</td>
</tr>
<tr>
<td>RC 240</td>
<td>Cardiopulmonary Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>RC 271</td>
<td>Clinical Practice I</td>
<td>6</td>
</tr>
<tr>
<td>RC 272</td>
<td>Clinical Practice II</td>
<td>6</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: 75

* Prerequisite courses that must be completed prior to the clinical year at Johnson County Community College

Social Science Elective must be one of the following: ANTH 100, ECON 110, 210, 211, GEOG 105, 111, 112, POLS 135, 136, 137, PSYC 140, 142, SOSC 150, 151, 172, SOCI 160, 162, 163, 170

Communications Elective must be one of the following: SPDR 100, 102, 103, ENGL 102, 175, BSAD 178

Humanities Elective must be one of the following: Art 108, 150, 151, 159, ENGL 120, 121, 122, 124, 125, 128, 150, 151, 158, 165, 167, 220, 221, 222, 223, SPDR 114, 148, 203, FREN 203, GERM 203, SPAN 203, SPAN 204, HIST 120, 121, 133, 134, 135, 215, HUMN 133, 134, 140, 160, MUSI 108, PHIL 100, 101, 200, 201, 203

RESPIRATORY CARE TRANSITION

Specific Program Requirements
Must be taken at one of the MCC campuses
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 110</td>
<td>Human Anatomy*</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 208</td>
<td>Microbiology*</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 210</td>
<td>Human Physiology*</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry*</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I*</td>
<td>3</td>
</tr>
<tr>
<td>MATH 110</td>
<td>Intermediate Algebra or</td>
<td>3</td>
</tr>
<tr>
<td>MATH 120</td>
<td>College Algebra*</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Communications Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Specific Program Requirements
Must be taken at Johnson County Community College
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 121</td>
<td>CPR I:Basic Life Support</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Healthcare Provider</td>
<td></td>
</tr>
<tr>
<td>RC 125</td>
<td>Beginning Principles of Respiratory Care</td>
<td>4</td>
</tr>
<tr>
<td>RC 130</td>
<td>Respiratory Care Equipment</td>
<td>4</td>
</tr>
<tr>
<td>RC 135</td>
<td>Cardiopulmonary Medicine I</td>
<td>1</td>
</tr>
<tr>
<td>RC 220</td>
<td>Cardiopulmonary Physiology</td>
<td>2</td>
</tr>
<tr>
<td>RC 230</td>
<td>Clinical Topics and Procedures I</td>
<td>4</td>
</tr>
<tr>
<td>RC 231</td>
<td>Clinical Topics and Procedures II</td>
<td>4</td>
</tr>
<tr>
<td>RC 233</td>
<td>Respiratory Care of Children</td>
<td>2</td>
</tr>
<tr>
<td>RC 235</td>
<td>Cardiopulmonary Medicine II</td>
<td>2</td>
</tr>
<tr>
<td>RC 240</td>
<td>Cardiopulmonary Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>RC 245</td>
<td>CRRT-RRT Clinical Topics and Procedures</td>
<td>4</td>
</tr>
<tr>
<td>RC 271</td>
<td>Clinical Practice I</td>
<td>6</td>
</tr>
<tr>
<td>RC 272</td>
<td>Clinical Practice II</td>
<td>6</td>
</tr>
</tbody>
</table>

Total Credit Hours Required: 75
* Prerequisite courses that must be completed prior to the clinic year at Johnson County Community College

**Social Science Elective** must be one of the following: ANTH 100, ECON 110, 210, 211, GEOG 105, 111, 112, POLS 135, 136, 137, PSYC 140, 142, SOSC 150, 151, 172, SOCI 160, 162, 163, 170

**Communications Elective** must be one of the following: SPDR 100, 102, 103, ENGL 102, 175, BSAD 178

**Humanities Elective** must be one of the following: Art 108, 150, 151, 159, ENGL 120, 121, 122, 124, 125, 128, 150, 151, 158, 165, 167, 220, 221, 222, 223, SPDR 114, 128, FREN 203, GERM 203, SPAN 203, SPAN 204, HIST 120, 121, 133, 134, 135, 215, HUMN 133, 134, 140, 160, MUSI 108, PHIL 100, 101, 200, 201, 203

---

**SIGN LANGUAGE INTERPRETING**

*Offered at Maple Woods*

This program leads to an Associate in Applied Science degree, which prepares students for entry-level jobs as sign-language interpreters, or to a certificate of proficiency in deaf studies.

**Program Admission**

Admission to this program is limited. To be admitted, students must meet the requirements listed below. Students who complete the admissions requirements will be evaluated by a screening committee. The committee will rank each applicant on the following factors: SIGN coursework, materials in the application packet, and videotaped sample of the applicant’s conversational ASL skills while in SIGN 102.

**Application Process**

1. An application to the Sign Language Program.
2. An application for admission to Maple Woods Community College.
3. A handwritten statement on "Why you want to enter the Sign Language Program" (300 words or less).
4. Official transcripts from high school and/or college.
5. Hearing evaluation by a licensed audiologist. A form is included in SIGN packet.
6. ENGL 30 or a higher level course or a minimum ASSET score for ENGL 101. Completion of ENGL 101 lends weight to the application packet.
7. Complete SIGN 101 and SIGN 102, Conversational American Sign Language I and II, with a grade of B or better. Students enrolled in SIGN 102 for the summer semester may use a midterm assessment and recommendation of instructor in lieu of final grade.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>9</td>
</tr>
</tbody>
</table>

**Specific Program Requirements**

*Must be taken at Maple Woods*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGN 110</td>
<td>American Sign Language I</td>
<td>4</td>
</tr>
<tr>
<td>SIGN 112</td>
<td>Fingerspelling</td>
<td>1</td>
</tr>
<tr>
<td>SIGN 114</td>
<td>The Interpreting Profession</td>
<td>2</td>
</tr>
<tr>
<td>SIGN 116</td>
<td>Deaf Culture</td>
<td>3</td>
</tr>
<tr>
<td>SIGN 118</td>
<td>Sign-To-Voice I</td>
<td>3</td>
</tr>
<tr>
<td>SIGN 120</td>
<td>American Sign Language II</td>
<td>4</td>
</tr>
<tr>
<td>SIGN 122</td>
<td>Linguistics of American Sign Language</td>
<td>3</td>
</tr>
<tr>
<td>SIGN 125</td>
<td>Interpreting I</td>
<td>4</td>
</tr>
<tr>
<td>SIGN 128</td>
<td>Sign-To-Voice II</td>
<td>3</td>
</tr>
</tbody>
</table>
Deaf Studies Certificate

This program prepares an English language user to communicate on an intermediate conversational skill level with an American Sign Language user. It does not lead to any degree of interpreting proficiency. To advance to SIGN 110, the student must complete program admission procedures.

General Education Requirements
ENGL 101 Composition and Reading I 3

Specific Program Requirements
SIGN 101 Conversational American Sign Language I 3
SIGN 102 Conversational American Sign Language II 3
SIGN 110 American Sign Language I 4
SIGN 116 Deaf Culture 3
SIGN 120 American Sign Language II 4

Total Credit Hours Required 20

SURGICAL TECHNOLOGY CERTIFICATE

Offered at Penn Valley
This program leads to a certificate of proficiency and prepares students for entry-level jobs as operating room technicians.

Specific Program Requirements
Must be taken at Penn Valley
STNU 100 Introduction to Surgical Technology 2
STNU 102 Fundamentals of Operating Techniques 11
STNU 104 Body Structure and Function 2
STNU 105 Pharmacology for the Surgical Technologist 2
STNU 106 Aseptic Technique for the Surgical Technologist 2
STNU 109 Principles of Surgical Procedures I 8
STNU 110 Principles of Surgical Procedures II 7
STNU 114 Principles of Surgical Procedures III 7
STNU 116 Career Development for the Surgical Technologist 2

Total Credit Hours Required 43

TELECOMMUNICATIONS TECHNOLOGY

Offered at the Business & Technology College
This program provides a career ladder for students wishing to pursue careers in telecommunications. The degree develops both technical and general education skills. The Level I certificate is targeted for individuals seeking an entry-level position. The Level II certificate is designed for those individuals seeking advancement in the field, specifically for positions beyond entry level.

General Education Requirements
ENGL 101 Composition and Reading I 3
HIST 120 American History I or
HIST 121 American History II or
POLS 135 Introduction to Political Science or
POLS 136 Introduction to American National Politics or
POLS 137 Introduction to State and Local Politics 3
MATH 120 College Algebra and
MATH 130 Trigonometry or
MATH 150 Precalculus 5-6
SPDR 100 Fundamentals of Speech 3
Electives General Education 6

Specific Program Requirements
Must be taken at Business & Technology College
BSAD 109 Principles of Supervision or
BSAD 120 Human Relations in Business 3
Elective: BSAD, CSIS, ELTE 1-3

Specific Program Requirements
CSIS 101* Technology and Information Management or
CSIS 121* Introduction to Computer Science or
CSIS 160 Introduction to Telecommunications Careers 3
CSIS 161 Telecommunications and Network Fundamentals 3
CSIS 164 Basic Telecommunications Theory 5
CSIS 165 Telecommunications Instrumentation 3
CSIS 168 Telecommunications Technology I 3
CSIS 261 Telecommunications and Networks II 3
CSIS 264 Optical and Broadband Transmission Systems 3
CSIS 266 Switching Techniques or
CSIS 267 FCC Commercial License Preparation 3
CSIS 268 Telecommunications Technology II 3
CSIS 295 Telecommunications Internship 3
ELTE 130 Digital Electronics 3

Total Credit Hours Required 62-65
* May be taken at any campus.
**Telecommunications Technician I Certificate**

**Specific Program Requirements**
- CSIS 101 Technology and Information Management or
- CSIS 121 Introduction to Computer Science

**Specific Program Requirements**
Must be taken at Business & Technology College
- CSIS 160 Introduction to Telecommunication Careers
- CSIS 164 Basic Telecommunications Theory
- CSIS 165 Telecommunications Instrumentation
- CSIS 168 Telecommunications Technology I

Total Credit Hours Required 17

---

**Telecommunications Technician II Certificate**

**Specific Program Requirements**
- BSAD 109 Principles of Supervision or
- BSAD 120 Human Relations in Business
- CSIS 101 Technology and Information Management or
- CSIS 121 Introduction to Computer Science
- MATH 120 College Algebra and
- MATH 130 Trigonometry or
- MATH 150 Precalculus 5-6

**Specific Program Requirements**
Must be taken at Business & Technology College
- CSIS 160 Introduction to Telecommunication Careers
- CSIS 164 Basic Telecommunications Theory
- CSIS 165 Telecommunications Instrumentation
- CSIS 168 Telecommunications Technology I
- CSIS 261 Telecommunications and Networks II
- CSIS 264 Optical and Broadband Transmission Systems
- CSIS 266 Switching Techniques or
- CSIS 267 FCC Commercial License Preparation
- CSIS 268 Telecommunications Technology II
- CSIS 295 Telecommunications Internship
- ELTE 130 Digital Electronics

Total Credit Hours Required 46-47

---

**TRAVEL AND TOURISM**

**Offered at Maple Woods**

This program offers an Associate in Applied Science degree and both a basic and an advanced certificate in Travel and Tourism. These options provide training for entry-level positions or allow persons already employed to qualify for a higher-level positions. The requirements for the degree and certificates are listed below.

---

**General Education Requirements**
- ENGL 101 Composition and Reading I 3
- GEOG 105 World Geography 3
- HIST 120 American History I or
- HIST 121 American History II or
- POLS 135 Introduction to Political Science or
- POLS 136 Introduction to American National Politics or
- POLS 137 Introduction to State and Local Politics 3
- SPDR 100 Fundamentals of Speech 3
- Electives: General Education 6

**Specific Program Requirements**
Must be taken at Maple Woods
- TRAV 101 Introduction to the Travel Industry 3
- TRAV 102 Destination Geography 3
- TRAV 103 Travel Sales and Reservations 3
- TRAV 104 Travel Agency Operations 3
- TRAV 105 Computer Reservation Systems 4
- TRAV 121 Travel Sales and Customer Service or
- TRAV 122 Cruise Counseling and Marketing 3
- TRAV 124 Advanced Studies in Travel and Tourism 3

Any two of the following:
- TRAV 111 Destination Specialist: Caribbean Region and Mexico
- TRAV 112 Destination Specialist: Pacific Rim
- TRAV 113 Destination Specialist: North America
- TRAV 114 Destination Specialist: Western Europe
- TRAV 115 Destination Specialist: Corporation Travel Geography 6

Total Credit HoursRequired 64

---

**Travel and Tourism Basic Certificate**

**Specific Program Requirements**
Must be taken at Maple Woods
- TRAV 101 Introduction to the Travel Industry 3
- TRAV 102 Destination Geography 3
- TRAV 103 Travel Sales and Reservations 3
- TRAV 104 Travel Agency Operations 3
- TRAV 105 Computer Reservation Systems 4

Total Credit Hours Required 16
### Travel and Tourism Advanced Certificate

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 127</td>
<td>Management Internship I</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Specific Program Requirements

Must be taken at Maple Woods

- TRAV 101 Introduction to the Travel Industry 3
- TRAV 102 Destination Geography 3
- TRAV 103 Travel Sales and Reservations 3
- TRAV 104 Travel Agency Operations 3
- TRAV 105 Computer Reservation Systems 4
- TRAV 111 Dest Specialist: Caribbean Region and Mexico or
- TRAV 115 Dest Specialist: Corporation Travel Geography 3
- TRAV 112 Dest Specialist: Pacific Rim or
- TRAV 113 Dest Specialist: North America or
- TRAV 114 Dest Specialist: Western Europe 3
- TRAV 121 Travel Sales and Customer Service or
- TRAV 122 Cruise Counseling and Marketing 3
- TRAV 124 Advanced Studies in Travel and Tourism 3

**Total Credit Hours Required** 37

### VETERINARY TECHNOLOGY

**Offered at Maple Woods.**

This program, which leads to an Associate in Applied Science degree, is accredited by the American Veterinary Medical Association. It provides students with the practical knowledge and skills necessary for working with laboratory animals or for assisting veterinarians with technical and office procedures.

#### Program Admission

Since enrollment is limited, students must apply for admission. Those who want to be admitted for the fall semester should apply by March 15. Students must take BIOL 106 (General Zoology) or BIOL 101 (General Biology) as a prerequisite. Call 437-3235 for a packet.

#### Application Process

Submit the following items to the Maple Woods Admissions Office by March 15 to be considered for the fall semester.

1. An application for the Veterinary Technology Program.
2. An application for admission to Maple Woods Community College.
3. A minimum of one and a maximum of three personal references, preferably from veterinarians, veterinary technicians, current or former employers or teachers. Use forms included in the VETT packet.
4. A typewritten or computer-generated form verifying four hours of veterinary clinic observation (or job description) as follows (less than 250 words):
   a. Evaluation form completed by the supervisor at the observation site and returned to the admissions office.
   b. Applicants who have been or are currently employed in a veterinary clinical facility should submit a written description of their position including job responsibilities and length of employment in lieu of the observation form.
5. Handwritten statement on “Why I Would Like a Career in Veterinary Technology” (less than 250 words).
6. Official transcripts (high school and/or college) must be provided to the admissions office. Students with a minimum of 15 college credits need not submit high school transcripts.
7. “Assessment of Current College Enrollment” form if you are taking courses that will not be included on your transcript. (Form included in VETT packet.)
8. Applications are evaluated on a point system that includes previous academic performance, number of required general studies courses completed, work experience, motivation, references, completeness, and neatness of the program application, and grammar and content of the essays.

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading I</td>
<td>3</td>
</tr>
<tr>
<td>SPDR 100</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>HIST 120</td>
<td>American History I or</td>
<td></td>
</tr>
<tr>
<td>HIST 121</td>
<td>American History II or</td>
<td></td>
</tr>
<tr>
<td>POLS 135</td>
<td>Introduction to Political Science or</td>
<td></td>
</tr>
<tr>
<td>POLS 136</td>
<td>Introduction to American National Politics or</td>
<td></td>
</tr>
<tr>
<td>POLS 137</td>
<td>Introduction to State and Local Politics or</td>
<td></td>
</tr>
<tr>
<td>SOSC 151</td>
<td>Foundations of the Social Sciences II</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Specific Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 106</td>
<td>General Zoology (101 may also be used)</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 208</td>
<td>Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>Introductory Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>MATH 108</td>
<td>Clinical Mathematics</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Specific Program Requirements

Must be taken at Maple Woods

- CSIS 115 Intro to Microcomputer Applications 3
- VETT 100 Introduction to Veterinary Technology 2
- VETT 101 Principles of Animal Science I 3
- VETT 110 Principles of Animal Science II 3
- VETT 111 Sanitation and Animal Care 2
- VETT 200 Veterinary Hospital Technology I 3
- VETT 201 Clinical Pathology Techniques 4
- VETT 202 Veterinary Anatomy 5
- VETT 203 Laboratory Animal Technology 2
- VETT 209 Equine Medicine and Management 3
- VETT 210 Animal Hospital Technology II 3
- VETT 211 Clinical Pathology Techniques II 5
- VETT 212 Large Animal Technology 4
- VETT 213 Radiology and Electronic Procedures 2
- VETT 214 Veterinary Technician Internship 6

**Total Credit Hours Required** 75
CONTINUING EDUCATION

The Business & Technology College

The Business & Technology College is the largest and most comprehensive business solutions and technical training facility in the Midwest. The 350,000 square foot facility has state-of-the-industry labs and classrooms and also boasts a 56,000 square foot exhibit hall for trade shows and conventions. Today the BTC serves over 26,000 people annually.

Many business solutions and technical training options are available through the BTC. Training can be delivered at the client’s location/business or on campus. As part of the consulting services used to improve organizational performance, the BTC offers customized programs/services for which curricula and course materials can be designed specifically to meet training and job performance objectives. Some of the programs/services offered:

- Performance Consulting
- Organizational and Employee Assessments
- Technical Writing and Process Documentation
- ISO 9000 Registration
- ISO Certified Quality Management System
- Call Center Start-Up Package
- PeopleSoft Authorized Training Center
- Management and Professional Development Training
- Technical and Skilled Trade—welding, hydraulics, metal fabrication, pneumatics, etc.
- Microsoft Certified Partner—computer skills training on the most popular business software
- Microsoft Office User Specialist (MOUS) Testing Center
- Customer service training in our state-of-the-art, award-winning call center.
- Environmental Health and Safety (EHS) and Occupational Health and Safety (OSHA) consulting and training
- State-of-the-Industry Confined Space Trainer
- AutoCAD at our authorized Autodesk Training Center
- Basic skills training (reading, math, and writing) in the Workforce Skills computer lab equipped with self-directed educational programs geared to each student’s skill level
- Distance Learning Programs on the Internet through PLATO or American College Testing (ACT) whereby employers can assess the needs and design a training program for employees.

The BTC is also ISO 9001:2000 registered and is the first division of a community college in the United States to have earned the coveted registration. This ensures that the BTC consistently delivers quality products and services to the Kansas City area business community.

Funding Programs for Training

Besides sources of funds from direct-bill contract clients and open enrollment revenue, additional BTC revenue sources include the State of Missouri Customized Training and New Jobs...
Training programs. Both programs provide our clients access to either direct funding for MCC–BTC training and services or using external sources. These funding programs are provided in cooperation with the Missouri Department of Economic Development (DED) and the Department of Elementary and Secondary Education (DESE) and can help qualified companies finance training programs.

The goals of the BTC are to develop partnerships with businesses and agencies; to deliver training for real, high-paying, and rewarding jobs; and to strengthen MCC’s role in the economic and resource development of the entire metropolitan area.

The BTC vision: to be recognized as the single source solution provider for meeting customers’ multiple training and technical service needs.

The BTC Quality Policy: Our services are innovative and practical. We continuously improve to reach and maintain the highest level of customer satisfaction.

Health Care Continuing Education at Penn Valley

Noncredit seminars for healthcare professionals and training for entry-level employment in health occupations such as certified nurse aide and phlebotomy technician are offered at Penn Valley. Classes are also developed and provided off-site as requested by hospitals and other health care facilities.

Workshops are held monthly during the spring and fall semesters for licensed professionals to obtain continuing education contact hours to improve their performance and to maintain licensure. Penn Valley Community College is approved as a provider of continuing education in nursing by the Missouri Nurses Association, which is accredited as an approver of continuing education in nursing by the American Nurses Credentialing Center Commission on Accreditation. Partnerships are also developed to provide approved contact hours for various professional groups, both on and off-site.

Information about specific offerings, schedules, and policies is available from the continuing education office at Penn Valley, (816)759-4042 or (816) 759-4033.

Community Education

Noncredit community education courses, workshops, seminars, conferences, and special events are offered each semester at most MCC campuses. These include opportunities for adults, children, and special populations. The mission of community education is to provide diverse classes and programs to meet the needs of the communities we serve—lifelong learning opportunities for education, enrichment, and enjoyment.

Adult classes are offered in the areas of business, communication, computers, financial planning, fine arts, health and fitness, language and writing, law, recreation, personal enhancement, professional development, special interests, and more. Programs for adults with disabilities, families experiencing divorce, and other special populations also are included within the realm of community education.

College for Kids features a variety of innovative courses and camps for children of all ages. Class enrollments are limited to provide individual attention and allow for optimal educational experiences.

Information about specific offerings, schedules, and policies is available from the community education offices at Blue River (816) 220-6518, Longview (816) 672-2030, and Maple Woods (816) 437-3011.
Index

A
accounting 12
  accounting assistant certificate 12
  accounting clerk certificate 12
  computerized accounting certificate 12
administrative assistant 13
  administrative support assistant certificate 13
art (A.A. degree) 3
associate in applied science degree 10
associate in arts degree 2, 3
associate in computer science degree 2, 5
associate in engineering degree 2, 7
associate in science degree 2, 8
automotive technology 13
  collision repair degree 13
  collision repair technician certificate 14
Ford/ASSET degree 14
General Motors/ASEP degree 14
mechanical degree 15
merchandising degree 15
automotive technology certificate 15

B
biology
  A.A. degree 3
  A.S. degree 8
bricklayer 38
business administration (A.A. degree) 3

C
certificates 10
chef apprenticeship 34
chemistry
  A.A. degree 3
  A.S. degree 8
child growth and development
  school age care emphasis 17
child growth and development certificate 18
  degree and certificate programs 16
  infant/toddler emphasis 16
  preschool emphasis 16
  special needs emphasis 17
coding specialist certificate 33
collision repair degree 13
  collision repair technician certificate 14
community education 66
computer information systems programming certificate 19
computer science (A.A. degree) 5
  computer science/information systems database management emphasis 19
  degree and certificate programs 18
  multimedia technology emphasis 21
  networking emphasis 21
  specialty area emphasis 22
teaching support emphasis 22
computer support technology I certificate 19
computer support technology II certificate 19
computerized accounting certificate 12
computerized office systems certificate 23
construction carpentry 38
construction cement masons 39
construction ironworking 39
construction laborer 39
continuing education 65
correctional science 23
  correctional science certificate 24
correctional services (human services) 35
criminal justice (A.A. degree) 3

database administrator with ORACLE certificate 20
database management with ACCESS certificate 20
database management with SQL server certificate 20
database management with web-based applications (Java) 20
database management with web-based applications (Visual Track) 21
deaf studies certificate 62
degree graduation requirements 2
degrees 2
dental assisting 25
digital prepress technician certificate 32
drafting and design engineering technology
  A.A.S. degree 26
drug addiction services (correctional science) 23
drug addiction services (human services) 35
drug addiction services certificate 36

E
economics (A.A. degree) 3
electronics engineering 39
electronics technology 40
emergency medical technician–paramedic 26
  certificate 27
English (A.A. degree) 3
entrepreneurial studies certificate 31
environmental health and safety certificate 28

F
fashion design 29
fashion merchandising degree 29
Fire Academy 30
fire science technology
  A.A.S. degree and certificate 30
  certificate 30
food and beverage 34
Ford/ASSET degree 14
foreign language (A.A. degree) 3
funding programs for training 65
G
  general business
    A.A.S. degree  30
    entrepreneurial studies certificate  31
  General Motors/ASEP degree  14
  geography (A.A. degree)  3
  geology (A.A. degree)  3
  glaziers  40
  graduation requirements  2
  graphic design  31
  digital prepress technician certificate  32
  grounds and turf management  32
  grounds maintenance certificate  32

H
  health care continuing education  66
  health information technology
    A.A.S. degree  33
  heating, ventilation and air conditioning  41
  history (A.A. degree)  3
  horticulture certificate  32
  hospitality management  34
  hotel/motel  34
  human sciences (A.A. degree)  3
  human services
    A.A. degree  3
    A.A.S. degrees and certificates  35

I
  industrial electrical  41
  industrial electrical certificate  42
  industrial maintenance A.A.S. degree  42
  industrial technologies
    A.A.S. degrees and certificates  38
  information/word processing  44
  inside wiring  42
  interior design
    A.A.S. degree and certificate  45
  interior design retail sales/manufacturers representative  46
  interior entrepreneurship emphasis  45
  interior products sales representative certificate  46

J
  journalism, A.A. degree  3
  juvenile services (correctional science)  23

L
  land surveying
    A.A.S. degree and certificate  47
  land surveying degree
    certificate  47
  location of occupational programs  11
  LPN-ADN Bridge Program  56

M
  management degree  47
  computer science/information systems  48
  construction  48
  environmental health and safety  48
  marketing and retailing  49
  travel and tourism  49
  manufacturing technology  50
    A.A.S. degree and certificate  50
    certificate  50
  mass communications (A.A. degree)  3
  mathematics (A.A. degree)  3
  mechanical (automotive technology) degree  15
  medical transcription  51
  mental health services
    (correctional science degree)  24
  mental health services (human services)  36
  mental health technician certificate  36
  merchandising (automotive) degree  15
  millwright  43
  millwright certificate  43
  music (A.A. degree)  3
  networking certificate  22
  nursing
    LPN-ADN Bridge Program  56
    practical nursing certificate  55
    professional nursing  55
  occupational certificate and degree programs  10
  occupational education  51
  occupational therapy assistant  52
  office management  52
    certificate  53
  paralegal technology  53
  philosophy (A.A. degree)  3
  physical education  3
  physical therapist assistant  54
  physics (A.A. Degree)  3
  Police Academy  54
  police science  54
    certificate  55
  practical nursing certificate  55
  predentistry (A.A. degree)  3
  prelaw (A.A. degree)  3
  premedicine (A.A. degree)  3
  professional nursing  55
  psychology (A.A. Degree)  3

Q
  quality assurance technology  57

R
  radiologic technology  58
  railroad operations technology  59
  respiratory care  59

S
  sign language interpreting  61
    deaf studies certificate  62
  social work (A.A. degree)  3
  sociology (A.A. degree)  3
  speech and theater arts (A.A. degree)  3
stationary engineer 43
stationary engineer certificate 44
supervision certificate 31
supply chain logistics certificate 31
surgical technology certificate 62
surveying, land 47

T
telecommunications technology 62
transfer degree programs 2
travel and tourism 63
advanced certificate 64
basic certificate 63

V
veterinary technology 64

W
workers in developmental disabilities certificate 37

Y
youth development worker 37
youth work certificate 37
## Course Descriptions

<table>
<thead>
<tr>
<th>Course Numbering</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agribusiness Grounds and Turf Management</td>
<td>2</td>
</tr>
<tr>
<td>Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Art</td>
<td>3</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>7</td>
</tr>
<tr>
<td>Basic Skills</td>
<td>8</td>
</tr>
<tr>
<td>Biology</td>
<td>9</td>
</tr>
<tr>
<td>Business Administration</td>
<td>10</td>
</tr>
<tr>
<td>Chemistry</td>
<td>13</td>
</tr>
<tr>
<td>Child Growth and Development</td>
<td>14</td>
</tr>
<tr>
<td>Computer Science Information Systems</td>
<td>16</td>
</tr>
<tr>
<td>Computer Software</td>
<td>23</td>
</tr>
<tr>
<td>Construction Management</td>
<td>23</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>24</td>
</tr>
<tr>
<td>Dance</td>
<td>26</td>
</tr>
<tr>
<td>Dental Assisting</td>
<td>27</td>
</tr>
<tr>
<td>Drafting</td>
<td>28</td>
</tr>
<tr>
<td>Economics</td>
<td>29</td>
</tr>
<tr>
<td>Education</td>
<td>30</td>
</tr>
<tr>
<td>Electronics</td>
<td>31</td>
</tr>
<tr>
<td>Emergency Medical Technician–Paramedic</td>
<td>32</td>
</tr>
<tr>
<td>Engineering</td>
<td>33</td>
</tr>
<tr>
<td>English as a Second Language</td>
<td>34</td>
</tr>
<tr>
<td>English Language and Literature</td>
<td>36</td>
</tr>
<tr>
<td>Environmental Health and Safety</td>
<td>38</td>
</tr>
<tr>
<td>Fashion Design and Merchandising</td>
<td>40</td>
</tr>
<tr>
<td>Fire Science Technology</td>
<td>40</td>
</tr>
<tr>
<td>Foreign Language and Literature</td>
<td>41</td>
</tr>
<tr>
<td>Geography</td>
<td>42</td>
</tr>
<tr>
<td>Geology</td>
<td>43</td>
</tr>
<tr>
<td>Guided Studies</td>
<td>44</td>
</tr>
<tr>
<td>Health Information Technology</td>
<td>44</td>
</tr>
<tr>
<td>Heating, Ventilation, and Air Conditioning</td>
<td>46</td>
</tr>
<tr>
<td>History</td>
<td>47</td>
</tr>
<tr>
<td>Hospitality Management</td>
<td>48</td>
</tr>
<tr>
<td>Human Sciences</td>
<td>50</td>
</tr>
<tr>
<td>Human Services</td>
<td>51</td>
</tr>
<tr>
<td>Humanities</td>
<td>53</td>
</tr>
<tr>
<td>Industrial Technology</td>
<td>55</td>
</tr>
<tr>
<td>Interior Design</td>
<td>56</td>
</tr>
<tr>
<td>Land Surveying</td>
<td>58</td>
</tr>
<tr>
<td>Manufacturing Technology</td>
<td>59</td>
</tr>
<tr>
<td>Mass Communications</td>
<td>61</td>
</tr>
<tr>
<td>Mathematics</td>
<td>62</td>
</tr>
<tr>
<td>Medical Transcription</td>
<td>64</td>
</tr>
<tr>
<td>Music</td>
<td>64</td>
</tr>
<tr>
<td>Occupational Therapy Assistant</td>
<td>66</td>
</tr>
<tr>
<td>Office Systems</td>
<td>68</td>
</tr>
<tr>
<td>Paralegal</td>
<td>69</td>
</tr>
<tr>
<td>Philosophy</td>
<td>70</td>
</tr>
<tr>
<td>Physical Education</td>
<td>71</td>
</tr>
<tr>
<td>Physical Science</td>
<td>74</td>
</tr>
<tr>
<td>Physical Therapist Assistant</td>
<td>74</td>
</tr>
<tr>
<td>Physics</td>
<td>75</td>
</tr>
<tr>
<td>Political Science</td>
<td>76</td>
</tr>
<tr>
<td>Practical Nursing</td>
<td>76</td>
</tr>
<tr>
<td>Professional Nursing</td>
<td>78</td>
</tr>
<tr>
<td>Psychology</td>
<td>79</td>
</tr>
<tr>
<td>Quality Assurance Technology</td>
<td>80</td>
</tr>
<tr>
<td>Radiologic Technology</td>
<td>81</td>
</tr>
<tr>
<td>Railroad Operations</td>
<td>82</td>
</tr>
<tr>
<td>Reading</td>
<td>84</td>
</tr>
<tr>
<td>Respiratory Care</td>
<td>86</td>
</tr>
<tr>
<td>Sign Language Interpreting</td>
<td>88</td>
</tr>
<tr>
<td>Social Science</td>
<td>90</td>
</tr>
<tr>
<td>Sociology</td>
<td>90</td>
</tr>
<tr>
<td>Speech and Drama</td>
<td>91</td>
</tr>
<tr>
<td>Surgical Technology</td>
<td>93</td>
</tr>
<tr>
<td>Travel and Tourism</td>
<td>93</td>
</tr>
<tr>
<td>Veterinary Technology</td>
<td>94</td>
</tr>
</tbody>
</table>
This section describes each of the for-credit courses offered by the Metropolitan Community Colleges. Each entry includes the course number and title, the number of credit hours earned by a student who successfully completes it and the number of hours the class meets each week as well as the number of laboratory, studio or clinical scheduled each week. There is also a brief description of what’s covered in the course.

**NOTE:** Not all courses are offered at every location or every semester. Students should see their campus advisors or counselors to determine when the classes they want or need are available.

**Course Numbering**
A course’s number indicates something about its purpose and level of difficulty. At MCC, the following course numbering system is used.

1-99 These courses assist students in mastering the information and skills needed for being successful in college. Credits from these courses do not meet any degree or certificate requirements.

100-199 These are general courses ordinarily offered as first-year or freshman classes by most colleges and universities.

200-299 These are courses ordinarily offered as second-year or sophomore classes by most colleges and universities.

---

**AGRIBUSINESS GROUNDS AND TURF MANAGEMENT**

*Offered at Longview*

**AGBS 100 INTRODUCTION TO URBAN AGRIBUSINESS**
3 credits. 3 hours. (Lecture 3 hours.)
Survey of arboricultural, floricultural, and ornamental horticulture occupations in the greens industry.

**AGBS 106 LANDSCAPE DESIGN AND MAINTENANCE**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Principles of landscape design and required maintenance procedures. Introduction of computer aided design software program.

**AGBS 107 DECIDUOUS TREES AND SHRUBS**
3 credits. 3 hours. (Lecture 3 hours.)
A practical study of woody plants, shade trees, ornamental and flowering trees, and deciduous and flowering shrubs indigenous to the Midwest designed for the practitioner in agribusiness. Course provides an in-depth study of environmental adaptability, cultural practices, diseases, pests, and seasonal effects in the Midwest.

**AGBS 108 EVERGREENS AND HERBACEOUS PLANTS**
3 credits. 3 hours. (Lecture 3 hours.)
A practical study of coniferous evergreens, broadleaf evergreens, reliable low-maintenance perennials, and bedding annuals indigenous to the Midwest. Designed for the practitioner in agribusiness. Discussion of diseases, pests, and seasonal effects in the Midwest.

**AGBS 109 PEST MANAGEMENT/TURF AND ORNAMENTAL**
3 credits. 3 hours. (Lecture 3 hours.)
Environmental, safety, and regulatory considerations of turf and ornamental pest control.

**AGBS 115 SOIL FERTILITY AND FERTILIZERS**
3 credits. 3 hours. (Lecture 3 hours.)
Types of fertilizers for soil and crops. Fertilizers: their components, their formulation, and their application. Investigating aspects of the nature and properties of soils.

**AGBS 135 TURFGRASS MANAGEMENT I**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
An introduction to the basics of turfgrass management. Emphasis on plant growth, identification, and characteristics of the major cold and warm season turf grasses such as blue grasses, ryegrasses, bentgrass, fescues, bermuda grass, and zoysia grass. Establishment procedures and mowing practices will be covered.

**AGBS 140 TURFGRASS MANAGEMENT II**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
More specific information provided on turfgrass management. Topics such as green construction, topdressing, sprayer calibration, management programs (i.e., setting up a lawn care program), and the influence environment has on turfgrass growth.

**AGBS 145 IRRIGATION AND INSTALLATION**
3 credits. 3 hours. (Lecture 3 hours.)
Study design, operations, and maintenance of modern golf courses and landscape facilities, including water requirements, supply, and distribution.

**AGBS 153 SPECIAL TOPICS IN HORTICULTURE III**
3 credits. 3 hours. (Lecture 3 hours.)
This course will cover current topics relevant to horticultural practices in the areas of ornamental horticulture, arboriculture, and turfgrass science.

**AGBS 200 OCCUPATIONAL INTERNSHIP**
3 credits. 1 hours. (Field Studies 15 hours.)
On-the-job training in agribusiness.
AGBS 206 ADVANCED LANDSCAPE DESIGN AND MAINTENANCE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: AGBS 106.
Planning and landscape design. Installation and maintenance of various plants. The commercial process of bidding and contracting. Advanced utilization of computer aided design software program.

ANTH 100 GENERAL ANTHROPOLOGY
3 credits. 3 hours. (Lecture 3 hours.)

ART

Longview Maple Woods Penn Valley
D. Kim Lindaberry Jennie Frederick Mary Beth Moley
James Smith Robert Morris

ART 100 ART FUNDAMENTALS I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Introduction to the principles of art in three-dimensional design. Exploratory use of various materials and methods of expression in studio applications.

ART 101 ART FUNDAMENTALS II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Use of the plastic elements of art and principles of design in studio application. Emphases of study of art styles, techniques and media.

ART 102 COMPUTERS IN DESIGN I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
An introduction to the computer for the creation of artwork applicable to the advertising and graphic design industry.

ART 108 SURVEY OF ART
3 credits. 3 hours. (Lecture 3 hours.)
A brief history of painting, architecture, and sculpture from prehistoric times through the present day.

ART 110 BASIC DRAWING I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Development of fundamental drawing skills and techniques using various media. Observation and compositional aspects of drawing.

ART 111 BASIC DRAWING II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 110.
Drawing skills in various techniques while developing various styles of expression through a variety of media and subject matter.

ART 112 BASIC DRAWING III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 111.
Individual projects to help students strengthen their styles and techniques. Introduction of new media for exploration. Increased observation and compositional aspects of drawing.

ART 113 BASIC DRAWING IV
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 112.
Exploration of a variety of subject matter for personally expressive and compositional aspects of drawing. Individual projects.

ART 115 ORIENTATION TO GRAPHIC COMMUNICATIONS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Study of the graphic communications industry and production methods from design through bindery. Emphasis on current trends for the professional preparation for careers in graphic communications.

ART 130 FASHION ILLUSTRATION I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Fundamentals of fashion illustration with emphasis on basic drawing techniques, fabric, advertising concepts, and media use in the field.

ART 131 FASHION ILLUSTRATION II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 130.
Principles of fashion drawing with emphasis on media and reproduction techniques.

ART 139 PHOTOGRAPHY I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Use of cameras and basic processes and principles of black and white photography. Introduction to the use of photographic equipment, dark room procedures, and materials. Students introduced to historical and contemporary developments in photography. (Students furnish their own 35mm cameras.)

ART 141 METAL/SILVERSMITHING
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisites: Art 100, Art fundamentals or instructor approval.
This course is a basic introduction to the terms, tools, and techniques involved in creating jewelry and other wearables as they relate to the human form. Fabrication, construction, and casting will be explored. This course will introduce the student to non-ferrous metals, tool usage, and application in metalworking. Students will learn about the properties of various metals, tool usage, and techniques/processes and apply this knowledge to the construction/fabrication of wearable and sculptural forms relating to the body. This includes
ART 166 CALLIGRAPHY
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Execution of different styles. Use of tools and inks.
Creative designing of type. Matting and framing of finished work.

ART 170 CERAMICS I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Students will be introduced to fundamental principles, styles, and forms of ceramics. Primarily working with hand-building techniques, students will learn the importance of texture, form, and unity of design. Students will also be introduced to rudimentary pottery wheel techniques.

ART 171 CERAMICS II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 170.
Advanced synthesis of form and development of skills and techniques in including decoration and glazing. Studio experience in pottery wheel techniques and glazing concentration.

ART 172 CERAMICS III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 171.
Advanced and individual projects exploring the problems, methods, and techniques of production ceramic ware. Emphasis on skill-building, research in slip casting processes and glazing techniques. Individual skill-building on wheel-thrown and/or hand-building procedures.

ART 173 CERAMICS IV
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 172.
Advanced and individual projects under the direction of the instructor. Emphasis on skill-building, research in glazing techniques and knowledge of kiln firing. Individual skill-building in wheel-thrown and/or slip casting procedures.

ART 200 DESIGN
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Exploration of two- and three-dimensional design with emphasis on solving various design problems. Exploration of various media, color patterns, structure, and shape relationships.

ART 202 COMPUTERS IN DESIGN II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 201 or approval of instructor.
Students will use a combination of advanced graphic software to solve illustration/graphic design problems. Students will further develop skills and techniques utilizing the computer as an integrated environment for artist. Advanced layered drawing, layout, specialized applications, and resources will be covered.

ART 212 LIFE DRAWING I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 110 or equivalent.
In this course, students will explore the human form using live models. Assignments will cover a variety of drawing styles and media.

ART 213 LIFE DRAWING II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 212.
Further study of the figure with emphasis on proportion and action using a knowledge of basic anatomical structure. Development of skills in various media.
ART 214 LIFE DRAWING III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 213.
Advanced study of drawing the figure from models.
Introduction to new media and the study of various styles for the improvement of the student’s own style.
More emphasis on portraiture.

ART 215 WATERCOLOR PAINTING
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 110 or equivalent.
Experimentation in watercolor medium techniques and brushwork. Projects will stress composition, theme development, and technique.

ART 216 LIFE DRAWING AND PORTRAITURE IV
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 214.
Projects using selected media. Introduction of color and further study of relationship of subject matter, media, and style.

ART 220 PAINTING I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 110 or equivalent.
This course will introduce basic principles of design and pictorial composition. Students will execute a series of paintings on various themes.

ART 221 PAINTING II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 220.
Continued study of painting styles with emphasis on developing visual perception and compositional aspects. Exploration of various media to increase proficiency in skills and techniques.

ART 222 PAINTING III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 221.
Individual projects to meet the student’s needs in dealing with composition and color problems and to increase proficiency in techniques of various media.

ART 223 PAINTING IV
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 222.
Advanced study to develop skills and to handle one or more media. Special projects to develop awareness of creative responsibility and expression. Exploration of a variety of styles and subjects.

ART 230 SCULPTURE I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Introduction to the principles and styles of three-dimensional forms. Exploration of natural, abstract, and synthetic sculptural forms through the use of traditional materials such as clay, plaster, wood, fiber, plastic, and metal. Students will be introduced to the conceptual sculptural methods of addition, reduction, and substitution.

ART 231 SCULPTURE II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 230.
Advanced exploration of sculptural methods and techniques. Emphasis on exploring sculpture materials, forms and imagery as a means of self-expression and communication in the three-dimensional field.

ART 232 SCULPTURE III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 231.
Advanced exploration of sculptural processes and forms through the study of contemporary and traditional concepts, media, and techniques.

ART 233 SCULPTURE IV
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 232.
Development of aesthetic judgment and creative skills through individual selection of creative projects using student’s choice of media.

ART 239 PHOTOGRAPHY II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 139.
Development of advanced photographic techniques in black and white photography. Optional introduction into color processes. Increased emphasis on formal issues of image making in relation to content.

ART 242 PHOTOGRAPHY III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 239.
Individual student projects developing visual communication of imagery. Further studies in black and white photographic processes and techniques. Color photo option.
ART 243 PHOTOGRAPHY IV
3 credits. 6 hours. (Laboratory 6 hours.)
Prerequisite: ART 242.
Use of student-generated projects to develop abilities of individual students. Professional competence in use of photographic equipment and materials.

ART 244 DIGITAL PHOTOGRAPHY
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 139.
Exploration of photographic techniques and themes using the computer, traditional camera, digital camera, and other input hardware such as scanners. Photoshop will be the primary software used.

ART 245 WEB DESIGN
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 102 or equivalent, and ART 244 or permission of Instructor.
Concept, development, design and production, registration and launching of web sites. Visual design, color, typography, digital images and illustrations will be stressed. A variety of software packages will be used.

ART 250 PRINTMAKING I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Introduction to a variety of traditional and contemporary printmaking processes, including on- and off-the-press techniques. Historical styles of printmaking and application to current trends. Exploration of woods, linoleum, and silk-screen techniques.

ART 254 SILK SCREEN PRINTING I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Screen printing techniques ranging from the use of a simple paper stencil to photographic processes.

ART 255 SILK SCREEN PRINTING II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 254.
Advanced problems in lacquer and photofilm with emphasis on two-color printing.

ART 256 SILK SCREEN PRINTING III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 255.
Application of advanced problem solving techniques to commercial printing methods projects.

ART 260 GRAPHIC DESIGN II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 160, ART 102.
Advanced problems in graphic design, which may include newspaper, magazine package, and trademark designs.

ART 261 GRAPHIC DESIGN III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 260, 102, and 202.
Advanced problems in advertising and editorial layout. Theory and design for effective composition of verbal and visual communication designed for publication.

ART 263 ART PORTFOLIO
3 credits. 6 hours. (Laboratory 6 hours.)
Prerequisite: Approval of the instructor.
Selection, revamping, and mounting of student work for the professional portfolio.

ART 264 ART PORTFOLIO-GRAphic DESIGN
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 160, 260, 261 and the student should be in the last semester of the graphic design program.
Selection and presentation of the professional graphic design portfolio along with interviewing techniques and employment searches.

ART 270 ILLUSTRATION
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 100, 110, 200, or approval of the instructor.
Illustration techniques involving research and visual problem solving utilizing a variety of mediums.

ART 280 SPECIAL STUDIES
1-3 credits. 2-6 hours. (Laboratory 2-6 hours.)
Prerequisite: Approval of the instructor.
Individual projects involving media and techniques chosen by the student with the advice of the instructor.

ART 281 INTRODUCTION TO PREPRESS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: ART 115 and ART 102.
Introduction to the digital prepress process that follows a digital file from creation through output and contract proof. Emphasis on using proper techniques and workflows to ensure successful file output and printing.

ART 282 IMAGE INPUT
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ART 202 and ART 281. Prerequisites may be waived with approval of the program coordinator.
Capturing images through scanning. Focus on color theory, image quality, and color calibration to achieve predictable, high-quality results.

ART 283 ADVANCED PREPRESS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ART 115, ART 202, ART 281 and ART 282 or approval of instructor.

ART 284 PREPRESS INTERNSHIP
3 credits. 14 hours. (Field Studies 14 hours.)
Prerequisite: ART 282 and ART 283. Prerequisites may be waived with approval of the program coordinator.
Cooperative work experience in digital prepress.
Automotive Technology

Offered at Longview
Paul Dammainga  Gary McDaniel  Edward Schauffler
William Fairbanks  Rory Perrodin

AUTO 100 AUTOMOTIVE INTERNSHIP I
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: One semester of automotive course work and approval of the automotive coordinator.
Cooperative on-the-job training in the automotive industry under college supervision.

AUTO 101 AUTOMOTIVE INTERNSHIP II
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: AUTO 100 and approval of the automotive coordinator.
Cooperative on-the-job training.

AUTO 105 COOPERATIVE WORK EXPERIENCE I
3 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Approval of the automotive coordinator.
Cooperative on-the-job training.

AUTO 106 COOPERATIVE WORK EXPERIENCE II
3 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Approval of the automotive coordinator.
Cooperative on-the-job training.

AUTO 107 COOPERATIVE WORK EXPERIENCE III
3 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Approval of the automotive coordinator.
Cooperative on-the-job training.

AUTO 108 COOPERATIVE EXPERIENCE IV
3 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Approval of the automotive coordinator.
Cooperative on-the-job training.

AUTO 120 MIG AND STRUCTURAL WELDING
3 credits. 5 hours. (Lecture 2 hours. Laboratory 3 hours.)
Prerequisite: Accepted into the articulation program for Auto Collision Repair.
Welding of metal in modern automobiles including oxyacetylene, and GMAW (MIG).

AUTO 125 STRUCTURAL ANALYSIS AND DAMAGE REPAIR
6 credits. 12 hours. (Lecture 3 hours. Laboratory 9 hours.)
Prerequisite: Accepted into the articulation program for Auto Collision Repair.
The analysis, measurement, and repair of frames and unibody structures of automobiles and light trucks.

AUTO 130 NONSTRUCTURAL ANALYSIS AND DAMAGE REPAIR
6 credits. 12.5 hours. (Lecture 3.5 hours. Laboratory 9 hours.)
Prerequisite: Accepted into the articulation program for Auto Collision Repair.
The analysis of the condition and the repair or replacement of nonstructural components of automobiles and light trucks.

AUTO 135 PLASTICS AND ADHESIVES
3 credits. 5 hours. (Lecture 2 hours. Laboratory 3 hours.)
Prerequisite: Accepted into the articulation program for Auto Collision Repair.
Analysis and repair of panels and structures using plastic fillers, fiberglass, structural adhesives, and bonding agents.

AUTO 140 AUTOMOTIVE PAINTING
4 credits. 10 hours. (Lecture 1 hour. Laboratory 9 hours.)
Prerequisite: Accepted into the articulation program for Auto Collision Repair.
Analysis, preparation, and performance of paint applications on modern automobiles and light trucks.

AUTO 141 AUTOMOTIVE REFINISHING
4 credits. 10 hours. (Lecture 1 hour. Lab 9 hours.)
Prerequisite: Accepted into the articulation program for Auto Collision Repair.
Analysis, preparation, and performance of paint repair and refinishing applications on modern automobiles and light trucks.

AUTO 150 AUTOMOTIVE POWER PLANTS
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
History, theory of operation, diagnosis, and repair of automotive gasoline and diesel engines. Covers the basic and special tools required to properly overhaul or rebuild. Includes head and valve service, piston and ring service, block and bearing service. Special emphasis on measuring and diagnosis.

AUTO 160 DIAGNOSIS AND REPAIR
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: AUTO 150, 166, and 176.
A lecture laboratory approach to the use of diagnostic equipment pertaining to driveability with an emphasis on ignition, fuel, starting and charging systems, and efficient engine operation.

AUTO 166 AUTOMOTIVE ELECTRICAL SYSTEMS
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
An in-depth consideration of modern electrical systems and use of meters in troubleshooting and maintenance of batteries, starters, voltage regulators, alternators, relays, solenoids, lighting, charging circuits, ignition system, and accessories.

AUTO 170 AUTOMOTIVE BRAKING SYSTEMS
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
History, theory of operation, and current service procedures on drum and disc brakes systems. Includes vacuum and hydraulic power assist and anti-lock brake systems.
AUTO 172 AUTOMOTIVE SUSPENSION AND STEERING
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
History, theory and service of front and rear suspension and steering systems. Includes control arm, strut types and air ride, steering gear boxes, rack and pinion steering, power assist, and spring installation. Extensive coverage on four-wheel alignment, tire and wheel balance and vibration analysis. Also covers automatic ride control.

AUTO 174 AUTOMOTIVE POWER TRAINS
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Theory of operation and service procedures for drivelines, constant velocity joints, manual transmissions and transaxles, differentials, and clutches. Driveline phasing and vibration analysis.

AUTO 176 EMISSION & FUEL CONTROL SYSTEM
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: AUTO 150 and 166.
History, theory of operation, diagnosis, and repair of emission control systems. Includes electronically controlled emission systems. History, theory of operation, diagnosis and repair of gasoline fuel system including basic carburetion, throttle body injection and port fuel injection.

AUTO 260 ADVANCED DIAGNOSIS
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: AUTO 150, 160, 166, 170, 172, 174, 176, 264, 277 and/or AUTO 278 and be a member of the ASEP or ASSET program.
An advanced course allowing students to specialize in one or two of eight specialty areas of automotive technology. This course utilizes individualized instruction methods. Special emphasis will be placed on specialty electronics areas and driveability.

AUTO 264 AIR CONDITIONING
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Theory of operation, diagnosis, and repair of various types of automotive air conditioners, including refrigerant reclaiming equipment.

AUTO 272 AUTOMATIC TRANSMISSIONS
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Emphasis on diagnosis, testing, theory of operation, disassembly, and reassembly of current model automatic transmissions.

AUTO 277 SPECIALIZED ELECTRONICS TRAINING
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisites: AUTO 166 and admission to GM ASEP.
Principles of solid-state electronics with applications to such devices as are used in General Motors products.

AUTO 278 ELECTRONIC ENGINE CONTROL
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: AUTO 166 and admission to Ford ASSET Program.
Solid-state electronic principles and applications on devices as utilized on late model Ford Motor Company’s computer-equipped vehicles. Includes Ford EEC certification.

AUTO 279 AUTOMOTIVE ELECTRONIC SYSTEMS
6 credits. 8 hours. (Lecture 4 hours. Laboratory 4 hours.)
Prerequisite: AUTO 166.
Solid-state electronic principles and applications on devices as utilized on late model computer-equipped automobiles.

BASIC SKILLS
Offered at Blue River
Mary Simpson

NOTE: Credit in these courses is not applicable to any degree or certificate.

BASK 13B SPELLING
2-3 credits. 2-3 hours. (Lecture 2-3 hours.)
The student will identify auditory and visual-centered spelling problems and become proficient in spelling skills.

BASK 19 PUNCTUATION
1 credit. 2 hours. (Laboratory 2 hours.)
Rules and use of punctuation. Self-paced instruction.

BASK 20 JUST GRAMMAR
1 credit. 2 hours. (Laboratory 2 hours.)
Topics in this course include parts of speech and sentences; clauses, phrases, agreement and correct usage. Self-study.

BASK 21 JUST SENTENCES
1 credit. 2 hours. (Laboratory 2 hours.)
This course if designed to include sentence fundamentals, verb recognition, sentence elements, sentence types, sentence errors and corrections. Self-study.

BASK 22 JUST SPELLING
1 credit. 1 hour. (Lecture 1 hour.)
This course deals with correcting common spelling errors by study of consonant and vowel sounds and spelling rules. A/V materials, workbooks, and tutorial assistance are available in this self-study course.

BASK 24 COLLEGE ENTRANCE SKILLS
3 credits. 3 hours. (Lecture 3 hours.)
Interpretation and solution of word problems in basic mathematics
BASK 26 SOLVING WORD PROBLEMS
1 credit. 2 hours. (Laboratory 2 hours.)
Interpretation and solution of word problems in basic mathematics.

BASK 37 BASIC ALGEBRAIC CONCEPTS
2 credits. 2 hours. (Lecture 2 hours.)
Algebraic expressions. Use of formulas to solve linear equations. Designed to prepare students for the GED (General Education Development) Test.

BASK 38 BASIC GEOMETRIC CONCEPTS
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: BASK 37.
Measurement and relationship of lines, angles, plane figures, and solid figures.

BASK 39 SENTENCES TO PARAGRAPHS
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Moving from sentence to paragraph writing. Topic sentences, coherence, focus, and organization.

BASK 40 MATHEMATIC SKILLS/SPECIAL TOPICS
1 credit. 1 hour. (Lecture 1 hour.)
Various topics in basic arithmetic based on student needs. Will include fractions, decimals, ratio and proportion, critical thinking and geometric concepts.

BIOLOGY

BIOL 100 INTRODUCTION TO CELL BIOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 20 with a minimum grade of C or score on the placement test above the cutoff point for MATH 20.
Fundamental biological concepts preparatory to the study of physiology and microbiology. Subcellular components of living cells. Concepts of molecular biology with emphasis on compounds and reactions structurally and functionally important in the living cell.

BIOL 101 GENERAL BIOLOGY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Biological principles applied to selected groups of plants and animals.

BIOL 104 GENERAL BOTANY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Biological principles and their application to the plant kingdom. Microscopic and gross examination of anatomy of plants. Life cycles and ecological relationships.

BIOL 106 GENERAL ZOOLOGY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Systematic survey of the major animal phyla. Microscopic and gross examination of representative animal types. Anatomy and physiology, natural history, life cycles, ecological relationships, and genetics.

BIOL 108 INTRODUCTORY ANATOMY AND PHYSIOLOGY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Gross and microanatomy and physiology of each organ system. Correlation of the organ systems in the functioning of the human body.

BIOL 109 ANATOMY AND PHYSIOLOGY
6 credits. 8 hours. (Lecture 4 hours. Laboratory 4 hours.)
Prerequisite: BIOL 100 or CHEM 105 with a minimum grade of C.
Gross anatomy, histology, and physiology of each system of the human body. Homeostatic mechanisms and correlation of structure and function.

BIOL 110 HUMAN ANATOMY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Gross and microscopic structure of each system of the human body. Integration of the systems within the entire body.

BIOLOGY
BIOL 117 LIFE AND THE ENVIRONMENT
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
General principles of biology and environmental science. Problems in human ecology such as population growth, resource utilization, and pollution. Field trips.

BIOL 118 INTRODUCTION TO BIOLOGY
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)

BIOL 121 DIRECTED PROJECT
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: Approval of instructor.
Supervised introductory study of a topic in biology.

BIOL 132 HUMAN NUTRITION
3 credits. 3 hours. (Lecture 3 hours.)

BIOL 137 INTRODUCTION TO PATHOLOGY
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: BIOL 108.
Causes, signs, symptoms, and pathological changes in structure and function of the human body in common diseases. Selected diagnostic and treatment procedures. Some general public health aspects.

BIOL 150 MEDICAL TERMINOLOGY
2 credits. 2 hours. (Lecture 2 hours.)
Basic vocabulary of medical terms stressing prefixes, suffixes, and roots, with application to each system of the body.

BIOL 202 ECOLOGY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: BIOL 101 or 104, or BIOL 106 with a minimum grade of C.
Forest, aquatic, and grassland ecological systems. Collection and classification of various specimens from each of the three habitats and discussion of their ecological relationships.

BIOL 204 GENETICS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BIOL 101 or 104, or BIOL 106 with a minimum grade of C.
Principles of inheritance in plants and animals and the mechanisms of gene action.

BIOL 208 MICROBIOLOGY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)

Prerequisite: BIOL 100 or CHEM 105 and 5 hours of biological science at the college level, with a minimum grade of C. Growth, physiology, and genetics of microorganisms. Fundamental concepts of immunology, virology, bacteriology, mycology, and parasitology. Aspects of host-parasite relationships and control of microorganisms by physical and chemical agents.

BIOL 210 HUMAN PHYSIOLOGY
5 credits. 7 hours. (Lecture 4 hours. Laboratory 3 hours.)
Prerequisite: BIOL 110 and either BIOL 100 or CHEM 105 with a minimum grade of C.
Functions of the human body as revealed by cells, tissues, organs, and systems in terms of underlying physicochemical processes.

BIOL 211 FIELD BIOLOGY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: BIOL 101, 104 or 106 with a minimum grade of C and consent of instructor.
Flora and fauna of selected biomes including field observation, identification, classification, and ecological relationships. Students must be prepared to camp out while in the field.

BIOL 220 SPECIAL TOPICS IN BIOLOGY
1-5 credits. 2-10 hours. (Laboratory 2-10 hours.)
Prerequisite: Two courses in biological science and approval of the instructor.
Study of a biological topic of special interest under the supervision of a faculty member.

BUSINESS ADMINISTRATION

Penn Valley
Diane Enkleman
Randy Kidd

Longview
James Beisel
Theodore Dinges
Stephanie Masquelier
James Weaver

Maple Woods
Lynda Clark
Bruce Culley
Linda Spotts
Michael

Blue River
Robert Holman
Richard Kimberly

BSAD 100 INTRODUCTION TO ACCOUNTING
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to the steps of the accounting cycle. Practical background in accounting for professional offices and/or merchandising businesses.

BSAD 101 ACCOUNTING PRINCIPLES I
3 credits. 3 hours. (Lecture 3 hours.)
Practice and application of the accounting principles involved in the opening and closing of a complete set of books. Accounting procedures for inventories, depreciation, and payroll.
**BSAD 102 ACCOUNTING PRINCIPLES II**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 101 or two years of high school accounting.
Practice and application of the accounting principles involved in partnerships and corporations. Departmentalization, budgeting, and statement analysis.

**BSAD 104 PRINCIPLES OF ADVERTISING**
3 credits. 3 hours. (Lecture 3 hours.)

**BSAD 105 PERSONNEL MANAGEMENT**
3 credits. 3 hours. (Lecture 3 hours.)
Survey of personnel administration activities and their impact on the organization. Human resources planning and management, equal employment opportunity and recruiting, training and development, performance appraisal and compensation, and labor relations.

**BSAD 106 PRINCIPLES OF SALESMANSHIP**
3 credits. 3 hours. (Lecture 3 hours.)
Principles of effective selling. Planning, prospecting, approaching, demonstrating, and dramatizing the sales. Field-tested techniques for handling sales resistance. Closing the sale.

**BSAD 109 PRINCIPLES OF SUPERVISION**
3 credits. 3 hours. (Lecture 3 hours.)
Basic supervisory responsibilities and practices as applied to hiring, training, and directing a work force. Human relations, performance evaluation, grievance handling, and dealing with employee problems.

**BSAD 113 SPECIAL PROBLEMS IN BUSINESS**
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Independent study in business-related areas under the supervision of a faculty member.

**BSAD 120 HUMAN RELATIONS IN BUSINESS**
3 credits. 3 hours. (Lecture 3 hours.)
Course investigates the impact that individuals, groups, and organizational structures have on behavior in the workplace. The Student will develop individual competencies with emphasis in business environments. The acquired competencies can be applied toward improving individual and organizational effectiveness.

**BSAD 127 MANAGEMENT INTERNSHIP I**
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: Approval of the instructor.
On-the-job training in a field directly related to the management program.

**BSAD 128 MANAGEMENT INTERNSHIP II**
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: BSAD 127 and approval of the instructor.
On-the-job training in a field related to the management program.

**BSAD 129 MANAGEMENT INTERNSHIP III**
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: BSAD 128 and approval of the instructor.
On-the-job training in a field directly related to the management program.

**BSAD 130 MANAGEMENT INTERNSHIP IV**
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: BSAD 129 and approval of the instructor.
On-the-job training in a field directly related to the management program.

**BSAD 135 ENTREPRENEURSHIP**
3 credits. 3 hours. (Lecture 3 hours.)
Principles and methods of identifying business opportunities, planning ways to address market needs, gathering resources and managing the process of building businesses. This course will include development of the entrepreneurial attitude that may be utilized in all areas of an individual’s career.

**BSAD 150 BUSINESS ESSENTIALS**
3 credits. 3 hours. (Lecture 3 hours.)
Overview of all phases of business, including ownership, marketing, personnel, finance, managerial controls, and the relationship of business to the social and economic environment in which it operates.

**BSAD 151 PERSONAL FINANCE**
3 credits. 3 hours. (Lecture 3 hours.)
Taxes, insurance, buying a home or automobile, borrowing, saving, social security, and budgeting. The problems of the consumer as a central figure in the American economy.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Lecture Hours</th>
<th>Prerequisite(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAD 152</td>
<td>FASHION MERCHANDISING</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>The fashion industry and its relationship to retail merchandising.</td>
</tr>
<tr>
<td>BSAD 154</td>
<td>MANAGERIAL ACCOUNTING</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>BSAD 101.</td>
<td>Interaction between the fields of accounting and management with emphasis on analysis of accounting records for aiding managerial decision making.</td>
</tr>
<tr>
<td>BSAD 155</td>
<td>ACCOUNTING APPLICATIONS USING SPREADSHEETS</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>BSAD 101.</td>
<td>The emphasis of this course is to teach the solving of accounting problems utilizing spreadsheet programs as a tool.</td>
</tr>
<tr>
<td>BSAD 169</td>
<td>BUSINESS MACHINES</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>Use of business machines to solve typical problems such as trade/cash discounts, markup, markdown, payroll, interest, depreciation, distribution, and proration.</td>
</tr>
<tr>
<td>BSAD 178</td>
<td>BUSINESS COMMUNICATIONS</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>ENGL 30 with a minimum grade of C.</td>
<td>Fundamental principles of written and oral communication. Instruction and practice in preparing and presenting effective letters and reports.</td>
</tr>
<tr>
<td>BSAD 190</td>
<td>OFFICE MANAGEMENT</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>Organization and control of administrative office operations. Leadership and human relations in office administration. Personnel practices and training. Job analysis and work measurement.</td>
</tr>
<tr>
<td>BSAD 201</td>
<td>COST ACCOUNTING</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>BSAD 102.</td>
<td>Basic principles of cost accounting applied to job, process, and standard cost methods. Budget control and analysis of profits.</td>
</tr>
<tr>
<td>BSAD 202</td>
<td>INTERMEDIATE ACCOUNTING I</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>BSAD 102.</td>
<td>The valuation of assets, liabilities, and capital items as they are related to the measurement of revenue or loss.</td>
</tr>
<tr>
<td>BSAD 203</td>
<td>INTERMEDIATE ACCOUNTING II</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>BSAD 102.</td>
<td>Comprehensive study of accounting theory.</td>
</tr>
<tr>
<td>BSAD 204</td>
<td>BUSINESS MANAGEMENT</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>Principles and practices of business management developed around the framework of the functions of planning, organizing, and controlling. Communications, decision making, leadership and management styles, budgeting, productivity, and organizational effectiveness.</td>
</tr>
<tr>
<td>BSAD 205</td>
<td>MARKETING</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>Principles and methods of product development, distribution, promotion, and pricing strategy. Consumer behavior, market research, and market segmentation.</td>
</tr>
<tr>
<td>BSAD 207</td>
<td>LABOR MANAGEMENT RELATIONS</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>Current issues in the industrial and postindustrial society. Contract negotiations, arbitration policies, conflict theories, strategies for conflict resolution, and administering the collective bargaining agreement.</td>
</tr>
<tr>
<td>BSAD 210</td>
<td>LOGISTICS MANAGEMENT</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>Logistics management is an integrated system approach involving a variety of environments within a global marketplace. The course explores the logistic system from inbound movement of material and freight into the organization, through physical distribution of the completed product to the consumer. Hands-on applications, activities and simulations IAW Council of Logistics management guidelines will be emphasized.</td>
</tr>
<tr>
<td>BSAD 211</td>
<td>OPERATIONS MANAGEMENT</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>This course covers the central role and importance of the operations function in both service and product organizations. Strategy, design, scheduling, materials handling, inventory, production, MRP and distribution are covered.</td>
</tr>
<tr>
<td>BSAD 212</td>
<td>TRANSPORTATION OPERATIONS AND MANAGEMENT</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>This course covers the significance of an integrated, well-organized, transportation system to a market-driven economy. The development of the transportation system to the U.S. from both historic and economic perspectives is included.</td>
</tr>
</tbody>
</table>
BSAD 213 WAREHOUSE AND DISTRIBUTION CENTERS
3 credits. 3 hours. (Lecture 3 hours.)
Warehousing and Distribution Centers is an integrated system approach involving a variety of environments within a global marketplace. The course covers the organization and operations of warehouses and distribution center. The major components are Warehousing and Distribution Center paradigms, System Design, Locations, Technology and Financial dimensions.

BSAD 220 BUSINESS LETTERS AND REPORTS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101 or OFSC 101.
Principles of written communications as a foundation for composing effective business letters and reports.

BSAD 235 COLLOQUIA: READINGS IN BUSINESS
1-3 credits, 1-3 hours. (Lecture 1-3 hours.)
Prerequisite: Approval of instructor.
Directed reading in a field chosen by the student with the advice and direction of the instructor.

BSAD 240 ACCOUNTING CAPSTONE COURSE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Should be taken in the last semester of the student's accounting program.
A survey course integrating students' knowledge in financial accounting, managerial/cost accounting, computer usage, business law, general ledger, and communication skills. By using the computer as a tool, students will analyze data and enhance their financial decision-making process. Students will participate in role playing, case studies and group work.

BSAD 252 INDIVIDUAL INCOME TAX
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 101.
Principles of the Internal Revenue Code as applied to individual returns. Forms required from the employer and the individual. Preparation of individual tax form 1040 and accompanying schedules.

BSAD 254 BUSINESS LAW I
3 credits. 3 hours. (Lecture 3 hours.)
Identification and discussion of principles of law related to business transactions. Topics covered include: contracts, agency, employment, negotiable instruments, personal property, and bailments.

BSAD 255 BUSINESS LAW II
3 credits. 3 hours. (Lecture 3 hours.)
Identification and discussion or principles of law related to business transactions. Topics include: sale of goods, partnerships, corporations, real property, security devices, bankruptcy, and estates.

BSAD 256 ACCOUNTING INTERNSHIP
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: Approval of the instructor.
Development of accounting skills through supervised on-the-job experience in the office of a cooperating firm.

BSAD 270 LEGAL ENVIRONMENT OF BUSINESS
3 credits. 3 hours. (Lecture 3 hours.)
Provides a survey of laws that are important to persons as citizens of the United States and as participants in its economic system.

CHEMISTRY

LONGVIEW
Moira Frey
Robert Smith

MAPLE WOODS
James Bard

PENN VALLEY
Douglas Martin

BLUE RIVER
Donald Miller

CHEM 101 SURVEY OF CHEMISTRY
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Survey of the principles of chemistry and the role and significance of chemistry in the modern world.

CHEM 105 INTRODUCTORY CHEMISTRY FOR HEALTH SCIENCES
5 credits. 7 hours. (Lecture 4 hours. Laboratory 3 hours.)
The principles of general, organic and biological chemistry for health science students.

CHEM 107 PREPARATORY GENERAL CHEMISTRY
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Prerequisite: Math 110 (or equivalent score on placement test) or one unit of high school algebra with a minimum grade of C.
Introduction to the elementary principles of chemistry with emphasis on chemical calculations.

CHEM 111 GENERAL COLLEGE CHEMISTRY I
5 credits. 7 hours. (Lecture 4 hours. Laboratory 3 hours.)
Prerequisite: MATH 120 (or equivalent score on placement test) or two units of high school algebra with a minimum grade of C and CHEM 107 or high school chemistry with a minimum grade of C.
Introduction to the understanding of atoms and molecules: their qualitative and quantitative reactions and interactions.

CHEM 112 GENERAL COLLEGE CHEMISTRY II
5 credits. 7 hours. (Lecture 4 hours. Laboratory 3 hours.)
Prerequisite: CHEM 111 with a minimum grade of C.
Chemical equilibrium, kinetics, electrochemistry, thermodynamics, and the reactions of the elements and their compounds explained in terms of bonding and energy relationships.

CHEM 205 ORGANIC CHEMISTRY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: CHEM 105 or CHEM 111, or CHEM 115 with a minimum grade of C.
Basic concepts and the practical applications of organic and biochemistry to the living organism. For health science students.

CHEM 221 ORGANIC CHEMISTRY I
5 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: CHEM 112 with a minimum grade of C.
Nomenclature, reactions, and properties of alkanes, alkenes, alkynes, and alkyl halides. Mechanisms and kinetics. Stereochemistry of organic compounds and its relevance to the understanding of reactions. Introduction to infrared spectroscopy and to the chemical literature.

CHEM 222 ORGANIC CHEMISTRY II
5 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: CHEM 221 with a minimum grade of C.
Nomenclature, reactions, and properties of aromatic compounds, alcohols, ethers, aldehydes, ketones, carboxylic acids, and their derivatives with an introduction to NMR spectroscopy and to biomolecules.

CHILD GROWTH AND DEVELOPMENT
Offered at Penn Valley
Linda Bell Mary Svoboda-Chollet
Cordelia Murphy Licia Watson
Helen Speed

CDCG 113 CHILD GROWTH AND DEVELOPMENT I
3 credits. 3 hours. (Lecture 3 hours.)
Corequisite: CDCG 114.
The student will develop an understanding of the principles of development from birth to age 12.

CDCG 114 CHILD DEVELOPMENT OBSERVATION
1 credit. 2 hours. (Lecture 1 hour. Laboratory 1 hour.)
Corequisite: CDCG 113.
The student will develop an understanding of methods of observing children from birth to age 12.

CDCG 115 CHILD GROWTH & DEVELOPMENT II: INFANT/TODDLER
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 113 and 114.
Students will gain in-depth understanding of the physical, social, emotional, language, and cognitive development of children from birth to 36 months and the importance of caregiver and environment to development.

CDCG 116 CHILD GROWTH AND DEVELOPMENT II: PRESCHOOL
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 113 and 114.
The student will gain in-depth understanding of the physical, social, emotional, language, and cognitive development of preschool children and the importance of the environment on development.

CDCG 117 CHILD GROWTH AND DEVELOPMENT II: SCHOOL-AGE CARE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 113 and 114.
This course is designed to focus on the physical, social, emotional, cognitive and creative development of school-age children, five to twelve years. Emphasis will be placed on the needs and characteristics of the school-age children in out-of-school environments and provides the foundation and theory to school-age care programming.

CDCG 118 FAMILY DEVELOPMENT
3 credits. 3 hours. (Lecture 3 hours.)
This course takes an in-depth look at the strategies, theories, and history supporting family development study.

CDCG 119 CHILD GROWTH AND DEVELOPMENT II: SPECIAL NEEDS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CDCG 113, 114 and 260.
Students will gain in-depth understanding of the physical, social, emotional, language and cognitive development of children from infancy to school age, including those with different types of special needs; as well as explore the importance of the caregiver, the environment and working with families.
CDCG 130 CREATIVE EXPERIENCES FOR YOUNG CHILDREN
3 credits. 3 hours. (Lecture 3 hours.)
The student will be introduced to a variety of creative learning materials suitable for use with children. The student will develop skills on how to use art, math, and science activities that are developmentally appropriate for children.

CDCG 200 MUSIC AND MOVEMENT FOR CHILDREN
3 credits. 3 hours. (Lecture 3 hours.)
This course prepares students to include music and creative movement in early childhood and school age care curriculum. Emphasis will be placed on developing necessary knowledge, vocabulary and skills to create and implement music and movement with children. Students will learn how to provide a variety of listening, singing, instrumental, movement, improvisational, and rhythmic experiences. In addition, strategies will be introduced to plan, develop and evaluate music and creative movement curriculum.

CDCG 201 LANGUAGE DEVELOPMENT
3 credits. 3 hours. (Lecture 3 hours.)
The student will receive in-depth study in the basic use of tools and materials which stimulate imagination, reasoning, concept formation, and communications through language development.

CDCG 216 CHILD HEALTH AND SAFETY
3 credits. 3 hours. (Lecture 3 hours.)
Basic factors that affect child health including feeding and clothing habits, health routines, hygiene, childhood diseases, first aid, and safety.

CDCG 217 LITERATURE FOR CHILDREN
3 credits. 3 hours. (Lecture 3 hours.)

CDCG 220 CHILD CARE MANAGEMENT
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Approval of the instructor.
Survey of child care programs. Planning, developing, and operating a day care center. Licensing, curriculum, and parent involvement.

CDCG 221 ISSUES AND THEORIES IN CHILD GROWTH AND DEVELOPMENT
3 credits. 3 hours. (Lecture 3 hours.)
This course explores current topics having to do with educational approaches, training techniques, cultural traditions and practices, and general ages and stages of children birth through adolescence.

CDCG 230 PROGRAM PLANNING: INFANT/TODDLER
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 115 or approval of instructor and CDCG 249.
Students will gain knowledge and hands-on experience with activities and methods to use while caring for children from birth through 36 months.

CDCG 231 PROGRAM PLANNING: PRESCHOOL
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 116 or approval of instructor and CDCG 249.
The student will gain skills in program planning for the optimum development of preschoolers.

CDCG 232 PROGRAM PLANNING: SCHOOL-AGE CHILDREN
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 117 and 249.
This course will prepare students to design, implement and administer environments and activities that promote developmentally appropriate practice in school-age care programming for children ages 5-12 years old.

CDCG 233 PROGRAM PLANNING: SPECIAL NEEDS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 119, 249, 260.
Students will gain knowledge of how to adapt early childhood curriculum and environments to meet the needs of all children, including those with special needs.

CDCG 234 PROGRAM PLANNING: FAMILY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 118, CDCG 250.
This course offers students an advanced look at strategies having to do with direct service to families.

CDCG 248 FAMILY DEVELOPMENT INTERNSHIP I
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: CDCG 118.
This course gives the students the opportunity for hands on experience, skills and practice in a systems model of working with families. Students also are in preparation for the portfolio and exam necessary for obtaining the Family Worker credential.

CDCG 249 CHILD DEVELOPMENT INTERNSHIP I: INFANT/TODDLER
3 credits. 5 hours. (Lecture 1 hour. Field Studies 4 hours.)
Prerequisite: CDCG 113, 114, and 130.
In-service training and experience in day care centers.

CDCG 250 CHILD DEVELOPMENT INTERNSHIP II: INFANT/TODDLER
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: CDCG 115, 230, 249.
Student will gain experience in child care setting for children birth to 37 months through observation, evaluation of, and participation in programs.

CDCG 251 CHILD DEVELOPMENT INTERNSHIP II: PRESCHOOL
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: CDCG 116, 231, 249.
The student will receive teacher training and experience at preschool sites. The student will gain skills in planning activities for the intellectual, physical, social, emotional, and mental development of preschoolers.

CDCG 252 CHILD DEVELOPMENT INTERNSHIP II: SCHOOL AGE
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: CDCG 117, 232, 249.
Supervised internship and observation in an approved school age care program serving children ages 5 - 12 years. Students will benefit from group seminars to share, solve problems, and clarify issues arising in the internship experience.

CDCG 253 CHILD DEVELOPMENT INTERNSHIP II: SPECIAL NEEDS
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: CDCG 119, 233, 249, 260.
Advanced teacher training and experience in child care centers or homes.

CDCG 254 CHILD DEVELOPMENT INTERNSHIP II: FAMILIES
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: CDCG 118, 234.
This course gives the students the opportunity for hands-on experience in several family support agencies/organizations/activities.

CDCG 260 EDUCATION OF THE EXCEPTIONAL CHILD
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CDCG 113, 114.
Introduction to the education of infants, toddlers, preschoolers and school-agers with special needs and the interaction with their families, in inclusive settings.

CDCG 261 PARENTING
3 credits. 3 hours. (Lecture 3 hours.)
Students will gain in-depth understanding of the principles of parenting and family relationships as applied to working with young children.

CDCG 271 SPECIAL PROBLEMS IN CHILD GROWTH AND DEVELOPMENT
1 credit. 1 hour. (Lecture 1 hour.)
Independent study in child growth and development under the supervision of a faculty member.

CDCG 272 SPECIAL PROBLEMS IN CHILD GROWTH AND DEVELOPMENT
2 credits. 2 hours. (Lecture 2 hours.)
Independent study in child growth and development under the supervision of a faculty member.

CDCG 273 SPECIAL PROBLEMS IN CHILD GROWTH AND DEVELOPMENT
3 credits. 3 hours. (Lecture 3 hours.)
Independent study in child growth and development under the supervision of a faculty member.

---

COMPUTER SCIENCE INFORMATION SYSTEMS

Longview
Cinthia Herbert
Gary Johnson
T. S. Pennington
Gayla Wynn

Maple Woods
Karen Richards
Dennis Jirkovsky
Pamela Matthiesen
Gary May
Dempsey Yeary

Penn Valley
Edward Durant
Margaret Easter
J. Ronald Leake
Michael Sturgeon

Blue River
Melissa Napper
Michael Wiemann

CSIS 101 TECHNOLOGY AND INFORMATION MANAGEMENT
3 credits. 4 hours. (Lecture 2 hours. Lab 2 hours.)
Prerequisite: Keyboarding skills are highly recommended.
Introduces information management technology and its impact on social and political environments and lifelong learning. Students will investigate how computers and other information technology are ethically applied to today's changing society. Lecture, demonstration, and hands-on experience will introduce hardware, operating systems, application software and Internet concepts with emphasis on communications and problem solving.

CSIS 111 MICROCOMPUTER HARDWARE CONCEPTS
3 credits. 4 hours. (Lecture 2 hours. Lab 2 hours.)
Prerequisite: CSIS 101.
This course introduces the student to maintenance, upgrading, setup, and expansion of personal computer hardware. Detailed exploration of microcomputer architecture, functions, and components is included in this course. Students will study and apply methods and procedures for installation, troubleshooting, and modification of computer systems.

CSIS 115 INTRODUCTION TO MICROCOMPUTER APPLICATIONS
3 credits. 4 hours. (Lecture 2 hours. Lab 2 hours.)
Prerequisites: Keyboarding experience and basic computer skills.
Introduction to operation of computer software packages. Hands on application work with software packages for word processing, presentation, spreadsheet, and database software, and communication software.

CSIS 121 INTRODUCTION TO COMPUTER SCIENCE
3 credits. 3 hours. (Lecture 3 hours.)
A first course for computer science and computer information systems majors. Intended to expose students to a systematic view of the field that will integrate theory and practice for each of the levels of abstraction that is used to describe the discipline. Includes an introduction to computer architecture and its integration with operating systems and software.
CSIS 125 VISUAL BASIC PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Recommended: CSIS 101.
Application and use of microcomputers using the Microsoft Visual Basic programming language. Programming and problem solving using typical business applications.

CSIS 128 WEB DEVELOPMENT
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 101 or CSIS 115.
An in-deth introduction to the creation of web pages for an Internet site. Create individual web pages that use all the basic components, then build a web site that follows good design and navigation principles. Interactive and multimedia features will be added to the site. Issues concerning the Internet will be discussed.

CSIS 131 OBJECT-ORIENTED PROGRAMMING I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATH 110 (or equivalent placement test score) and CSIS 121.
An introduction to an object-oriented programming for students with a procedural programming background. Topics include data encapsulation and information hiding, built-in classes and libraries, inheritance, polymorphism, simple graphical user interfaces, user-defined classes, and event-driven programming. The basics of object-oriented design will be covered with the topics of maintainable software, software reuse, class hierarchies, design patterns, and the Universal Modeling Language. An appropriate object-oriented language will be used.

CSIS 140 COBOL PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 101 or suitable work experience.
COBOL language features compatible with most medium to large-scale computers. Structured programming concepts.

CSIS 141 DISCRETE STRUCTURES FOR COMPUTER SCIENCE I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 120 or MATH 150.
Mathematical logic, sets, relations, functions, mathematical induction, Boolean algebra, algebraic structures. The theory inducted will be applied to appropriate areas of computer science.

CSIS 143 RELATIONAL DATABASE DESIGN FOR ORACLE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 115 or similar experience with microcomputer database software.
Data modeling and relational database design concepts will be discussed. Students will define requirements for business entities, their attributes and relationships. Entity-relationship diagrams will be developed for business applications. Diagrams will be mapped into initial database design.

CSIS 144 INTRODUCTION TO SQL WITH ORACLE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 115 or similar experience with microcomputer database software.
In-depth, hands-on experience with ORACLE database management system (DBMS). The student will use SQL to develop skills in retrieving data; inserting, deleting, and updating records; and creating tables, records, and other database objects. Basic relational database design and management concepts will be discussed.

CSIS 145 ORACLE DATABASE PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 144 and CSIS 121, or CSIS 155 or suitable programming background.
In-depth hands-on experience utilizing the programming language of ORACLE relational database management software package. Students will write and manage PL/SQL program units, including error handling and database triggers. Object types and manipulation, and large objects will also be studied.

CSIS 146 CREATING ORACLE APPLICATION FORMS I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 144 and prior completion of or concurrent enrollment in CSIS 145.
Working in a graphical user interface, students will build and test interactive applications. Students will learn how to customize forms with user input items such as check boxes, list items and radio groups. Event-related triggers will be created.

CSIS 147 CREATING ORACLE REPORTS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS and prior completion of or concurrent enrollment in CSIS 145 ORACLE Database Programming.
Using the graphical user interface, students will create a variety of standard and custom reports. Tabular, matrix, mailing label and letter reports are among the types of reports created. Creating customized reports and embedding graphs and charts in reports will be investigated.

CSIS 151 MICROCOMPUTER OPERATING SYSTEMS CONCEPTS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 101 and either CSIS 115 or CSOF 101 + CSOF 102 + CSOF 103.
This course covers the fundamental concepts and terminology of both command line and graphical user interface operating systems for microcomputers. The student will master management and optimization of files, disks, and memory and be able to install device drivers. The student will be introduced to batch programming. Configuration of both stand-alone and network workstations will be covered.

CSIS 152 JAVA PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: A beginning programming course or suitable work experience.
An introduction to the Java programming language with emphasis on the object-oriented paradigm for both conventional and web-site applications.

CSIS 155 C++ PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 101 and a knowledge of a programming language.
An introduction to C++ programming with emphasis on the object-oriented paradigm for both business and scientific applications. Comparisons to C will be made.

CSIS 160 INTRODUCTION TO TELECOMMUNICATIONS CAREERS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
This course includes a nontechnical introduction to careers in telecommunications technology, a brief history of telecommunication, and an introduction to the work of telecommunications technicians. This course provides introduction to the terminology and concepts of telecommunications technology. Guest lecturers from industry, field trips, and on-site interviews at telecommunications companies are included.

CSIS 161 TELECOMMUNICATIONS AND NETWORK FUNDAMENTALS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 101 and either CSIS 115 or CSOF 101 + CSOF 102 + CSOF 103.
This course covers fundamentals of communications, data transmission hardware, protocols, communications software, and local area networks. It will present students with a foundation in technical terms and vocabulary that will enable them to deal effectively with users and providers of communications services. Hands-on activities will give the student experience using modems and configuring communications software to access other computers, networks, BBSs, information providers, and the Internet.

CSIS 162 INTRODUCTION TO MULTIMEDIA
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 101 or CSIS 115.
An overview of multimedia technology on the PC. The course focuses on four major themes: the nature of multimedia, its hardware components, its common software applications, and the actual production of simple programs. Students will be introduced to instructional design concepts, screen design strategies, and navigation techniques, producing multimedia components, and actual development of simple multimedia programs.

CSIS 164 BASIC TELECOMMUNICATIONS THEORY
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: High school algebra with a minimum grade of C or satisfactory score on the mathematics placement examination.
An introduction to the principles of telecommunications technology including study methods and the development of theoretical foundations necessary to understand telecommunications basics. Students will learn applications to DC and AC circuits, parallel and series circuits, reactive and nonreactive circuits, active and passive devices, solid state devices, and digital devices. Also included are preparation methods, customer interfacing, job performance and training expectations, job safety skills, record keeping, and report generation necessary for efficient job performance. Also covered is the mathematics necessary for solutions to formulae used to analyze electrical and electronic circuits, such as: Ohm’s law, resistance, reactance, phase relationships, etc. This course includes study of number systems and conversion between number bases.
CSIS 165 TELECOMMUNICATIONS INSTRUMENTATION
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 164.
A study of the instrumentation used in the telecommunications industry. Special emphasis is placed on hand tools, test equipment, installation, repair, and construction procedures used in telephony. Laboratory emphasizes signaling, transmission basics, and the use of basic hand tools and test equipment. Industry standards and color codes are covered.

CSIS 168 TELECOMMUNICATIONS TECHNOLOGY I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 165.
An introduction to the principles of transmission of data, voice, and video. Covers transmission media, networking, and the terminology used in telecommunications. Special emphasis is placed on telephony and in the types of signaling used in telephone systems. Includes a hands-on laboratory that emphasizes troubleshooting and repair of equipment, cabling, line interfacing, and industry standards and safety.

CSIS 171 LAN NOVELL NETWARE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
This course teaches the fundamental skills needed to effectively manage a network including setup of users directories and securities. Network utilities are taught through hands-on training and team projects. Students will create login scripts and menus, and learn how to effectively monitor and maintain a network.

CSIS 172 LAN WINDOWS SERVER
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 161 or equivalent background strongly recommended.
This course teaches the fundamental skills needed to effectively manage a network including setup of users directories and securities. Network utilities are taught through hands-on training and team projects. Students will create logon scripts and user profiles and learn how to effectively monitor and maintain a network.

CSIS 174 TECHNOLOGIES USED ON LOCAL AREA NETWORKS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 171.
This course teaches the basic concepts of data communications, networking, and connectivity including terminology, topologies, Open Systems Interconnection (OSI) Model, and popular vendor-defined protocol suites.

CSIS 175 SERVICE AND SUPPORT OF LOCAL AREA NETWORKS
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisite: CSIS 171.
This hands-on course teaches experienced network administrators how to install, maintain, and troubleshoot networks. The course covers installation and upgrade procedures for the latest versions of network operating system software.

CSIS 177 DATABASE APPLICATION AND DESIGN WITH ACCESS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: One Windows based course or approval of instructor.
Recommend CSIS 125 as corequisite for those planning to take CSIS 277. In-depth, hands-on experience with Access relational database management software. The student will develop skills in table, query, form and report creation utilizing the graphical user interface provided in Access. Efficient database design and data management strategies along with data normalization will be emphasized.

CSIS 178 INTERNETWORKING WITH TCP/IP
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 172 or equivalent background strongly recommended.
This course teaches the fundamental skills needed to effectively set up, configure, and support Transmission Control Protocol/Internet Protocol (TCP/IP) on popular network operating systems.

CSIS 179 WEB SQL PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 177, some experience with HTML is helpful.
Fundamentals of designing and implementing a database-driven web site. Topics include web server configuration, open database connectivity, SQL, and security.

CSIS 180 CURRENT TOPICS
1-4 credits. 1-4 hours. (Lecture 1-4 hours.)
Prerequisite: Approval of the instructor.
Technical and applicational implications of innovations in hardware and software.

CSIS 181 APPLICATIONS SUPPORT TECHNOLOGIES
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 101 and either CSIS 115 or CSOF 101 + CSOF 102 + CSOF 103.
Learn techniques for transitioning to new and upgraded software. Implement advanced features of software applications including sharing data across software and platforms. Hands-on experience with software packages including applications and help desk software to troubleshoot errors.
CSIS 191 COMPUTER SUPPORT PRACTICUM
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Concurrent enrollment or completion of CSIS 111, 151, 161 and 181.
This course provides an environment to apply computer skills to the process of supporting computer hardware, software, and human resources in a business setting. Through actual or simulated on-the-job work experience, the instructor will assist students to integrate the principles and techniques learned in prior coursework.

CSIS 215 ADVANCED MICROCOMPUTER APPLICATIONS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 115 or experience with following software: word processing, spreadsheet, and database of an integrated package.
Implementation and in-depth use of microcomputer software packages. Specific hands-on work with word processor, spreadsheet, database, and graphics software applications.

CSIS 221 INTRODUCTION TO COMPUTER ARCHITECTURE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CSIS 131 and MATH 120.
Data representation, number systems, Boolean algebra, sequential logic, inter-register transfer and other micro-operations, computer organization and design, computer software, and input and output organization.

CSIS 225 ADVANCED VISUAL BASIC PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 125.
Using the Microsoft Visual Basic programming language, the student will solve advanced business-related problems involving multiple forms, menus, accessing database files, crystal reports, object linking and embedding (OLE), and application program interface (API).

CSIS 228 ADVANCED WEB DEVELOPMENT
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 128.
Building on the topics discussed in CSIS 128, this course provides in-depth coverage of HTML and client-side scripting, with an introduction to current web development topics. Topics include DHTML, E-commerce, security, web database programming, server-side scripting, XML, and web site architecture and configuration.

CSIS 231 COMPUTING THEORY II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 120, MATH 150, and CSIS 131.
A continuation of CSIS 131. Topics include programming style and modularity, program correctness, recursion dynamic data structures, induction, basic algorithms of computing, and software engineering principles.

CSIS 240 ADVANCED COBOL
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 140 or suitable work experience.
Problem solving utilizing current disk access methods. Program design. More complex programming skills.

CSIS 241 DISCRETE STRUCTURES FOR COMPUTER SCIENCE II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 141 Discrete Structures for Computer Science I and CSIS 131 Computing Theory I.
Lattice structures and graph theory, algorithms and complexity, recurrence relations, introduction to computability theory and abstract machines. The theory introduced will be applied to appropriate areas of computer science.

CSIS 245 CREATING WEB APPLICATIONS WITH ORACLE PL/SQL
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 145, CSIS 152, and CSIS 128.
An introduction to ORACLE Application Server for building dynamic Web applications to access an ORACLE database. Using the PL/SQL Web Toolkit to generate HTML. Using scripting features to build web pages that include dynamic content, including other Web pages.

CSIS 246 CREATING ORACLE APPLICATION FORMS II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 145 and CSIS 146.
A continuation of CSIS 146, this course expands the form-building skills of ORACLE Developer. The student will learn to manage application file with Project Builder, create multiple form applications and learn how to manage multiple transactions across modules. Custom menus, reports and charts will be developed.

CSIS 251 ADVANCED MICROCOMPUTER OPERATING SYSTEMS CONCEPTS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 151.
This course covers the advanced concepts and features of a graphical user interface operating system for microcomputers as well as introduction to the Unix and mainframe operating systems environments.
CSIS 252 ADVANCED JAVA PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 152.
The student will develop sophisticated Java applications for both Windows and web-site applications. Projects will incorporate multimedia, sequential and random files, and exception handling for both input/output and robust program execution. The student will use abstract base classes, friends, and polymorphism to create complex classes.

CSIS 255 ADVANCED C++ PROGRAMMING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 155.
Advanced C++ programming language problem solving concepts with emphasis placed on file handling techniques and sophisticated object-oriented analysis and design.

CSIS 257 IMPLEMENTING A DATABASE IN MICROSOFT SQL INFORMATION SYSTEMS.
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 172 and CSIS 177.
Student will gain knowledge and technical skills required to implement a database solution with Microsoft SQL Server. There will be hands-on experience of the elements using the Transact-SQL language. Students will learn how to create and manage files, databases, tables, indexes and transaction logs. Students will manage locking options and data integrity. Queries, views and stored procedures will be designed and created.

CSIS 258 SYSTEM ADMINISTRATION FOR MICROSOFT SQL SERVER
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 171 and CSIS 177.
The student will gain knowledge and develop skills required to install, configure, administer and troubleshoot Microsoft SQL Server. Managing files and databases for SQL Server will be discussed. Students will learn how to administer SQL Server security and performance as well as automate administrative tasks.

CSIS 259 TELECOMMUNICATIONS AND NETWORKS II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Satisfactory completion of CSIS 161, MATH 120, and MATH 130, or equivalent.
This course is a continuation of CSIS 161. It covers general data compression; video, image and sound data transmission; error coding and encryption; TCP/IP and the Internet theory and principles; network operating systems theory; LANs/WANS theory; and cables and connectors.

CSIS 262 ADVANCED MULTIMEDIA DESIGN AND DEVELOPMENT
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 162.
This course expands upon the theories, concepts, and practical applications presented in Introduction to Multimedia. Students will learn more about the instructional design process, learn how to create and edit more complex audio and video elements, learn to use authoring tools, create a CD-ROM based multimedia application, and discuss the most current issues facing multimedia developers.

CSIS 263 DIGITAL VIDEO PRODUCTION FOR MULTIMEDIA
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 162 or consent of the instructor.
This course expands on the theories and concepts covered in Introduction to Multimedia (CSIS 162), focusing on the creation of digital video. The student will use modern video lighting, recording, digitizing, and editing equipment to create video productions suitable for distribution via multimedia CD-ROM, and discuss the issues facing the digital video developer.

CSIS 264 OPTICAL AND BROADBAND TRANSMISSION SYSTEM
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Enrollment in or completion of MATH 120, MATH 130, CSIS 168, and CSIS 261.
This course covers optical and broadband transmission systems. It examines analog and digital modulation techniques, frequency and time division multiplexing techniques, digital transmission principles, cables, fiber optic communications, satellite technology, and satellite communications characteristics.

CSIS 265 WINDOWS PROGRAMMING USING C AND C++
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 255.
This course is designed for the accomplished C and C++ programmer desiring to write programs for Windows operating systems. Topics include graphical user interface concepts, message-driven architecture, multitasking and threads, dynamic linking, and the API interface library. In addition, use of foundation classes and object programming interfaces will be discussed.

CSIS 266 SWITCHING TECHNIQUES
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Enrollment in or completion of CSIS 168 and ELTE 130.
This course is a study of analog and digital switching techniques with an emphasis on switch architecture and modern digital equipment. The principles of switching from early analog to modern digital switches are covered. Applications such as PBXs, Centrex systems, voice processing, electronic data interchange and terminal equipment are covered.
CSIS 267 FCC COMMERCIAL LICENSE PREPARATION  
3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: Approval of program coordinator.  
Previous training, experience, and/or study outside of class is required for entrance to this course. This is an intense course of study in preparation for the FCC commercial licenses. Passing of a commercial FCC license is required for completion of this course. Wireless theory, practice, implementation, operations, and regulations are covered. Morse Code training is offered for those seeking the commercial radiotelegraph license.

CSIS 268 TELECOMMUNICATIONS TECHNOLOGY II  
3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: Enrollment in or completion of CSIS 168 and completion of MATH 120 and MATH 130 or equivalent.  
This course is a continuation of CSIS 168. It includes various modern telecommunications systems and the theory and technology used. Also covered are basic telephone, wireless, satellite, IP, and other communication networks. Disaster management and recovery, and other topics necessary for successful telecommunications systems analysis and implementation are covered.

CSIS 270 OBJECT ORIENTED ANALYSIS AND DESIGN  
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisite: CSIS 101 and completion of an object-oriented language course.  
The student will develop an understanding of object models as a tool that can be applied to computer-based problems encountered in business and industry. This will be accomplished by identifying classes and their behaviors from a problem statement, constructing graphical representations of the relationships between the classes using such concepts as inheritance and polymorphism in the design, and checking the process for correct domain and cohesions.

CSIS 271 DATA STRUCTURES AND ALGORITHM ANALYSIS  
3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: MATH 141 and CSIS 231.  
An introduction to data organizations, strings, stacks, queues, linear lists, linked-lists, heaps, and trees. These topics will be integrated with the notion of abstract data types. Students will develop skills in the use of abstraction, specification, and program construction using modules. Algorithms used to implement data structures will be introduced and their efficiency analyzed.

CSIS 277 DATABASE PROGRAMMING WITH ACCESS AND ADVANCED ACCESS FEATURES  
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisite: CSIS 125 and CSIS 177.  
In-depth, hands-on experience utilizing the programming language of Access (Visual Basic for Access), a relational database management software package. This “object-oriented” language assists developers to use the full power of the database management package. Student will also learn to utilize several advanced features (of the constantly growing number of features) of the Access database management system.

CSIS 279 WEB DATABASE PROGRAMMING  
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisite: CSIS 128, and introductory database course (CSIS 143 or CSIS 177) and a beginning and advanced programming sequence (CSIS 125 and CSIS 225, or CSIS 152 and CSIS 252).  
This course will teach web site developers who perform architectural planning, technology selection, or web site programming tasks how to create web sites that use current web database technology components on both the client workstation and the web server. The course will show students how to create a multi-tiered web site that accesses a database using current web database programming tools.

CSIS 280 DATABASE ADMINISTRATION WITH ORACLE  
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisite: CSIS 144 and CSIS 145, or approval of instructor.  
Fundamental knowledge and skills necessary to successfully setup, maintain, and troubleshoot and ORACLE client/server database environment.

CSIS 290 COMPUTER SCIENCE/INFORMATION SYSTEMS FIELD PROJECT  
3-5 credits. 6-10 hours. (Field Studies 6-10 hours.)  
Prerequisite: Approval of instructor.  
Actual or simulated on-the-job work experience in the area of degree emphasis.

CSIS 293 COMPUTER SCIENCE/INFORMATION SYSTEMS MAJOR FIELD PROJECT  
6 credits. 12 hours. (Field Studies 12 hours.)  
Prerequisite: Approval of instructor.  
Actual or simulated on-the-job work experience in the area of degree emphasis.

CSIS 295 TELECOMMUNICATIONS INTERNSHIP  
3 credits. 15 hours. (Field Studies 15 hours.)  
Prerequisite: Enrollment in or completion of CSIS 261, CSIS 264, CSIS 268, and consent of program coordinator.  
This course provides on-the-job experiences in the field of telecommunications technology. The student is required to work at least 80 hours with an approved and cooperating industry for each semester of the Telecommunications II certificate or the A.A.S. Degree program.
COMPUTER SOFTWARE

Offered at all campuses

Note: Credit for courses numbered below 100 is not applicable to any degree or certificate.

CSOF 80 BEGINNING KEYBOARDING
1 credit. 2 hours. (Laboratory 2 hours.)
Introduction to the keyboard. Keying by touch.

CSOF 100 INTRODUCTION TO PERSONAL COMPUTING
1 credit. 1.5 hours. (Lecture 0.5 hour. Lab 1 hour.)
Prerequisite: Keyboarding skills equivalent to or enrollment in CSOF 80.
This course provides a basic introduction to the personal computer. Through the use of lecture, demonstration and hands-on experience, the student will be introduced to microcomputer hardware, operating systems, and several applications, including word processing, spreadsheet and database.

CSOF 101 INTRODUCTION TO WORD PROCESSING
1 credit. 1.5 hours. (Lecture 0.5 hour. Lab 1 hour.)
Prerequisite: Keyboarding proficiency minimum of 35 wpm.
An introduction to word processing.

CSOF 102 INTRODUCTION SPREADSHEET APPLICATIONS
1 credit. 1.5 hours. (Lecture 0.5 hour. Lab 1 hour.)
An introduction to spreadsheet applications.

CSOF 103 INTRODUCTION TO DATABASE
1 credit. 1.5 hours. (Lecture 0.5 hour. Lab 1 hour.)
Introduction to database.

CSOF 104 INTRODUCTION TO MICROCOMPUTER OPERATING SYSTEMS
1 credit. 2.5 hours. (Lecture 0.5 hour. Lab 2 hours.)
An introduction to microcomputer operating systems.

CSOF 105 COMPUTER SURVIVAL
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Introduction to use of microcomputer software packages for personal or home-based use. Hands-on experience using computers with an integrated software package that includes word processing, spreadsheet, database, and DOS/WINDOWS.

CSOF 106 INTRODUCTION TO PRESENTATION SOFTWARE
1 credit. 1.5 hours. (Lecture 0.5 hour. Lab 1 hour.)
Prerequisite: CSOF 100.
This course is a hands-on introduction to presentation software. Learn how to design and create computerized presentations using popular presentation software packages.

CSOF 108 INTRODUCTION TO INTERNET
1 credit. 1.5 hours. (Lecture 0.5 hour. Lab 1 hour.)
This course is a hands-on introduction to the Internet. The student will learn how to gain access to the Internet and use it to send and receive mail, access forums on topics of interest and access other computer systems.

CONSTRUCTION MANAGEMENT

Offered at the Business & Technology College
Bill Franken

CSMG 110 PROBLEM SOLVING/DECISION MAKING
1 credit. 1 hour. (Lecture 1 hour.)
To help the supervisor understand that the ability to make effective decisions is a vitally important management skill, and to assist the supervisor in developing a background in and a system for performing the decision making function in an effective manner.

CSMG 120 OSHA AND SITE SECURITY
1 credit. 1 hour. (Lecture 1 hour.)
Students will learn about the occupational safety and health act and its interpretation. Learn to recognize and avoid dangerous conditions. Learn theft prevention techniques.

CSMG 130 COST AWARENESS/PRODUCTION CONTROL
1 credit. 1 hour. (Lecture 1 hour.)
Participants will understand the conditions which must be met if production is to be under control. Also, participants will be able to use the short interval production schedule (SIPS) and will recognize factors that affect both the productivity of their crews and the worker.

CSMG 140 BEGINNING PRINT READING
2 credits. 2 hours. (Lecture 2 hours.)
Print reading for construction. Students will learn how to use symbols, working drawings, survey plats, electrical plans, and all other drawings related to construction. How specifications are related to drawings.

CSMG 205 INTERMEDIATE PRINT READING
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: CSMG 140.
How to read prints for energy saving structures, steel-frame structures, and reinforced concrete structures. Site plans, floor plans, elevations, risers, diagrams and all other construction details.

CSMG 210 ACCIDENT PREVENTION AND LOSS CONTROL
1 credit. 1 hour. (Lecture 1 hour.)
Participants will learn to think actively about safety in their daily activities and will have a good knowledge of the risks involved in construction projects. They will also understand that there are many economic as well as humanistic consequences of unsafe operations.
CSMG 220 CONSTRUCTION PLANNING AND SCHEDULING
2 credits. 2 hours. (Lecture 2 hours.)
Participants will understand the techniques used to plan and organize jobs for which they are responsible and accountable. They will also understand the importance of timely and accurate reporting.

CSMG 230 PRODUCTIVITY IMPROVEMENT
2 credits. 2 hours. (Lecture 2 hours.)
Study of productivity improvement. External factors, internal factors, and necessary functions for productive projects.

CSMG 250 CONSTRUCTION ESTIMATING
2 credits. 2 hours. (Lecture 2 hours.)
How to bid on construction projects. Includes all styles of the bid process as well as follow-up and management techniques.

CSMG 260 CONTRACT DOCUMENTS
2 credits. 2 hours. (Lecture 2 hours.)
Recognize the existence of a series of documents, called the contract documents, which constitute the contract for a construction project, and know the names, definitions, and basic function of application of each of these documents.

CSMG 270 ADVANCED PRINT READING
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: CSMG 140 and 240.
Print reading for commercial buildings. All building features. Drafting techniques. Computer aided drafting. All types of concrete construction.

CRIMINAL JUSTICE

Longview Maple Woods Penn Valley
Karen Curls

NOTE: Credit for courses number below 100 is not applicable to any degree or certificate.

CRJU 101 INTRODUCTION TO CRIMINAL JUSTICE
3 credits. 3 hours. (Lecture 3 hours.)
Philosophical and historical background of law enforcement, courts, and corrections. Organization, purpose, and functions of criminal justice agencies on the local, state, and federal levels. The respective roles of personnel in justice agencies in the United States. Career requirements and opportunities in these fields.

CRJU 105 PRINCIPLES OF CORRECTIONS
3 credits. 3 hours. (Lecture 3 hours.)
Fundamentals of the correctional worker’s job and responsibilities. Inmate characteristics, elements of supervision in a correctional institution, security procedures, and contraband control.

CRJU 111 POLICE OPERATIONAL PROCEDURES
3 credits. 3 hours. (Lecture 3 hours.)
This course will present to the student the duties, responsibilities, and techniques of modern law enforcement patrol activities. Types of patrol, vehicle stops, field interviews, community policing, and procedures for handling various types of calls for service.

CRJU 112 TRAFFIC CONTROL & INVESTIGATION
3 credits. 3 hours. (Lecture 3 hours.)
This course will present to the student the fundamentals of traffic control and accident investigation. Regulation, control, and enforcement of traffic laws and municipal ordinances will be presented and discussed. Procedures for response, evaluating, protecting, and investigating accident scenes will be integrated into course.

CRJU 118 LEGAL ASPECTS OF CORRECTIONS
3 credits. 3 hours. (Lecture 3 hours.)
Law and procedures are examined and discussed that focus on prisoner’s rights, treatment and handling of inmates, Supreme Court cases regarding inmate rights, and the legal processes accorded a detainee from arrest until released.

CRJU 122 PROCEDURAL LAW
3 credits. 3 hours. (Lecture 3 hours.)
This course will present to the student the fundamental concepts of constitutional law as applied to law enforcement. Rules of evidence, admissions and confessions, Miranda, arrest procedures, and search and seizure issues will be taught. A review of relevant case law and how it affects contemporary law enforcement practices will also be presented.

CRJU 126 CORRECTIONS IN THE COMMUNITY
3 credits. 3 hours. (Lecture 3 hours.)

CRJU 132 COMMUNITY RELATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Psychological and sociological aspects of police-community relations, police and minority groups, changing elements of social classes, crime prevention as related to poverty, and unequal justice under the law. Problems of communication and cooperation in the administration of criminal justice.

CRJU 141 VICE CONTROL
3 credits. 3 hours. (Lecture 3 hours.)
Vice problems in regulating prostitution, perversion, obscenity, bookmaking, gambling, liquor, narcotics, and dangerous drugs. Problems resulting from economic, moral, and other social attitudes. Techniques of discovery and investigation of vice offenders. Prevention techniques and cooperation with federal agencies.
CRJU 152 COMMERCIAL & INSTITUTIONAL SECURITY I
3 credits. 3 hours. (Lecture 3 hours.)
History and role of private police. Retail security and inventory shrinkage, legal aspects, protection of trade secrets, proprietary systems, riot, and protection of premises.

CRJU 153 COMMERCIAL AND INSTITUTIONAL SECURITY II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CRJU 152.

CRJU 162 CORRECTIONAL PSYCHOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CRJU 105 or PSYC 140.

CRJU 165 CRIMINOLOGY
3 credits. 3 hours. (Lecture 3 hours.)

CRJU 167 SPECIAL ISSUES IN CRIMINAL JUSTICE
1-3 credits. 1-3 hours. (Lecture 3 hours.)
Various topics in administration of justice and corrections.

CRJU 168 JUVENILE DELIQUENCY
3 credits. 3 hours. (Lecture 3 hours.)

CRJU 169 FAMILY VIOLENCE AND SEXUAL ABUSE
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to concepts related to interpersonal violence. Categorizes population of abuse examined are adult spousal, child, sibling, ritual, elderly, gay and lesbian. Although the legal aspect of abuse is emphasized, the social-psychological and medical elements are presented.

CRJU 196 SEMINAR IN LAW ENFORCEMENT PROBLEMS
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Current problems in law enforcement.

CRJU 200 INTERNSHIP IN CRIMINAL JUSTICE
3-6 credits. 1-6 hours. (Field Studies 15-30 hours.)
Prerequisite: Completion of 15 hours of CRJU courses or approval of the instructor.
On-the-job training in criminal justice.

CRJU 201 CRIMINAL JUSTICE PRACTICUM I
3 credits, 3 hours. (Field Studies 3 hours.)
Prerequisite: Approval of instructor.
Work and/or observation in a correctional agency or institution. Periodic reports and written assessment of specific areas of interest or concern.

CRJU 202 CRIMINAL JUSTICE PRACTICUM II
3 credits, 3 hours. (Field Studies 3 hours.)
Prerequisite: Approval of the instructor.
Work in a correctional institution or social agency. Exploration of an area of special interest or need. Exploration of a special problem and development of a written proposal for its solution.

CRJU 203 CRIMINAL INVESTIGATIONS I
3 credits, 3 hours. (Lecture 3 hours.)
This course will present an introduction to modern criminal investigations. This course presents theory of investigation, procedures at a crime scene, collection and preservation of physical evidence, sources of information, questioning of witnesses and suspects, preliminary and follow-up investigations, and case and case trial preparation.

CRJU 204 CRIMINAL INVESTIGATIONS II
3 credits, 3 hours. (Lecture 3 hours.)
Prerequisite: CRJU 203.
This course will present to the student techniques and information for investigating deaths, sex crimes, assaults, stealing, robbery, property crimes, burglary, bombs, and arson. Examine evidence, collection, and crime laboratory analysis procedures will also be presented.

CRJU 215 JUVENILE LAW
3 credits, 3 hours. (Lecture 3 hours.)
Introduction to juvenile law, jurisdiction over and disposition of the juvenile offender, court processing, adjudicatory process, and the uniform juvenile court act.

CRJU 223 CRIMINAL LAW I
3 credits, 3 hours. (Lecture 3 hours.)
Introduction to criminal law. Classification and analysis of crimes and criminal acts. Criminal law as a means of preservation and protection of life and property.

CRJU 224 CRIMINAL EVIDENCE
3 credits, 3 hours. (Lecture 3 hours.)
Nature, types, and degrees of criminal evidence; rules governing admissibility, competency, and relevancy. Presentation of physical and other material evidence, direct and circumstantial evidence, hearsay rules, and exceptions.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Lecture Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU 228</td>
<td>FUNDAMENTALS OF PROBATION AND PAROLE</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Historical development of probation and parole from early correctional</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>procedures through modern approaches. Pre-sentence investigation, conditions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>of probation, and suspended sentences. Prerelease programs, parole conditions,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>role of probation, and parole conditions, role of probation, and parole</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>personnel.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRJU 230</td>
<td>MISSOURI CRIMINAL LAW</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>This course will study the Revised Statutes of Missouri and relevant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>federal statutes relating to general code provisions, justifications,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>homicide, assaults, kidnapping, sexual offenses, drug offenses, robbery,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>arson, burglary, stealing, armed criminal action, and offenses against</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>public order.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRJU 233</td>
<td>PRINCIPLES OF MANAGEMENT IN CRIMINAL JUSTICE SYSTEMS</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Problems of police administration, functional organization, fundamentals of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>staff and field operation, planning, budget analysis, recruitment, training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>assignment, and disciplinary methods. Cooperation with other agencies.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRJU 236</td>
<td>CORRECTIONAL ADMINISTRATION</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Current administrative and management patterns and functions in correctional</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>agencies and institutions. Concepts of staffing classification, training,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>budgeting, record keeping, and public relations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRJU 244</td>
<td>GROUP AND INDIVIDUAL COUNSELING IN CORRECTIONS</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Principles of human behavior and some techniques for changing attitudes and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>behavior. Individuals in counseling settings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRJU 248</td>
<td>CONSTITUTIONAL LAW</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>U.S. Supreme Court rulings that affect law enforcement. Major</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>constitutional decisions, federal statutes, interstate rules, and cases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>involving constitutional amendments affecting law enforcement jurisdiction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and civil liberties.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRJU 275</td>
<td>ALCOHOL AND DRUG ADDICTION</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Exploration of the field of alcohol and drug use, biological, physical,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>psychological, and social causation theories. Particular attention is</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>directed toward local and national initiatives in alcohol and drug abuse.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRJU 280</td>
<td>ADDICTION COUNSELING WITH SPECIAL POPULATIONS</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Cultural, racial, age, and sex differences in patterns of substance abuse. The</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>potential for developing appropriate treatment for special population groups.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Theory and treatment techniques for minority populations of addicted clients.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRJU 285</td>
<td>ADDICTION CLIENT MANAGEMENT</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Case management procedures utilized with addicted clients. Assessment,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>planning, evaluation, and record keeping employed in addiction treatment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case presentation techniques. Ethical issues. Case management and recovery.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DANCE**

*Offered at Penn Valley*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Lecture Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DANC 100</td>
<td>GENERAL DANCE</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>A studio survey of movement principles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>common to most forms of dance,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>including but not limited to ballet,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>modern dance, jazz, and ethnic dance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Designed for the student who is</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>interested in finding out more about</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>these disciplines before taking a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>specific technique or style.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DANC 111</td>
<td>MODERN DANCE I</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: DANC 100 or previous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>modern dance classes; KCMO Magnet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts Magnet experience qualifies.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A studio course for beginning students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>covering basic principles of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>contemporary modern dance. Students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>will also learn about the history and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>vitality of this unique American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>dance form.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DANC 112</td>
<td>MODERN DANCE II</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: DANC 111 or audition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>with instructor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A studio course for intermediate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>students covering principles of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>contemporary jazz dance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DANC 121</td>
<td>BALLET I</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: DANC 100 or previous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>modern dance classes; KCMO Magnet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts Magnet experience qualifies.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A studio course for beginning students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>covering basic principles of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>contemporary ballet. Students will</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>also learn about the history and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>variety of this classical dance form.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DANC 122</td>
<td>BALLET II</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>A studio course for intermediate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>students covering intermediate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>principles of contemporary ballet.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Students will also learn about the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>history and variety of this</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>classical dance form.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DANC 123</td>
<td>BALLET III</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: DANC 121 and 122 or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>audition with instructor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A studio course for advanced students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>covering advanced principles of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>contemporary ballet. Students will</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>also learn about the history and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>variety of this classical dance form.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DANC 131 JAZZ DANCE I
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisites: DANC 100 or previous jazz training;
KCMO Middle High Arts experience qualifies.
A studio course for beginning students covering basic
principles of contemporary jazz dance. Students will
also discover the origins of this American invention
with roots in African and other ethnic dance forms.

DANC 151 THEORY AND COMPOSITION I
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisites: DANC 111, 121, 131, or equivalent.
A laboratory course designed to assist students in
becoming better choreographers and dancers through
studies in composition (choreography) and aesthetics.

DENTAL ASSISTING
Offered at Penn Valley
Denise Callahan

DENA 100 DEVELOPMENTAL DENTISTRY
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2
hours.)
Prerequisite: Admission to the Dental Assisting
Program or approval from program coordinator.
Study of oral embryology; oral histology; development-
Al disturbances of the face, oral cavity and related
structures; head and neck anatomy, and dental morphol-
y and occlusion.

DENA 105 DENTAL LABORATORY PROCEDURES
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: Admission to the Dental Assisting
Program.
Basic Physics and Chemistry. Actions, reactions and
physical properties of dental materials. Emphasis on
waxes, temporary crowns, custom trays, alginate
materials, and diagnostic models.

DENA 106 BASIC DENTAL TECHNIQUES
1.5 credits. 2 hours. (Lecture 1 hour. Laboratory 1
hour.)
Prerequisite: 6 months employment as a chairside
dental assistant.
Sterilization and disinfection procedures. Basic tooth
morphology and terminology. Basic instrument grasps
and finger rests and general principles of instrument
use.

DENA 110 CHAIRSIDE ASSISTING I
5 credits. 9 hours. (Lecture 3 hours. Laboratory 6
hours.)
Prerequisite: Admission to the Dental Assisting
Program.
Dental terminology and responsibilities of the dental
assistant in the dental operatory. Patient preparation,
instrument identification, charting, sterilization
practices, basic operative chairside skills, ethics, and
jurisprudence.

DENA 115 DENTAL RADIOLOGY I
3 credits. 5 hours. (Lecture 2 hours. Laboratory 3
hours.)
Prerequisite: Admission to the Dental Assisting
Program.
Radiography history, characteristics of radiation
production, film composition, x-radiation terminology,
effects of radiation exposure, and protection. Exposing,
processing, and mounting of radiographs taken on a
radiographic manikin.

DENA 125 CLINICAL PRACTICE I
2 credits. 6 hours. (Clinical 6 hours.)
Prerequisite: Concurrent enrollment in the Dental
Assisting Program.
Clinical experience in operative and preventive dental
procedures utilizing four-handed dentistry in the clinic
at the University of Missouri-Kansas City School of
Dentistry.

DENA 126 DENTAL ASSISTANT SEMINAR
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Concurrent enrollment in DENA 125.
Evaluation of experiences in Clinical Practice 1.

DENA 200 BODY STRUCTURE AND FUNCTION
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: DENA 100.
Basic anatomy and physiology of human body, oral
pathology, principles of disease processes, and
microbiology.

DENA 205 DENTAL BIOMATERIALS
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: DENA 105.
Manipulation of dental cements, amalgam, esthetic
restoratives, alginate and gypsum products, and
sealants.

DENA 210 CHAIRSIDE ASSISTING II
2 credits. 4 hours. (Lecture 1 hour. Laboratory 3 hours.)
Prerequisite: DENA 110.
Dental specialties emphasized. Theory of orthodontics,
periodontics, prosthodontics, oral surgery, endodontics,
and pedodontics. Application of the concepts of
chairside assisting to these specialties.

DENA 215 DENTAL RADIOLOGY II
1 credit. 3 hours. (Laboratory 2 hours.)
Prerequisite: DENA 115.
Radiographic techniques, procedures, and hygiene
emphasized. Practical experience in exposing, process-
ing, and mounting radiographs taken on patients and
radiographic manikins.

DENA 225 DENTAL OFFICE MANAGEMENT
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: Enrollment in the Dental Assisting
Program.

**DENA 250 CLINICAL PRACTICE II**
4 credits. 16 hours. (Clinical 16 hours.)
Prerequisite: DENA 125.
Advanced clinical experience in front office, at chairside, and in radiographic and laboratory assisting techniques in general and specialty dental offices and clinics.

**DENA 260 DENTAL ASSISTANT SEMINAR**
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: DENA 250.
Preparation for the Dental Assisting National Board Examination and for successful employment. Evaluation of experiences in Clinical Practice II.

**DENA 270 EXPANDED FUNCTIONS IN RESTORATIVE DENTISTRY**
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: Student must meet one of the following:
1.) Certified dental or orthodontic assistant through the Dental Assisting National Board, Inc.
2.) Graduate of an ADA-accredited dental assisting or dental hygiene program.
3.) Completion of DENA 106 Basic Dental Techniques and successful completion of Basic Skills Mastery Exam given by the Missouri Dental Assistants Association.
Dental restorative materials with emphasis on placing and carving amalgam and composite restorations and palliative care of dental emergencies.

**DENA 271 EXPANDED FUNCTIONS IN ORTHODONTICS**
0.5 credit. 1 hour. (Laboratory 1 hour.)
Prerequisite: Student must meet one of the following:
1.) Certified dental or orthodontic assistant through the Dental Assisting National Board, Inc.
2.) Graduate of an ADA-accredited dental assisting or dental hygiene program.
3.) Completion of DENA 106 Basic Dental Techniques and successful completion of Basic Skills Mastery Exam given by the Missouri Dental Assistants Association.
Orthodontic procedures with emphasis on impressions, bending archwires, placement and removal of orthodontic bands and brackets, and palliative care of orthodontic emergencies.

**DENA 272 EXPANDED FUNCTIONS PERIODONTICS**
0.5 credit. 1 hour. (Laboratory 1 hour.)
Prerequisite: Student must meet one of the following:
1.) Certified dental or orthodontic assistant through the Dental Assisting National Board, Inc.
2.) Graduate of an ADA-accredited dental assisting or dental hygiene program.
3.) Completion of DENA 106 Basic Dental Techniques and successful completion of Basic Skills Mastery Exam given by the Missouri Dental Assistants Association.
Periodontal procedures with emphasis on air-brasive coronal polishing and placement of periodontal dressings.

**DENA 273 EXPANDED FUNCTIONS IN PROSTHETIC DENTISTRY**
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: Student must meet one of the following:
1.) Certified dental or orthodontic assistant through the Dental Assisting National Board, Inc.
2.) Graduate of an ADA-accredited dental assisting or dental hygiene program.
3.) Completion of DENA 106 Basic Dental Techniques and successful completion of Basic Skills Mastery Exam given by the Missouri Dental Assistants Association.
Prosthodontic procedures with emphasis on prosthodontic impression techniques, cementation of dental appliances, extr-oral adjustment of fixed and removable prostheses, placement of soft-tissue liners.

**DRAFTING**

*Offered at the Business & Technology College*
William Allyn

**DRAF 107 COMPUTER AIDED DRAFTING FOR INDUSTRIAL TECHNOLOGIES**
3 credits. 4.5 hours. (Lecture 1.5 hours. Laboratory 3 hours.)
The course is designed to present the fundamentals of drafting using computer aided drafting techniques. Appropriate drafting fundamentals and industrial applications will accompany each drafting activity. The student will learn the family of commands and activities that comprise the core of drafting using CAD. Commands include draw, line, circle, arc, polyline, snap functions, drawing layout, and an introduction to 3D.

**DRAF 108 ADVANCED BLUEPRINT READING FOR THE METAL TRADES**
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Advanced blueprint reading involving study of industrial metal work drawings as they apply to planning and laying out of jigs and fixtures.

**DRAF 109 BLUEPRINT READING, ELECTRICAL**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
The student will learn to read and interpret electrical blueprints commonly found in residential, commercial, and industrial maintenance settings. Topics include blueprint layout, symbols, projections, dimensions, tolerances, clearances, assembly, and bill of material.

**DRAF 152 ENGINEERING GRAPHICS AND CADD I**
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Introduction to engineering communications and basic Computer Aided Drafting/Design (CADD). Emphasis on sketching, projection, drawing layout, drafting standards and conventions, dimensioning, sectioning,
and basic design principles. Foundation for computer aided drafting/design including file management, basic drawing commands, basic editing commands, layering conventions, blocks, dimensioning, polylines, sectioning, and drawing layout and plotting.

**DRAF 153 DESCRIPTIVE GEOMETRY**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
*Prerequisite: DRAF 152.*
Descriptive geometry. The graphic solution of spatial and perspective relationships between points, lines, angles, planes and solids.

**DRAF 155 ARCHITECTURAL DRAFTING**
3 credits. 3 hours. (Lecture 3 hours.)
*Prerequisite: DRAF 152.*
Basic problems of house design. Problems of drainage, loads, FHA standard estimating costs, writing specifications. Drawing according to architectural standards.

**DRAF 169 COMPUTER AIDED DESIGN**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
*Prerequisite: DRAF 152 or approval of instructor.*
Basic computer aided drafting and design utilizing a current industry standard CADD software package. Includes two dimensional drawing, editing, dimensioning, and plotting.

**DRAF 191 TECHNICAL DRAFTING INTERNSHIP**
3 credits. 15 hours. (Field Studies 15 hours.)
*Prerequisite: Approval of instructor.*
On-the-job-training.

**DRAF 199 SPECIAL TOPICS**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: DRAF 152 and DRAF 169.
Independent study and work on projects in areas of special interest.

**DRAF 258 PRINCIPLES OF DESIGN**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
*Prerequisite: DRAF 152.*
Mechanical design as a creative activity with emphasis on manufacturing processes. Designs will stress the study and implementation of mechanical advantage through gears, cams, linkages and other components. Product design will involve individual and group projects, using manual or computer aided drafting and design (CADD) methodology. Basic electrical and electronics drawing as well as basic pipe drafting will be included.

**DRAF 262 TECHNICAL ILLUSTRATION**
3 credits. 3 hours. (Lecture 3 hours.)
*Prerequisite: DRAF 152.*
Methods of pictorial representation including isometric, diametric, trimetric, and perspective. Drawing an exploded view of an assembly using shading techniques.

**DRAF 268 STRUCTURAL DESIGN**
3 credits. 3 hours. (Lecture 3 hours.)
*Prerequisite: DRAF 152.*
Shop fabrication drawings, connection details, framing plans, and bills of materials incorporating steel and concrete construction for drawing and design.

**DRAF 269 COMPUTER AIDED DESIGN II**
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
*Prerequisite: DRAF 152 or DRAF 169.*
Advanced computer aided drafting (CADD). Advanced dimensioning and tolerancing techniques and attributes. Includes three dimensional wireframes, surface models, and solid models. Effective use of paper space, model space and viewports. Use and application of basic rendering techniques.

**DRAF 270 CADD APPLICATIONS**
2 credits. 2 hours. (Lecture 2 hours.)
*Prerequisite: Draft 152 or DRAF 169.*
An introduction to the customization of a computer aided drafting and design (CADD) software package, script files, and an introduction to a CADD programming language.

**ECONOMICS**

---

**ECON 110 INTRODUCTION TO ECONOMICS**
3 credits. 3 hours. (Lecture 3 hours.)

**ECON 210 MACROECONOMICS**
3 credits. 3 hours. (Lecture 3 hours.)
Students will study the impact of organizations on modern economic society. Areas of study will include supply and demand analysis. Private and public sector involvement; national income, employment and fiscal policy; monetary policy and banking system; economic theories and the world economy.

**ECON 211 PRINCIPLES OF ECONOMICS II–MICROECONOMICS**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ECON 210 or consent of instructor.
Wages, interest, rent, and profits. Income distribution, consumption, monopolies, agriculture, economics of the firm, and international trade. Preparation for advanced work in economics.
EDUC 101 PARTICIPATION IN EDUCATION I
1 credit. 3 hours. (Field Studies 36 hours.)
Supervised internship in a public school or other educational agency.

EDUC 102 PARTICIPATION IN EDUCATION II
1 credit. 3 hours. (Field Studies 36 hours.)
Supervised internship in a public school or other educational agency.

EDUC 103 PARTICIPATION IN EDUCATION III
1 credit. 3 hours. (Field Studies 36 hours.)
Supervised internship in a public school or other educational agency or community agency. Weekly seminar.

EDUC 104 PARTICIPATION IN EDUCATION IV
1 credit. 3 hours. (Field Studies 36 hours.)
Supervised internship in a public school or other educational agency or community agency. Weekly seminar.

EDUC 190 ART FOR ELEMENTARY TEACHERS
3 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prepares students to include art in their elementary classrooms. Creative learning activities are provided to promote visual awareness in children pre-K through grade 8. Emphasis is placed on the development and motivation of children through creative art projects. Art production, curriculum integration, criticism, aesthetics, and the evaluation of art works are included.

EDUC 200 BECOMING A TEACHER: FOUNDATIONS OF EDUCATION
3 credits. 3 hours. (Lecture 3 hours.)
The professional foundations course designed to focus on an overview of teaching and schooling. Curriculum, instruction, teacher certification, assessment techniques, school missions/purposes, ethics, legal issues, school governance and collegiality, and other contemporary topics will be introduced and elaborated on to facilitate professional decision-making. The initial design of a professional portfolio will be expected in order that a collection of artifacts can provide evidence of professional competency.

EDUC 205 PHYSICAL EDUCATION FOR ELEMENTARY TEACHERS
2 credits. 2 hours. (Lecture 2 hours.)
Theory and practice of physical education activities for elementary school children and ways to integrate these activities throughout the curriculum.

EDUC 210 MUSIC FOR ELEMENTARY TEACHERS
2 credits. 2 hours. (Lecture 2 hours.)
A professional music educational skills course designed to focus on basic music teaching for elementary teachers, grades pre-K through grade eight. The professional portfolio will be expanded to include a collection of elementary music artifacts that can provide evidence of professional competency. Strategies and techniques for integrating music throughout the elementary curriculum are stressed. There will be opportunity for micro-teaching.

EDUC 215 CHILDREN’S LITERATURE FOR ELEMENTARY TEACHERS
3 credits. 3 hours. (Lecture 3 hours.)
A survey and history of literature appropriate for children from pre-K through grade eight. Criteria for selection and evaluation of children’s literature is included. Techniques for using literature in the elementary classroom are emphasized. Micro-teaching opportunities are provided.

EDUC 220 K-12 LEARNING IN MATH AND SCIENCE
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Must be taken concurrently with EDUC 221, Field Experiences for EDUC 220; EDUC 200; or taken concurrently with EDUC 200.
This course prepares the preservice education student to analyze lessons in math or science for the K-12 classroom. Students will learn to think mathematically and to incorporate the scientific method through problem solving. Students will be able to adapt problems to the developmental level of their students. Students will gain introductory knowledge of the MO Show Me Standards, instructional strategies, assessment techniques, and lesson design.

EDUC 221 FIELD EXPERIENCES FOR EDUC 220
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Must be taken concurrently with EDUC 220, K-12 Learning in Math and Science; EDUC 220 or taken concurrently with EDUC 200.
This course provides the preservice education student an opportunity to observe lessons in math and science for the K-12 classroom in a supervised internship. Students will work under the guidance of a mentor teacher and have an opportunity to apply information and skills acquired in EDUC 220. Students will enhance their own problem solving, critical-thinking, and assessment skills.

EDUC 240 K-12 LEARNING IN THE SOCIAL STUDIES AND ARTS
2 credits. 2 hours. (Lecture 2 hours.)
This course will prepare the preservice education student to design lessons in the social sciences and the arts for the K-12 classroom. Students will learn the purposes of social sciences and critical thinking in the social sciences and the arts for the K-12 classroom. Students will learn the purposes of social sciences and critical thinking in the social studies. Students will explore commonalities and differences in the arts (music, art, theater, dance) and will learn how to incorporate the use of arts across the curriculum to enhance learning. Students will demonstrate an understanding of age-appropriate activities. Students will gain introductory knowledge of MO Show Me Standards, instructional strategies, assessment techniques, and lesson design.
### EDUC 241 FIELD EXPERIENCES FOR EDUC 240
1 credit. 1 hour. (Lecture 1 hour.)
**Prerequisite:** Must be taken concurrently with EDUC 240, K-12 Learning in the Social Studies and Arts; EDUC 220 or taken concurrently with EDUC 200.

This course provides the preservice education student an opportunity to observe lessons in the social studies and arts for the K-12 classroom in a supervised internship. Students will work under the guidance of a mentor teacher and have an opportunity to apply information and skills acquired in EDUC 240. Students will enhance their own problem-solving, critical-thinking, and assessment skills.

### EDUC 270 THE STUDENT LEARNER
3 credits. 3 hours. (Lecture 3 hours.)
**Prerequisite:** EDUC 200 or taken concurrently.

Focuses on the physical, cognitive, socio-emotional, moral and aesthetic development of school children pre-K through grade 12. Emphasis will be on the cognitive and socio-emotional development of the learner and how students of different ages, cultural/ethnic backgrounds and abilities learn subject matter. Topics include theories of human development, learning principles and strategies, motivation, theories of intelligence, and additional contemporary topics. This course fulfills the requirements for educational psychology.

### EDUC 280 TECHNOLOGY IN TEACHING
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
**Prerequisite:** EDUC 200 or taken concurrently.

Prepares the student in the use of technology, both professionally and personally. Students will use productivity tools for lesson design and assessment. Social, ethical, and human issues of technology will be integrated.

## ELECTRONICS

*Offered at the Business & Technology College*

**Bill Franken**

**Kent Stolz**

### ELTE 110 BASIC ELECTRONICS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
**Prerequisite:** Completion of or concurrent enrollment in MATH 103 or MATH 106.

An introductory course in the principles of electronics. Ohm’s and Watt’s laws, behavior of electricity and electronics, electrical and electronic devices, an introduction to semiconductor devices, amplification, power supply operation and basic digital logic gates. Heavy emphasis on the operation of commonly used electronic testing devices such as multimeters, digital meters and oscilloscopes.

### ELTE 114 DC CIRCUIT ANALYSIS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
**Prerequisite:** Completion of or concurrent enrollment in MATH 103 or MATH 106.

This course covers Ohm’s laws for series, parallel and series parallel circuits, voltage divider circuits, meter circuits, network theorems, Norton’s, Thevenins, Millmans, current sources, wye to delta and delta to wye conversions. Conductors and insulators, batteries, magnetism. Laboratory activities will be used to reinforce each topic.

### ELTE 118 AC CIRCUIT ANALYSIS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
**Prerequisite:** ELTE 114.

The course covers alternating voltage and current, power generation and distribution, inductance, inductive reactance, capacitance and capacitive reactance, inductive and capacitive series and parallel circuits, RC and RL transient response, complex number analysis of ac circuits, resonance and filters. Laboratory activities will be used to reinforce each topic.

### ELTE 120 ANALOG DEVICES I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
**Prerequisite:** Completion of or concurrent enrollment in ELTE 113.

The course covers semiconductor devices and their applications. Diodes, power supplies, limiters, clamps, amplifiers, multistage amplifiers, small and large signal amplifiers, device characteristics and applications and system troubleshooting will be studied. Laboratory activities will be used to reinforce each topic.

### ELTE 130 DIGITAL ELECTRONICS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
**Prerequisite:** Completion of or concurrent enrollment in ELTE 110.

The course covers basic digital gates, logical circuits and systems, counters, shift registers, flip flops, encoders and decoders analog to digital and digital to analog conversion, memory devices and circuits and an introduction to the architecture of the microprocessor. Testing equipment will be used to make digital measurements. Circuit construction and troubleshooting is covered. Laboratory activities will be used to reinforce each topic.

### ELTE 150 OPERATIONAL AMPLIFIERS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
**Prerequisite:** ELTE 120.

This course is designed to present an in-depth study of the circuits and systems that are operated by, or supported by the operational amplifier. Instrument amplifiers, active filters, Voltage and Current conditioners and converters, signal processing circuits, timers, wave shaping circuits and oscillators are covered.
ELTE 220 ANALOG DEVICES II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Completion of or concurrent enrollment in ELTE 120, Analog Devices I.
Field effect family of semiconductor devices, small, medium and large signal amplifiers, amplifier design considerations and troubleshooting. Solid state amplifiers, switching devices, SCR, TRIAC and unijunction devices and switching device circuits and applications, switching circuit troubleshooting.

ELTE 230 MICROCOMPUTER ARCHITECTURE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ELTE 130.
This course covers the operation and architecture of the microprocessor, input and output communication ports, interface and communications with read/write magnetic disk drives and cd’s. Video development, keyboard and mouse communications, RAM, ROM, BIOS, and an introduction to machine language programming is covered. Appropriate laboratory activities are performed for each unit.

ELTE 240 DESIGN PROJECT
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: Student must be in final semester of the program.
This is a capstone course. The student will work with the instructor to select a project and go through the design, prototyping and the development of a working model. Student will design the layout using CAD and autorouter software, develop and make printed circuit and verify correct operation of the project.

ELTE 260 COMMUNICATIONS ELECTRONICS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Completion of or concurrent enrollment in ELTE 220.
This is a comprehensive electronics course. AM, FM, SSB, communications protocol, rf amplifiers, transmitter and receiver theory antenna design, microwave technology, RADAR, digital communications are taught as a part of the course. FCC rules and regulations are introduced. Laboratory activities relating to each topic are performed.

ELTE 270 INDUSTRIAL ELECTRONICS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ELTE 230.
This course covers linear integrated circuits that relate to industrial applications, industrial solid state devices including SCR, TRIAC, zero crossover, unijunction, programmable UJT, power control circuits, variable speed controls, variable frequency drives, stepper motors and controls, and optical electronics are course units. Introduction to instrumentation transducers and process controls. Robotics are introduced as an application.

EMERGENCY MEDICAL TECHNICIAN–PARAMEDIC
Offered at Penn Valley
Arthur Brady, Jr Harold Kenyon Michael Peters

EMTP 102 BASIC EMERGENCY PATIENT CARE
1 credit. 1 hour. (Lecture 1 hour.)
Current cardiopulmonary resuscitation skills, including adult, child, and infant resuscitation according to American Heart Association standards. Medical and environmental emergencies review. (Successful completion of the course qualifies the student for the Basic Life Support Course Certification.)

EMTP 110 FIRST RESPONDER
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to the significant didactic and practical material essential for the first responder at the scene of an emergency.

EMTP 150 EMT BASIC
8 credits. 11 hours. (Lecture 5 hours. Laboratory 4 hours. Clinical 2 hours.)
Prerequisite: The student must be 18 years old by the end of the course.
Basic life support and emergency care. Signs, symptoms, and procedures of field management for emergency medical situations. Clinical observations. Successful completion makes student eligible to take the Missouri licensure examinations for EMT-B.

EMTP 240 INTRODUCTION TO PARAMEDIC CARE
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: Admission to the EMT-Paramedic program.
This course introduces the student to the roles and responsibilities of the EMT-Paramedic, as well as the legal and ethical issues encountered. It also includes an orientation to the basic anatomy and physiology related to advanced prehospital care.

EMTP 241 PREHOSPITAL ASSESSMENT TECHNIQUES
4 credits. 4.5 hours. (Lecture 3.5 hours. Laboratory 1 hour.)
Prerequisite: Admission to the EMT-Paramedic program and EMTP 240 with a grade of C or better (or concurrent enrollment).
This course is designed to enable the student to perform assessments and respiratory system interventions on patients suffering from medical and traumatic emergencies. Skills include physical examination, electrocardiographic monitoring, electrical therapy, and advanced airway management procedures.

EMTP 242 MEDICAL EMERGENCIES
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Admission to the EMT-Paramedic program and EMTP 240 and 241 each with a grade of C or better (or concurrent enrollment).
This course will introduce the student to paramedic assessment and intervention in cases involving nontraumatic medical emergencies. Emergency assessment and care of patients with respiratory, endocrine, renal, CNS, vascular, infectious, toxicologic and behavioral conditions will be addressed.

**EMTP 243 Paramedia Pharmacology**  
4.5 credits. 5 hours. (Lecture 4 hours. Laboratory 1 hour.)  
*Prerequisite: EMTP 240, 241, and 242, each with a grade of C or better.*  
This course introduces the student to the medications used in the prehospital management of medical and traumatic emergencies, as well as the methods and techniques of administration.

**EMTP 244 Obstetrics, Pediatrics, and ACLS**  
2.5 credits. 3 hours. (Lecture 2 hours. Laboratory 1 hour.)  
*Prerequisite: EMTP 240, 241 and 242 each with a minimum grade of C; EMTP 243 with a minimum grade of C or concurrent enrollment.*  
This course prepares the student to deal with obstetric and gynecological emergencies, neonatal care and resuscitation, as well as pediatric emergencies. It includes the American Heart Association Advanced Cardiac Life Support (ACLS) affirmation courses.

**EMTP 245 Trauma Management**  
2.5 credits. 3.5 hours. (Lecture 1.5 hours. Laboratory 2 hours.)  
*Prerequisite: EMTP 240, 241 and 242 each with a grade of C or better.*  
This course orients the student to the prehospital management of trauma victims. It focuses on chest, abdominal, spinal, neurological, burn, and soft tissue injury.

**EMTP 246 Prehospital Care Integration**  
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)  
*Prerequisite: EMTP 243 with a grade of C or better.*  
This course integrates the didactic, laboratory and clinical experiences that have preceded in other EMT-Paramedic course work.

**EMTP 247 Paramedic Hospital Clinical**  
9 credits. 28 hours. (Clinical 28 hours.)  
*Prerequisite: EMTP 244.*  
This course provides the paramedic student the opportunity to function in actual field situations under the supervision of a paramedic preceptor.

**EMTP 249 Pediatric Advanced Life Support (PALS) Provider**  
1 credit. 1 hour. (Lecture 1 hour.)  
*Prerequisite: EMTP 240, 241 and 242 each with a minimum grade of C; EMTP 243 and 244 with a minimum grade of C or concurrent enrollment.*  
This course prepares the student to assess and treat pediatric patients suffering from medical emergencies. It follows the curriculum established by the American Heart Association and the American Academy of Pediatrics, and leads to affirmation as a PALS Provider.

---

**Engineering**

*Offered Districtwide*

Randall Forchee  
Dan Justice

**ENGR 101 Introduction to the Profession**  
1 credit. 1 hour. (Lecture 1 hour.)  
Information relative to fields of engineering, necessary preparations, and working conditions.

**ENGR 104 FORTRAN Programming for Engineers and Scientists**  
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
*Prerequisite: MATH 120 with a minimum grade of C and MATH 130 with a minimum grade of C, or MATH 150 with a minimum grade of C.*  
Computers and the FORTRAN language in solving engineering problems and presenting data graphically.

**ENGR 113 CAD and Microcomputer Graphics**  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
*Prerequisite: MATH 110.*  
Use of CAD software in basic two-dimensional and three-dimensional drawing. Introduction to use of microcomputer applications including word processing, spreadsheet analysis, and symbolic algebra software.

**ENGR 223 Thermodynamics and Heat Transfer**  
4 credits. 4 hours. (Lecture 4 hours.)  
*Prerequisite: MATH 190 and PHYS 220.*  
Properties of pure substance, work and heat, the first law of thermodynamics, the second law of thermodynamics, entropy, irreversibility, availability, and some power and refrigeration cycles. Introduction to heat transfer, thermal conduction, convective heat transfer, and thermal radiation.

**ENGR 229 Statics**  
3 credits. 3 hours. (Lecture 3 hours.)  
*Prerequisite: MATH 190 and PHYS 220.*  
Resultants of force systems, including couples in two and three dimensions, centroids, equilibrium of force systems, friction, and vector methods.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 233</td>
<td>CIRCUIT ANALYSIS I</td>
<td>4</td>
<td>4</td>
<td>Lecture 4 hours.</td>
<td>Fields, circuit elements, and analysis of simple circuit combinations.</td>
</tr>
<tr>
<td>ENGR 240</td>
<td>MECHANICS OF MATERIALS</td>
<td>3</td>
<td>3</td>
<td>Lecture 3 hours.</td>
<td>Introduction to the techniques of determining stresses and strains in mechanical and structural components.</td>
</tr>
<tr>
<td>ESL 10</td>
<td>ESL COMPOSITION I</td>
<td>3</td>
<td>5</td>
<td>Lecture 1 hour. Laboratory 4 hours.</td>
<td>The study and practice of writing skills in the skills in the present and past, and the introduction of some organizational patterns; multiple sentence structures, descriptions, and simple narratives.</td>
</tr>
<tr>
<td>ESL 11</td>
<td>GRAMMAR I</td>
<td>3</td>
<td>5</td>
<td>Lecture 1 hour. Laboratory 4 hours.</td>
<td>The study and practical application of some sentence structures and word parts. Simple sentences, questions, directions, and descriptions in the present and past tenses.</td>
</tr>
<tr>
<td>ESL 12</td>
<td>SPEAKING &amp; LISTENING I</td>
<td>3</td>
<td>4</td>
<td>Lecture 1 hour. Laboratory 4 hours.</td>
<td>The study and practice of speaking and listening for basic social functions. Practice of basic descriptions and the development of oral/aural skills.</td>
</tr>
<tr>
<td>ESL 13</td>
<td>READING AND VOCABULARY I</td>
<td>3</td>
<td>5</td>
<td>Lecture 1 hour. Laboratory 4 hours.</td>
<td>The study and practice of reading with English vocabulary in context. Reading comprehension, identifying the topics of short readings, and using some dictionary skills.</td>
</tr>
<tr>
<td>ESL 14</td>
<td>CONVERSATION I</td>
<td>1</td>
<td>1</td>
<td>Lecture 1 hour.</td>
<td>Focus on improvement of conversational English.</td>
</tr>
<tr>
<td>ESL 15</td>
<td>ENGLISH LIVING IN THE UNITES STATES</td>
<td>3</td>
<td>3</td>
<td>Lecture 3 hours.</td>
<td>This is an ESL and study skills course in which speaking and listening, reading, and writing are integrated so that students are able to improve all areas of ESL in one course. Basic study skills are introduced throughout the course.</td>
</tr>
<tr>
<td>ESL 20</td>
<td>COMPOSITION II</td>
<td>3</td>
<td>5</td>
<td>Lecture 1 hour. Laboratory 4 hours.</td>
<td>The study and practice of techniques for writing paragraphs in English. Paragraph organization and the improvement of punctuation and mechanical skills in writing.</td>
</tr>
</tbody>
</table>
ESL 21 GRAMMAR II  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisites: ESL 11 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of sentence structures including future and irregular past tense constructions.  
Comparatives, information questions, and compound nouns and verbs.

ESL 22 ESL SPEAKING & LISTENING II  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 12 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of speech in different environments and some simple social occasions. Sound distinction and production in the context of a sentence and listening for specific information.

ESL 23 ESL READING AND VOCABULARY II  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 13 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of reading narrative and expository texts and standard forms. Development of vocabulary and introduction of reading techniques such as a identification of topics and main ideas, skimming, scanning, prediction, and inference.

ESL 30 ESL COMPOSITION III  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 20 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of writing multi-paragraph academic essays. Process writing, and a variety of rhetorical styles.

ESL 31 ESL GRAMMAR III  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 21 with a minimum grade of C or Applied Language Institute approval.  
The study and practical application of complex sentence structures, including perfect and perfect progressive tenses. Understanding and use of passive voice, gerunds and infinitives, articles, conditionals, and modals.

ESL 32 ESL SPK/LST III  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 22 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of comprehension and production of speech in a variety of social situations and environments. Note-taking techniques and understanding and expressing abstract ideas.

ESL 33 ESL READING AND VOCABULARY III  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 23 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of longer reading passages of various rhetorical styles. Improvement of reading speed, development of vocabulary and comprehension through complex inferences.

ESL 40 ESL COMPOSITION IV  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 30 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of rhetorical principles in standard English prose. Critical thinking and research skills as well as fluency and accuracy in academic writing.

ESL 41 ESL GRAMMAR IV  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 31 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of grammatical structures in standard English prose. All verb tenses and the relationship between ideas and the construction of sentences in academic discourse.

ESL 42 ESL SPEAKING AND LISTENING IV  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 32 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of standard English particularly in the introductory level college classroom. Academic lecture comprehension and note-taking, as well as formal and informal discourse.

ESL 43 ESL READING AND VOCABULARY IV  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: ESL 33 with a minimum grade of C or Applied Language Institute approval.  
The study and practice of reading, and the development of vocabulary, in academic level English. Critical thinking, reading skills and the ability to contextually identify unfamiliar vocabulary in reading from a variety of disciplines.

ESL 50 ESL MULTISKILLS I  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: Applied Language Institute approval.  
The comprehensive study of standard English skills for advanced students. College level materials focusing on current issues as the basis for writing exercises and for classroom activities and presentations.

ESL 60 ESL MULTISKILLS II  
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)  
Prerequisite: Successful completion of Multiskills I and/ or recommendation and approval by ALI.  
An advanced integrated skills ESL course in which all areas of English as a Second Language learning (speaking and listening, reading, structure, and writing) are combined.

ESL 97 ENGLISH AS A SECOND LANGUAGE I  
3 credits. 3 hours. (Lecture 3 hours.)  
English for students with little or no experience with the language. Basic English structure, pronunciation, and conversation. Introduction to reading and writing.
ESL 98 ENGLISH AS A SECOND LANGUAGE II
3 credits. 3 hours. (Lecture 3 hours.)
English for students with some knowledge of the language. Basic English structure, pronunciation, and conversation. Introduction to reading and writing.

ESL 99 ENGLISH AS A SECOND LANGUAGE III
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 98.
English for students who have mastered the basics of the language. English structure, pronunciation, conversation, vocabulary, reading, and writing.

ENGLISH LANGUAGE AND LITERATURE

<table>
<thead>
<tr>
<th>Longview</th>
<th>Maple Woods</th>
<th>Penn Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurt Canow</td>
<td>James Karasiewicz</td>
<td>Craig Bartholomaus</td>
</tr>
<tr>
<td>Joyce Dvorak</td>
<td>Michelle Potts</td>
<td>William Hodgkinson</td>
</tr>
<tr>
<td>Sylvia Edwards</td>
<td>David Sharp</td>
<td>Catherine Sheeley</td>
</tr>
<tr>
<td>Diana Grahn</td>
<td>Michael Warren</td>
<td>Lisa Spaulding</td>
</tr>
<tr>
<td>Russell Keevy</td>
<td>Stephanie Zeriel</td>
<td></td>
</tr>
<tr>
<td>Mary Ann Lee</td>
<td>Mark Lidman</td>
<td>Blue River</td>
</tr>
<tr>
<td>Terri Lowry</td>
<td></td>
<td>Cheryl Grosser</td>
</tr>
<tr>
<td>J. Michael Raynor</td>
<td></td>
<td>Theresa Hannon</td>
</tr>
<tr>
<td>Dawnielle</td>
<td></td>
<td>Richard Higgason</td>
</tr>
<tr>
<td>Robinson-Walker</td>
<td></td>
<td>Robin Preston-</td>
</tr>
<tr>
<td>Pat McKeown Sparks</td>
<td></td>
<td>McGee</td>
</tr>
</tbody>
</table>

PREPARATORY

ENGL 28 FUNDAMENTALS OF GRAMMAR AND SENTENCE STRUCTURE I
3 credits. 3 hours. (Lecture 3 hours.)
Review of fundamental writing concepts. Mechanical, grammar and sentence structure.

ENGL 30 BASIC WRITING SKILLS
3 credits. 3 hours. (Lecture 3 hours.)
Writing clear, correct, and effective sentences and paragraphs.

NOTE: Credit for the above courses is not applicable to any degree or certificate.

COMPOSITION

ENGL 101 COMPOSITION & READING I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 with a minimum grade of C or a satisfactory score on the ASSET test.
Focus on instruction in the composing process that includes exploration of ideas through reading, methods of writing development, and use of writing conventions. Instruction takes students from reflective expression to critical analysis through writing.

ENGL 101R COMPOSITION AND READING I–REENTRY
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: ENGL 30 with a minimum grade of C or a satisfactory score on the English placement test.
Methods of rhetorical organization, sentence and paragraph development, and diction. Writing essays of various types. Basic study skills: note taking and test taking. Personal adjustment skills: time-scheduling and reduction of test anxiety. Designed especially for the adult student who has been out of school for several years.

ENGL 102 COMPOSITION & READING II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101 with a minimum grade of C.
Students are asked to analyze and evaluate persuasive essays for the writer’s use of logical thinking. Students will develop research skills for the purpose of creating documented essays that reflect critical thinking and logical argument.

ENGL 104 NEWS WRITING AND REPORTING I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ENGL 101.
Instruction and practice in writing and editing copy for college news publication. Student will contribute work for publication. Also includes analysis and discussion of professional and college newspapers.

ENGL 105 NEWS WRITING AND REPORTING II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ENGL 104.
Continued instruction and practice in writing and editing copy for college news publications. Student will contribute work for publication. Also includes learning and practicing production skills.
ENGL 106 NEWS WRITING AND REPORTING III  
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisite: ENGL 105.  
Continued instruction and practice in writing and editing copy for college news publications. Students will contribute work for publication. Also includes further development of production skills.

ENGL 107 NEWS WRITING AND REPORTING IV  
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisite: ENGL 106.  
Offers continued instruction and practice in writing and editing copy for college news publications. Student will contribute work for publication. Also includes practicing production skills and participating in the training of newer students.

ENGL 109 INTRO TO THE ELECTRONIC LIBRARY  
1 credit. 1.5 hours. (Lecture 0.5 hour. Lab 1 hour.)  
A hands-on exploration of electronic technology that teaches students information-seeking strategies needed for information literacy and critical thinking skills.

ENGL 175 TECHNICAL WRITING  
3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: ENGL 101.  
Prepares students to compose written products appropriate to contexts requiring technical communication and documentation.

ENGL 203 CREATIVE WRITING I  
3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: ENGL 101.  
Various types of imaginative writing, such as fiction, plays and/or screenplays, poetry, and creative nonfiction.

ENGL 204 CREATIVE WRITING II  
3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: ENGL 101 with a minimum grade of C or recommendation of instructor.  
May be taken without ENGL 203. Various types of imaginative writing, such as narration, short stories, poetry, and exposition.

ENGL 210 CREATIVE WRITING; WRITING CHILDREN'S LITERATURE  
3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: ENGL 102 with a minimum grade of B or recommendation of instructor.  
This class is devoted to writing various kinds of stories for children from preschool through junior high.

ENGL 121 INTRODUCTION TO DRAMA AND POETRY  
3 credits. 3 hours. (Lecture 3 hours.)  
Reading, discussion, and analysis of poetry and drama; interpretation, evaluation, and enjoyment of works within the two literary forms.

ENGL 122 FILM AS LITERATURE  
3 credits. 3 hours. (Lecture 3 hours.)  
Viewing, discussion, and analysis of films. Interpretation, evaluation, and enjoyment of works within this literary form.

ENGL 124 INTRODUCTION TO LITERATURE  
3 credits. 3 hours. (Lecture 3 hours.)  
Reading, discussion, and analysis of short stories, plays, and poems. Interpretation, evaluation, and enjoyment of these forms.

ENGL 127 MYTHOLOGY  
3 credits. 3 hours. (Lecture 3 hours.)  
The origins, purposes, and meanings of myth in past and present human experiences as seen through mythological stories and characters.

ENGL 129 DIRECTED READING  
1-3 credits. 1-3 hours. (Independent Study 1-3 hours.)  
Directed reading in a field chosen by the student with the advice and direction of the instructor. In-depth investigation of a particular author, genre, or area of literature.

ENGL 130 SHAKESPEARE  
3 credits. 3 hours. (Lecture 3 hours.)  
Study of Shakespeare life and major works. Consideration of the significance of the playwright and his plays for both Elizabethan and 21st century audiences.

ENGL 132 COLLOQUIA  
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)  
Selected topics of current interest. Through arrangement with an instructor, students or small groups of students can develop and conduct an independent research study of a special topic.

ENGL 140 SCIENCE FICTION  
3 credits. 3 hours. (Lecture 3 hours.)  
Introduction to science fiction. Its current position as an independent genre making a unique contribution to the social comment of the 21st century.

ENGL 142 WOMEN IN LITERATURE  
3 credits. 3 hours. (Lecture 3 hours.)  
Reading, discussion, and analysis of writing by women: short stories, poems, autobiographical essays, and short novels. Interpretation, evaluation, and enjoyment of these forms.

ENGL 150 WORLD LITERATURE I  
3 credits. 3 hours. (Lecture 3 hours.)  
Representative works of world literature up to 1600 AD and their significance to the 21st century reader.
ENGL 151 WORLD LITERATURE II
3 credits. 3 hours. (Lecture 3 hours.)
May be taken without ENGL 150. Representative works of the later Renaissance, the Neoclassical period, the Romantic period, Realism, Naturalism, and the contemporary period and their significance to the 21st century reader.

ENGL 155 AFRICAN-AMERICAN LITERATURE
3 credits. 3 hours. (Lecture 3 hours.)
Survey of African-American literature from various genres and historical periods.

ENGL 165 MASTERPIECES OF AMERICAN LITERATURE
3 credits. 3 hours. (Lecture 3 hours.)
Masterpieces of American literature that represent American culture and themes.

ENGL 220 BRITISH LITERATURE TO 1750
3 credits. 3 hours. (Lecture 3 hours.)
Survey of British literature from the early Middle Ages to the middle of the 18th century.

ENGL 221 BRITISH LITERATURE 1750–PRESENT
3 credits. 3 hours. (Lecture 3 hours.)
Survey of British literature from the end of the 18th century to the present.

ENGL 222 AMERICAN LITERATURE TO 1860
3 credits. 3 hours. (Lecture 3 hours.)
Survey of American literary works to the Civil War.

ENGL 223 AMERICAN LITERATURE 1860–PRESENT
3 credits. 3 hours. (Lecture 3 hours.)
Survey of American literary works from the Civil War to the present.

LANGUAGE

ENGL 111 VOCABULARY
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Improvement of general college vocabulary and specific subject-related vocabulary through the use of word analysis and context clues.

ENVIRONMENTAL HEALTH AND SAFETY

Offered at the Business and Technology College
Sybil Chandler

EHSS 100 INTRODUCTION TO ENVIRONMENTAL HEALTH AND SAFETY
3 credits. 3 hours. (Lecture 3 hours.)
This course for non-EHS students is a review of environmental and health and safety regulations published by the EPA, DOT, OSHA, and the states’ regulatory agencies. The topics will include clean air, clean water, hazardous waste, hazard communication, fall protection, recordkeeping, confined space, respiratory protection, and chemical protective clothing.

EHSS 101 HAZARDOUS MATERIAL MANAGEMENT AND EMERGENCY RESPONSE OPERATIONS
3 credits. 3 hours. (Lecture 3 hours.)
This course provides a review of hazardous waste operations, handling, and regulations for facilities and hazardous waste sites. In addition, medical monitoring programs, engineering controls, respiratory protection, personal protective equipment, sampling, air monitoring equipment, hazardous waste documentation, and incident command system (ICS) will be covered.

EHSS 110 PROPERTIES AND HAZARDS OF HAZARDOUS MATERIALS
3 credits. 3 hours. (Lecture 3 hours.)
This course covers the recognition and communication of the physical hazards (flammability, corrosivity, reactivity, toxicity) of hazardous materials based on the nine DOT hazard classes and EPA’s definition of characteristic hazardous waste.

EHSS 200 SAFETY AND HEALTH REGULATIONS AND STANDARDS
3 credits. 3 hours. (Lecture 3 hours.)
A comprehensive overview of OSHA and other health and safety regulations and guidelines. Subject areas include OSHA history, specific regulations regarding respiratory protection, protective clothing, medical monitoring, fall protection, confined space, lock out/tag out, recordkeeping and compliance techniques.

EHSS 202 TRANSPORTATION AND STORAGE OF HAZARDOUS MATERIALS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 203 or consent of faculty.
A presentation of detailed information required for the handling, transportation, and storage of hazardous materials. Methods are given for the preparation of hazardous materials prior to shipment. The distinction and regulatory differences between hazardous waste and hazardous material handling and shipment are presented in relation to different types of transportation.
EHSS 203 ENVIRONMENTAL REGULATIONS
3 credits. 3 hours. (Lecture 3 hours.)
This course provides a comprehensive overview of EPA and other environmental regulations and guidelines. Subject areas included in this course are: EPA history, specific regulations regarding surface water, air drinking water, pollution prevention, hazardous waste, Superfund, and Community Right-to-Know.

EHSS 204 EMERGENCY PREPAREDNESS AND PLANNING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200 and EHSS 203.
This course will provide a broad coverage of proactive and regulatory approaches to emergency planning. Analysis techniques, methods of auditing, and conducting hazards assessments are covered. Incident prevention and life and cost savings are emphasized. Subject materials are presented for students working in industry as well as the public sector of emergency planning and incident response. Environmental health and safety liabilities are addressed in terms of incident prevention and proper management.

EHSS 205 PRINCIPLES OF INDUSTRIAL HYGIENE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200 and either CHEM 102, CHEM 105, or CHEM 111.
This course is presented to provide the fundamentals of hazards control and industrial hygiene to environmental health and safety management students. Information is given in key areas that cover hazard recognition, hazard evaluation, hazards control, industrial hygiene, governmental regulations, and employee training.

EHSS 210 INCIDENT AND ACCIDENT INVESTIGATION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200.
Fundamentals and techniques of investigating accidents and incidents.

EHSS 211 WORKERS COMPENSATION LEGISLATION FOR EHS
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to provide EHS students a comprehensive study of legislation and standards designed to protect the worker.

EHSS 213 EHS PROGRAM DEVELOPMENT AND MANAGEMENT
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200 and 203.
This course is designed to merge all the former EHS courses into a cohesive and comprehensive unit. This course outlines the principles of program development and implementation for all EHS type programs including training, emergency preparedness, waste minimization, workers compensation, air and water quality, and compliance. This course will cover the development of materials, techniques and procedures in the implementation of EHS programs and their application in a variety of occupational settings.

EHSS 217 CONCEPTS OF WASTE MINIMIZATION, RECYCLING, AND POLLUTION PREVENTION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 203.
This course is presented to familiarize EHS students with options available to properly minimize, recycle, or dispose of wastes. Information is presented from the perspective of reducing wastes by better materials management. Comparisons between management of hazardous wastes and nonhazardous wastes and methods of disposal are covered. Emphasis is placed upon economical considerations for recovery and recycling of materials used in industry and methods to reduce materials placed in landfills. Key topics are given to show methods of making money from materials that cost to be destroyed.

EHSS 218 INDUSTRIAL PROCESS AND HAZARD CONTROL
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200.
This course is presented to provide an overview of health and safety variables involved in common processes used in industry today. The EHS student is provided with information from the perspective of controlling and managing mechanical, electrical and chemical hazards associated with processes and the by-products from those processes. Students will work together to address common problems in process control and become aware of potential liabilities that employers endure in today’s industrial climate.

EHSS 220 AIR QUALITY MANAGEMENT
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 203.
This course serves as an introduction to all aspects of air pollution control and maintaining air quality. Major areas of study will include: nature and origin of air pollution, air pollution control methods and strategies, dispersion modeling, assessing/monitoring air quality and air quality programs and requirements.

EHSS 225 WATER QUALITY MANAGEMENT
3 credits. 3 hours. (Lecture 3 hours.)
This course provides an overview of regulatory programs and requirements of the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA); typical treatment processes for drinking water, municipal and industrial wastewater and hazardous wastes; and basic permits for storm water and effluent. The course will provide an overview of the spill prevention control and countermeasure (SPCC) plans. Students will develop a practical understanding of advantages and disadvantages of established and new treatment processes, conduct case studies, evaluate treatment options.
FASHION DESIGN AND MERCHANDISING

Offered at Penn Valley

**FASH 110 FASHION BUYING**
3 credits. 3 hours. (Lecture 3 hours.)
Fashion products, industry trends, production, and merchandising and how they affect fashion buying.

**FASH 111 FASHION AND CLOTHING SELECTION**
3 credits. 3 hours. (Lecture 3 hours.)
Elements and principles of design in clothing selection. Introductory study of factors that affect fashion, trends and consumer purchases.

**FASH 112 CLOTHING CONSTRUCTION**
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Selection and use of equipment and commercial patterns. Construction of clothing for the individual. Fabric selection, basic fitting, and sewing techniques.

**FASH 118 COSTUME HISTORY**
3 credits. 3 hours. (Lecture 3 hours.)
The history of clothing styles from the ancient world to the present. Influence on current fashion styles.

**FASH 119 FASHION PROMOTION**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: FASH 111.
Basic visual presentation techniques using design concepts. Window and store displays. Student production fashion show.

**FASH 211 BASIC FLAT PATTERN DRAFTING**
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: FASH 112.
Basic principles and methods of flat pattern drafting. Development of skirt, bodice, pant and dress slopers; in full scale sizes. Cut, sew and fit muslin proto types. Original design development from basic sloper. Pattern making process and design room techniques.

**FASH 212 TEXTILES**
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to fibers, textiles and all aspects of textile manufacturing process.

**FASH 213 ADVANCED CLOTHING CONSTRUCTION**
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: FASH 111 and FASH 112 or approval of the instructor.
The construction of a tailored garment. Identification and treatment of figure difficulties and fitting techniques.

**FASH 214 FASHION DESIGN PORTFOLIO**
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ART 130 and FASH 211.
Develop original line of clothing. Complete design portfolio. Draping, illustration, flat pattern method and garment construction. Fashion designer and the role in the fashion industry.

**FASH 218 FASHION FIELD EXPERIENCE I**
3 credits. 16 hours. (Lecture 1 hour. Field Studies 15 hours.)
On-the-job training in fashion merchandising.

**FASH 219 FASHION FIELD EXPERIENCE II**
3 credits. 16 hours. (Lecture 1 hour. Field Studies 15 hours.)
Prerequisite: FASH 218.
Advanced on-the-job training in fashion merchandising.

**FASH 250 COMPUTER AIDED FASHION DESIGN**
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: FASH 211 or approval of instructor.
Fashion design using the computer. Learning to apply flat pattern techniques, grade patterns, and make markers on the computer.

**FASH 251 APPAREL DESIGN PRODUCTION**
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: FASH 112, FASH 211.
Facets of the apparel industry including manufacturing. Garment mass production. Basic training on certain apparel production manufacturing and computer applications.

FIRE SCIENCE TECHNOLOGY

Offered at Blue River

**FSTE 169 FIRE PREVENTION**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: Involvement in fire prevention activities approved by the instructor.
This course is designed to teach fire prevention by identifying conditions that could cause fire; corrective actions and cooperation skills between the fire department and community.

**FSTE 170 HAZARDOUS MATERIALS AWARENESS AND OPERATIONS**
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to provide instruction in the handling of hazardous materials in an emergency situation. Upon successful completion of this program and the state exam, the student will become state certified in hazardous materials awareness and operations.

**FSTE 172 FIREFIGHTING TACTICS AND STRATEGY**
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to prepare a fire officer to be able to provide strategies and tactics at a structure fire, fully utilizing available resources in a safe and efficient manner.

**FSTE 179 FIREFIGHTER SUPPRESSION**
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
This course is designed to instruct the student in all phases of basic firefighter techniques. The student will be eligible for state certification upon completion of the course and successful completion of the state certification exam.
FSTE 180 FIRE ADMINISTRATION
3 credits. 3 hours. (Lecture 3 hours.)
Instruction on fire department and fire company organization, personnel administration, duties and responsibilities of company officers, leadership, supervision, and control. Development of communication, records, and reports.

FSTE 182 FIRE SERVICE INSTRUCTIONAL METHODOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
“How to” and “what to” teach in the fire service from the company level to the department level.

FSTE 183 EMERGENCY MANAGEMENT AND THE FIRE SERVICE
3 credits. 3 hours. (Lecture 3 hours.)
This course describes how emergency and disaster incidents should be managed, by immersing the student in the incident and unifies management systems. It also provides the student with a detailed look at disaster mitigation planning.

FSTE 189 FIREMANSHP IN ADMINISTRATION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: FSTE 179 Fire Fighter I.
This course is designed to instruct the student in all phases of advanced fire fighting skills and techniques. The student will be eligible for state certification upon completion of the course and successful completion of the state certification exam.

FSTE 192 SUPPRESSION AND DETECTION SYSTEMS
3 credits. 3 hours. (Lecture 3 hours.)
This course will provide the student with basic information concerning water and its use as a tool for combating fire, especially in fixed extinguishing systems. It will also provide information on other types of fixed extinguishing systems, as well as how all fixed systems detect the fires they are built to extinguish.

FSTE 193 FIRE SERVICE LAW
3 credits. 3 hours. (Lecture 3 hours.)
As with all parts of society, the fire service is becoming increasingly embroiled in litigation and potential litigation. This course will lay the groundwork for fire service managers to provide service to its citizens with knowledge of potential legal problems that need to be avoided.

FSTE 200 FIRE SERVICE SUPERVISION
3 credits. 3 hours. (Lecture 3 hours.)
This course will involve the student in learning proper methods of leadership and supervision as it pertains to today’s first line fire service supervisor. It will encompass basic supervisory techniques and help the student to apply them to their special problems in supervising in today’s fire service.

FSTE 201 THE FIRE SERVICE MANAGER
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: FSTE 200.

This course is the second of three courses designed to provide information fire personnel in the areas of supervision, management and administration. It shows the history of general management principles, and how they fit in today’s fire service. It also provides basic information on the information on the variety of areas that a fire service manager may become a part of as a manager.

FSTE 202 FIRE SERVICE ADMINISTRATION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: FSTE 200 & 201.
This is the third course in the fire service management series. It delves into the needs of the fire department organization as a whole. It discusses the needs of all parts of the department, as well as how the department fits in to the larger governance structure. It also discusses the need to provide better information and service to the citizens it serves.

FSTE 203 MANAGING IN TODAY’S FIRE SERVICE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: FSTE 200 and 201, and ENGL 101.
The student shall have also completed a minimum of 45 credit hours of course work in the Fire Science Program. This course is an internship. The student will meet with various members of a fire department management team. The student will choose an area of the organization and provide an in-depth report on its functions, process, and operations. It will compare and contrast this area with studies accomplished in class as well as other organizations of similar size. This report will form the backbone of this student’s final evaluation.

FOREIGN LANGUAGE AND LITERATURE

<table>
<thead>
<tr>
<th>Longview</th>
<th>Maple Woods</th>
<th>Penn Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carol Kuznacic</td>
<td>Mary Ann Blitt</td>
<td>Carole Gilmore</td>
</tr>
<tr>
<td>Donald Swanson</td>
<td>Blue River</td>
<td>Jennifer Rogers</td>
</tr>
</tbody>
</table>

FREN 101 ELEMENTARY FRENCH I
5 credits. 5 hours. (Lecture 5 hours.)
An introduction to French. Develop basic communication skills (listening, reading, writing, and speaking). Informal study of the culture of French-speaking countries.

FREN 102 ELEMENTARY FRENCH II
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: FREN 101, Elementary French I.
Grammar essentials. Develop communication skills (listening, reading, writing, and speaking). Informal study of the culture of French-speaking countries.
FREN 203 INTERMEDIATE FRENCH
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: FREN 102.
Reading selections from French writers. Grammar review, vocabulary building, and conversational practice.

FREN 204 CONTEMPORARY FRENCH LITERATURE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: FREN 203.
Drama, fiction, and poetry by major French writers of the 20th century.

GERMAN

GERM 101 ELEMENTARY GERMAN
5 credits. 5 hours. (Lecture 5 hours.)
Introduction to speaking, reading, and writing German.

GERM 102 GERMAN II
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: GERM 101.
Grammar essentials. Introduction to German culture and history.

GERM 203 INTERMEDIATE GERMAN
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: GERM 102.
Reading selections from contemporary German writers.

GERM 228 DIRECTED READING
3 credits. 3 hours. (Independent Study 3 hours.)
Prerequisite: Approval of the instructor.
Reading and discussion of works chosen with advice and direction of the instructor.

SPANISH

SPAN 101 ELEMENTARY SPANISH I
5 credits. 5 hours. (Lecture 5 hours.)
An introduction to Spanish. Course develops basic communication skills: Listening, reading, writing, and speaking. Informal study of the culture of Spanish-speaking countries.

SPAN 102 ELEMENTARY SPANISH II
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: SPAN 101, Elementary Spanish, or SPAN 111, Accelerated Elementary Spanish I.
Grammar essentials. In addition, course develops communication skills: Listening, reading, writing and speaking. Informal study of the culture of Spanish-speaking countries.

SPAN 203 INTERMEDIATE SPANISH
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPAN 102 or two or more years of high school Spanish.
Reading selected modern works in Spanish. Conversation and composition. Grammar review.

SPAN 204 INTERMEDIATE SPANISH II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Thirteen credits of college Spanish or three or more years of high school Spanish.
Continuation of SPAN 203. Emphasis on developing communication and reading comprehension skills.

SPAN 207 SPANISH COMPOSITION AND CONVERSATION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Spanish 102 or three years of high school Spanish or instructor approval.
Students will improve their communication skills and knowledge of Spanish-speaking cultures through in-class discussions and written compositions.

SPAN 212 SPANISH IMMERSION I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: SPAN 101 or one year of high school Spanish or instructor approval.
Students will broaden their language skills while at the same time experiencing a new culture through a total immersion program in a Spanish-speaking country. Special emphasis will be placed on spoken communication while expanding listening, reading and writing skills. Students will be tested and placed into the appropriate level of instruction. All classes are conducted in Spanish by native Spanish speakers.

SPAN 214 SPANISH IMMERSION II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: SPAN 212.
Students will broaden their language skills while at the same time experiencing a new culture through a total immersion program in a Spanish-speaking country. Special emphasis will be placed on spoken communication while expanding listening, reading and writing skills. Students will be tested and placed into the appropriate level of instruction. All classes are conducted in Spanish by native Spanish speakers.

GEOGRAPHY

Blue River  Longview  Maple Woods
Christopher Johnson  Carl Priesendorf  Virginia Ragan

GEOG 104 PRINCIPLES OF PHYSICAL GEOGRAPHY
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Survey of the characteristics and distribution of the components of the earth’s natural environment, using basic meteorology, climatology, vegetation, soil, map studies, geomorphology, surficial processes and the relationship to human activity. Optional field trips.

GEOG 105 WORLD GEOGRAPHY
3 credits. 3 hours. (Lecture 3 hours.)
Introduction and application of geographic principles to the survey of the major world regions: Europe, Asia, Africa, Middle East, North America, and the Pacific World.
GEOG 110 METEOROLOGY
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Introduction to the structure, composition, and interaction of the atmosphere with emphasis on atmospheric processes and related phenomena, storm systems, weather information resources, basic forecasting, equipment and techniques of meteorologists, and climate variability.

GEOG 111 GEOGRAPHY OF THE WESTERN WORLD
3 credits. 3 hours. (Lecture 3 hours.)
A regional survey of North and South America, Europe, Russia, Australia, and New Zealand. Emphasis on each region’s unique attributes and how it fits into a larger international context. Current events are highlighted in the development of a geographic perspective.

GEOG 112 GEOGRAPHY OF THE EASTERN WORLD
3 credits. 3 hours. (Lecture 3 hours.)
A regional survey of the Middle East, Africa, and Asia. Emphasis on each region’s unique attributes and how it fits into a larger international context. Current events are highlighted in the development of a geographic perspective.

GEOG 113 CULTURAL GEOGRAPHY
3 credits. 3 hours. (Lecture 3 hours.)
Addresses techniques of geographic interpretation and cultural and political diversity, as well as their relationship to physical environment. Covers the availability of water, food, and other natural resources; language; religion; industry; spatial relationships of cities and settlements; population; ethnic characteristics; migration; folk and popular cultures; and the effects of globalization.

GEOG 207 GEOGRAPHY OF THE UNITED STATES AND CANADA
3 credits. 3 hours. (Lecture 3 hours.)
A study of the unique physical and cultural aspects of regions within the United States and Canada. Includes map interpretation, land features, climate, settlement patterns, cities, industry, natural and recreational resources, comparison of economic and political systems.

GEOLOGY

Blue River Longview Maple Woods
Christopher Johnson Carl Priesendorf Virginia Ragan

GEOL 101 PHYSICAL GEOLOGY
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Study of plate tectonics, rocks, minerals, volcanoes, earthquakes, resources, geologic time, and the processes that affect the surface and the interior of the earth. Laboratory analysis of rocks and minerals. Interpretation of topographic and geologic maps as investigative tools. Optional field trips.

GEOL 102 HISTORICAL GEOLOGY
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: GEOL 101 or approval of the instructor. History of the earth from its origin as a planet to the present time. Succession of geologic formations and their contained fossils in revealing the evolution of the earth and forms of life throughout the four and a half billion years of geologic time. Laboratory analysis of geologic problems and identification of fossils. Optional field trip.

GEOL 103 ENVIRONMENTAL GEOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Introduces fundamental concepts and philosophy of environmental study; discusses natural hazards with underlying causes and human interaction with the environment; applies environmental concepts to problems of pollution, garbage, and hazardous waste; explores the source, availability, and intelligent use of geologic resources; suggests techniques for hazard prevention and remediation; addresses current media topics concerning the environment.

GEOL 199 SPECIAL TOPICS
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
A focused study of a topic in geology. May take the form of individual research projects based on library, internet, and/or oral presentation information; field or laboratory project; and short courses such as, but not limited to, topics in environmental geology, national parks, earthquakes, rock and minerals.

GEOL 214 GEOLOGY FIELD STUDY IN THE MIDWESTERN U.S.
1-3 credits. 1-3 hours. (Field Studies 1-3 hours.)
Recommended background course: GEOL 101 or approval of instructor. Study of selected geological locations in Missouri during a five-day field trip. Location of field trip varies. Physical features. Collection of Geologic materials.
GEOL 215 GEOLOGY FIELD STUDY
3 credits. 3 hours. (Field Studies 3 hours.)
Prerequisite: GEOL 101, Physical Geology, or approval of the instructor.
Study of selected locations in the Western United States during a field trip. Location of field trip varies. Apply basic geologic principles and collect rock and mineral samples.

GUIDED STUDIES

Offered at Penn Valley

GUID 100 PERSONAL SKILLS I
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Examination of the process; analysis of emotional and behavioral responses; comparison of coping styles and techniques; examination and evaluation of the decision-making process; and self-assessment of life planning and goal-setting.

GUID 108 ACADEMIC SUCCESS
3 credits. 3 hours. (Lecture 3 hours.)
Students taking this course will participate in activities designed to identify components of the learning process and personal resources for attitude and motivation management. Students will apply specific study strategies to design effective personal learning and study strategies for academic success.

GUID 109 CAREER EXPLORATION SEMINAR
1 credit. 1 hour. (Lecture 1 hour.)
Exploration of factors affecting career choice. Identification and discussion of individual values, interests and abilities related to occupations. Overview of the world of work as it relates to career and academic planning. Expansion of career development knowledge, skills and use of resources.

GUID 113 ORIENTATION
1 credit. 1 hour. (Lecture 1 hour.)
Comparison of the academic and social demands of college; utilization of campus services and facilities; utilization of college information resources; and exploration and identification of college opportunities to enhance and prepare for current and future life roles.

GUID 114 EDUCATIONAL OPTIONS
1 credit. 1 hour. (Lecture 1 hour.)
Exploration of the rights and responsibilities of students in the college setting; demonstration of self-advocacy, negotiation, and problem solving skills; design and implementation of action plans; and identification of personal learning styles, strengths, and compensatory strategies.

GUID 115 STRESS, STRENGTH, AND SATISFACTION
2 credits. 2 hours. (Lecture 2 hours.)
In-depth examination of sources of personal stress in a changing world. Extended self-assessment of external and internal stressors and useful coping strategies. Application and evaluation of coping strategies/lifestyle choices with an emphasis on recognition of individual strengths. Specific training in healthy practices to promote increased quality of life.

GUID 116 STRESS MANAGEMENT
1 credit. 1 hour. (Lecture 1 hour.)

GUID 150 CAREER PLANNING & EMPLOYMENT STRATEGIES
3 credits. 3 hours. (Lecture 3 hours.)
Exploration of factors affecting career choice. Identification and discussion of individual values, interests, and abilities related to occupations. Overview of the world as it relates to career, academic planning and job seeking strategies including resumes, cover letter and interviewing techniques. Learn research techniques for exploring occupations and employment opportunities.

GUID 152 EMPLOYMENT STRATEGIES
1 credit. 1 hour. (Lecture 1 hour.)

HEALTH INFORMATION TECHNOLOGY

Offered at Penn Valley
Tracy Rockwell Jennifer Scott

HITE 101 INTRODUCTION TO THE MEDICAL RECORDS PROFESSION
2 credits. 2 hours. (Lecture 2 hours.)
Orientation to the medical records profession and the supporting professional organization. History and evolution of health care delivery, facilities, and practitioners. Supervisory functions of the medical record department.

HITE 102 HEALTH RECORDS SYSTEMS, ANALYSIS AND CONTROL
3.5 credits. 4.5 hours. (Lecture 2.5 hours. Laboratory 2 hours.)
Content, storage, retrieval, control, and retention of medical records, especially hospital records. Forms design and control, microfilming, and computer applications for medical record departments.

HITE 103 MEDICAL TERMINOLOGY FOR MEDICAL RECORDS I
3 credits. 3 hours. (Lecture 3 hours.)
Professional language of medicine. Analysis of medical terms by roots and combining forms. Disease processes, diagnostic and operative procedures for each system of the body. Selected medical specialties.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours (Lecture/Laboratory/Field Studies)</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HITE 106</td>
<td>HEALTH CARE STATISTICS</td>
<td>3</td>
<td>3.5 hours (2.5 hours/Laboratory 1 hour)</td>
<td>Prerequisite: HITE 102 or approval of the instructor.</td>
<td>Vital health statistics, their uses and values. Abstracting and analysis of data from medical records, collection of data from other sources, and methods of presenting the information.</td>
</tr>
<tr>
<td>HITE 108</td>
<td>LEGAL ASPECTS OF MEDICAL RECORDS</td>
<td>2</td>
<td>2 hours (Lecture 2 hours.)</td>
<td>Prerequisite: HITE 102 or approval of the instructor.</td>
<td>Legal principles applied to the health care professions. Confidentiality of the medical record, informed consent, the medical record as a legal document, release of clinical information, response to subpoena, and testimony.</td>
</tr>
<tr>
<td>HITE 109</td>
<td>DIRECTED PRACTICE I</td>
<td>2.5</td>
<td>5 hours (Laboratory 2 hours/Field Studies 3 hours)</td>
<td>Prerequisite: BIOL 108 and HITE 102.</td>
<td>Supervised on-the-job training in a medical records department. Supervised discussion of clinical experiences.</td>
</tr>
<tr>
<td>HITE 110</td>
<td>PHARMACOLOGY</td>
<td>1.5</td>
<td>2 hours (Lecture 1 hour/Laboratory 1 hour)</td>
<td>Prerequisite: BIOL 108 and HITE 103.</td>
<td>Introduction to basic pharmacology with a body systems approach to disease.</td>
</tr>
<tr>
<td>HITE 111</td>
<td>INTRODUCTION TO MEDICAL INSURANCE &amp; OFFICE PROCEDURES</td>
<td>1.5</td>
<td>2 hours (Lecture 1 hour/Laboratory 1 hour)</td>
<td>Prerequisite: HITE 103.</td>
<td>An overview of medical office systems and administrative procedures, with emphasis on insurance billing, compliance with regulatory agencies, and technology tools, including medical transcription.</td>
</tr>
<tr>
<td>HITE 200</td>
<td>INTRODUCTION TO CLASSIFICATION SYSTEMS</td>
<td>1</td>
<td>1 hour (Lecture 1 hour.)</td>
<td>Prerequisite: None.</td>
<td>Classification systems used to organize clinical data in health care. ICD-9-CM classification system will be introduced.</td>
</tr>
<tr>
<td>HITE 201</td>
<td>QUALITY MANAGEMENT</td>
<td>3</td>
<td>3.5 hours (Lecture 2.5 hours/Laboratory 1 hour)</td>
<td>Prerequisite: HITE 108 or approval of the instructor.</td>
<td>Methods of assessing and improving quality in a health care setting. Concept of continuous quality improvement. Compliance with guidelines of regulatory and accrediting agencies.</td>
</tr>
<tr>
<td>HITE 202</td>
<td>CLASSIFICATION SYSTEMS, NOMENCLATURES, INDEXES, AND REGISTERS I</td>
<td>4</td>
<td>5.5 hours (Lecture 2.5 hours/Laboratory 3 hours)</td>
<td>Prerequisite: HITE 200.</td>
<td>Nomenclatures and classification systems for coding and indexing diagnoses and procedures with special emphasis on ICD-9-CM.</td>
</tr>
<tr>
<td>HITE 203</td>
<td>DIRECTED PRACTICE II</td>
<td>2</td>
<td>4 hours (Laboratory 1 hour/Field Studies 3 hours)</td>
<td>Prerequisite: HITE 202 with a grade of C or better or concurrent enrollment in HITE 202.</td>
<td>Supervised learning experience in a medical records department under the direction of a credentialed professional involving a variety of procedures including coding and abstracting health information, medical transcription, and release of information. Supervised discussion of clinical experiences.</td>
</tr>
<tr>
<td>HITE 206</td>
<td>SPECIALIZED HEALTH RECORDS SYSTEMS</td>
<td>2</td>
<td>2 hours (Lecture 2 hours.)</td>
<td>Prerequisite: BIOL 108 and HITE 202.</td>
<td>Specialized health care systems. Record maintenance. Requirements of accrediting and regulating agencies. Specialized health information registers.</td>
</tr>
<tr>
<td>HITE 207</td>
<td>CLASSIFICATION SYSTEMS, NOMENCLATURES, INDEXES, AND REGISTERS II</td>
<td>3</td>
<td>4 hours (Lecture 2 hours/Laboratory 2 hours)</td>
<td>Prerequisite: BIOL 108 and HITE 202.</td>
<td>Nomenclatures and classification systems for coding and indexing diagnoses and procedures with emphasis on specialized health care record systems. Impact of DRGs on the coding function.</td>
</tr>
<tr>
<td>HITE 208</td>
<td>DIRECTED PRACTICE III</td>
<td>2</td>
<td>4 hours (Laboratory 2 hours/Field Studies 2 hours)</td>
<td>Prerequisite: HITE 203.</td>
<td>Supervised on-the-job instruction about health record systems in specialized health care facilities. Supervised discussion of directed practice experiences.</td>
</tr>
<tr>
<td>HITE 210</td>
<td>CLASSIFICATION SYSTEMS AND NOMENCLATURES FOR AMBULATORY CARE</td>
<td>3</td>
<td>4 hours (Lecture 2 hours/Laboratory 2 hours)</td>
<td>Prerequisite: HITE 200; BIOL 108 with a grade of C or better or concurrent enrollment in BIOL 108.</td>
<td>Outpatient coding, classification and payment systems. Assignment of CPT-4 codes to procedures and services. Common outpatient procedures. Role of health information technologist in ambulatory coding and billing.</td>
</tr>
</tbody>
</table>
HITE 211 ORGANIZATION AND ADMINISTRATION IN HEALTH INFORMATION
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisite: HITE 201, 202, and 203.
General principles of management and organization as applied to health information settings. Budget development and control, personnel recruitment and retention, performance appraisal, and progressive discipline. Office design, productivity monitoring, work simplification, job analysis and job descriptions, and quality management.

HEATING, VENTILATION, AND AIR CONDITIONING

Offered at the Business & Technology College
Paul Harding
Jess Harding

HVAC 109 ELECTRICITY FOR HVAC/R TECHNICIANS
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Beginning and advanced AC and DC theory, control relays, motors, compressors. Assembly and use of all major HVAC components. Construction and use of wiring diagrams.

HVAC 111 PRINCIPLES OF HEATING, VENTILATION, AND AIR CONDITIONING
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to the basic elements of heating, ventilation, and air conditioning systems. Heat laws, psychometrics, heating and cooling load estimating, design, and distribution.

HVAC 120 FUNDAMENTALS OF REFRIGERATION
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Basic principles of refrigeration and their application in domestic refrigeration. Development of manipulative skills required for the installation, maintenance, and servicing of domestic equipment.

HVAC 135 RESIDENTIAL HEATING A/C I
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: HVAC 109 (or take concurrently), HVAC 111, 120, 230 (or take concurrently).
Installation of residential systems; tools, equipment, uniform mechanical code. Troubleshooting and servicing standard efficiency units.

HVAC 136 RESIDENTIAL HEATING AND AIR CONDITIONING II
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: HVAC 135.

HVAC 201 STATIONARY ENGINEERING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HVAC 111 and 120.
Principles and safe operation of low pressure and high pressure boilers. The course will prepare students for the basic licensing examination for stationary engineering.

HVAC 205 ADVANCED ENERGY SYSTEMS MANAGEMENT
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: HVAC 221 and MATH 103 and 104 or MATH 106.
An overview of modern building climate management. Building operation and maintenance. Demands of equipment and weather conditions. Record keeping and performance monitoring. Increased efficiency and energy cost reduction.

HVAC 211 DESIGN AND ESTIMATING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HVAC 111.
Design and function of air conditioning ductwork. Calculations for proper distribution. Construction and installation of duct systems for residential and commercial heating and cooling.

HVAC 221 COMMERCIAL REFRIGERATION
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: HVAC 120 and 109.
The refrigeration cycle applied to commercial uses. Sizing, selection, installation, and servicing of commercial and industrial refrigeration equipment.

HVAC 230 DESIGN & DISTRIBUTION
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: HVAC 111.
Study of the design, installation, balancing, and selection of components for air distribution systems. Lab work includes planning, layout, and fabrication of duct work.

HVAC 250 CO-OP WORKSTUDY
3 credits. 7 hours. (Lecture 1 hour. Field Studies 6 hours.)
Prerequisite: Must be approved by program coordinator.
Must have a minimum of 15 credit hours in HVAC courses. Advanced student gets on-the-job experience supervised by area employers. Objectives are directed by classroom sessions and job activities.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 120</td>
<td>AMERICAN HISTORY I</td>
<td>3</td>
<td>3</td>
<td>Prerequisites: There are no prerequisites for this course, and corequisites exist only if this course is taken as part of a learning community at Longview, Penn Valley, Blue River or Maple Woods. Survey of American history and institutions from pre-Columbian times through the Civil War. Examines economic, social, cultural, intellectual, and political development. Federal and Missouri constitutions.</td>
</tr>
<tr>
<td>HIST 121</td>
<td>AMERICAN HISTORY II</td>
<td>3</td>
<td>3</td>
<td>Prerequisites: There are no prerequisites for this course, and corequisites exist only if this course is taken as part of a learning community at Longview, Penn Valley, Blue River or Maple Woods. Survey of American history and institutions from the Civil War to the present. Examines economic, social, cultural, intellectual, and political development. Federal and Missouri constitutions.</td>
</tr>
<tr>
<td>HIST 130</td>
<td>WOMEN IN AMERICAN HISTORY</td>
<td>3</td>
<td>3</td>
<td>This course focuses on the roles women have played in the history of the United States. It traces the attitude towards women from antiquity through the revolutionary era to the present day. Students will examine the general demographic, economic and social changes affecting women of all classes.</td>
</tr>
<tr>
<td>HIST 133</td>
<td>WESTERN CIVILIZATION I</td>
<td>3</td>
<td>3</td>
<td>Survey of Western Civilizations through the classical civilizations of Greece and Rome and the Middle Ages to the Renaissance. Brief comparative summaries of Near Eastern and Oriental civilizations.</td>
</tr>
<tr>
<td>HIST 134</td>
<td>WESTERN CIVILIZATION II</td>
<td>3</td>
<td>3</td>
<td>Survey of European history from the Renaissance to present. Emphasis on Renaissance and Reformation, the emergence of the modern state, industrialism, nationalism, and the problems posed by war, revolution, and imperialism in the 20th century. Relationship of European civilization to the developments in the non-European world.</td>
</tr>
<tr>
<td>HIST 140</td>
<td>AFRICAN AMERICAN HISTORY</td>
<td>3</td>
<td>3</td>
<td>Economic, social, political, and religious aspects of the development of black American culture.</td>
</tr>
<tr>
<td>HIST 145</td>
<td>SURVEY OF ENGLISH HISTORY</td>
<td>3</td>
<td>3</td>
<td>Survey of the evolution of England from barbarism to world power. Political, economic, religious, and literary development.</td>
</tr>
<tr>
<td>HIST 199</td>
<td>SPECIAL TOPICS IN HISTORY</td>
<td>1-3</td>
<td>1-3</td>
<td>Prerequisites: ENGL 101. Guided readings and discussion in history. Topics and material will vary by instructor each semester. Specific reading lists, activities and writing assignments to be determined by the instructor. This course is intended to go into detail and research beyond the material covered in the United States or Western Civilization survey courses.</td>
</tr>
<tr>
<td>HIST 202</td>
<td>HISTORY AND MATERIAL CULTURE</td>
<td>3</td>
<td>3</td>
<td>Prerequisite: American History I or II or instructor consent. Contributions of material culture to our understanding of history, including insights into the lives of those who did not leave extensive written records. Consideration of aspects of material culture, drawing largely on examples from American history: architecture, domestic utensils and furnishings, clothing, tools, and agricultural practices; the process of handcraft technology and products; the impact of modernization upon both process and product.</td>
</tr>
<tr>
<td>HIST 210</td>
<td>MISSOURI HISTORY</td>
<td>3</td>
<td>3</td>
<td>A study of Missouri history from the pre-territorial period to the present. It studies the indigenous people of Missouri, the exploration of Missouri, and its colonial experience. The evolution of Missouri’s social, economic, and political systems from the territorial period to the present is studied.</td>
</tr>
<tr>
<td>HIST 221</td>
<td>RUSSIAN HISTORY</td>
<td>3</td>
<td>3</td>
<td>Survey of Russian history: cultural, social and political development. brief introduction to ancient and medieval Russia with greater emphasis on the Tsarist and Soviet periods.</td>
</tr>
<tr>
<td>HIST 226</td>
<td>AMERICAN FRONTIERS</td>
<td>3</td>
<td>3</td>
<td>Survey of the American frontier experience 1500-1890. Exploration and settlement by Spanish, French, English, and Americans. Relationships between the settlers and the Indians. Special emphasis on the frontier in Missouri.</td>
</tr>
</tbody>
</table>
HOSPITALITY MANAGEMENT

Offered at Johnson County Community College
Coordinated throughout MCC

HMGT 120  FOOD SERVICE SANITATION
1 credit. 1 lecture hour.
Upon successful completion of this course, the student should be able to understand and describe the basic principles of providing and serving safe food. The student should also understand all safe food-handling procedures necessary to manage a sanitary and safe food service operation.

HMGT 121  HOSPITALITY MANAGEMENT FUNDAMENTALS
3 credits. 3 lecture hours.
Prerequisite: Admission to the Hospitality Management program.
This is an overview of the organization of the food service and public lodging industries and departmental functions, the positions of the industries in the American economic system, and the functions and limitations of these types of establishments.

HMGT 123  BASIC FOOD PREPARATION
3 credits. 3 lecture hours.
Upon successful completion of this course, the student should be able to demonstrate skills in grilling, frying, broiling, sautéing, recipe conversion, salad preparation and the production of the five basic sauces. Also, the student should be able to operate the food service equipment used in commercial kitchens.

HMGT 126  FOOD MANAGEMENT
4 credits. 7 hours.
Prerequisites: HMGT 123, 145, 230, and 277.
Upon successful completion of this course, the student should be able to explain the components of menu planning and the styles of food service used for various occasions—buffet service and French, Russian and American service. The student will take part in the operation of the campus restaurant and will be involved in food preparation, services, sales promotion, purchasing, and costing.

HMGT 128  SUPERVISORY MANAGEMENT
3 credits. 3 lecture hours.
Upon successful completion of this course, the student should be able to analyze and explain basic supervisory management skills, management styles, motivation with emphasis on human relations, delegation, training, evaluation, and communication. In addition, the hiring and firing functions within FLSA guidelines will be covered.

HMGT 130  HOSPITALITY LAW
3 credits. 3 lecture hours.
This course offers an overview of product and dram shop liability as well as of the various areas of federal and state legislation that regulate the hospitality industry. Emphasis will be on familiarizing the hospitality manager with ways to avoid costly and time-consuming lawsuits. A manager’s or owner’s legal rights and responsibilities will also be discussed. Upon successful completion of this course, the student should be able to recognize potential legal problems.

HMGT 132  SEMINAR IN HOUSEKEEPING OPERATIONS
3 credits. 3 lecture hours.
This course presents a systematic approach to managing housekeeping operations in the hospitality industry. The course will also include related health department regulations. While enrolled in this class, a student must work a minimum of 15 hours a week in a lodging operation. The work experience is concurrent but does not necessarily concentrate on the subject being taught in the course.

HMGT 145  FOOD PRODUCTION SPECIALTIES
3 credits. 3.5 hours. (Lab: 2 hours)
Prerequisite: HMGT 123.
This course covers the fundamentals of convenience baking, hors d’oeuvre and cold kitchen preparation. It provides a knowledge and basic skills in the pastry kitchen where the student can handle convenience products from the frozen or dried state and produce finished pies, cakes and dessert items. It provides a further knowledge and skill in the garde manger kitchen of making salads, cocktail hors d’oeuvres, cocktail sandwiches and making economic purchases for gourmet foot items. In addition, the student will learn how to make intermezzo ices, identify different cheeses, design and carve ice blocks for display, and learn how to make a general plan for a buffet.

HMGT 203  HOTEL SALES AND MARKETING
3 credits. 3 lecture hours.
Prerequisites: HMGT 121.
Upon successful completion of this course, the student should be able to understand and describe the hotel sales and marketing functions. The course will focus on practical sales techniques for targeting markets.

HMGT 221  DESIGN TECHNIQUES
3 credits. 3 lecture hours.
Prerequisites: HMGT 123 and 271.
This course includes detailed information about food service design that covers layout, design, and equipment specifications. Upon successful completion of this course, the student should be able to understand and develop a food service design concept, including the menu, the location, and the type of clientele expected.

HMGT 223  FUNDAMENTALS OF BAKING
3 credits. 3 lecture hours.
Prerequisite: HMGT 145.
Upon successful completion of this course, the student should be able to demonstrate an understanding of bake shop production as it relates to the basic principles of ingredients, measurements, mixing, proofing, baking,
Upon successful completion of this course, the student should be able to demonstrate a working knowledge of the cold kitchen and modernize traditional methods of salad preparation.

**HMGT 226 GARDE-MANGER**
3 credits. 3.5 hours. (Lab: 2.5 hours)
*Prerequisite: HMGT 123 and 145.*
This course is designed for the student to learn cold food production and charcuterie. The course will allow the student to develop fundamental principles of the cold kitchen and modernize traditional methods of salad preparation.

**HMGT 228 ADVANCED HOSPITALITY MANAGEMENT**
3 credits. 3 lecture hours.
*Prerequisite: Hospitality Management program approval.*
Upon successful completion of this course, the student should be able to explain the various components of menu planning, food service, supervision, design, and beverage control. In addition, the student should be able to demonstrate an understanding of the external factors affecting the hotel-restaurant industry. The student should also be able to describe the skills necessary to secure a position in management within the hospitality industry.

**HMGT 230 INTERMEDIATE FOOD PREPARATION**
3 credits. 3.5 hours. (Lab: 2.5 hours)
*Prerequisite: HMGT 123.*
This course is designed to help the student’s transition from basic to intermediate food skills. Upon successful completion of this course, the student should be able to demonstrate the skills necessary to prepare standard menu items as well as a range of American regional cuisines. This course consists of lecture, demonstration and participation in food preparation.

**HMGT 231 ADVANCED FOOD PREPARATION**
4 credits. 4 hours lecture/lab.
*Prerequisites: HMGT 145 and 230.*
Upon successful completion of this course, the student should be able to demonstrate an understanding of the advanced skills necessary for preparing international cuisine.

**HMGT 240 ADVANCED BAKING**
4 credits. 4 hours lecture/lab.
*Prerequisites: HMGT 123 and 223.*
Upon successful completion of this course, the student should be able to demonstrate a working knowledge of the preparation of specialty bakery products. This course will focus on lecture-demonstrations and student participation in advanced baking procedures. Student lab projects will cover specialty yeast and rich dough products as well as baked and chilled desserts.

**HMGT 248 CONFECTIONARY ARTS**
3 credits. 4.5 hours lecture/lab.
Upon successful completion of this course, the student should be able to demonstrate skills in preparing molten sugar in a safe and economical manner. Also, the student should be able to cast, blow, and pull sugar, developing decorative pieces. Pastillage, as well as casting and painting with chocolate, also is covered.

**HMGT 250 INTRODUCTION TO CATERING**
3 credits. 3 lecture hours.
Upon successful completion of this course, the student should be able to explain the different types of catered events within the hospitality industry. The student should also be able to explain the importance of marketing, contract writing, food production, room arrangements, and required personnel relative to specific catered events.

**HMGT 265 FRONT OFFICE MANAGEMENT**
3 credits. 3 lecture hours.
Upon successful completion of this course, the student should be able to understand the flow of business through a hotel, beginning with the reservation process and ending with check-out and settlement. The student should understand the various elements of effective front office management and procedures and the role of the front office in the overall operation of a hotel.

**HMGT 268 HOTEL ACCOUNTING**
3 credits. 3 lecture hours.
*Prerequisites: MATH 120, HMGT 121 and HMGT 273.*
Upon successful completion of this course, the student should be able to describe hotel accounting concepts, procedures, processing of data, and the flow of financial information within the various hotel departments. Students also will discuss, prepare and evaluate an income statement and balance sheet and read and interpret a statement of cash flow.

**HMGT 271 SEMINAR IN HOSPITALITY MANAGEMENT: PURCHASING**
3 credits. 2 hours class, 15 hours minimum on-the-job training/week.
Upon successful completion of this course, the student should be able to define purchasing techniques and specification writing for items used in the industry. In addition, the student should be able to demonstrate decision making skills in the areas of quality, quantity, specifications and general value analysis. Two hours in class and a minimum of 15 hours a week are required in a supervised work situation in an approved area of the hospitality industry. Work experience is concurrent but does not necessarily concentrate on the subject being taught in the course.

**HMGT 273 SEMINAR IN HOSPITALITY MANAGEMENT: ACCOUNTING**
3 credits. 2 hours class, 15 hours minimum on-the-job training/week.
*Prerequisites: MATH 120 or higher and HMGT 121.*
Upon successful completion of this course, the student should be able to prepare operation statements for food service operators, inventories, and control systems.
Areas of concentration will be food cost and controls, labor costs controls, and profit production. While enrolled in this class, a student must work a minimum of 15 hours a week in the hospitality industry. The work experience is concurrent but does not necessarily concentrate on the subject being taught in the course.

HMGT 275 SEMINAR IN HOSPITALITY MANAGEMENT INTERNSHIP
3 credits.
Upon successful completion of this course, the student should be able to demonstrate an understanding of an actual operation and identify and explain operational problems. In addition, the student should be able to construct and contrast solutions to these problems. While enrolled in this course, a student must work a minimum of 320 hours in an approved position in the hospitality industry. By arrangement.

HMGT 277 SEMINAR IN MENU PLANNING AND SALES PROMOTION
3 credits. 2 hours class, a minimum of 15 hours on-the-job training by arrangement/week.
Prerequisite: HMGT 123.
Upon successful completion of this course, the student should be able to explain the components of menu planning for every type of service and facility. In addition, the student should be able to demonstrate an understanding of menu layout, selection and development, price structure, and the theory of menu design. A minimum of 15 hours a week is required in a supervised work situation in an approved area of the hospitality industry. Work experience is concurrent but does not necessarily concentrate on the subject being taught in the course.

HMGT 279 BEVERAGE CONTROL
3 credits. 3 lecture hours.
Upon successful completion of this course, the student should be able to demonstrate an understanding of beverage control and how it is used in all types of operations. This course covers the history of wines and their use and storage procedures. The student will participate in an in-depth study of spirits, internal control systems, and local and state alcoholic beverage control laws.

HMGT 281 CULINARY ARTS PRACTICUM I
2 credits
Prerequisites: Acceptance into the American Culinary Federation Chef Apprenticeship Training Program and Hospitality Management program approval.
A qualified American Culinary Federation chef will supervise this on-the-job training. Upon successful completion of this course, the student should be able to apply food preparation and presentation techniques and gain experience in all phases of food service operation.

HMGT 282 CULINARY ARTS PRACTICUM II
2 credits
Prerequisite: HMGT 281.
This is a continuation of Culinary Arts Practicum I.

HMGT 285 CULINARY ARTS PRACTICUM III
2 credits
Prerequisite: HMGT 282.
This is a continuation of Culinary Arts Practicum II.

HMGT 286 CULINARY ARTS PRACTICUM IV
2 credits
Prerequisite: HMGT 285.
This is a continuation of Culinary Arts Practicum III.

HMGT 287 CULINARY ARTS PRACTICUM V
2 credits
Prerequisite: HMGT 286.
This is a continuation of Culinary Arts Practicum IV.

HMGT 288 CULINARY ARTS PRACTICUM VI
2 credits
Prerequisite: HMGT 287 and Hospitality Management program approval.
A qualified chef who is a member of the American Culinary Federation will supervise this on-the-job apprentice training. Upon successful completion of this course, the student should be able to apply food preparation and presentation techniques and gain experience in all phases of food service operation. This is a continuation of Culinary Arts Practicum V.

HUMAN SCIENCES
Offered at Penn Valley

HUSC 100 CAREERS IN HUMAN SCIENCES
3 credits. 3 hours. (Lecture 3 hours.)
The design of this course will offer students an introduction to becoming a professional in the field of family and consumer science as they complete observations of agencies, businesses and organizations in the greater Kansas City area.

HUSC 105 CHILD NUTRITION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HUSC 108.
Normal nutritional needs and growth patterns for infants and preschool children. Child feeding problems. Effective management of a preschool lunch program.

HUSC 108 NUTRITION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HUSC 108.

HUSC 115 CONSUMER PROBLEMS
3 credits. 3 hours. (Lecture 3 hours.)
Problems and potentials of family spending and consumption with attention to consumer protection and marketing practices.
HUSC 120 COMPETENCY DOCUMENTATION
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: Students must have evidence of completing the 120-clock hour formal training required to receive the Child Development Associate (CDA) credential.
Methods of documenting competencies in the eight concept areas as required by the National CDA Office.

HUSC 162 MARRIAGE AND FAMILY LIVING
3 credits. 3 hours. (Lecture 3 hours.)
Problems in personal and family living. Attitudes and practices for effective participation in marriage and family life.

HUSC 200 ENTREPRENEURSHIP IN HUMAN SCIENCES
3 credits. 3 hours. (Lecture 3 hours.)
The course prepares individuals to perform development, marketing, and management functions associated with owning and operating a family and consumer sciences related business. Family and consumer sciences-related content supports instruction in the program and hand-on approach to business plan development are essential to the course. Balancing family life and entrepreneurial ventures is a major emphasis of the curriculum.

HUSC 236 SPECIAL PROBLEMS IN HUMAN SCIENCE
1-3 credits. 1-3 hours. (Independent Study 1-3 hours.)
Independent study in human science under the supervision of a faculty member.

HUMAN SERVICES
Offered at Longview
Mary Scharff

HUMS 100 INTRODUCTION TO HUMAN SERVICES
3 credits. 3 hours. (Lecture 3 hours.)
Survey of human problem areas and services, public and private, developed to address social needs of the individual and society. Knowledge, skills, and values common to the field. (Transferable as the first social work course to most colleges in the area.)

HUMS 105 PRINCIPLES OF CORRECTIONS
3 credits. 3 hours. (Lecture 3 hours.)

HUMS 126 CORRECTIONS IN THE COMMUNITY
3 credits. 3 hours. (Lecture 3 hours.)
Community correctional problems. Diversion, halfway programs, prerelease centers, group homes, probation and parole. Community treatment needed to support these programs. Evaluation of an agency.

HUMS 160 PRINCIPLES OF YOUTH WORK
3 credits. 3 hours. (Lecture 3 hours.)
Prepare students to function as youth workers using a youth development approach in community-based, residential, group home and other youth work environments. Students will explore these concepts: developing a professional awareness of youth work, identifying and distinguishing between asset building models and deficit based models of adolescent development and developing a capacity to design implement programs consistent with the needs of youth in relation to available resources.

HUMS 168 INTRODUCTION TO PRACTICUM
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: HUMS 100.
This course is designed to prepare students for their practicum HUMS 201. It is structured to assist students to explore their interests and aptitude for various human service delivery systems and to examine their social settings and understanding of self, which is crucial to becoming an effective practitioner.

HUMS 171 CRISIS INTERVENTION
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: HUMS 100 or PSYC 140.
Crisis intervention involves the short term use of specific skills and strategies to help people in crisis cope with turmoil resulting from specific emergency situations or events. Crisis intervention is an approach to helping relationships that is distinctive from other counseling models. This course is designed to familiarize students to basic crisis theory with the application of helping strategies in basic crisis intervention.
HUMS 172 AGING, ALCOHOL AND MEDICATIONS
1 credit. 1 hour. (Lecture 1 hour.)
Examines the use and abuse of alcohol and drugs among older people and the changing demographics. Special considerations in diagnosis and treatment and the proper use of prescription drugs. Designed for students and in-service professionals working in the field of aging or the mental health/substance abuse field.

HUMS 173 HUMANISTIC PERSPECTIVE ON AGING
1 credit. 1 hour. (Lecture 1 hour.)
Examines the ways in which a humanistic approach has been and is being applied to the field of aging. The contributions from the disciplines of literature, film, philosophy, art, music, religion and anthropology. Course participants will be looking for responses to the broad questions, “What, for our society and the individual in it, are the many ways of successful aging?”

HUMS 174 COUNSELING ISSUES WITH TODAY’S FAMILIES
1 credit. 1 hour. (Lecture 1 hour.)
Exploring the changing family structure and changing relationship implications within the family. Examining the family as a social system and discussing treatment implications for the human services worker.

HUMS 175 SPIRITUALITY IN ADDICTION RECOVERY
1 credit. 1 hour. (Lecture 1 hour.)
Defines the process by which persons in early recovery begin to accept their need for spiritual components in their life. Incorporate spirituality concepts into the treatment process. Demonstrates the importance of spirituality to support recovery for multiple addictions and as a tool for relapse prevention.

HUMS 176 ADDICTION MANAGEMENT
1 credit. 1 hour. (Lecture 1 hour.)

HUMS 177 POSITIVE DEPENDENCY
1 credit. 1 hour. (Lecture 1 hour.)
Positive aspects of dependency. The challenge model is a therapeutic approach of viewing survivors of troubled families developed by Drs. Steven and Sybil Wolin. This model contrasts with traditional models that emphasize damage and pathology. This course emphasizes strengths found in many children from dysfunctional families that are protective in nature and a positive approach toward healthier choices.

HUMS 178 WOMEN’S ISSUES IN ADDICTION
1 credit. 1 hour. (Lecture 1 hour.)
This class will examine the special issues for women who are addicted to chemical substances and/or behaviors. We will discuss factors which may predispose women to addictions, recognition of addiction in women, and the special needs for counseling women who are addicted.

HUMS 180 GAMBLING ADDICTIONS
1 credit. 1 hour. (Lecture 1 hour.)
Basic information about gambling addiction in our society and the interventions and treatment for the clients and family. Extensive overview of types of gambling found in our society as well as demographic factors that contribute.

HUMS 190 COMMUNITY MENTAL HEALTH
3 credits. 3 hours. (Lecture 3 hours.)
Analysis of community mental health from a sociological and clinical social work perspective. It is designed to give students an overview of various dimensions of mental illness which include assessment, intervention strategies with diverse groups, types of treatment facilities, and special issues.

HUMS 191 YOUTH DEVELOPMENT SEMINAR
1 credit. 1 hour. (Lecture 1 hour.)
This course is designed to familiarize students with the theory and practice of youth development. Students will explore conceptual definitions of youth development and discuss the implications of integrating youth development theory into practice.

HUMS 199 HUMAN SERVICES SEMINAR
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Current problems in human services.

HUMS 201 HUMAN SERVICES PRACTICUM I
3 credits. 3 hours. (Lecture 2 hours. Field Studies 1 hour.)
Prerequisite: HUMS 100 and 168 and approval of the coordinator.
Initial field experience in a social service, mental health, juvenile treatment, or other community service agency.

HUMS 202 HUMAN SERVICES PRACTICUM II
3 credits. 3 hours. (Lecture 1 hour. Field Studies 2 hours.)
Prerequisite: HUMS 201 and approval of the coordinator.
Continued field experience in a social service, mental health, educational, or other community service agency. Evaluation of the effectiveness of the agency.

HUMS 203 COLLOQUIA I
1 credit. 1 hour. (Lecture 1 hour.)
Corequisite: HUMS 201.
Analysis of the practicum learning experience. Discussion of strategies useful in learning to work with different client populations. Development of interpersonal skills essential to establishing necessary relationships.
HUMS 204 COLLOQUIA II
1 credit. 1 hour. (Lecture 1 hour.)
Analysis of the practicum learning experience. Continued development of interpersonal skills. Discussion of community resources, problem solving, agency effectiveness, and counseling skills.

HUMS 210 INTERVIEWING AND INTERPERSONAL COMMUNICATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 162.
Development of interpersonal skills necessary for effective performance in the helping professions. Analyzing differences in individual values and social backgrounds. Demonstration interviewing and counseling techniques.

HUMS 215 DEVELOPMENTAL DISABILITIES
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: HUMS 100.
Prepares individuals to function as workers in the field of developmental disabilities. Survey of types of developmental disabilities, planning and evaluation of clients, professional issues for workers, values, assistive technologies, and issues related to working with people with a developmental disability.

HUMS 220 SOCIAL WELFARE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HUMS 100.
Historical perspectives of social welfare policies from prehistoric to present. Analysis of agency structures, administrative policies, and agency politics as they affect delivery systems. Administrative and supervisory styles related to agency function.

HUMS 236 CORRECTIONAL ADMINISTRATION
3 credits. 3 hours. (Lecture 3 hours.)
Survey of current administrative and management patterns and functions in correctional agencies and institutions. Concepts of staffing, classification, training, supervision styles, budgeting, record keeping, and public relations.

HUMS 275 ALCOHOL AND DRUG ADDICTION
3 credits. 3 hours. (Lecture 3 hours.)
Exploration of the field of alcohol and drug use. Biological, physical, psychological, and social causation theories. Classification of various drugs of abuse and their effects on individuals, families, employment, crimes, and socialization patterns. Dynamics of addiction related to stimulants, depressants, narcotics, and hallucinogens.

HUMS 280 ADDICTION COUNSELING WITH SPECIAL POPULATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HUMS 275 or CRJU 275.
Cultural, racial, age, and sex differences in patterns of substance abuse. The potential for developing appropriate treatment for special population groups. Theory and treatment techniques for minority populations of addicted clients.

HUMS 285 ADDICTION CLIENT MANAGEMENT
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HUMS 280 or CRJU 280.
Case management procedures utilized with addicted clients. Assessment, planning, evaluation, and record keeping employed in addiction treatment. Case presentation techniques. Ethical issues. Case management and recovery.

HUMANITIES

Blue River  Longview  Maple Woods
Sharon Bagg  Kurt Canow  John Stockmyer
Joseph Walwik  Joyce Dvorak  Andy Geoghegan
Priscilla Jackson-Evans  Kathy Kiser  David Miller
Randall Moore  Michael Raynor  Elliott Schimmel

HUMN 105 LEADERSHIP DEVELOPMENT
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Honors program enrollment or instructor approval.
Study of leadership principles using examples from classical literature, film, and historical events. Interdisciplinary approach.

HUMN 133 WESTERN CIVILIZATION I
3 credits. 3 hours. (Lecture 3 hours.)
Ancient civilizations from primitive human beginnings to premodern era. Greece and Rome-government, religion, philosophy, art, architecture, drama, and social institutions. Exploration of the thoughts and feelings of people of the premodern period about themselves, their place in the universe, and the human condition.

HUMN 134 WESTERN CIVILIZATION II
3 credits. 3 hours. (Lecture 3 hours.)
May be taken without HUMN 133. Background of the premodern world. The modern state-Renaissance and Reformation, industrialism, war, revolution, and imperialism. Relationship of western civilization to developments in other parts of the world. Exploration of the thoughts and feelings of modern human beings about themselves, their place in the universe, and the human conditions.

HUMN 140 HUMANITIES PAST AND PRESENT
3 credits. 3 hours. (Lecture 3 hours.)
An overview of the history and philosophy of human culture as seen through the arts and the study of their impact on life today.
HUMN 145 COMPARATIVE HUMANITIES: MYTH THROUGH TIME
3 credits. 3 hours. (Lecture 3 hours.)
Study and compare cultural myths throughout time including historical, artistic, and ideological development of the Faust legend from the sixteenth century through the present.

HUMN 165 AMERICAN HUMANITIES: DIVERSITY IN THE AMERICAN EXPERIENCE
3 credits. 3 hours. (Lecture 3 hours.)
Through a study of American history, literature, and culture, this course will explore issues of critical significance in American life and thought. A special focus will be placed on issues of American identity and on the role that pluralism plays in the life of American communities, especially communities in the Midwest. The contributions of Native Americans, African Americans, Hispanic Americans, Asian Americans, and women’s cultural and political activities will be included.

HUMN 200 HONORS SEMINAR I
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Enrollment in the Honors Program.
Examines some of the profound and enduring ideas that have influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics change every semester. An interdisciplinary approach is used.

HUMN 201 HONORS SEMINAR II
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Enrollment in the Honors Program.
Examines some of the profound and enduring ideas that have influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolutions will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics change every semester. An interdisciplinary approach is used.

HUMN 202 HONORS SEMINAR III
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Enrollment in the Honors Program.
Examines some of the profound and enduring ideas that have influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics change every semester. An interdisciplinary approach is used.

HUMN 203 HONORS SEMINAR IV
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Enrollment in the Honors Program.
Examines some of the profound and enduring ideas that have influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics change every semester. An interdisciplinary approach is used.

HUMN 204 HONORS SEMINAR V
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Enrollment in the Honors Program.
Examines some of the profound and enduring ideas that have influenced the development of major political, social and economic systems. Readings from major texts of the philosophical, political and scientific history of Western culture. Topics change every semester.

HUMN 205 HONORS SEMINAR VI
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Enrollment in the Honors Program.
Examines some of the profound and enduring ideas that have influenced the development of major political, social and economic systems. Readings from major texts of the philosophical, political and scientific history of Western culture. Topics change every semester.

HUMN 206 HONORS SEMINAR VII
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Enrollment in the Honors Program.
Examines some of the profound and enduring ideas that have influenced the development of major political, social and economic systems. Readings from major texts of the philosophical, political and scientific history of Western culture. Topics change every semester.

HUMN 207 HONORS SEMINAR VIII
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Enrollment in the Honors Program.
Examines some of the profound and enduring ideas that have influenced the development of major political, social and economic systems. Readings from major texts of the philosophical, political and scientific history of Western culture. Topics change every semester.
INDUSTRIAL TECHNOLOGY

Offered at the Business & Technology College
William Franken

INTE 101 INTRODUCTION TO INDUSTRIAL TECHNOLOGIES
1.5 credits. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
An Industrial Technology career seminar. Students will explore the work environment, requirements and career opportunities of major technologies. Students will interact with industry by way of tours and hands on experience.

INTE 110 INDUSTRIAL ELECTRICAL PRINCIPLES
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
The course is an introductory course for the individual who is moving into industrial maintenance or related activity. Behavior of electricity, sources of electricity, Ohm’s and Watt’s laws, electrical power distribution, transformers, electrical safety, electrical measurements, and basic components are covered.

INTE 122 LAYOUT AND FABRICATION
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Satisfactory score on mathematics placement test.
Layout procedures for metal fabrication, cutting, drilling, and selection of taps and dies. Fasteners, measurement and preparation of structural steels, welding setup, leveling fabrications, aligning, grouting, precision fitting of couplings, gears, and drives. Sheet metal layout and fabrication.

INTE 124 EMPLOYMENT STRATEGIES FOR INDUSTRIAL TECHNOLOGY
1 credit. 1 hour. (Lecture 1 hour.)
This course prepares the technical student to use strategies for successful job seeking, obtaining and maintaining employment in technical careers. Students will conduct a job search, prepare a resume and cover letter, and participate in job interviews.

INTE 140 FUND OF INDUSTRIAL MAINTENANCE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
The course is designed to present the fundamentals of the care and maintenance on a wide range of industrial equipment, including chain and gear drives, couplings, and fluid power equipment. Lubricants and lubrication will be covered. The replacement of seals and bearings will be covered. Correct application and selection of tools.

INTE 142 NATIONAL ELECTRIC CODE (NEC)
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Completion of INTE 110.
The course is designed to present the requirements of the National Electric Code. Topics include regulatory requirements, codes, wiring requirements, conduit, hazardous locations, overcurrent protection, motor protection, installations, and safety.

INTE 150 INTRODUCTION TO FLUID POWER
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
An introduction to fluid power. Topics include the physics of fluid power, safety, hydraulic and pneumatic pumps, actuators, pressure and flow regulation, basic maintenance, coolers and lubricants, and system operation.

INTE 151 INDUSTRIAL RIGGING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
The course is designed to present the safe and correct ways to rig and hoist equipment. Topics include fiber and wire rope, rope fundamentals, wire rope maintenance, cranes, braking, grounding, center of gravity, nets, clings, hooks, and ladders.

INTE 166 INTRODUCTION TO WELDING TECHNOLOGY
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
This course is designed to present welding techniques and standards approved by the American Welding Society. V-groove joints are taught. Various electrodes are presented and used. Metal cutting using Oxy fuel will be presented.

INTE 167 WELDING I SMAW
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: A general understanding of the properties of metals and general safety.
The course is designed to cover SMAW techniques commonly used in the welding industry. Various types of V groove joints are taught. Different kinds of electrodes are taught and used. The course has an introduction to the technique for pipe welding using the SMAW process.

INTE 168 WELDING II SMAW
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 167.
The course is designed to cover advanced SMAW techniques commonly used in the welding industry. Various types of V groove joints are taught. Different kinds of electrodes are taught and used. The course has an introduction to the technique for pipe welding using the SMAW process.
INTE 175 ELECTRIC MOTOR CONTROLS I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 110.
The course is designed to present the fundamentals of electrical control components, circuits, and systems. Topics include electrical control symbols, power distribution, control transformers, solenoids and relays, motor starters, pilot devices, timers and sequencers, DC and AC motor principles, proximity sensors, and troubleshooting.

INTE 271 PROGRAMMABLE LOGIC CONTROLLERS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 110 and 175.
The course is designed to provide the individual with an ability to understand the various input-output methods, programming and troubleshooting techniques using the programmable controller (PLC). I-O methods for DC-AC and analog, ladder programming and analysis, logical functions, timers and counters, forcing, and troubleshooting techniques are among the specific topics covered.

INTE 273 VARIABLE SPEED MOTOR DRIVE AND CONTROLLERS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 175 and 271.
The course will cover the theory and application of the theory, elements, and operation of the methods used to control the speed of AC and DC electric motors using solid state devices. Thyristor and transistor controller circuits, variable phase circuit, three-phase triggered circuits, and frequency synthesis circuits are covered.

INTE 275 ELECTRIC MOTORS CONTROLS II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 175.
This is the second course in electric motor controls. Topics include timers, proximity sensors, reversing controls, reduced voltage starters, deceleration methods, torque speed relationships and power distribution, and preventative maintenance.

INTE 276 ELECTRICAL TROUBLESHOOTING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 275 or equivalent.
The course is designed to present the systematic approaches to electrical troubleshooting. An emphasis is placed on electrical and electromechanical controls. Discussions of trouble analysis will be followed by the student’s analyzing various introduced troubles into control systems. Replacement of components are covered.

INTE 276 ELECTRICAL TROUBLESHOOTING
1 credit. 1.5 hours integrated lecture/lab
This course provides in-depth knowledge and hands-on application of floral design. Upon successful completion of this course, the student should be able to use the principles of floral design, develop a proficiency in the techniques of line and mass arrangements, obtain an enhanced appreciation for flowers and other plant material, use the mechanics and design considerations involved in working with silk and dried materials, and design and create silk and dried floral arrangements.

INTERIOR DESIGN
Offered at Johnson County Community College
Coordinated throughout MCC

ITMD 121 INTERIOR DESIGN I
3 credits. 3 lecture hours.
This course provides basic introductory knowledge about interior design. Upon successful completion of this course, the student should be able to understand the significance of interior design, complete projects using the elements and principles of design and color theory in interior spaces, use use planning skills to arrange furniture on a floor plan, and present the floor plan and its decorative scheme.

ITMD 122 INTERIOR DESIGN II
3 credits. 3 lecture hours.
Prerequisites: ITMD 121 and DRAF 261.
This is an advanced course focusing on residential design. Upon successful completion of this course, the student should be able to demonstrate an advanced level of furniture arrangement on a floor plan; develop color schemes that will solve specific assigned decorating problems; demonstrate the ability to coordinate fabrics, colors, texture, patterns and finishes in a complete floor plan for a residential unit; and produce floor plans enhanced by color and shadow.

ITMD 125 INTERIOR TEXTILES
3 credits. 2 lecture hours, 2 lab hours.
This course is a comprehensive study of textiles used in interior design. Upon successful completion of this course, the student should be able to differentiate fibers and textiles according to their specific characteristics and to select fibers and interior textiles for specific applications. Specific course content includes properties and characteristics of natural and man-made fibers, construction methods, and various finishing processes such as weaving, knitting, felting, printing, and dyeing. The course will concentrate on textiles designed for interior applications.

ITMD 127 ELEMENTS OF FLORAL DESIGN
1 credit. 1.5 hours integrated lecture/lab
This course provides in-depth knowledge and hands-on application of floral design. Upon successful completion of this course, the student should be able to use the principles of floral design, develop a proficiency in the techniques of line and mass arrangements, obtain an enhanced appreciation for flowers and other plant material, use the mechanics and design considerations involved in working with silk and dried materials, and design and create silk and dried floral arrangements.

ITMD 132 INTERIOR PRODUCTS
3 credits. 3 lecture hours.
This course provides in-depth knowledge about products used in interior spaces. Upon successful completion of this course, the student should be able to evaluate the quality of interior products; demonstrate
the ability to use catalogs and other product information resources; identify manufacturing and/or construction techniques used in products; use correct terminology to describe the various types of interior products; and compare design, use, durability and cost of products.

**ITMD 133 FURNITURE AND ORNAMENTATION/ANTIQUITY TO RENAISSANCE**
3 credits. 3 lecture hours.
This course provides in-depth knowledge in the study of Western furniture and ornament. Upon successful completion of this course, the student should be able to analyze and compare furniture, ornamentation, design motifs, and textiles of historical periods from antiquity to the Renaissance. Additionally, the student should be able to define the religious, political and social influences on the ornamentation and furnishing of each period. The student should also be able to identify the craftsmanship and materials used in the furniture of each historical period and to correctly use vocabulary related to each era.

**ITMD 140 DRAPERIES, TREATMENTS AND CONSTRUCTION**
1 credit. 1 lecture hour.
*Prerequisites: ITMD 121 and 125. Corequisite: ITMD 275.*
This course provides comprehensive knowledge about draperies, treatments and construction. Upon successful completion of this course, the student should be able to demonstrate the use of correct vocabulary relating to drapery and window treatments, explain the use of equipment used in the drapery industry, distinguish appropriate textiles and hardware for specific window treatments, measure for window treatments, and describe and select the proper suspension system for specific window treatments. The student will measure, select and present the proper style, fabric and suspension system for a specific window treatment.

**ITMD 145 UPHOLSTERY CONSTRUCTION**
1 credit. 1 lecture hour.
*Prerequisites: ITMD 121 and 125. Corequisite: ITMD 275.*
This course provides comprehensive knowledge about upholstery construction. Upon successful completion of this course, the student should be able to demonstrate the use of correct vocabulary relating to upholstery construction, explain the equipment used in the upholstery industry, identify appropriate textiles and materials for upholstery use, and describe the various suspension systems used in bench-constructed and mass-produced furniture.

**ITMD 147 LIGHTING DESIGN AND PLANNING**
1 credit. 1 lecture hour.
*Prerequisites: ITMD 121.*
This course provides in-depth knowledge about lighting design and planning. Upon successful completion of this course, the student should be able to define and use vocabulary relating to lighting design and planning. The student should be able to recognize and explain lighting application and technology used in the lighting industry. Additionally, the student should be able to identify and describe proper fixtures and equipment for lighting applications and demonstrate skills in selecting proper lighting designs for specific applications.

**ITMD 148 FURNITURE AND ORNAMENTATION/ORIENTAL**
3 credits. 3 lecture hours.
Upon successful completion of this course, the student should be able to analyze and compare furniture, ornamentation, design motifs and textiles from the Renaissance to the 20th century. Additionally, the student should be able to define social, religious and political influences on the ornamentation of each period. The student should also be able to identify the craftsmanship and materials used in the furniture of each period and use correct vocabulary related to each era.

**ITMD 223 CONTRACT DESIGN**
3 credits. 1 lecture hour, 4 lab hours.
*Prerequisites: ITMD 122 and DRAF 264.*
Upon successful completion of this course, the student should be able to explain the differences between residential and contract design; demonstrate the use of interior design skills to convert, redesign and create contract design space; explain the concept of open office planners; and compare and analyze the costs and benefits of open planning vs. closed planning.

**ITMD 231 FURNITURE AND ORNAMENTATION/RENAISSANCE TO 20TH CENTURY**
3 credits. 3 lecture hours.
Upon successful completion of this course, the student should be able to analyze and compare furniture, ornamentation, design motifs and textiles from the Renaissance to the 20th century. Additionally, the student should be able to define social, religious and political influences on the ornamentation of each period. The student should also be able to identify the craftsmanship and materials used in the furniture of each period and use correct vocabulary related to each era.

**ITMD 234 KITCHEN AND BATH: PLANNING AND DESIGN**
3 credits. 2 hours. (Lab: 1 hour)
*Prerequisites: DRAF 264 and ITMD 122.*
Upon successful completion of this course, the student should be able to define and use vocabulary related to kitchen and bath design and construction; identify and use proper architectural symbols common to kitchen and bath floor plans and elevations; state the space relationships required for proper kitchen and bath usage; and draw kitchen and bath floor plans and elevations. Additionally, the student should be able to identify and explain the work triangle, structural detail, cabinetry and appliances in kitchen design and wet walls, cabinetry, structural detail and plumbing in bath planning.
ITMD 239 CAPSTONE: PORTFOLIO AND PRESENTATION
2 credits. 2 lecture hours.
Corequisites: ITMD 223 and 234.
Upon successful completion of this course, the student should be able to select and rework portfolio materials for maximum visual potential and appeal. In addition, the student will prepare a résumé, conduct a job search, and present written and oral presentations based on resource and product files from other classes. This course is designed as a capstone for the interior merchandising program. It should be taken in conjunction with or after completion of the final interiors studio course or in the graduating semester.

ITMD 273 INTERIOR MERCHANDISING SEMINAR: PRACTICES AND PROCEDURES
2 credits. 2 lecture hours.
Prerequisite: ITMD 121.
Upon successful completion of this course, the student should be able to demonstrate the use of proper interior design industry terminology and appropriate business forms and contracts; define the types of business legal structures; and solve business organizational and ethical problems through the use of case studies.

ITMD 275 INTERIORS SEMINAR: BUDGET AND ESTIMATING
2 credits. 2 lecture hours.
Prerequisite: ITMD 121.
Upon successful completion of this course, the student should be able to describe methods of pricing interior design/merchandising materials and services; measure accurately for materials; demonstrate the use of business math in interior design/merchandising applications; and compute cost in cases.

ITMD 282 INTERIORS INTERNSHIP I
1 credit. 15 internship hours.
Prerequisite: ITMD 121.
Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work situation. This course consists of supervised work experience in an approved training situation. It is designed to provide practical experience in the interiors industry. A minimum of 15 hours each week on-the-job training is required.

ITMD 284 INTERIORS INTERNSHIP II
1 credit. 15 internship hours.
Prerequisite: ITMD 121.
Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work situation. This course consists of supervised work experience in an approved training situation. It is designed to provide practical experience in the interiors industry. A minimum of 15 hours each week on-the-job training is required.

ITMD 295 FIELD STUDY: DESIGN AND MERCHANDISING
3 credits.
Prerequisites: ITMD 121 and approval of the division administrator.
This travel-for-credit course consists of visits to manufacturing plans, a market showroom and a merchandise mart in a major market city. Summer.

ITMD 296 INTERIOR DESIGN: THE ORIENT
3 credits.
Upon successful completion of this course, the student should be able to recognize and identify Asian furniture pieces and accessories from different countries; define and use vocabulary common to the art periods; and compare and contrast furniture and accessory pieces observed in museums, temples, homes, and antique stores. This course will include five three-hour pre-departure seminars, followed by a three-week field trip to Japan, Hong Kong and Thailand. Summer.

LAND SURVEYING
Offered at Longview

SRVY 135 ELEMENTARY SURVEYING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: Math 104 with a minimum grade of C.
Introduction to the care and use of optical surveying instruments; Transits, Total Stations and Auto Levels. Use of cloth tapes, steel tapes and electronic distance machines. Reduction of slope measurements to horizontal and vertical components. Measurement, field data reduction and adjustment of a closed traverse. Horizontal and Vertical curves, earthwork, and coordinates. Extensive field work, field notes and electronic data collection. Introduction to systematic and random errors.

SRVY 136 ANALYSIS OF SURVEY MEASUREMENTS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135 with a minimum grade of C.
Introduction to the true nature of surveying instruments and their use. Analysis of the effect that instruments and observers have on the measurements. Explanation of random error propagation, estimates of uncertainty, and dealing with this phenomena. Introduction to adjustments of measurement data.

SRVY 137 SUBDIVISION PLANNING AND LAYOUT
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135 and DRAF 152 with a minimum grade of C.
Physical elements of designing land subdivisions including traffic circulation, sewer and drainage systems, soils and earthwork, grading considerations, erosion control, lot and block arrangement, topography and existing land use factors, geometric analysis; laws and codes affecting land subdivisions; environmental considerations; site analysis procedures.
SRVY 139 ROUTE AND CONSTRUCTION SURVEYING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135 with a minimum grade of C.
A survey of equipment and methods used in laying out engineering construction projects with an emphasis on the methodology, computations, and note keeping techniques required.

SRVY 235 ADVANCED SURVEYING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135 with a minimum grade of C.
This course is a continuation of surveying skills introduced in SRVY 135 with an emphasis on advanced techniques beyond plane surveying such as geodetic control networks, practical astronomy, state plane coordinates, photogrammetry, and the US Public Land Surveys System.

SRVY 236 LEGAL ASPECTS OF SURVEYING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135.
A study of the legal principles of land boundaries, section corners, area; interpretations of land descriptions, identification of land parcels; legal principles of boundary locations, and the United States land survey system.

SRVY 237 LAND SURVEYING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135.
A study of the land survey practice of retracement and creation of new parcels as it relates to; the lot survey, the sectional survey, the water boundary survey. Further, standard business practice will be discussed.
MATE 106 TOOL DESIGN
5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)
Prerequisites: MATE 102, DRAF 152.
Developing the design and procedures for jigs, fixtures, and other tooling devices necessary for efficient and economical manufacturing.

MATE 107 MACHINERY’S HANDBOOK
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATE 102.
This course is designed to provide the student working familiarity of technical and data as presented in the Machinery’s Handbook.

MATE 111 SPECIAL PROBLEMS AND PROJECTS
1 credit. 1 hour. (Independent Study 1 hour.)
Independent study in Machine Tool related areas under the supervision of a faculty member.

MATE 112 SPECIAL PROBLEMS AND PROJECTS
2 credits. 2 hours. (Independent Study 2 hours.)
Independent study in Machine Tool related areas under the supervision of a faculty member.

MATE 113 SPECIAL PROBLEMS AND PROJECTS
3 credits. 3 hours. (Independent Study 3 hours.)
Independent study in Machine Tool related areas under the supervision of a faculty member.

MATE 114 METROLOGY
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
The student will develop the technical competency to use, read and care for measuring devices in inspection and manufacturing settings.

MATE 115 BLUEPRINT READING FOR MANUFACTURING TRADES
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
The student will learn to read and interpret blueprints commonly found in manufacturing and machine trades. Topics include drawings, drafting procedures, print reading procedures, and machining specifications. This course is designed for students in manufacturing related occupations.

MATE 116 GEOMETRIC DIMENSIONING AND TOLERANCING PRINTREADING
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisites: DRAF 105 or MATE 115 or instructor’s permission.
Geometric Dimensioning and Tolerancing (GD&T) is a method for stating and interpreting design requirements. GD&T is an international system of symbolic language and is simply another tool available to make engineering drawings a better means of communication from design through manufacturing and inspection. GD&T begins with basic principles and builds on these principles with applications-oriented concepts. Complex material is presented in a “building-block” approach.

MATE 130 MACHINING FOR MECHANICAL DRAFTING
5 credits. 8 hours. (Lecture 2 hours. Lab 6 hours.)
This course is designed to introduce the student to common machining practices. The student will learn layout, measuring tools, benchwork, machine setup and operation required to operate saws, drill presses, lathes and mills.

MATE 131 NIMS LEVEL I CREDENTIALS JOB PLANNING, BENCHWORK, LAYOUT AND DRILL PRESS
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATH 103 and DRAF 105 or MATE 115.
Students receive NIMS Level I Certificates in Job Planning, Benchwork, Layout and Drill Press upon successful completion of the performance tests and theory exams. NIMS documents the skills of individuals through the skill standards developed through a consortium.

MATE 132 NIMS LEVEL I CREDENTIALS MILLING
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATH 103 and DRAF 105 or MATE 115.
A student receives NIMS Level I Certificates in Milling upon successful completion of the performance test and theory exam. NIMS documents the skills of individual through the consortium developed skill standard.

MATE 133 NIMS LEVEL I CREDENTIALS LATHE–CHUCKING
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATH 103 and DRAF 105 or MATE 115.
A student receives NIMS Level I Certificate in Lathe-Chucking upon successful completion of the performance test and theory exam. NIMS documents the skills of individual through the consortium developed skill standards.

MATE 134 NIMS LEVEL I CREDENTIALS LATHE-TURNING
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATH 103 and DRAF 105 or MATE 115.
A student receives NIMS Level I Certificate in Lathe-Turning upon successful completion of the performance test and theory exam. NIMS documents the skills of the individual through the consortium developed skill standards.

MATE 135 NIMS LEVEL I CREDENTIALS SURFACE GRINDING
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATH 103 and DRAF 105 or MATE 115.
A student receives NIMS Level I Credential Surface Grinding upon successful completion of the performance test and theory exam. NIMS documents the skills of the individual through the consortium developed skill standards.
MATE 201 BASIC METALLURGY
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATE 101.
Metallurgy covers all aspects of metallurgical engineering, which include the tree areas of extractive, mechanical, and physical metallurgy. Properties of ferrous and nonferrous metals.

MATE 203 PROCESS PLANNING AND PRODUCTION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATE 101.
A comprehensive introduction to the ways in which the form of a material is changed to make it usable and add to its value. Various problems encountered in establishing the physical setting of a modern machine shop/ manufacturing plant, including arrangement of equipment, systems of production, safety, maintenance of equipment, and facilities.

MATE 205 MANUFACTURING INTERNSHIP II
3 credits. 3 hours. (Field Studies 3 hours.)
Prerequisite: MATE 102.
This course is designed to give the student real world experience in a manufacturing environment. The student will perfect machining and tooling techniques and job responsibilities learned in prior courses under the direction of a mentor.

MATE 210 COMPUTERIZED NUMERICAL CONTROL—LATHE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATE 102 and 104 or instructor consent.
This course is designed to provide training on computer numerical controlled lathe turning centers. The student will process, program, verify and trouble shoot CNC lathe programs. Set-up and operations are covered and CADCAM programming will be introduced.

MATE 215 COMPUTER NUMERICAL CONTROL—MILL
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATE 210, MATH 104 or permission of the instructor.
This course is designed to provide training on computer numerical controlled milling centers. The student will process, program, verify and trouble shoot CNC mill programs. Set up and operation are covered and CADCAM programming will be introduced.

MATE 220 ADVANCED COMPUTER NUMERICAL CONTROL—MILL/LATHE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATE 210, 215 and MATH 104.
This course is designed to cover advanced CNC programming techniques taking the student beyond standard code practices. Pre-set tooling and parametric (macro) programming with probing examples are covered. CADCAM will be used to produce CNC lathe and mill projects.

MATE 225 MASTER CAM I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATE 210, MATE 215 or consent of the instructor.
This course is designed as an introduction to Master Cam software. Menu screens and configuration of the software will be covered working thru 2-D projects on the lathe and mill.

MATE 226 MASTER CAM II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATE 210 or consent of the instructor.
This course is designed for the experienced Master Cam user wanting to explore 3-Dimensional frame creation and surface modeling. The course focus will be on 3-D surface creation, surface machining, construction planes, drawing organization and four and five axis machine procedures.

MASS COMMUNICATIONS
Offered at Penn Valley
Tracy Hall

MSCM 112 INTRODUCTION TO MASS COMMUNICATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Historical study of content, structure, and control of modern communications in American society. Provides criteria for evaluating media content relative to the nature and consequences of news, entertainment, and advertising.

MSCM 113 BASIC RADIO PRODUCTION
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Principles and techniques of developing, producing and directing various types of radio programs in the areas of public service, commercial spots, news and sports. Basic operation of radio production equipment.

MSCM 115 TELEVISION PRODUCTION I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MSCM 112 or concurrent enrollment.
Effective and creative use of television studio. Practical experience in non-technical areas like scripting and program development, and technical areas including lighting, audio, graphics, camera operation, switcher and special effects generator.

MSCM 116 TELEVISION PRODUCTION II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MSCM 115.
Pre-production (concept development), production (camera shooting), and post-production (editing), combining remote productions and studio productions into final product.
MSCM 118 INTRODUCTION TO PUBLIC RELATIONS I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MSCM 112 or concurrent enrollment.
History and practices of public relations. Writing various forms of public relations materials and examining field and case studies. Topics will include unethical public relations practices, and the relationship of public relations to the press and to society.

MSCM 200 MEDIA INTERNSHIP I
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: Six credits in MSCM.
Practical experience working at a local media outlet.

MSCM 203 MEDIA INTERNSHIP II
3 credits. 15 hours. (Clinical/Intern 15 hours.)
Students will continue to gain practical experience by working with a local media outlet.

MSCM 299 EDITING TECHNIQUES
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Introduction to the equipment and techniques of editing three-quarter inch videotape with practical hands-on experience.

MATHEMATICS

<table>
<thead>
<tr>
<th>Longview</th>
<th>Maple Woods</th>
<th>Penn Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Church</td>
<td>Kimberly Christensen</td>
<td>Tim Chappel</td>
</tr>
<tr>
<td>Kenneth Eichman</td>
<td>Terry Hobbs</td>
<td>Martha Haehl</td>
</tr>
<tr>
<td>Randy Gupta</td>
<td>Cheryl Lewkowsky</td>
<td>Joan Henson</td>
</tr>
<tr>
<td>Sharon Hamsa</td>
<td>Robert Skrukrud</td>
<td>Nic LaHue</td>
</tr>
<tr>
<td>Le Ann Lotz</td>
<td>Blue River</td>
<td>Gregory Mitchell</td>
</tr>
<tr>
<td>Janet Wyatt</td>
<td>Martha Eagle</td>
<td>Tristan Londré</td>
</tr>
<tr>
<td></td>
<td>Cheryl Winter</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Courses numbers under 100 do not apply to any degree or certificate.

MATH 20 BASIC MATHEMATICAL OPERATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Review of all basic mathematical operations. Fractions, decimals, proportions, and percentages. Elementary geometry (Perimeter, area and volume).

MATH 23 BASIC MATHEMATICS/LAB
3 credits. 5 hours. (Lecture 2 hours. Laboratory 3 hours.)
Review of basic mathematical operations. Fractions, decimals, proportion, and percentages. Elementary geometry (perimeter, area and volume).

MATH 40 INTRODUCTORY ALGEBRA
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Minimum grade of C in MATH 20 or MATH 23, or a satisfactory score on the math placement test.
Review of all operations and properties of real numbers with special attention to work with signed numbers.

Solutions of linear equations and inequalities in one variable, using and manipulation formulas. Properties of exponential numbers, definition and basic operations with polynomials and solution of polynomial equations by factoring. Basic Operations and simplification of rational expressions. Graphing linear equations in two variables.

MATH 43 INTRODUCTORY CO-LABORATORY ALGEBRA
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: A grade of C or better in MATH 20 or 23, or an acceptable score on the math placement test.
Review of operations and properties of the Real Number System. Operations on polynomials, exponents, and rational expressions. Solving and graphing linear equations. Applications are emphasized throughout the course.

MATH 100 MATHEMATICS FOR BUSINESS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: Minimum grade of C or better in MATH 20 or 23, or an acceptable score on math placement test.
Application of arithmetic and mathematical processes to the solution of practical problems in general business, retailing, accounting, consumer credit, and personal finance.

MATH 103 TECHNICAL MATHEMATICS I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 40 or 43 or appropriate score on placement exam.
Algebraic expressions, linear equations, functions, exponents, graphical analysis, Quadratic equations, factoring common factors and difference of squares, unit conversions, percents, tolerance, clearance, and inference (mean, median, mode.)

MATH 104 TECHNICAL MATHEMATICS II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 103 with a minimum grade of C.
Applied geometry including complex, multi-step problems, complex numbers, solutions of right and oblique triangles, ratio and Proportion, radian measure, exponential and logarithmic functions (graphical approach) and practical applications.

MATH 106 TECHNICAL ALGEBRA AND TRIGONOMETRY
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: MATH 40 or 43 or one year of high school algebra with a minimum grade of C.
Algebraic functions, factoring fractions, linear and quadratic equations, complex number exponents, and radicals. Trigonometric functions, solutions of right triangles, functions of the general angle, and graphs of trigonometric functions. Vectors, periodic functions, phasors, logarithms. Applications to technology.
MATH 108 CLINICAL MATHEMATICS
1 credit. 1 hour. (Lecture 1 hour.)
Metric system and conversion of units. Apothecaries’
equivalents and vocabulary. Preparation of solutions:
strengths, procedures, and computations. Drug
administration: calculating and measuring dosages.

MATH 110 INTERMEDIATE ALGEBRA
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Minimum grade of C in MATH 40 or 43,
or a satisfactory score on the math placement test.
Functions and their graphs, systems of linear equations,
application problems, inequalities, absolute value
equations. Rational exponents, radicals, quadratic
functions and equations, ratios and proportions.

MATH 115 STATISTICS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Minimum grade of C in MATH 110 or
satisfactory score on math placement test.
Descriptive statistics, ungrouped and grouped data,
elementary probability, discrete and continuous
statistical inference, significance and distribution
measures, regression and correlation analysis, index
numbers, and time series.

MATH 119 COLLEGE MATHEMATICS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Math 110 with C or better or an appropri-
ate placement test score.
A course designed for students seeking a liberal arts
education. The objective of this course is to provide
students with a mathematical experience that will
include topics from algebra, geometry, probability, and
statistics. This course has a strong emphasis on
applications.

MATH 120 COLLEGE ALGEBRA
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Minimum grade of C in MATH 110 or
satisfactory score on the math placement test.
A study of various types of equations and inequalities,
functions and their inverses, theory of higher degree
equations, systems of equations, determinants,
logarithms and exponentials, and applications.

MATH 124 DISCRETE Structures FOR
COMPUTER SCIENCE I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 120 or 150.
Mathematical logic, sets, relations, functions, math-
ematical induction, Boolean algebra, algebraic struc-
tures. The theory introduced will be applied to appropri-
ate areas of computer science.

MATH 150 PRECALCULUS
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: Minimum grade of C in MATH 110 or
satisfactory score on the math placement test.
A study of various types of algebraic equations and
inequalities, functions and their inverses, theory of
higher degree polynomial equations, systems of
equations, determinants, logarithms, exponentials, and
applications. A study of trigonometric functions and
their inverses, formulas and identities, conditional
equations, radian measure, arc length, angular velocity,
function graphing, and solution of triangles.

MATH 175 CALCULUS FOR BUSINESS AND SOCIAL
SCIENCE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 120 with a minimum grade of C, or
an appropriate placement test score.
Quadratic, polynomial, rational exponential, and
logarithmic functions used in differential and integral
calculus application in business, economic and social
science.

MATH 180 ANALYTIC GEOMETRY AND
CALCULUS I
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: MATH 130 or 150 with a minimum grade
of C.
A study of plane analytic geometry, limits, continuity,
the derivative for functions of a single variable,
differentials, indefinite and definite integrals, the
Fundamental Theorem of Calculus, and applications of
the derivative and integral.

MATH 182 ANALYTIC GEOMETRY AND
CALCULUS II
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: MATH 180 with a minimum grade of C.
A study of the calculus of elementary transcendental
functions; integration by parts, by trigonometric
substitution, by partial fraction and by miscellaneous
substitutions; improper integrals; LHospital’s Rule;
conic sections; the transformation of axes; infinite
series; parametric and polar equations and their
derivatives; and graphs, area, and arc length in polar
coordinates.

MATH 190 SPECIAL TOPICS I
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Prerequisite: Approval of the instructor.
Mathematical topics of special interest.
MATH 210 ANALYTIC GEOMETRY AND CALCULUS III
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: A minimum grade of C in MATH 190, or an appropriate score on the math placement test.
A study of analytic geometry in three dimensions, functions of more than one variable and their calculus, directional and partial derivatives, vector functions and their calculus, two- and three-dimensional applications, multiple integrals, and line integrals.

MATH 230 DIFFERENTIAL EQUATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 190 with a minimum grade of C.
Solution and application of ordinary differential equations including the order non-homogeneous linear cases. Laplace transform, and power series methods.

MATH 241 DISCRETE STRUCTURES FOR COMPUTER SCIENCE II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 141 and CSIS 131.
Lattice structures and graph theory, algorithms and complexity, recurrence relations, introduction to computability theory, and abstract machines. The theory introduced will be applied to appropriate areas of computer science.

MEDICAL TRANSCRIPTION

Offered at Penn Valley

MTRN 101 MEDICAL TRANSCRIPTION I
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: ENGL 101 and OFSC 195.
Introduction to the transcription of medical record reports using correct terminology, punctuation, and format.

MTRN 112 MEDICAL TRANSCRIPTION II
5 credits. 10.7 hours. (Lecture 2 hours. Laboratory 2 hours. Clinical 6.7 hours.)
Prerequisite: HITE 103 and MTRN 101, each with a minimum grade of C, and concurrent enrollment in MTRN 113.
Development of transcription skills including medical vocabulary, punctuation, monitoring for quality, and productivity. Selection of word processing and dictation equipment.

MTRN 113 MEDICAL TERMINOLOGY FOR MEDICAL RECORDS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BIOL 108, HITE 103, and MTRN 101, each with a minimum grade of C.
Advanced study of medical terms including those used in specialties such as radiology, pathology, cardiology, obstetrics, neurology, and surgery.

MUSI 101 MIXED CHORUS I
1 credit. 3 hours. (Laboratory 3 hours.)
Open to all students interested in group singing. Performance of various types of choral music in public.

MUSI 102 MIXED CHORUS II
1 credit. 3 hours. (Laboratory 3 hours.)
Open to all students interested in group singing. Performance of various types of choral music in public.

MUSI 103 BAND I
1 credit. 4 hours. (Laboratory 4 hours.)
Open to all students interested in playing in an instrumental ensemble. Performance of various types of instrumental music in public.

MUSI 104 BAND II
1 credit. 3 hours. (Laboratory 3 hours.)
Open to all students interested in playing in an instrumental ensemble. Performance of various types of instrumental music in public.

MUSI 105 ORCHESTRA I
1 credit. 4 hours. (Laboratory 4 hours.)
Prerequisite: Permission of instructor.
Student must furnish his or her own instrument. The orchestra will rehearse and perform orchestral music with emphasis on various styles of symphonic repertoire including standard and contemporary. Open to all students interested in playing in a community orchestra.

MUSI 106 ORCHESTRA II
1 credit. 4 hours. (Laboratory 4 hours.)
Prerequisite: Permission of instructor.
Student must furnish his or her own instrument. The orchestra will rehearse and perform orchestral music with emphasis on various styles of symphonic repertoire including standard and contemporary. Open to all students interested in playing in a community orchestra.

MUSI 107 FUNDAMENTALS OF MUSIC
3 credits. 3 hours. (Lecture 3 hours.)

MUSI 108 MUSIC APPRECIATION
3 credits. 3 hours. (Lecture 3 hours.)
Elements of music for students with limited musical background. Instruments, musical styles. Analysis of the works of the great composers with an emphasis on developing musical listening skills.
MUSI 110 MUSIC THEORY I
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: MUSI 107 with a minimum grade of C.
Written harmony, ear training, sightsinging, dictation, and keyboard harmony. Melodic and harmonic relationships through study of intervals. Scales, triads, chords of the seventh and their inversions, nonharmonic tones including suspension, appoggiatura, and passing tones. Practical application in sightsinging, in ear training, and at the piano keyboard.

MUSI 111 MUSIC THEORY II
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: MUSI 110.
Written harmony, ear training, sightsinging, dictation, and keyboard harmony. Secondary triads and inversions, secondary sevenths, and secondary dominants and inversions. Nonharmonic tones including suspensions, pedal tones, and added sixths. Modulation by secondary dominants to closely related keys.

MUSI 112 CLASS PIANO I
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: Some experience with note reading in at least one clef and with rhythmic notation.
A practical approach to keyboard techniques including harmonization, transposition, and sight reading.

MUSI 114 PRIVATE INSTRUCTION I
1-2 credits. 2-4 hours. (Laboratory 2-4 hours.)
Prerequisite: Approval of the instructor.
Private instruction in brass, guitar, percussion, piano, voice, or woodwinds. Music from the standard repertoire as well as technical exercises on the instrument. Special enrollment fee in addition to regular tuition.

MUSI 115 PRIVATE INSTRUCTION II
1-2 credits. 2-4 hours. (Laboratory 2-4 hours.)
Prerequisite: MUSI 114 and approval of the instructor.
Private instruction in brass, guitar, percussion, piano, voice, or woodwinds. Music from the standard repertoire as well as technical exercises on the instrument. Special enrollment fee in addition to regular tuition.

MUSI 116 EVOLUTION OF JAZZ
3 credits. 3 hours. (Lecture 3 hours.)
A study of the rich ethnic background and evolution of jazz music and its many styles. African, African-American, and European cultures will be examined in terms of the role each has played, and continues to play, in defining and influencing American culture through jazz. Important performers, composers, musicians, educators, and writers of jazz will be identified with respect to their contributions to the art form. Critical listening activities supplement the course content.

MUSI 117 SPECIAL PROBLEMS IN MUSIC
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Directed studies in special interest music topics (e.g., composition, MIDI music, pedagogy, music industry, etc.).

MUSI 202 ADVANCED MUSIC THEORY IV
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: MUSI 201.

MUSI 203 BAND III
1 credit. 4 hours. (Laboratory 4 hours.)
Open to all students interested in playing in an instrumental ensemble. Performance of various types of instrumental music in public.

MUSI 204 BAND IV
1 credit. 4 hours. (Laboratory 4 hours.)
Open to all students interested in playing in an instrumental ensemble. Performance of various types of instrumental music in public.

MUSI 206 CLASS PIANO IV
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: MUSI 127 with a minimum grade of C or approval of the instructor.
Melodic harmonization, sightreading, transposition, accompanying, and reading from an open score. Performance of piano literature of various periods.

MUSI 207 ORCHESTRA III
1 credit. 4 hours. (Laboratory 4 hours.)
Prerequisite: Permission of instructor.
Student must furnish his or her own instrument. The orchestra will rehearse and perform orchestral music with emphasis on various styles of symphonic repertoire including standard and contemporary. Open to all students interested in playing in a community orchestra.

MUSI 208 ORCHESTRA IV
1 credit. 4 hours. (Laboratory 4 hours.)
Prerequisite: Permission of instructor.
Student must furnish his or her own instrument. The orchestra will rehearse and perform orchestral music with emphasis on various styles of symphonic repertoire including standard and contemporary. Open to all students interested in playing in a community orchestra.

MUSI 211 MIXED CHORUS III
1 credit. 3 hours. (Laboratory 3 hours.)
Open to all students interested in group singing.

MUSI 212 MIXED CHORUS IV
1 credit. 3 hours. (Laboratory 3 hours.)
Open to all students interested in group singing.
Performance of various types of choral music in public.

MUSI 214 PRIVATE INSTRUCTION III
1-2 credits. 1-2 hours. (Laboratory 1-2 hours.)
Prerequisite: MUSI 115 and approval of the instructor.
Private instruction in brass, guitar, percussion, piano, voice or woodwinds. Music from the standard repertoire as well as technical exercises on the instrument. Special enrollment fee in addition to regular tuition.

MUSI 215 PRIVATE INSTRUCTION IV
1-2 credits. 1-2 hours. (Laboratory 1-2 hours.)
Prerequisite: MUSI 214 and approval of the instructor.
Private instruction in brass, guitar, percussion, piano, voice, or woodwinds. Music from the standard repertoire as well as technical exercises on the instrument. Special enrollment fee in addition to regular tuition.

MUSI 203 ADVANCED MUSIC THEORY IV
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: MUSI 201.

MUSI 204 BAND IV
1 credit. 4 hours. (Laboratory 4 hours.)
Open to all students interested in playing in an instrumental ensemble. Performance of various types of instrumental music in public.

MUSI 206 CLASS PIANO IV
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: MUSI 127 with a minimum grade of C or approval of the instructor.
Melodic harmonization, sightreading, transposition, accompanying, and reading from an open score. Performance of piano literature of various periods.

MUSI 207 ORCHESTRA III
1 credit. 4 hours. (Laboratory 4 hours.)
Prerequisite: Permission of instructor.
Student must furnish his or her own instrument. The orchestra will rehearse and perform orchestral music with emphasis on various styles of symphonic repertoire including standard and contemporary. Open to all students interested in playing in a community orchestra.

MUSI 208 ORCHESTRA IV
1 credit. 4 hours. (Laboratory 4 hours.)
Prerequisite: Permission of instructor.
Student must furnish his or her own instrument. The orchestra will rehearse and perform orchestral music with emphasis on various styles of symphonic repertoire including standard and contemporary. Open to all students interested in playing in a community orchestra.

MUSI 211 MIXED CHORUS III
1 credit. 3 hours. (Laboratory 3 hours.)
Open to all students interested in group singing.

MUSI 212 MIXED CHORUS IV
1 credit. 3 hours. (Laboratory 3 hours.)
Open to all students interested in group singing.
Performance of various types of choral music in public.

MUSI 214 PRIVATE INSTRUCTION III
1-2 credits. 1-2 hours. (Laboratory 1-2 hours.)
Prerequisite: MUSI 115 and approval of the instructor.
Private instruction in brass, guitar, percussion, piano, voice or woodwinds. Music from the standard repertoire as well as technical exercises on the instrument. Special enrollment fee in addition to regular tuition.

MUSI 215 PRIVATE INSTRUCTION IV
1-2 credits. 1-2 hours. (Laboratory 1-2 hours.)
Prerequisite: MUSI 214 and approval of the instructor.
Private instruction in brass, guitar, percussion, piano, voice, or woodwinds. Music from the standard repertoire as well as technical exercises on the instrument. Special enrollment fee in addition to regular tuition.

NURSING

OCCUPATIONAL THERAPY ASSISTANT

Offered at Penn Valley
Theresa Chop Sandra McInlay

OTHA 100 INTRODUCTION TO OCCUPATIONAL THERAPY
2 credits. 2 hours. (Lecture 2 hours.)
Introduction to the history, philosophy, and practice of occupational therapy. Exploration of diversity and the role it plays in health care.

OTHA 102 DOCUMENTATION GUIDELINES
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Formal admission to the Occupational Therapy Assistant program.
Guidelines for documentation of occupational therapy services.

OTHA 103 CLINICAL CONDITIONS
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Formal admission into the Occupational Therapy Assistant Program.
Etiology, clinical process and prognosis of common diseases and illnesses. Effect of disease or illness on an individual’s performance and the impact this has on the person, family and society.

OTHA 106 THERAPEUTIC INTERVENTIONS
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: Formal admission into the Occupational Therapy Assistant Program.
Use of techniques and low tech devices commonly used in occupational therapy practice to assist individuals in improving their performance of daily life tasks. Introduction to architectural barriers.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHA 116</td>
<td>LEVEL I FIELDWORK I</td>
<td>1</td>
<td>1.5</td>
<td>(Lecture 0.5 hour. Laboratory 1 hour.) Prerequisite: Formal admission to the Occupational Therapy Assistant program.</td>
<td>Introduction to the role, policies, and procedures of fieldwork. Directed experience in a specified community setting.</td>
</tr>
<tr>
<td>OTHA 118</td>
<td>ASSISTIVE TECHNOLOGY</td>
<td>2</td>
<td>3</td>
<td>(Lecture 1 hour. Laboratory 2 hours.) Prerequisite: BIOL 109, EMTP 102, and OTHA 100, 102, 103, 106, and 116, each with a minimum grade of C.</td>
<td>Hands-on introduction to high tech assistive technology and augmentative communication.</td>
</tr>
<tr>
<td>OTHA 120</td>
<td>PEDIATRICS</td>
<td>3</td>
<td>3</td>
<td>(Lecture 3 hours.) Prerequisite: EMPT 102, BIOL 109, and OTHA 100, 102, 103, 106 and 116, each with a minimum grade of C.</td>
<td>Occupational therapy practice as it relates to individuals from birth to early adolescence. Study of normal growth and development.</td>
</tr>
<tr>
<td>OTHA 121</td>
<td>LEVEL I FIELDWORK II</td>
<td>0.5</td>
<td>1</td>
<td>(Clinical 1 hour.) Prerequisite: BIOL 109, EMPT 102, and OTHA 100, 102, 103, 106, and 116, each with a minimum grade of C; concurrent enrollment in OTHA 120.</td>
<td>Directed experience in a specified community setting.</td>
</tr>
<tr>
<td>OTHA 130</td>
<td>ANALYSIS OF PHYSICAL PERFORMANCE</td>
<td>3</td>
<td>4</td>
<td>(Lecture 2 hours. Laboratory 2 hours.) Prerequisite: EMPT 102, BIOL 109, and OTHA 100, 102, 103, 106, and 116, each with a minimum grade of C.</td>
<td>Analysis and evaluation of the components of physical performance and their relationship to functional activities.</td>
</tr>
<tr>
<td>OTHA 154</td>
<td>APPLIED NEUROLOGY</td>
<td>2</td>
<td>2</td>
<td>(Lecture 2 hours.) Prerequisite: BIOL 109, EMTP 102, and OTHA 100, 102, 103, 106, and 116, each with a minimum grade of C.</td>
<td>Foundations of neuroscience necessary for practice as a rehabilitation professional. Anatomy and function of the nervous system. Correlation of clinical problems with pathology of the nervous system.</td>
</tr>
<tr>
<td>OTHA 173</td>
<td>SPECIAL TOPICS</td>
<td>2</td>
<td>2</td>
<td>(Lecture 2 hours.) Prerequisite: Concurrent enrollment in PTA or OTA programs or completion of an Associate or advanced degree in physical therapy or occupational therapy.</td>
<td>A study of advanced topics relevant to the current practice of rehabilitation. Cross-listed as PTHA 173.</td>
</tr>
<tr>
<td>OTHA 200</td>
<td>ACTIVITY ANALYSIS/POSITIONING</td>
<td>2</td>
<td>3</td>
<td>(Lecture 1 hour. Laboratory 2 hours.) Prerequisite: PSYC 140, SPDR 100, and OTHA 118, 120, 121, 130, and 154, each with a minimum grade of C.</td>
<td>Analysis and teaching of activities for therapeutic intervention. Tool use and basic wheelchair management and positioning.</td>
</tr>
<tr>
<td>OTHA 201</td>
<td>MENTAL HEALTH</td>
<td>2.5</td>
<td>3</td>
<td>(Lecture 2 hours. Laboratory 1 hour.) Prerequisite: OTHA 101, OTHA 108, OTHA 111, OTHA 154, OTHA 204 and PSYC 140 each with a minimum grade of C.</td>
<td>Concurrent enrollment in OTHA 212. Occupational therapy assessment and treatment techniques in the mental health setting.</td>
</tr>
<tr>
<td>OTHA 202</td>
<td>PHYSICAL DYSFUNCTION</td>
<td>3</td>
<td>3</td>
<td>(Lecture 3 hours.) Prerequisite: American Institutions and OTHA 200, each with a minimum grade of C.</td>
<td>Occupational therapy assessment and treatment used with the physically and cognitively challenged population.</td>
</tr>
<tr>
<td>OTHA 203</td>
<td>GERONTOLOGY</td>
<td>3</td>
<td>3</td>
<td>(Lecture 3 hours.) Prerequisite: American Institutions and OTHA 200, each with a minimum grade of C.</td>
<td>Concepts and process of aging. The role of occupational therapy with the elderly.</td>
</tr>
<tr>
<td>OTHA 208</td>
<td>SPLINTING</td>
<td>2</td>
<td>3</td>
<td>(Lecture 1 hour. Laboratory 2 hours.) Prerequisite: American Institutions and OTHA 200, each with a minimum grade of C.</td>
<td>Principles of splinting and guidelines for fabrication.</td>
</tr>
<tr>
<td>OTHA 212</td>
<td>LEVEL I FIELDWORK III</td>
<td>2</td>
<td>4</td>
<td>(Clinical 4 hours.) Prerequisite: American Institutions and OTHA 200, each with a minimum grade of C; concurrent enrollment in OTHA 201 and 202.</td>
<td>Directed experience in specified community settings.</td>
</tr>
<tr>
<td>OTHA 217</td>
<td>FIELDWORK SEMINAR</td>
<td>3</td>
<td>3</td>
<td>(Lecture 3 hours.) Prerequisite: American Institutions and OTHA 220, each with a minimum grade of C.</td>
<td>Preparation for full-time clinical practice, the national certification process, state licensure, and future employment.</td>
</tr>
<tr>
<td>OTHA 222</td>
<td>LEVEL II FIELDWORK</td>
<td>12</td>
<td>40</td>
<td>(Field Studies 40 hours.) Prerequisite: OTHA 201, 202, 203, 208, 212, and 217, each with a minimum grade of C.</td>
<td>Directed clinical experience in different practice areas of occupational therapy.</td>
</tr>
</tbody>
</table>
OFFICE SYSTEMS

OFSC 41 TYPEWRITER KEYBOARD
1 credit. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Identification of parts of the typewriter. Introduction to the keyboard. Typing by touch. Courses numbers under 100 do not apply to any degree or certificate.

OFSC 101 BUSINESS ENGLISH
3 credits. 3 hours. (Lecture 3 hours.)
Review of fundamentals of grammar, sentence structure, punctuation, and capitalization along with various forms and styles of business correspondence.

OFSC 103 KEYBOARDING
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Development of the touch system of keyboarding skill on microcomputer alphabet and numeric pads.

OFSC 156 SPEEDWRITING/NOTETAKING
2 credits. 2 hours. (Lecture 2 hours.)
Introductory course in which an abbreviated writing system will be presented. This course is appropriate for all persons involved in notetaking.

OFSC 157 ADVANCED SPEEDWRITING/NOTETAKING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: OFSC 156 or equivalent competency and OFSC 161 or equivalent competency.
Continuation course for all rapid writing systems with emphasis on development of dictation and transcription skills.

OFSC 159 PROFESSIONAL DEVELOPMENT
3 credits. 3 hours. (Lecture 3 hours.)
Self-assessment, career planning, job search skills, and development that includes problem solving, communication techniques, and professional appearance.

OFSC 161 KEYBOARDING APPLICATIONS/TYPWRITING I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Introduction to the keyboard using computers. Introduction to business letters, simple tabulations, and manuscripts.

OFSC 162 KEYBOARDING APPLICATIONS/TYPWRITING II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: OFSC 161 or equivalent competency.
Advanced practice in preparing business letters, tabulations, manuscripts, and rough drafts on the computer.

OFSC 163 KEYBOARDING APPLICATIONS/TYPWRITING III
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: OFSC 162 or equivalent competency.
Office standards in preparing business letters, tabulations, office forms, and legal materials on the computer.

OFSC 164 KEYBOARDING APPLICATIONS/TYPWRITING IV
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: OFSC 163 or equivalent competency.
Development of skills required of competent administrative assistants by solving production problems that are detailed, challenging, and creative.

OFSC 166 LEGAL TYPEWRITING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: OFSC 162 or equivalent competency.
Legal terminology, procedures, and forms.

OFSC 171 MACHINE TRANSCRIPTION AND CALCULATION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: OFSC 161 or equivalent.
Fundamental operations of electronic calculation using ten-key touch method and/or spreadsheet to work business math problems. Development of machine transcription skills.

OFSC 180 BUSINESS LETTERS AND REPORTS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101 or OFSC 101.
Fundamental principles of written communications as a foundation for preparing and writing effective business letters and reports.
OFSC 181 ELECTRONIC OFFICE PROCEDURES
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: OFSC 161 and OFSC 195 or equivalent competency.
Basic office procedures. Fax, electronic mail, word processing, reprographics, mail responsibilities, preparing travel arrangements, company letters, and telephone communications.

OFSC 193 INTERNSHIP I
3-5 credits. 15-45 hours. (Field Studies 15-45 hours.)
Prerequisite: Enrollment in approved course(s).
On-the-job experience approved by the coordinator.

OFSC 194 INTERNSHIP II
5 credits. 30 hours. (Field Studies 30 hours.)
Prerequisite: Enrollment in approved course(s).
On-the-job experience approved by the coordinator.

OFSC 195 WORD PROCESSING CONCEPTS
3 credits. 4 hours. (Lecture 2 hours. Lab 2 hours.)
Prerequisite: Keyboarding skill.
The role of word/information processing. Current trends in concepts, terminology, hardware, software, and mastery of word processing software programs. Application of word processing skills in simulating office projects.

OFSC 197 OFFICE MANAGEMENT
3 credits. 3 hours. (Lecture 3 hours.)
Planning and organizing administrative office operations. Leadership and human relations in office administration, including personnel practices and training. Control of administrative office operations, including job analysis and work measurement.

OFSC 200 ADVANCED WORD PROCESSING PROJECTS OR INTERNSHIP
3 credits. 3 hours. (Independent Study 3 hours.)
Prerequisite: OFSC 195 or approval of the instructor.
Hands-on training in advanced functions of word processing software package. Projects utilizing all skills involved.

OFSC 210 INTRODUCTION TO DESKTOP PUBLISHING
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: OFSC 161.
Experience with word processing recommended, but not required. Fundamental concepts and terminology of desktop publishing. Hands-on experience with functions of current desktop publishing software on a personal computer.

OFSC 215 ADVANCED DESKTOP PUBLISHING
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: OFSC 210.
Students will review desktop publishing fundamentals and explore operating system features. Layout and design techniques and document enhancements will be used. Project applications will include brochures, flyers, and newsletters.

PARALEGAL

PARA 122 PROCEDURAL LAW
3 credits. 3 hours. (Lecture 3 hours.)
The student will examine and understand laws of criminal procedure regulating law enforcement and criminal law process; fundamentals of constitutional and criminal law concepts; elements of local, state, and federal jurisdiction, venue, and procedure as they apply to law enforcement; and detailed concepts in the laws of arrest, search, and seizure.

PARA 171 INTRODUCTION TO LEGAL TECHNOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Philosophical and historical background of law. Legal context, organization, purpose, and responsibility. Introduction to the career requirements, opportunities, and responsibilities.

PARA 173 CONTRACTS
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to the formation of simple contracts, consideration, conditions, benefits, and impossibility. Remedies, performance, and breach.

PARA 175 TORTS
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to negligence, strict liability, intentional torts, battery, false imprisonment, rights to privacy, and privilege. Techniques of interviewing witnesses and parties to an action.

PARA 176 LEGAL RESEARCH
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to sources of laws and legal research methods; fundamentals of legal writing.

PARA 177 LEGAL WRITING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 176.
In depth instruction in legal writing, drafting legal documents including: briefs, memoranda, and motions.

PARA 180 REAL PROPERTY
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to the fundamentals of real property, present estates and interests, ownership, land zoning, easements, licenses, and rights in land.

PARA 181 PROPERTY
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to the fundamentals of real and personal property, ownership interests, zoning easement, liens and bailments.
PARA 185 ETHICS FOR THE PARALEGAL
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 171.
This course will introduce students to the type of ethical dilemmas that they will face once in the work force, the ethical rules developed by the American Bar Association, and methods for researching the answers to ethical dilemmas.

PARA 215 JUVENILE LAW
3 credits. 3 hours. (Lecture 3 hours.)
The student will be introduced to juvenile law, jurisdiction and disposition of the juvenile offender, court processing, adjudicatory process, and the uniform juvenile court act.

PARA 223 CRIMINAL LAW I
3 credits. 3 hours. (Lecture 3 hours.)
The student will be introduced to criminal law, classification and analysis of crimes and criminal acts with emphasis on criminal law as a means of preservation and protection of life and property.

PARA 224 CRIMINAL EVIDENCE
3 credits. 3 hours. (Lecture 3 hours.)
The student will examine and understand the nature, types, and degrees of criminal evidence; rules governing admissibility, competency, and relevancy; presentation of physical and other material evidence, direct and circumstantial evidence, hearsay rules, and exceptions.

PARA 248 CONSTITUTIONAL LAW
3 credits. 3 hours. (Lecture 3 hours.)
The student will be introduced to U.S. Supreme Court rulings that affect law enforcement. They will analyze and understand major constitutional decisions, federal statutes, interstate rules, and cases involving constitutional amendments affecting law enforcement jurisdiction and civil liberties.

PARA 277 LAW OFFICE MANAGEMENT
3 credits. 3 hours. (Lecture 3 hours.)
Review systems approach to law office management. Client relationship, billing practices, timekeeping, and law office library systems.

PARA 279 FAMILY LAW
3 credits. 3 hours. (Lecture 3 hours.)
Responsibilities and techniques in family relationships, legal problems in the family, and husband-wife and parent-child responsibilities.

PARA 281 BUSINESS ORGANIZATION
3 credits. 3 hours. (Lecture 3 hours.)
Practical aspects of the law of business organizations. Legal principles that must be observed in counseling and forming an enterprise.

PARA 283 WILLS/TRUSTS/PROBATE
3 credits. 3 hours. (Lecture 3 hours.)
Construction of wills, trusts, and the administration of a probate estate.

PARA 284 INTELLECTUAL PROPERTY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 171 with a minimum grade of C, ENGL 101 with a minimum grade of B, and acceptance into Paralegal program.
Introduction to patent, trademark, and copyright law.

PARA 290 INTERNSHIP IN PARALEGAL TECHNOLOGY
3 credits. 10 hours. (Field Studies 10 hours.)
Prerequisite: 15 credit hours of paralegal study or consent of department.
On-the-job training in a law office.

PARA 292 LITIGATION
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 171 or approval of instructor.
Introduce student to trial preparation, trial practice, preparation of pleadings, discovery, and motions. Client and witness interviewing.

PARA 294 BANKRUPTCY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 171 or approval of instructor.
Introduction to the practice of bankruptcy law. Overview of bankruptcy code, rules, official forms, bankruptcy cases, and secondary authority.

PHILOSOPHY

Blue River  Longview  Maple Woods
Dennis Lowden  Michael Connelly  Paul Long
Douglas Washer
Penn Valley  Verle Muhrer

PHIL 100 INTRODUCTION TO PHILOSOPHY
3 credits. 3 hours. (Lecture 3 hours.)
This course will introduce students to the fundamental questions of human existence including the foundation of knowledge; the nature of ethical, religious, and social values and meaning; conceptions of being; and human freedom. Consideration will be given to the application of philosophical methods to contemporary society and problems.

PHIL 101 PHILOSOPHY OF RELIGION
3 credits. 3 hours. (Lecture 3 hours.)
This course is an inquiry into the nature of religion and religious claims. Religious thought, and religious language. It includes such philosophical topics as arguments for the existence of God; arguments against the existence of God; the problem of evil, the relationship between religion and other disciplines such as science, history, and ethics; religious language and its special problems; the influence of religion and the philosophy of religion on the contemporary world, and other specific philosophical and theological problems.
PHIL 102 WORLD PHILOSOPHY
3 credits. 3 hours. (Lecture 3 hours.)
A study of the fundamental and traditional problems of philosophy with an emphasis on African, Asian, Indian, Arabic, Latin and Native American philosophical traditions.

PHIL 200 LOGIC
3 credits. 3 hours. (Lecture 3 hours.)
An introduction to the art of rational thinking as applied to the critical evaluation of information, the construction and evaluation of deductive and inductive arguments, the resolution of practical and intellectual problems, and the persuasive defense of ideas.

PHIL 201 HISTORY OF PHILOSOPHY I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PHIL 100.
Survey of the major aspects of philosophical thought from the ancient Greeks to the end of the Middle Ages.

PHIL 203 ETHICS
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to introduce the student to the discipline of ethics and the philosophical questions and issues that arise from within it. It will include an historical overview of several traditional theories of ethics and approaches to ethical decision-making, an examination of the role of reason and logic in ethical analysis, and a consideration of some of the many ethical dilemmas and problems which confront our society today.

PHIL 204 CONTEMPORARY PHILOSOPHIES OF VALUE
3 credits. 3 hours. (Lecture 3 hours.)
Analysis of modern philosophies of personal and social value. Major contemporary “academic” and “popular” thinkers.

PHED 105 BODY BUILDING I
1 credit. 2 hours. (Laboratory 2 hours.)
Designed for the student wanting to develop muscular strength and endurance. Emphasis will be on proper training technique and program development. Includes assessment, planning, and participation in an individual fitness program based on the student’s needs.

PHED 106 BODY BUILDING II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 105.
A continuation of PHED 105. This course will expand on the concepts introduced in PHED 105, in addition to offering a variety of advanced techniques. Emphasis is given to the individual program of each student.

PHED 107 PHYSICAL FITNESS I
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 105.
First in a series of classes designed to develop the student’s level of physical fitness. Emphasis will be given to the individual’s muscle strength and endurance, cardiovascular endurance, flexibility, and body composition. Includes assessment, planning, and participation in an individual fitness program based on the student’s needs. The student will have access to free weights, weight machines, and a variety of cardiovascular equipment.

PHED 108 PHYSICAL FITNESS II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 107.
Second in a series of classes designed to develop the student’s level of physical fitness. This course will expand on the concepts introduced in PHED 107, in addition to offering a variety of advanced techniques and programming ideas. Emphasis is given to the individual program of each student.

PHED 109 PHYSICAL FITNESS III
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 107.
A continuation of PHED 107 and 108.

PHED 110 PHYSICAL FITNESS IV
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 109.

PHED 113 VOLLEYBALL I
1 credit. 2 hours. (Laboratory 2 hours.)
Techniques, skills, and rules of volleyball.

PHED 114 VOLLEYBALL II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 113.
Advanced techniques, skills, and strategies of volleyball.
PHED 117 GOLF I
1 credit. 2 hours. (Laboratory 2 hours.)
Fundamental techniques and skills, rules, terminology, playing courtesies, and etiquette of golf.

PHED 118 GOLF II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 117 or consent of instructor.
Advanced theory. Techniques of golf. Rhythm and swing, golf errors, and individual corrections and adjustments.

PHED 119 BASKETBALL I
1 credit. 2 hours. (Laboratory 2 hours.)
Techniques, skills, and rules of basketball.

PHED 120 BASKETBALL II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 119.
Advanced techniques, skills, and rules of basketball. Team and league play.

PHED 121 AEROBICS I
1 credit. 2 hours. (Laboratory 2 hours.)
A program of physical fitness based on popular aerobic exercises. Individual exercise programs designed for persons of all ages.

PHED 122 AEROBICS II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 121.
An advanced program of physical fitness based on popular aerobic exercises. Individual exercise programs designed for persons of all ages.

PHED 123 BENCH AEROBICS
1 credit. 2 hours. (Laboratory 2 hours.)
Concentrates on strengthening and toning the legs while working the cardiovascular system. By using the bench step-up format, low-impact exercises are incorporated into this class. All fitness levels can be accommodated in the same class by having the student change the height of the bench.

PHED 124 LIFETIME FITNESS I
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: Successful completion of preliminary health screening or permission of personal physician.
First in a series of cardiovascular and muscular development fitness programs designed around the aerobic circuit. The course introduces basic concepts of lifetime fitness development, health, and exercise programming. A variety of individual aerobic exercise equipment will be incorporated into the student’s total program.

PHED 125 LIFETIME FITNESS II
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: PHED 124 and successful completion of preliminary health screening or permission of personal physician.
A cardiovascular and muscular development fitness program designed around the aerobic circuit. The course builds on the concepts introduced in PHED 126 and 127. Additional concepts integrated include strength and body composition. A variety of individual aerobic exercise equipment will be incorporated into the student’s total program.

PHED 126 LIFETIME FITNESS III
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: PHED 125 and successful completion of preliminary health screening or permission of personal physician.
A cardiovascular and muscular development fitness program designed around the aerobic circuit. The course builds on the concepts introduced in PHED 126, 127, and 128. A variety of individual aerobic exercise equipment will be incorporated into the student’s total program.

PHED 129 LIFETIME FITNESS IV
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: PHED 126 and preliminary health screening or permission of personal physician.
A cardiovascular and muscular development fitness program designed around the aerobic circuit. The course builds on the concepts introduced in PHED 126, 127, and 128. A variety of individual aerobic exercise equipment will be incorporated into the student’s total program.

PHED 130 FITNESS WALKING
1 credit. 2 hours. (Laboratory 2 hours.)
Designed to introduce the student to walking as a form of cardiovascular fitness. Students will learn the proper form for fitness walking as well as proper intensity monitoring techniques.

PHED 131 JOGGING AND DISTANCE TRAINING
1 credit. 2 hours. (Laboratory 2 hours.)
Basic principles and precautions are covered in setting up a beginning and/or advanced running program. This course is designed for those who wish to run for fitness or competition.

PHED 132 FENCING I
1 credit. 2 hours. (Laboratory 2 hours.)
Basic skills, rules, history, and etiquette of foil fencing. Practice of techniques and strategies.

PHED 133 FENCING II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 132 or consent of instructor.
Advanced techniques of foil fencing.

PHED 134 TENNIS I
1 credit. 2 hours. (Laboratory 2 hours.)
Skills, rules, and practice in the techniques and strategy of tennis.

PHED 135 TENNIS II
1 credit. 2 hours. (Laboratory 2 hours.)
Advanced tennis skills, rules, and practice in the techniques and strategy of tennis.

PHED 136 TENNIS III
1 credit. 2 hours. (Laboratory 2 hours.)
Advanced tennis skills, rules, and practice in the techniques and strategy of tennis.

PHED 137 TENNIS IV
1 credit. 2 hours. (Laboratory 2 hours.)
Advanced tennis skills, rules, and practice in the techniques and strategy of tennis.
PHED 138  TENNIS II
1 credit. 2 hours. (Laboratory 2 hours.)
Advanced skills and practice in techniques and strategy of tennis.

PHED 141  BOWLING I
1 credit. 2 hours. (Laboratory 2 hours.)
History of bowling. Development of individual skills and techniques. Facilities, etiquette, equipment, league organization, and abridged rules.

PHED 142  BOWLING II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 141 or consent of instructor.
Improvement of performance skills and techniques. Form, rhythm, and coordination. Individual bowling and league play.

PHED 143  SELF-DEFENSE
1 credit. 2 hours. (Laboratory 2 hours.)
A course designed for both men and women emphasizing “street self-defense.” Effective physical techniques and strategies to avoid or terminate threatening actions or a violent attack will be introduced.

PHED 144  KARATE I
1 credit. 2 hours. (Laboratory 2 hours.)
Fundamental skills and techniques in the art of karate.

PHED 145  KARATE II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 144 or approval of instructor.
Intermediate techniques in the art of karate.

PHED 146  KARATE III
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 145 or approval of instructor.
Further development of intermediate techniques in the art of karate.

PHED 147  KARATE IV
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 146 or approval of instructor.
Advanced techniques in the art of karate.

PHED 148  INDIVIDUAL WELLNESS
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Designed for individuals interested in a wellness lifestyle. Individuals design personalized fitness programs through consultation with the instructor. Computerized evaluations determine health and fitness levels. Programs are then administered for cardiovascular conditioning, muscle strengthening and toning, nutritional awareness, weight control, and stress reduction. Students choose those activities most relevant to them.

PHED 165  VARSITY SPORTS I
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: Current membership in an intercollegiate athletic team.
Participation in all phases of a varsity sport.

PHED 166  VARSITY SPORTS II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: Current membership in an intercollegiate athletic team.
Participation in all phases of a varsity sport.

PHED 167  VARSITY SPORTS III
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: Current membership in an intercollegiate athletic team.
Participation in all phases of a varsity sport.

PHED 168  VARSITY SPORTS IV
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: Current membership in an intercollegiate athletic team.
Participation in all phases of a varsity sport.

PHED 179  AQUA AEROBICS I
1 credit. 2 hours. (Laboratory 2 hours.)
Exercise program of choreographed routines involving continuous rhythmic activity performed in water to encourage cardiovascular fitness and muscular endurance.

PHED 180  AQUA AEROBICS II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 179.
Exercise program of advanced choreographed routines involving continuous rhythmic activity performed in water to encourage cardiovascular fitness and muscular endurance.

PHED 197  TOPICS IN PHYSICAL EDUCATION
1 credit. 2 hours. (Laboratory 2 hours.)
Designed to offer the student or a group of students a current activity topic. Considering the dynamic state the fields of physical and wellness are in at the current time, this allows the Physical Education Department to meet the needs of the community.

PHED 198  TOPICS IN PHYSICAL EDUCATION
2 credits. 2 hours. (Laboratory 2 hours.)
Designed to offer the student or a group of students a current activity topic. Considering the dynamic state the fields of physical and wellness are in at the current time, this allows the Physical Education Department to meet the needs of the community.

PHED 199  TOPICS IN PHYSICAL EDUCATION
3 credits. 3 hours. (Lecture 3 hours.)
Designed to offer the student or a group of students a current activity topic. Considering the dynamic state the fields of physical and wellness are in at the current time, this allows the Physical Education Department to meet the needs of the community.

HEALTH COURSES

PHED 155  CARE AND PREVENTION OF ATHLETIC INJURIES
3 credits. 4 hours. (Lecture 2 hours. Lab 2 hours.)
Athletic training procedures for prevention of injury. Recognition and treatment of athletic injuries.
PHED 157 PRINCIPLES OF HEALTH  
3 credits. 3 hours. (Lecture 3 hours.)  

PHED 158 FIRST AID, SAFETY, AND CPR  
2 credits. 2 hours. (Lecture 2 hours.)  
Prerequisite: The student must be at least 17 years old.  
Theory and practice of giving aid to ill or injured persons. Treatment of injuries. Cardiopulmonary resuscitation procedures. History and development of safety education. American Red Cross certificates issued to students completing the course successfully.

PHYSICAL SCIENCE

<table>
<thead>
<tr>
<th>Longview</th>
<th>Maple Woods</th>
<th>Penn Valley</th>
<th>Proctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deanna Poudel</td>
<td>Cynthia Sexton</td>
<td>John Hawkins</td>
<td>Proctor</td>
</tr>
<tr>
<td>Blue River</td>
<td>Christopher Johnson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PHSC 101 PHYSICAL SCIENCE I  
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)  
Fundamental principles and concepts of astronomy, chemistry, physics, and geology and their relation to man and the environment.

PHSC 107 FOUNDATIONS OF PHYSICAL SCIENCE  
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)  
Survey of basic principles and experimental history of the physical sciences and their importance in economic and social policy as shown by the study of selected areas.

PHYSICAL THERAPIST ASSISTANT

Offered at Penn Valley
Cheryl Carpenter-Davis  Gwendolyn Robertson  Pamela Stockman

PTHA 151 INTRODUCTION TO PHYSICAL THERAPY  
2 credits. 2 hours. (Lecture 2 hours.)  
Introduction to the basic concepts of the function of a physical therapist and a physical therapist assistant as members of the health team and interaction of health care disciplines in the care of the patient. Medical terminology related to the specific discipline.

PTHA 152 PHYSICAL THERAPY FUNDAMENTALS I  
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)  
Prerequisite: Formal acceptance into the program.  
Theory and application of treatment modalities used in physical therapy. Therapeutic measures and patient handling skills used in the physical treatment of various injuries and diseases. Field trips to observe the clinic and its modalities.

PTHA 153 KINESIOLOGY  
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)  
Prerequisites: BIOL 109 and PTHA 152 and PTHA 160, each with a minimum grade of C.  
Anatomy and function of the musculoskeletal system. Analysis of various daily activities. Application of physical therapy assessment procedures related to clinical kinesiology.

PTHA 154 APPLIED NEUROLOGY  
2 credits. 2 hours. (Lecture 2 hours.)  
Prerequisites: BIOL 109 and PTHA 152 and PTHA 160, each with a minimum grade of C.  
Foundations of neuroscience necessary for practice as a rehabilitation professional. Anatomy and function of the nervous system. Correlation of clinical problems with pathology of the nervous system.

PTHA 155 REHABILITATION  
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)  
Prerequisite: PTHA 162 with a minimum grade of C.  
Introduction to the philosophy underlying rehabilitation theory and principles of treatment involved in normal and abnormal ambulation and mobility. Application of external supports and assistive devices, and teaching activities of daily living with attention to description, demonstration, and practice. Field trips are required.

PTHA 158 THERAPEUTIC EXERCISE  
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)  
Prerequisite: PTHA 162 with a minimum grade of C.  
Introduction to the theory and principles of application of therapeutic exercise including patient instruction, manual techniques, and equipment commonly used by the physical therapist assistant. Field trips to learn various specialized techniques.
PTHA 159 ORTHOPEDIC PATHOLOGY
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: BIOL 109 and PTHA 152 and PTHA 160, each with a minimum grade of C.
Orthopedic pathologies commonly seen in physical therapy practice; diagnosis, signs and symptoms, physiologic factors, and treatment.

PTHA 160 MEDICAL DISEASES
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: BIOL 100, BIOL 110, BIOL 150 and PTHA 151, each with a minimum grade of C and formal acceptance into the program.
Medical diseases commonly seen in physical therapy practice; diagnosis, signs and symptoms, physiologic factors, and treatment.

PTHA 161 PHYSICAL THERAPY FUNDAMENTALS II
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisites: BIOL 109 and PTHA 152 and PTHA 160, each with a minimum grade of C.
Introduction to the theory and practical application of electrotherapy, patient documentation, patient care skills, and selected modalities, including indications and contraindications for use.

PTHA 162 CLINICAL EXPERIENCE I
2 credits. 5 hours. (Clinical 5 hours.)
Prerequisite: PTHA 153, 154, 159, and 161 and EMTP 102, each with a minimum grade of C. Completion of pre-clinical examination with a score of 80% or better. Demonstrated competency in pre-clinical checkouts. Supervised clinical experience in the practical application of techniques and procedures covered in all previous PTHA courses. Assisting physical therapists and physical therapist assistants in treatment of patients in a variety of clinical settings.

PTHA 164 PEDIATRICS AND GERONTOLOGY
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: PTHA 162 with a minimum grade of C.
Specialized information related to the treatment of pediatric and older adult populations.

PTHA 170 CLINICAL EXPERIENCE II
2 credits. 5 hours. (Clinical 5 hours.)
Prerequisite: PTHA 162 with minimum grade of C. Concurrent enrollment in PTHA 155, 158, 164, and 171.
Supervised clinical experience in the practical application of techniques and procedures covered in all previous PTHA courses. Assisting physical therapists and physical therapist assistants in treatment of patients in a variety of clinical settings.

PTHA 171 CLINICAL SEMINAR
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: PTHA 162 with a minimum grade of C.
This course contains current professional and patient care issues regarding the practice of physical therapy such as ethics, departmental organization, reimbursement, safety and research.

PTHA 172 CLINICAL EXPERIENCE III
12 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Completion of all other required courses in the PTHA program, each with a minimum grade of C. Practical application of principles learned in prior coursework. Experience rotation internships in selected hospitals and other clinical sites throughout the United States under the guidance of a physical therapist.

PTHA 173 SPECIAL TOPICS
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Completion of all previous semesters of physical therapy and biology coursework with a minimum grade of C.
This course presents specialized topics in physical therapy and the administration of health care.

PHYSICS

Longview  Maple Woods  Penn Valley
Deanna Poudel  Cynthia Sexton  John Hawkins
Proctor

PHYS 101 INTRODUCTORY PHYSICS
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
A survey of physics with emphasis on mechanics, heat, light, sound, electricity, magnetism, and atomic physics. Emphasis on the concepts of physics.

PHYS 106 GENERAL ASTRONOMY
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
A survey of the properties and the laws governing the behavior of bodies in the cosmos, including the observational procedures from which the concept of the cosmos has developed and practical applications of space science. (Formerly PHYS 102).

PHYS 112 TECHNICAL PHYSICS
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Prerequisite: MATH 104 with a minimum grade of C. Principles of mechanics, thermodynamics, sound, electricity, magnetism, light, and nuclear technology with emphasis on applications to technology. (Formerly PHYS 155).

PHYS 130 GENERAL PHYSICS I
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: MATH 130. Principles of mechanics, heat, and sound. (Formerly PHYS 104).
PHYS 131 GENERAL PHYSICS II
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: PHYS 130 with a minimum grade of C.
Principles of electricity, magnetism, light, and atomic physics. (Formerly PHYS 105)

PHYS 220 ENGINEERING PHYSICS I
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: Enrollment in or completion of MATH 190.
Principles of mechanics, heat and thermodynamics, wave motion, and sound.

PHYS 221 ENGINEERING PHYSICS II
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: PHYS 220 with a minimum C grade and enrollment in or completion of MATH 210.
Principles of electricity and magnetism, geometrical and physical optics, and elementary atomic physics.

POLITICAL SCIENCE

POLS 135 INTRODUCTION TO POLITICAL SCIENCE
3 credits. 3 hours. (Lecture 3 hours.)
Principles of constitutional and political theory. Federal and Missouri constitutions and political processes in selected contemporary states.

POLS 136 INTRODUCTION TO AMERICAN NATIONAL POLITICS
3 credits. 3 hours. (Lecture 3 hours.)
Principles of political science. Examination of the development, organization, and functions of the national government. Its relationship to the cultural, economic, and social institutions of the United States. Federal and Missouri constitutions.

POLS 137 INTRODUCTION TO STATE AND LOCAL POLITICS
3 credits. 3 hours. (Lecture 3 hours.)
State political systems and subsystems including the executive, judicial, and legislative branches. Intergovernmental relationships. Special attention to metropolitan areas. Federal and Missouri constitutions.

POLS 138 PRACTICUM IN PUBLIC ADMINISTRATION I
3 credits. 3 hours. (Field Studies 3 hours.)
Prerequisite: Completion of POLS 135, 136, or 137 with a minimum grade of B and permission of instructor.
Field work in a public agency in an entry-level position to obtain exposure to a department in City Hall or a state agency.

PRACTICAL NURSING

PNUR 100 PERSONAL AND VOCATIONAL CONCEPTS
1 credit. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Students must meet entrance requirements and must be accepted into practical nursing program.
An introduction to the role of the student and Licensed Practical Nurse including history, trends, health care teams, and health care delivery systems. The impact of cultural, religious, and social issues on health care as well as ethical and legal responsibilities are also covered.

PNUR 102 FUNDAMENTALS OF PRACTICAL NURSING I
1.5 credits. 1.5 hours. (Lecture 1 hour. Laboratory 0.5 hour.)
Prerequisite: Entry to the practical nursing program.
This fundamental course introduces the student to the role of the practical nurse in meeting basic needs common to all clients. This course introduces the student to the basic skills related to nursing care. Basic nursing skills and safety aspects will be presented. The student will practice these basic skills in the laboratory setting.

PNUR 103 FUNDAMENTALS OF PRACTICAL NURSING II
8.5 credits. 8.5 hours. (Lecture 1.5 hours. Laboratory 3 hours. Clinical 4 hours.)
Prerequisite: Completion of PNUR 102 with a grade of C or better, or Certified Nursing Assistant Certification.
Professional communication skills and approaches to clients of diverse populations across the lifespan are presented. Advanced nursing skills are taught utilizing the nursing process in their application to the client. Clinical experiences allow the learner to apply knowledge and skills through demonstration of competencies related to basic nursing care. Care of the elderly and nutrition are integrated as theory content and included in the clinical application.

PNUR 104 BODY STRUCTURE AND FUNCTION
2 credits. 2 hours. (Lecture 1.5 hours. Laboratory 0.5 hour.)
Prerequisite: Successful completion of all previously attempted courses in the program with a minimum grade of “C”.
Introduces the student to the major structure and functions of the human body. It is taught according to body systems. Laboratory time is used to reinforce classroom instruction.
PNUR 106 FUNDAMENTAL CONCEPTS OF NUTRITION
1 credit. 2 hours. (Lecture 2 hours.)
Prerequisite: Students must meet entrance requirements and must be accepted into the practical nursing program.
A study of basic nutrition and nutritional requirements throughout the life cycle, including a brief overview of dietary modifications necessitated by disease process.

PNUR 107 DEVELOPMENTAL STAGES OF THE LIFE SPAN
1 credit. 2 hours. (Lecture 2 hours.)
Prerequisite: Students must meet entrance requirements and must be accepted into the practical nursing program.
A study of the basic physical, social, and psychological changes occurring during the life cycle from newborn to death.

PNUR 110 PHARMACOLOGY
3.5 credits. 3.5 hours. (Lecture 1 hour. Laboratory 0.5 hour. Clinical 2 hours.)
Introduction of basic information regarding sources and effects of drugs, safe dosage preparation and the responsibilities of drug administration. There is presentation of pharmacology with the description of drug, purpose, action, side effects, and nursing implications covered.

PNUR 128 MENTAL HEALTH NURSING
2.5 credits. 5 hours. (Lecture 1.8 hours. Clinical 3.2 hours.)
Prerequisite: Successful completion of all previously attempted courses of the program with a minimum grade of C.
An introduction to mental health concepts emphasizing therapeutic communication and nursing approaches to behavior disorders and care of common mental disorders.

PNUR 132 THE CHILDBEARING FAMILY
4 credits. 4 hours. (Lecture 2 hours. Laboratory 0.5 hour. Clinical 1.5 hours.)
Prerequisites: PNUR 100, Personal and Vocational Concepts, PNUR 102, Fundamentals of Practical Nursing I, PNUR 103, Fundamentals of Practical Nursing II, PNUR 104, Body Structure and Function with a minimum grade of C.
Students will apply concepts of the nursing process, communication, and developmental stages to the care of the childbearing family, including the neonate through adolescence. Clinical experiences will reflect a variety of experiences. Nutrition is integrated into the theory content and included in clinical application.

PNUR 138 NURSING OF THE ADULT I
9 credits. 9 hours. (Lecture 4 hours. Laboratory 1 hour. Clinical 4 hours.)
Prerequisites: Successful completion of all previously attempted courses, PNUR 100, Personal and Vocational Concepts, PNUR 102, Fundamentals of Practical Nursing I, PNUR 103, Fundamentals of Practical Nursing II, PNUR 104, Body Structure and Function, PNUR 110 Pharmacology, in the program with a minimum grade of a C.
This course prepares the student to care for the adult client with needs ranging from simple to complex in a variety of settings. Concepts are presented by body systems, with common diseases and disorders, their causes, symptomatology, and treatments being emphasized. The nursing process is utilized to identify nursing problems and then to implement nursing interventions to meet client needs. Care of the elderly and nutrition are intergraded as theory content and included in clinical applications.

PNUR 144 NURSING OF THE ADULT II
8 credits. 8 hours. (Lecture 3 hours. Laboratory 1 hour. Clinical 4 hours.)
Prerequisites: PNUR 100, PNUR 102, or equivalent, PNUR 103, PNUR 104, PNUR 110, PNUR 138.
This course prepares the student to care for the adult client with needs ranging from simple to complex in a variety of settings. Concepts are presented by body systems, with common diseases and disorders, their causes, symptomatology, and treatments being emphasized. The nursing process is utilized to identify nursing problems and then to implement nursing interventions to meet clients needs. Pharmacology, nutrition and care of elderly are integrated as theory content and included in clinical application.

PNUR 145 NURSING OF THE ELDERLY
1 credit. 2 hours. (Lecture 2 hours.)
Prerequisite: Students must meet entrance requirements and must be accepted into the Practical Nursing Program.
A basic study of the physical, social, and psychological changes that occur during the aging process. The student applies basic nursing skills and communication techniques and knowledge of cultural and ethnic differences to the older adult client. This course assists the student to recognize the role of the practical nurse in restoration and health maintenance.

PNUR 146 LEADERSHIP
3 credits. 6 hours. (Lecture 1.7 hours. Clinical 4.3 hours.)
Prerequisite: Successful completion of all previously attempted courses of the program with a minimum grade of C.
Principles of leadership and management are utilized in the nursing process to meet the needs of the diverse client, family, and health team member. Legal responsibilities of the practical nurse in a leadership role are reviewed.
RNUR 115 PROFESSIONAL TRANSITION
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: BIOL 100 or CHEM 105, BIOL 109, BIOL 208, PSYC 140, and PSYC 243, each with a grade of C or better.
Admission into the nursing program. This course facilitates the transition of the Licensed Practical Nurse to the role of Associate Degree Nurse and includes professional and legal/ethical issues. Concepts covered in the course include: nursing process, physical assessment, teaching-learning principles, group dynamics, cultural/ethnic issues, and critical thinking. Community health concepts will be introduced and previously learned nursing content addressed.

RNUR 126 FUNDAMENTALS OF PROFESSIONAL NURSING
6 credits. 10 hours. (Lecture 4 hours. Clinical 6 hours.)
Prerequisite: BIOL 100 or CHEM 105 and PSYC 140, each with a grade of C or better. Prerequisite (grade of C or better) or taken concurrently: BIOL 109 and PSYC 243. Must be taken concurrently: RNUR 131.
This course must be taken concurrently with RNUR 131 Essential Nursing Concepts in the first semester of the program. The student will acquire knowledge fundamental to the development of basic skills and attitudes essential for the practice of nursing. The principles of physical, biological, and behavioral sciences and nursing theory serve as the foundation. This first clinical laboratory course is designed to introduce the student to the role of the professional nurse in meeting basic needs common to all clients. Students are prepared to establish the nurse-client relationship through communication skills. Planned clinical experience is designed to allow the student to utilize the nursing process to deliver safe, support systems. Emphasis is placed on incorporating teaching-learning needs as part of the plan of care for the student. Developmental tasks of the neonate, adolescent, and adult are identified. The nursing process is utilized in the clinical setting to determine needs and related self-care practices. While major emphasis is placed upon provide experiences in meeting the basic needs of the family during the childbearing years, women’s changing health care requirements throughout her lifetime are also addressed. Communication with women, mothers, and significant others is emphasized. Developmental tasks of the neonate, adolescent, and adult are identified. The nursing process is utilized in the clinical setting to determine needs and related interventions for childbearing women, neonates, and support systems. Emphasis is placed on incorporating teaching-learning needs as part of the plan of care for the culturally diverse family.

RNUR 131 ESSENTIAL NURSING CONCEPTS
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: BIOL 100 or CHEM 105 and PSYC 140. Prerequisite (grade of C or better) or taken concurrently: BIOL 109 and PSYC 243. Must be taken concurrently: RNUR 126.
This course must be taken concurrently with Fundamentals of Professional Nursing in the first semester of the program and presents the concepts underlying the nursing curriculum. The course provides a basis for beginning nursing practice, introducing the student to nursing as a profession with its component parts: professionalism, health care delivery systems, the health care team, and legal/ethical issues. The student is introduced to communication theory, the hierarchy of basic needs, developmental theories, the impact of culture and ethnicity on health practices, and the nurse-client relationship. The fundamental principles of health assessment are also a part of this course. Competency in calculation of medication dosages will be addressed.

RNUR 134 MENTAL HEALTH NURSING
4 credits. 8 hours. (Lecture 2 hours. Clinical 6 hours.)
Prerequisite: RNUR 126, RNUR 131, BIOL 109, and PSYC 243, each with a grade of C or better. Prerequisite (grade of C or better) or taken concurrently: BIOL 208.
This course is based on the belief that mental health nursing is an integral part of all nursing. It builds upon the foundation of basic knowledge of human behavior which the student receives from the field of psychology. The student will acquire a basic knowledge of the causes, treatment, and prevention of mental disorders across the life span including the impact of environmental forces. Ethical/legal concepts are integrated throughout. Emphasis is placed on application of therapeutic communication techniques, psychiatric assessment skills, and the nursing process. The impact of the therapeutic environment upon the treatment of specific psychiatric populations across the life span will be presented.

RNUR 138 NURSING CARE OF WOMEN AND THE NEONATE
4 credits. 8 hours. (Lecture 2 hours. Clinical 6 hours.)
Prerequisites: Admission to RNUR 138 requires successful completion of all prerequisite courses with a grade of C or better. BIOL 100 or CHEM 105, PSYC 140, RNUR 126, RNUR 131, BIOL 109 or option of BIOL 110 and BIOL 210, PSYC 243.
This is a 16-week nursing course focusing on nursing care of women and neonates. The course is designed to provide a holistic view of women and their health-related self-care practices. While major emphasis is placed upon provide experiences in meeting the basic needs of the family during the childbearing years, women’s changing health care requirements throughout her lifetime are also addressed. Communication with women, mothers, and significant others is emphasized. Developmental tasks of the neonate, adolescent, and adult are identified. The nursing process is utilized in the clinical setting to determine needs and related interventions for childbearing women, neonates, and support systems. Emphasis is placed on incorporating teaching-learning needs as part of the plan of care for the culturally diverse family.
nursing courses and builds upon the basic nursing content and skills learned in Fundamentals of Professional Nursing and Essential Nursing Concepts. Gerontological concepts are presented along with selected medical-surgical problems associated with this population. The nursing process will serve as the framework to integrate the concepts of legal/ethical issues, culture and ethnicity, developmental stages/tasks, and communication. Emphasis is placed on identifying physiological and psychological changes of clients aged 65 and older.

**RNUR 230 LEADERSHIP/MANAGEMENT/TRENDS**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: ENGL 101, SOCI 160, RNUR 234, and RNUR 238, each with a grade of C or better. Prerequisites (grade of C or better) or taken concurrently: SPDR 100 and one of the following: HIST 120 or 121; POLS 125, 136, or 137; or SOSC 151.

This fourth semester course will focus on leadership and management principles necessary for the professional nurse to function in the leadership role. Professional responsibilities are delineated. Changes in health care delivery systems are discussed as well as other current issues and trends. Concepts and theories of leadership, management, communication, group process, and decision making are examined.

**RNUR 234 CHILD-CENTERED NURSING**

4 credits. 8 hours. (Lecture 2 hours. Clinical 6 hours.)

Prerequisite: BIOL 208, RNUR 134, RNUR 138, and RNUR 141, each with a grade of C or better. Prerequisites (grade of C or better) or taken concurrently: ENGL 101 and SOCI 160.

This third semester clinical laboratory nursing course is designed to introduce the student to the role of the professional nurse in promoting health care in children and their families. Nursing care will be provided in primary, secondary and tertiary settings. This course stresses the uniqueness of each child and the family unit. Communication is employed to assist the child and family in health maintenance with the goal of independence and autonomy of function. The nursing process will be used as the interactive tool linking all aspects of care for culturally and ethnically diverse clients and their families. Developmental stages/tasks will be stressed in assisting the family unit toward health maintenance.

**RNUR 238 ADULT NURSING II**

5 credits. 9 hours. (Lecture 3 hours. Clinical 6 hours.)

Prerequisite: BIOL 208, RNUR 134, RNUR 138, and RNUR 141, each with a grade of C or better. Prerequisites (grade of C or better) or taken concurrently: ENGL 101 and SOCI 160.

Adult Nursing II is the second of three medical-surgical nursing courses and is the first with a clinical component. This course allows students to utilize previous nursing concepts as they apply their skills to clients in a variety of secondary and tertiary settings. Students assume professional nursing roles in meeting basic needs by demonstrating skills in communication, critical thinking, and the nursing process. Students interact with culturally/ethnically diverse clients and integrate legal/ethical issues into the plan of care. Content regarding medical-surgical disease processes is continued, giving the student the basis of knowledge to assist the client to reach optimal status on the health-illness continuum.

**RNUR 244 ADULT NURSING III**

7 credits. 13 hours. (Lecture 4 hours. Clinical 9 hours.)

Prerequisites: ENGL 101, SOCI 160, RNUR 234, and RNUR 238, each with a grade of C or better. Prerequisites (grade of C or better) or taken concurrently: SPDR 100 and one of the following: HIST 120 or 121; POLS 125, 136, or 137; or SOSC 151.

This is the final of three adult nursing courses and is designed to prepare the student to transition to the role of the professional nurse. Students will expand their knowledge of therapeutic communication and skills related to health care technology. Concepts from previous nursing courses are integrated to provide comprehensive nursing care to select adult clients and their families experiencing multisystem failure/trauma. Students use the nursing process to organize and manage care in conjunction with other health team members. Critical thinking, developmental stages, cultural/ethnic diversity, and legal/ethical issues are implemented in the care planning process. Clinical laboratory practice occurs in primary, secondary, and tertiary settings with diverse client populations and includes a concentrated practicum which prepares the student to enter the work force. A community health nursing experience is incorporated in theory and clinical practice.

---

**PSYCHOLOGY**

- **Blue River**
  - Kimberly Chapman
- **Longview**
  - Andrew Geoghegan, Jr.
- **Maple Woods**
  - Julia Bishop
  - Robert Williams
- **Penn Valley**
  - Matthew Westra
  - Cebra Sims

**PSYC 140 GENERAL PSYCHOLOGY**

3 credits. 3 hours. (Lecture 3 hours.)

Introduction to the scientific study of behavior and experience with emphasis on maturation and learning, motivation, emotion, sensation, perception, and thinking. Aspects of personality and individual differences

**PSYC 141 ADVANCED GENERAL PSYCHOLOGY**

3 credits. 3 hours. (Lecture 3 hours.)

Prerequisite: PSYC 140.

Content and methods of psychology with special training in the fundamentals of scientific investigation in psychology and the behavioral sciences. Scientific methods of observing, measuring, recording, and analyzing data.
PSYC 144 ADJUSTMENT AND PERSONALITY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
Basic factors in personality development with emphasis on the role of social influences, stress, communication, relationships, and mental health.

PSYC 146 INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
Application of psychological principles to the world of work. Attention is given to the role of management, principles of communication, decision making, gender issues, conflict resolution and negotiation. Special attention is given to the relationship of worker satisfaction and performance.

PSYC 148 GROUP PROCESSES
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
Analysis of group behavior and functioning. Examination of group and member interaction. Identification of traits promoting effective and ineffective groups. Exploration of the impact of group processes on various aspects of human development and functioning.

PSYC 162 CORRECTIONAL PSYCHOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.

PSYC 210 INTERVIEWING AND INTERPERSONAL COMMUNICATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 144.
Development of skills necessary for effective performance in the helping professions despite differences in basic values and social backgrounds.

PSYC 240 CHILD DEVELOPMENT
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
Critical factors in understanding development: internal growth forces, self factors, external adjustment processes. Emphasis on interrelatedness of developmental processes.

PSYC 243 HUMAN LIFESPAN DEVELOPMENT
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: PSYC 140.
Discussion of the physical, social, emotional, and personality changes occurring during the life of the individual from conception through death. Emphasis is placed on the similarities and differences in development across and within cultures.

PSYC 245 ADOLESCENT PSYCHOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
Overview of developmental stages of adolescence. Physical, psychological, educational, and social characteristics and implications.

PSYC 260 SOCIAL PSYCHOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
Factors influencing individuals in social situations. Attitude formation, prejudice, aggression, interpersonal communication, leadership, and persuasion.

QUALITY ASSURANCE TECHNOLOGY
Offered at the Business and Technology College

QCAT 150 INTRODUCTION TO QUALITY ASSURANCE I
3 credits. 3 hours. (Lecture 3 hours.)
Fundamentals of successful quality management. How to plan for, initiate, and maintain continuous quality improvement. Management functions and responsibilities, quality planning and deployment, determining needs, developing criteria and quality policy for a total quality organization.

QCAT 151 INTRODUCTION TO QUALITY ASSURANCE II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: QCAT 150.
Basic principles of employee involvement. Introducing the process into an organization, defining quality improvement goals and objectives, implementing pilot programs. Using the team approach and seven quality tools to make quality improvements.

QCAT 210 QUALITY MANAGEMENT SYSTEM AUDITING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: QCAT 150.
Applications in Quality Management System Auditing principles. Includes a systematic approach to determine whether quality activities and related results comply with defined criteria and have been implemented effectively.

QCAT 240 QUALITY ASSURANCE APPLICATIONS
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: QCAT 151 with a minimum grade of C.
Applications in quality assurance. Computer spreadsheet applications, use of basic measurement tools, data collection and analysis, quality control charts and measurement tolerances.

QCAT 251 PROCESS QUALITY CONTROL
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: QCAT 151.
Statistical tools in process quality control. SOC, SQC, types of data, variability, frequency distributions, capability, control charting, general statistical measures, acceptance sampling, and MIL-STD.
QCAT 261 QUALITY STATISTICAL APPLICATIONS
3 credits. 3 hours. (Lecture 3 hours.)
**Prerequisite:** QCAT 251.
Statistical applications for quality assurance. Hypothesis testing, probability distributions, regression analysis, correlation, tests of relationships, data transformations, and nonparametric statistics.

QCAT 270 RELIABILITY AND METROLOGY
3 credits. 3 hours. (Lecture 3 hours.)
**Prerequisite:** QCAT 261.
Introduction to advanced quality assurance concepts in reliability and metrology. Product design, development, and production. Quality maintenance, product safety, and reliability testing. Precision measurements, traceability, control systems, and measurement equipment.

QCAT 281 DESIGN AND ANALYSIS OF EXPERIMENTS
3 credits. 3 hours. (Lecture 3 hours.)
**Prerequisite:** QCAT 261.
Components of design. Types of design: randomized, block Latin square, Graeco-Latin square, incomplete block, Youden square, mixture, factorial, nested. Analysis of variance, analysis of means, method of least squares, and contrast analysis.

---

RADIOLOGIC TECHNOLOGY

*Offered at Penn Valley*

Judith Taylor  Kimberly Thebeau-Siercks

RATE 150 INTRODUCTION TO RADIOLOGIC TECHNOLOGY
1 credit. 1 hour. (Lecture 1 hour.)
Introduction to the profession of radiologic technology, including the duties of the radiologic technologist in the health environment.

RATE 160 SURVEY OF RADIOLOGIC TECHNOLOGY
6 credits. 10.2 hours. (Lecture 4.2 hours. Clinical 6 hours.)
**Prerequisite:** Completion of prerequisite courses including Introduction to Radiologic Technology and admission to the Radiologic Technology Program.
Orientation to the program and clinical responsibilities. Topics related to basic patient interactions, body mechanics, patient transportation, radiographic terminology, radiographic examinations of the chest and abdomen, methods of radiation protection and types of radiographic equipment will be explored.

RATE 162 IMAGE PROCESSING
2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
**Prerequisite:** RATE 160, 172, and 173, each with a minimum grade of C.
Materials and factors relating to acquisition, processing, viewing, and storage of radiographs.

RATE 165 PATIENT CARE
2 credits. 2 hours. (Lecture 2 hours.)
**Prerequisite:** RATE 160 with a minimum grade of C.
This course will explore patient-health professional interactions, basic patient care and management, medico-legal issues, and medical ethics.

RATE 170 RADIATION BIOLOGY AND PROTECTION
3 credits. 3 hours. (Lecture 3 hours.)
**Prerequisite:** RATE 160 with concurrent enrollment in the corresponding semester of clinical training.
The principles of radiation biology and techniques used to protect the patient and personnel from the effects of exposure to ionizing radiation.

RATE 171 RADIOGRAPHIC EXPOSURES I
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
**Prerequisite:** Admission to the program.
Factors which affect radiographic image formation and determine image quality.

RATE 172 RADIOGRAPHIC POSITIONING I
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
**Prerequisite:** RATE 160 with a minimum grade of C.
 Concurrent enrollment in RATE 165 and 173. Anatomy and positioning of the alimentary canal, urinary system, and upper and lower extremities.

RATE 173 CLINICAL TRAINING I
3 credits. 16 hours. (Clinical 16 hours.)
**Prerequisite:** RATE 160 with a minimum grade of C and concurrent enrollment in RATE 165 and 172.
Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

RATE 174 RADIOGRAPHIC EXPOSURES II
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
**Prerequisite:** RATE 160, 171, 172, and 173 each with a minimum grade of C.
Quality control of radiographic images. Technic charts, calibration of equipment, standard exposure systems and factors used for conversion of technics for variables in the exposure system. Special techniques used in producing radiographic images.

RATE 175 CLINICAL TRAINING II
4 credits. 24 hours. (Field Studies 24 hours.)
**Prerequisite:** RATE 165, 172, and 173 each with a minimum grade of C.
Concurrent enrollment in RATE 176. Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

RATE 176 RADIOGRAPHIC POSITIONING II
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
**Prerequisite:** BIOL 110 and RATE 165, 172, and 173, each with a minimum grade of C.
Concurrent enrollment in RATE 162 and 175.
Anatomy, radiographic positioning, and film critique of the pelvis, bony thorax, vertebral column, cranium, and facial bones.

**RATE 178 CLINICAL TRAINING III**
4 credits. 20 hours. (Clinical 20 hours.)
Prerequisites: RATE 175 and 176 each with a minimum grade of C.
Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

**RATE 278 IMAGING MODALITIES AND PATHOLOGY**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: RATE 279, 280, 281, and 285, each with a minimum grade of C.
Concurrent enrollment in RATE 282.
Human disease processes and their relationship to patient examination in the radiology department.
Radiographic pathology and imaging modalities.

**RATE 279 RADIOGRAPHIC POSITIONING III**
2 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: RATE 176 and 178 each with a minimum grade of C.
Concurrent enrollment in RATE 280, 281, and 285.
Anatomy and positioning of the biliary system, mammary glands, and temporal bone. Advanced film critique of radiographs of all routine radiographic examinations.

**RATE 280 CLINICAL TRAINING IV**
4 credits. 24 hours. (Clinical 24 hours.)
Prerequisite: RATE 162, 176, and 178, each with a minimum grade of C.
Concurrent enrollment in RATE 279, 280, 281, and 285.
Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

**RATE 281 RADIATION PHYSICS**
3 credits. 3 hours. (Lecture 2 hours. Laboratory 1 hour.)
Prerequisite: PHYS 162 and RATE 171 each with a minimum grade of C.
Application of fundamental physics principles relating to energy, electricity, and magnetism and their relevance to the study of x rays and x-ray equipment.

**RATE 282 CLINICAL TRAINING V**
4 credits. 24 hours. (Field Studies 24 hours.)
Prerequisite: RATE 279, 280, 281 and 285, each with a minimum grade of C.
Concurrent enrollment in RATE 278.
Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

**RATE 283 FINAL SEMINAR**
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: RATE 278 and 282, each with minimum grade of C.
Preparation for the National Registry examination.
Simulation of American Registry of Radiologic Technologists examination.

**RATE 285 SPECIAL PROCEDURES**
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: RATE 170, 171, and 178, each with a minimum grade of C, and concurrent enrollment in RATE 279, 280, and 281.
Anatomy, positioning, equipment, and special tasks related to performance of special contrast media studies. Vascular, neurological, lymphatic, skeletal, and pulmonary systems.

**RAILROAD OPERATIONS**
Offered at Johnson County Community College Coordinated throughout MCC

**RRT 120 HISTORY OF RAILROADING**
3 credits. 3 lecture hours.
This course covers the history and traditions of railroading and the industry’s role in North American economic development. Upon successful completion of this course, students should be able to list and explain the significance of major events in North American railroading.

**RRT 121 RAILROAD TECHNICAL CAREERS**
3 credits. 3 lecture hours.
This course includes information about technical careers in railroading, enabling students to choose suitable career paths. This course includes field trips that will demonstrate the relationship among technical work groups in day-to-day railroad operations. Upon successful completion of this course, students should be able to describe basic technical job functions, requirements, and characteristics.

**RRT 150 RAILROAD OPERATIONS**
3 credits. 3 lecture hours.
This course includes information about the industry, its major assets, structure, and typical operations. Upon successful completion of this course, students should be able to define the current North American railroad industry characteristics, basic operations, components and processes, and industry structure and administrative processes.

**RRT 165 RAILROAD SAFETY, QUALITY AND ENVIRONMENT**
3 credits. 3 lecture hours.
This course covers the importance of safety, quality, personal health, and environmental awareness to the railroad industry and emphasizes the basic tools and techniques for improving these conditions on the job. Upon successful completion of this course, students should be able to define and explain the needs for improved safety, quality, health, and environmental awareness; describe their basic principles; explain the elements of successful programs; and apply these elements to typical tasks on the job.
Upon successful completion of this course, the student should be able to describe railroad organization and general operations, policies and practices to ensure railroad safety, and the basic responsibilities of conductors.

**RRTC 175 CONDUCTOR MECHANICAL OPERATIONS**
2 credits. 2.5 lecture hours.

Prerequisite: Admission to the JCCC’s Railroad Operations Program, conductor option, and successful completion of RRTC 175 with a grade of C or better.

This course covers mechanical operations that relate to conductor service. This is the second course in the conductor option of the Railroad Operations degree program. Upon successful completion of this course, the student should be able to describe and apply railroad organization and general operations, policies and practices to ensure railroad safety, and the basic responsibilities of conductors. This course includes safety and the general rules with which conductors must comply and teaches the techniques and administrative procedures conductors use on the job to perform safely and effectively.

**RRTC 261 CONDUCTOR SERVICE**
2 credits. 2.5 lecture hours.

Prerequisite: Admission to the JCCC’s Railroad Operations Program, conductor option, and successful completion of RRTC 123 with a grade of C or better.

Upon successful completion of this course, the student should be able to describe and apply railroad organization and general operations, policies and practices to ensure railroad safety, and the basic responsibilities of conductors. This course includes safety and the general rules with which conductors must comply and teaches the techniques and administrative procedures conductors use on the job to perform safely and effectively.

**RRTC 263 GENERAL CODE OF OPERATING RULES**
4 credits. 5 lecture hours.

Prerequisite: Admission to the JCCC’s Railroad Operations Program, conductor option, and successful completion of RRTC 261 with a grade of C or better.

This is the fourth course in the conductor option for the Railroad Operations degree program. Conductors must maintain a thorough understanding of the General Code of Operating Rules (GCOR). This course provides an in-depth study of the GCOR. Upon successful completion of this course, the student should be able to describe railroad organization and general operations, policies and practices to ensure railroad safety, and the basic responsibilities of conductors. This course includes safety and the general rules with which conductors must comply and teaches the techniques and administrative procedures conductors use on the job to perform safely and effectively.

**RRTC 265 CONDUCTOR FIELD APPLICATION**
9 credits. 16 hours. (On-the-job training: minimum 15 hours)

Prerequisite: Admission to the JCCC’s Railroad Operations Program, conductor option, and successful completion of RRTC 263 with a grade of C or better.

Upon successful completion of this course, the student will have observed actual operations and be able to apply skills learned in classroom-based instruction to those operations. The student will observe and perform operations under the supervision of experienced conductor mentors in actual field locations.

**RRTC 271 APPRENTICE RAILROAD DISPATCHER TRAINING I**
6 credits. 7.5 lecture hours.

Prerequisite: Admission to the JCCC’s Railroad Operations Program, dispatcher option, and successful completion of RRTD 271 with a grade of C or better.

Upon successful completion of this course, the student should demonstrate abilities to apply the General Code of Operating Rules, Maintenance of Way operating rules, and the Train Dispatcher’s Manual of policies and practices to safe and effective train movement and maintenance operations. This is an intensive course that prepares students to observe actual dispatching operations. Class currently held at Tarrant County Junior College, Ft. Worth, TX.

**RRTC 272 APPRENTICE RAILROAD DISPATCHER TRAINING II**
6 credits. 7.5 lecture hours. (Lab: 3 hours)

Prerequisite: Admission to the JCCC’s Railroad Operations Program, dispatcher option, and successful completion of RRTD 271 with a grade of C or better.

Upon successful completion of this course, the student should demonstrate the ability to use centralized traffic control equipment, computerized track warrant control equipment, and management information systems that record and report train movement. Students also will identify and resolve traffic conflicts safely and effectively. This is an intensive course in which students observe, practice, and demonstrate rail traffic dispatching functions in a laboratory setting. In addition, the student will spend an additional one week observing dispatching-related activities in the field in conjunction with this course. Class currently held at Tarrant County Junior College, Ft. Worth, TX.

**RRTD 275 RAILROAD DISPATCHING FIELD OBSERVATION**
3 credits. 16 hours. (On-the-job training: minimum 15 hours.)

Prerequisite: Admission to the JCCC’s Railroad Operations Program, dispatcher option, and successful completion of RRTD 122 with a grade of C or better.
Upon successful completion of this course, the student will have observed actual dispatching operations and should be able to identify major job responsibilities. Students will observe operations under the supervision of experienced dispatcher mentors in actual dispatching offices. Class currently held at Tarrant County Junior College, Ft. Worth, TX.

RRTD 276 RAILROAD DISPATCHING FIELD
APPLICATION
5 credits. (On-the-job training: minimum 15 hours.)
Prerequisite: Admission to the JCCC’s Railroad Operations Program, dispatcher option, and successful completion of RRTD 272 with a grade of C or better.
Upon successful completion of this course, the student should be able to apply skills learned in classroom-based dispatching instruction to those operations. This course is offered for 10 weeks, and students will observe and practice operations under the supervision of experienced dispatcher mentors in actual dispatching offices. Class currently held at Tarrant County Junior College, Ft. Worth, TX.

NOTE: Credit for courses numbered under 100 is not applicable to any degree or certificate.

READ 10 FOUNDATIONS FOR ACADEMIC READING I
3 credits, 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement scores or instructor recommendation.
Development of fundamental ability to interact independently with printed material so as to comprehend written material applicable to the college environment. Instruction in main idea and supporting details, word recognition, phonetic analysis, and vocabulary development.

READ 11 FOUNDATIONS FOR ACADEMIC READING II
3 credits, 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 10/30 with a grade of C or better or instructor recommendation.
Further development of fundamental ability to interact independently with printed material as to comprehend written material applicable to the college environment. Instruction in main idea and supporting details, inference, and organizational patterns, vocabulary development, and textbook strategies.
READ 17 PHONOLOGY I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Diagnostic testing and approval of instructor.
Improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

READ 18 LINGUISTIC COMPREHENSION II
(COMPANION FOR READ 11)
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 13/33 with a grade of C or better or instructor recommendation.
Development of fundamental comprehension of printed material applicable to the college environment through auditory and visual input. Instruction in main ideas and supporting details, and organizational patterns, vocabulary development and textbook strategies.

READ 19 PHONOLOGY II
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Permission of the instructor. Successful completion of READ 15, 16, or 17.
Continued improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

READ 20 PHONOLOGY II
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Permission of the instructor. Successful completion of READ 15, 16, or 17.
Continued improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

READ 21 PHONOLOGY II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Permission of the instructor. Successful completion of READ 15, 16, or 17.
Continued improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

READ 22 LANGUAGE PROCESSING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: Permission of the instructor.
Improvement of reading, spelling, oral and written language comprehension and retention using multi-sensory information. Structured incremental sequence of instruction.

READ 30 FOUNDATIONS FOR ACADEMIC READING I
3 credits. 4 hours. (Lecture 2 hours. Lab 2 hours.)
Prerequisite: Appropriate placement scores or instructor recommendation.
Development of fundamental ability to interact independently with printed material so as to comprehend written material applicable to the college environment. Instruction in main idea and supporting details, word recognition, phonetic analysis, and vocabulary development. Lab component.

READ 31 FOUNDATIONS FOR ACADEMIC READING II
3 credits. 4 hours. (Lecture 2 hours. Lab 2 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 10/30 with a grade of C or better or instructor recommendation.
Further development of fundamental ability to interact independently with printed material so as to comprehend written material applicable to the college environment. Instruction in main idea and supporting details, inference, and organizational patterns, vocabulary development and textbook strategies. Lab component.

READ 38 LINGUISTIC COMPREHENSION II
3 credits. 4 hours. (Lecture 2 hours. Lab 2 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 13/33 with a grade of C or better or instructor recommendation.
Further development of fundamental comprehension of printed material applicable to the college environment through auditory and visual input. Instruction in main idea and supporting details, inference, and organizational patterns, vocabulary development, and textbook strategies. Lab component.

READ 51 SPELLING I
3 credits. 3 hours. (Lecture 3 hours.)
Development of adult-level spelling skills by explanation and drill in the fundamentals of spelling. Basic patterns of vowel and consonant sounds, families of structurally similar words, and addition of affixes.

READ 52 SPELLING II
1 credit. 2 hours. (Laboratory 2 hours.)
Development of skills in the fundamentals of spelling using drill and practice and computer assisted instruction.

READ 100 COLLEGE READING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 11/31 with a grade of C or better or instructor recommendation.
Enhancement of ability to interact independently with printed material at the college level. College level vocabulary and reading comprehension, flexibility in reading rate, critical and analytical reading, text strategies.
READ 101 SPEED READING
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Appropriate placement scores or the successful completion of READ 100 or instructor recommendation.
Purpose and methods of speed reading. Guided practice in surveying, scanning, skimming, and developing flexibility of reading rates.

READ 103 LINGUISTIC COMPREHENSION III
(COMPANION FOR READ 100)
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 18/38 with a grade of C or better and/or institutional team.
Enhancement of ability to comprehend printed material at the college level. College-level vocabulary, critical and analytical reasoning, and text strategies through auditory and visual input.

READ 108 COLLEGE SUCCESS SKILLS
3 credits. 3 hours. (Lecture 3 hours.)
Campus orientation, introduction to college environment resources, and campus socialization. Skills for achieving educational goals such as awareness of learning styles, textbook strategies, listening and note taking skills, memory skills, test preparation, and test taking strategies. Life skills such as interpersonal skills, goal setting, time management principles and tools, and stress management.

READ 114 ADVANCED COLLEGE READING
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Successful completion of READ 100 or instructor recommendation.
Further increase in reading rate and vocabulary. Refinement of reading comprehension and concentration on critical reading.

READ 124 STUDY SKILLS
1 credit. 1 hour. (Lecture 1 hour.)
A survey of techniques for organizing the learning process; learning styles, goal setting, time management, textbook strategies, note taking skills, memory skills, test preparation, test-taking skills.

READ 199 INSTRUCTIONAL TECHNIQUES IN READING AND SPELLING I
3 credits. 6 hours. (Lecture 6 hours.)
Prerequisites: Approval of the instructor.

READ 201 INSTRUCTIONAL TECHNIQUES II
3 credits. 3 hours. (Lecture 3 hours.)
Trains trainers in multi-sensory approaches and Socratic questioning techniques for improving students’ reading, spelling, and language comprehension and retention. Basic techniques and standardized procedures of administering and scoring a battery of diagnostic instruments for assessing literacy development.

RESPIRATORY CARE
Offered at Johnson County Community College
Coordinated through Penn Valley

RC 125 PRINCIPLES OF RESPIRATORY CARE
4 credits. 22 hours. (Lab: 16 hours)
Prerequisite: Admission to the Respiratory Care program.
This is an introduction to the basic therapeutic modalities used in respiratory care, including patient safety and comfort considerations, infection control and standard precautions, medical gas delivery, humidity and aerosol therapy, basic respiratory pharmacology, secretion clearance techniques, and lung expansion therapy. Emphasis is on patient assessment, clinical application of therapies, therapy evaluation, and communication techniques. The role of respiratory care in the health care system and basic respiratory care service scope, organization and operation are also introduced. Students will have the opportunity to work with patients after two to three weeks of introductory lecture and lab demonstration and practice. Summer.

RC 130 RESPIRATORY CARE EQUIPMENT
4 credits. 14 hours. (Lab: 8 hours)
Prerequisite: Admission to the Respiratory Care program.
This course is an introduction to basic respiratory care equipment. The operation, function, calibration, troubleshooting and maintenance will be addressed for oxygen administration devices, aerosol generators, humidifiers, and hyperinflation devices. Medical gas production and storage will also be addressed. Summer.

RC 135 CARDIOPULMONARY MEDICINE I
1 credit. 2 hours.
Prerequisite: Admission to the Respiratory program.
This is the first of three courses that provide a detailed review of the respiratory and cardiac system anatomy and physiology and the clinical implications of normal and abnormal function. Summer.

RC 220 CARDIOPULMONARY PHYSIOLOGY
2 credits. 2 lecture hours.
Prerequisite: Successful completion of the summer sequence of respiratory care courses.
This is a comprehensive study of the physiology and pathophysiology of the pulmonary, cardiovascular and renal systems as they relate to respiratory care. Fall.

RC 230 CLINIC TOPICS AND PROCEDURES I
4 credits. 6 hours. (Lab: 3 hours)
Prerequisite: Successful completion of the summer sequence of respiratory care courses.
This course supplements the fall clinical experiences. Concepts, techniques and procedures learned in the summer semester are reinforced. The student will develop new understandings and skills in the acute care,
basic emergency care, and introductory-level critical care settings. Emphasis will be on arterial blood gas procurement and analysis, cardiac rhythm assessment and management, airway equipment and management procedures, patient management of obstructive lung disorders, peri-operative care and chest trauma. In addition, basic mechanical ventilation concepts and techniques will be addressed as they relate to physiologic effects, ventilator commitment, management and basic troubleshooting. Fall.

**RC 231 CLINIC TOPICS AND PROCEDURES II**
4 credits. 6 hours. (Lab: 3 hours)
Prerequisite: Successful completion of the summer sequence of respiratory care courses.
This course supplements the spring clinical experiences. Concepts, techniques and procedures learned in the fall semester are reinforced. The student will refine understanding and skills in the acute care, basic emergency care, and critical care settings. Emphasis will be on ventilator management of patients with specific lung insults, neurological compromise, and the cardiac patient. Advanced mechanical ventilation concepts and techniques will be addressed as they relate to physiologic effects, management and troubleshooting. Home care, pulmonary rehabilitation, physician-assisted procedures, cardiopulmonary stress testing, patient case management, and department management will also be addressed. Spring.

**RC 233 RESPIRATORY CARE OF CHILDREN**
2 credits. 2 lecture hours.
Prerequisite: RC 230.
The focus will be on the respiratory care of neonatal and pediatric patients with emphasis on the management of cardiopulmonary disease states unique to children. Information will be based on developmental anatomy and physiology, pathology, diagnostic/laboratory assessments, and associated patient management in the acute, critical, emergency care, transport, and home care settings. Spring.

**RC 235 CARDIOPULMONARY MEDICINE II**
2 credits. 2 lecture hours.
Prerequisites: Successful completion of the summer sequence of respiratory care courses.
This is the second in a series of three courses that provide a detailed review of the physical and diagnostic assessments of the cardiopulmonary patient and the related clinical implications of the assessment findings. Fall.

**RC 236 CARDIOPULMONARY MEDICINE III**
2 credits. 2 lecture hours.
Prerequisites: Successful completion of the fall sequence of respiratory care courses.
This is the third in a series of three courses that provide a detailed review of pulmonary disorders, their pathology and their management.

**RC 240 CARDIOPULMONARY PHARMACOLOGY**
2 credits. 2 lecture hours.
Prerequisites: Successful completion of the summer sequence of respiratory care courses.
This course acquaints the student with general principles of pharmacology and provides a comprehensive review of all drugs and drug groups that are either administered by respiratory care practitioners or play an integral part in the management of patients they may encounter. Emphasis is on the clinical application of pharmacologic agents, their therapeutic effects, mechanisms of action and adverse effects, rather than the biochemistry involved.

**RC 245 CRT-RRT CLINICAL TOPICS AND PROCEDURES**
4 credits. 4 lecture hours.
Prerequisites: Admission to the Respiratory Care program CRT to RRT transition process.
This course is a transition course for the certified respiratory therapist preparing for the registry respiratory care process. Assessment, monitoring and respiratory management of the adult critical care patient is the primary emphasis.

**RC 253 CLINICAL PRACTICE I**
6 credits. 24 hours. (Lab: 24 hours) Fall
Prerequisite: Successful completion of the summer sequence of respiratory care courses.
This course is the clinical application of respiratory care therapeutic and diagnostic procedures. Students with close supervision will have the opportunity to work with patients to further develop their skill and understanding of basic respiratory care procedures for adults and children. The course objectives progress throughout the semester to involve the students initially in basic care of the less critically ill patient and as the students’ comfort level and exposures progress, the students are allowed to work with the more critically ill patients.

**RC 254 CLINICAL PRACTICE II**
6 credits. 24 lab hours.
Prerequisite: Successful completion of the summer sequence of respiratory care courses.
This course is the clinical application of respiratory care therapeutic and diagnostic procedures. Students with close supervision will have the opportunity to work with patients to further develop their skill and understanding of basic respiratory care procedures for adults and children. Students will also be involved in specialty activities to include physician rounds, pulmonary rehabilitation, home care, pulmonary function, and cardiopulmonary stress testing. Spring.

**RC 274 CRT-RRT CLINICAL PRACTICE TRANSITION**
4 credits. 24 lab hours.
Prerequisite: RC 233 and 245.
Students will assess and manage the adult, pediatric and neo-natal patient with respiratory and/or cardiac-related
conditions using the basic respiratory care arsenal, as well as the critical care monitoring, mechanical ventilation and airway management techniques required for the more critically ill patient. Students will be exposed to cardiopulmonary diagnostic procedures, pulmonary rehabilitation, and home care management of the respiratory patient.

**SIGN LANGUAGE INTERPRETING**

*Offered at Maple Woods*

**Ula Williams**

**SIGN 101 CONVERSATIONAL AMERICAN SIGN LANGUAGE I**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
A beginning course of instruction in American Sign Language designed to introduce functional communication skills. Also included will be beginning fingerspelling signs. The focus is learning to exchange personal information in a culturally appropriate way. A no-voice, total immersion approach is used in this course.

**SIGN 102 CONVERSATIONAL AMERICAN SIGN LANGUAGE II**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
*Prerequisite: SIGN 101 or permission of program coordinator.*
A course of instruction designed to further challenge the students to express themselves in a variety of situations using American Sign Language. Each unit of instruction focuses on a major language function in interactive contexts. A no-voice, total immersion approach is used in this course.

**SIGN 110 AMERICAN SIGN LANGUAGE I**
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
*Prerequisite: ENGL 101 and final grade of B or better in SIGN 102 or permission of program coordinator.*
A course designed to provide students with the principles and methods of communicating manually with Deaf individuals. Emphasis will be placed on the development of expressive and receptive skills in American Sign Language and an understanding of its grammatical structure. A no-voice, total immersion approach is used in this course.

**SIGN 112 FINGERSPELLING**
1 credit. 2 hours. (Laboratory 2 hours.)
*Prerequisite: ENGL 101 and final grade of B or better in SIGN 102 or permission of program coordinator.*
A course to provide students an intensive study of embedded fingerspelling and expressive drills. The students will develop discrimination of embedded numbers, recognize words according to affixes, discriminate adjacent fingerspelled words, and improve short-term visual memory skills. Students will be exposed to a variety of fingerspelling production.

**SIGN 114 THE INTERPRETING PROFESSION**
2 credits. 2 hours. (Lecture 2 hours.)
*Prerequisite: ENGL 101 and final grade of B or better in SIGN 102 or permission of program coordinator.*
This course gives an overview of interpreting as an occupation. Course work will focus on the role of the interpreter, code of ethics, certification, various modes of interpreting, legal issues that affect the profession, and organization of a free-lance business.

**SIGN 116 DEAF CULTURE**
3 credits. 3 hours. (Lecture 3 hours.)
*Prerequisite: ENGL 101 and final grade of B or better in SIGN 102 or permission of program coordinator.*
A course to provide students of interpreting an understanding of American Deaf culture in order to better facilitate communication and mediate across cultures.

**SIGN 118 SIGN-TO-VOICE I**
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
*Prerequisite: ENGL 101 and final grade of B or better in SIGN 102 or permission of program coordinator.*
A course designed to provide students with a study of sign-to-voice interpreting. The course of study includes short-term memory exercises, language analysis, sequencing, shadowing, paraphrasing, vocal inflection, diction, breathing, and pronunciation. Extensive use of videotapes provide students in-class practice.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGN 120</td>
<td>AMERICAN SIGN LANGUAGE II</td>
<td>4</td>
<td>5</td>
<td>SIGN 110 and 116 or permission of</td>
<td>Continued development of expressive and receptive skills in American Sign Language. Emphasis will be placed on vocabulary acquisition in connection with the understanding and use of appropriate American Sign Language structure. Development of nonmanual behaviors will be stressed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>program coordinator.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A course designed to develop skills in expressing Conceptually Accurate Signed English. In this hands-on course, students will practice skills in transliterating spoken English to signed English using appropriate sign choices to convey the message to the Deaf consumer.</td>
</tr>
<tr>
<td>SIGN 122</td>
<td>LINGUISTICS OF AMERICAN SIGN LANGUAGE</td>
<td>3</td>
<td>3</td>
<td>SIGN 110 and 116 or permission of</td>
<td>A course designed to teach the basic concepts of linguistics as they relate to American Sign Language structure. The phonology, morphology, and syntax of American Sign Language will be the major areas studied.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>program coordinator.</td>
<td></td>
</tr>
<tr>
<td>SIGN 125</td>
<td>INTERPRETING I</td>
<td>4</td>
<td>5</td>
<td>SIGN 110 and 116 or permission of</td>
<td>A course designed to develop skills in expressive interpreting. The course will focus on consecutive interpreting. Skills in analyzing the source language and target language will be developed. Extensive work on visualization and imagery skills.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>program coordinator.</td>
<td></td>
</tr>
<tr>
<td>SIGN 128</td>
<td>SIGN-TO-VOICE II</td>
<td>3</td>
<td>4</td>
<td>SIGN 110–118 inclusive of permission of program coordinator.</td>
<td>A course to develop skills for more difficult sign-to-voice interpreting tasks. At this level of study, students will watch videotaped signed narratives and begin to use simultaneous interpreting skills. Introduction of signers using Signed English will be included in the course of study.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A course to provide the student with more difficult sign-to-voice tasks. At this level of study, students will view signed narratives and voice consecutively. Instructor, peer, and self-evaluations will provide students feedback on strengths and weaknesses.</td>
</tr>
<tr>
<td>SIGN 210</td>
<td>AMERICAN SIGN LANGUAGE III</td>
<td>4</td>
<td>5</td>
<td>SIGN 110–128 inclusive or permission of program coordinator.</td>
<td>A course for continued development of expressive and receptive American Sign Language skills. Continued emphasis on aspects of American Sign Language for increasing fluency in using the language. Students will increase their ability to discuss a variety of topics in the target language.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A course designed for continued development of skills necessary to interpret spoken English to American Sign Language. Course work will focus on the development of simultaneous interpreting skills. Students will be exposed to videotaped interpreting models and introduced to interactive situations.</td>
</tr>
<tr>
<td>SIGN 212</td>
<td>C.A.S.E. I</td>
<td>2</td>
<td>3</td>
<td>SIGN 110–128 inclusive or permission of program coordinator.</td>
<td>Continued study of transliteration. Skills developed in this course include expressing more complex spoken English texts in Conceptually Accurate Signed English. Continued sign vocabulary development to enhance the ability to converse on a variety of topics and levels is a priority.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The final course in the development of skills when interpreting spoken English to American Sign Language. This course will focus on simultaneous interpreting in various situations. Heavy emphasis will be placed on interactive models in preparation for skill evaluations leading to certification.</td>
</tr>
<tr>
<td>SIGN 220</td>
<td>AMERICAN SIGN LANGUAGE IV</td>
<td>4</td>
<td>5</td>
<td>SIGN 110 - 128 inclusive and SIGN 210</td>
<td>A course designed to develop skills in expressing Conceptually Accurate Signed English. In this hands-on course, students will practice skills in transliterating spoken English to signed English using appropriate sign choices to convey the message to the Deaf consumer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>or permission of program coordinator.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A course designed for continued development of skills necessary to interpret spoken English to American Sign Language. Course work will focus on the development of simultaneous interpreting skills. Students will be exposed to videotaped interpreting models and introduced to interactive situations.</td>
</tr>
<tr>
<td>SIGN 225</td>
<td>INTERPRETING III</td>
<td>4</td>
<td>5</td>
<td>SIGN 110 - 128 inclusive or permission of program coordinator.</td>
<td>A course designed for continued development of skills necessary to interpret spoken English to American Sign Language. Course work will focus on the development of simultaneous interpreting skills. Students will be exposed to videotaped interpreting models and introduced to interactive situations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A course designed to develop skills in expressive interpreting. The course will focus on consecutive interpreting. Skills in analyzing the source language and target language will be developed. Extensive work on visualization and imagery skills.</td>
</tr>
</tbody>
</table>

89
SIGN 228 SIGN-TO-VOICE IV  
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)  
Prerequisites: SIGN 110 - 128 inclusive or permission of program coordinator.  
A course designed to provide more challenging levels of difficulty in sign-to-voice tasks. Students will simultaneously voice videotaped stories, lectures, panel discussions, dialogues and poetry produced by signers using Pidgin Signed English and American Sign Language. Continued work on diction and vocal inflection to appropriately represent signed material.

SIGN 230 PRACTICUM/INTERNSHIP  
2 credits. 4 hours. (Field Studies 4 hours.)  
Prerequisite: SIGN 110 - 128 inclusive or permission or program coordinator.  
The student will interpret at a practicum site under the supervision of a mentor. Class will meet weekly for discussion of the practical experience. A journal will be kept to record feelings or reactions to various situations and new vocabulary learned at the practicum site.

SIGN 236 DIRECTED STUDY IN SIGN LANGUAGE INTERPRETER TRAINING II  
1 credit. 1 hour. (Independent Study 1 hour.)  
Prerequisite: Consent of program coordinator.  
A flexible program of guided study in sign language interpreting. With the consent and guidance of the instructor, the student will conduct an in-depth study of a particular facet of interpreter training, including field observations and deaf community-oriented projects.

SOCIAL SCIENCE

SOSC 115 CONSUMER PROBLEMS  
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)  
Problems and potentials of family spending and consumption with attention to consumer protection and marketing practices.

SOSC 150 FOUNDATIONS OF THE SOCIAL SCIENCES I  
3 credits. 3 hours. (Lecture 3 hours.)  
Introduction to social science and the scientific method. Institutional framework of society with emphasis on the family, religion, and education. Interpreting human behavior.

SOSC 151 FOUNDATIONS OF SOCIAL SCIENCES II  
3 credits. 3 hours. (Lecture 3 hours.)  
Political and governmental institutions, the chief ideologies of the modern world, and international relations. Federal and Missouri constitutions.

SOSC 153 READINGS IN SOCIAL SCIENCE  
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)  
A flexible program of guided reading, discussion, and written work designed to provide the student with either a survey of the social sciences or a detailed study of a particular area within social science. Includes a unit on American institutions and the federal and Missouri constitutions when requested.

SOSC 171 COMPARATIVE ETHNIC AND CULTURAL STUDIES  
3 credits. 3 hours. (Lecture 3 hours.)  
Comparative analysis of a foreign contemporary society or societies to the contemporary society of the United States with focus on social, economic and political systems to enhance understanding of American society and its interaction with diverse culture or cultures.

SOCI 101 SEX ROLES AND SEXUALITY  
3 credits. 3 hours. (Lecture 3 hours.)  
Sociological, psychological, and physiological perspectives of the contemporary human sexuality, development of sex roles, and on alternatives for personal, interrelational and societal adjustment.

SOCI 160 SOCIOLOGY  
3 credits. 3 hours. (Lecture 3 hours.)  
Introduction to sociological principles, practices, and concepts with emphasis on groups, culture, personality, society, communication, cities, and social institutions. Family, religion, government, social change, social control, and social progress.

SOCI 162 MARRIAGE AND FAMILY LIVING  
3 credits. 3 hours. (Lecture 3 hours.)  
This course provides an introduction to the study of problems in family and marriage in contemporary society. Attention will be given to examining the attitudes and practices needed for effective participation in marriage and family life.

SOCI 163 SOCIAL PROBLEMS  
3 credits. 3 hours. (Lecture 3 hours.)  
Consider representative social problems with emphasis on delinquency, personality disintegration, alcoholism, and family and racial conflicts.

SOCI 164 SOCIOLOGY OF THE BLACK FAMILY  
3 credits. 3 hours. (Lecture 3 hours.)  
Considers how black families are relate and respond to society as a whole. Emphasis includes, but is not limited to, social welfare, housing, law, and employment.
SOCI 165 CRIMINOLOGY
3 credits. 3 hours. (Lecture 3 hours.)

SOCI 168 JUVENILE DELINQUENCY
3 credits. 3 hours. (Lecture 3 hours.)

SOCI 169 FAMILY VIOLENCE AND SEXUAL ABUSE
3 credits. 3 hours. (Lecture 3 hours.)
Scope, nature, and control of family violence and sexual abuse. Psychological aspects and intervention tactics.

SOCI 170 GENERAL ANTHROPOLOGY
3 credits. 3 hours. (Lecture 3 hours.)
Survey of physical and cultural anthropology. Concentrates on concept of culture, social institutions, and organization: economy, politics, family, religion, law, and language, human evolution, human sexuality, and archaeology.

SPEECH AND DRAMA

<table>
<thead>
<tr>
<th>Longview</th>
<th>Maple Woods</th>
<th>Penn Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Cue</td>
<td>Elizabeth Hill</td>
<td>Deborah Craig-Kathryne Kiser</td>
</tr>
<tr>
<td>Joyce Kuhn</td>
<td>Blue River</td>
<td>F. Kim Wilcox</td>
</tr>
<tr>
<td></td>
<td>Anne Mahoney</td>
<td></td>
</tr>
</tbody>
</table>

SPDR 100 FUNDAMENTALS OF SPEECH
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 with a minimum grade of C or a satisfactory score on the English placement test.
An introductory public speaking course including practical application of speaking and listening skills. Emphasis will be on organization and delivery of subject matter.

SPDR 101 ADVANCED SPEECH
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPDR 100.
Further practice in public speaking situations with special emphasis on organization, development of ideas, and mechanics of delivery.

SPDR 102 FUNDAMENTALS OF HUMAN COMMUNICATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 with a minimum grade of C or a satisfactory score on the English placement test.
An introductory course in the process of human communication, covering the basic forms of public speaking as well as interpersonal communication, including small group dynamics and interviewing. Practical application of speaking and listening skills.

SPDR 103 INTERPERSONAL COMMUNICATIONS
3 credits. 3 hours. (Lecture 3 hours.)
Principles and skills of human communication relating to interpersonal communication settings: topics include theoretical elements of interpersonal communication, self-concept, perception, emotions, language, non-verbal communication, development and deterioration of human relations, identity and conflict management, and analyses of communication climates.

SPDR 110 ARGUMENTATION AND DEBATE
3 credits. 3 hours. (Lecture 3 hours.)
Theory, methods, structure, and execution of competitive debate. Participation in competitive debates with other area debate squads.

SPDR 112 ORAL INTERPRETATION OF LITERATURE
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPDR 100.
Analysis and presentation of literary works to increase appreciation of and skill in reading aloud in individual and group performances.

SPDR 114 THEATER AND THE WESTERN WORLD
3 credits. 3 hours. (Lecture 3 hours.)
The study of the history of theatre from ancient Greece to the present. The course will explore the evolution of the many types of theatre activities. This course will include the reading and discussion of plays using the elements of theatre based on Aristotle’s “Poetics.” Exploration of the creation of theatre as a profession. The connection of modern issues with the themes of plays read. Different cultures will be explored through the study of theatre of arts.

SPDR 115 ACTING IN A VIDEO AND/OR DIGITAL MEDIUM
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
This course is an introduction to performance in a video and/or digital medium. Basic performance techniques and test analysis will be explored, culminating in a final performance project.

SPDR 116 CHILDREN’S THEATER
3 credits. 4 hours. (Lecture 1 hour. Laboratory 3 hours.)
Introduction to children’s theatre and the various forms of children’s theatre based not only on theatrical styles but age levels. This is a class designed for the adult student actor with emphasis on performance before a live audience. Various imagination games will be
employed to help student actors learn how to communicate to a child audience.

**SPDR 120 ACTING**

3 credits. 3 hours. (Lecture 3 hours.)
An introduction to performance on stage. Basic performance techniques and text analysis will be explored, culminating in a final performance project.

**SPDR 121 ELEMENTS OF PLAY PRODUCTION**

3 credits. 3 hours. (Lecture 3 hours.)
*Prerequisite: SPDR 100 or approval of the instructor.*
Identify and apply the elements of play production necessary to produce a theatrical performance through reading, observation and practical experience.

**SPDR 122 THEATER PRACTICUM**

1 credit. 1 hour. (Laboratory 1 hour.)
Performance and the technical production of plays. A different area each course: acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

**SPDR 123 THEATER PRACTICUM**

1 credit. 1 hour. (Laboratory 1 hour.)
Performance and the technical production of plays. A different area each course: acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

**SPDR 124 THEATER PRACTICUM**

1 credit. 1 hour. (Laboratory 1 hour.)
Performance and the technical production of plays. A different area each course: acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

**SPDR 125 THEATER PRACTICUM**

1 credit. 1 hour. (Laboratory 1 hour.)
Performance and the technical production of plays. A different area each course: acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

**SPDR 126 SUMMER THEATER WORKSHOP**

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Acting or technical production in one, two, or three productions of a local summer theater.

**SPDR 128 INTRODUCTION TO FILM**

3 credits. 3 hours. (Lecture 3 hours.)
Viewing and analysis of films. History and technical aspects of filmmaking. The visual language of this art form.

**SPDR 130 DIRECTED STUDIES IN SPEECH/ THEATRE/DEBATE**

1 credit. 1 hour. (Independent Study 1 hour.)
*Prerequisite: SPDR 100 and approval of the instructor.*
An independent study in speech, theatre or debate. Students will work in a professional environment designed to give them professional work experience in a selected program area. Students may also choose to do an independent project under the supervision of a faculty member. Those students selecting work in a professional environment will also be under the supervision of the director or supervisor for the selected work environment.

**SPDR 131 DIRECTED STUDIES IN SPEECH/ THEATRE/DEBATE**

2 credits. 2 hours. (Independent Study 2 hours.)
*Prerequisite: SPDR 100 and approval of the instructor.*
Students will work in a professional environment designed to give them professional work experience in a selected program area. Students may also choose to do an independent project under the supervision of a faculty member. Those students selecting work in a professional environment will also be under the supervision of the director or supervisor for the selected work environment.

**SPDR 132 DIRECTED STUDIES IN SPEECH/ THEATRE/DEBATE**

3 credits. 3 hours. (Independent Study 3 hours.)
*Prerequisite: SPDR 100 and approval of the instructor.*
Students will work in a professional environment designed to give them professional work experience in a selected program area. Students may also choose to do an independent project under the supervision of a faculty member. Those students selecting work in a professional environment will also be under the supervision of the director or supervisor for the selected work environment.
SURGICAL TECHNOLOGY

Offered at Penn Valley

Carolyn A. Parks Andrea Spalter

STNU 100 INTRODUCTION TO SURGICAL TECHNOLOGY
2 credits. 4 hours. (Lecture 4 hours.)
Explores historical aspects of surgery, health care facilities, and organizations. Includes the roles, duties, and responsibilities of the surgical team members. Ethical, legal, and moral issues in health care and surgery are addressed. Focuses on effective communication skills, accurate medical terminology, and the impact of transcultural psychosocial outcomes for clients in the surgical setting.

STNU 102 FUNDAMENTALS OF OPERATING TECHNIQUE
11 credits. 21 hours. (Lecture 6 hours. Clinical 15 hours.)
Prerequisite: The student must meet the entrance requirements and be accepted into the Surgical Technology Program.
Applies principles of medical and surgical asepsis. Focuses on preparation of the sterile field, identification of instruments, sutures, supplies and equipment. Emphasis is on basic skills of the Surgical Technologies in preparation for and during the operative procedure. Practices maintaining a safe client environment and includes the responsibilities and duties of surgery personnel. Common surgical techniques and procedures.

STNU 104 BODY STRUCTURE AND FUNCTION
2 credits. 2 hours. (Lecture 1 hour. Laboratory 1 hour.)
Prerequisite: Students must meet entrance requirements and must be accepted into the Surgical Technology program.
Introduces students to the major structures and functions of the human body. Is taught according to body systems. Laboratory time is used to introduce and reinforce classroom instruction.

STNU 105 PHARMACOLOGY FOR THE SURGICAL TECHNOLOGIST
2 credits. 2 hours. (Lecture 2 hours.)
Development of knowledge and understanding of the metric, apothecary, household, and linear systems of measurement. The conversion of equivalents from one system to another. Focus is on terminology associated with pharmacology and procedures for safe and accurate handling of medications and solutions. Included is discussion of principles of anesthesia administration, post anesthesia client care, and care in emergencies.

STNU 106 ASEPTIC TECHNIQUE FOR THE SURGICAL TECHNOLOGIST
2 credits. 4 hours. (Lecture 4 hours.)
Study of structure, function, and pathogenicity of microorganisms, immune and infectious responses. An emphasis is placed on principles of sterilization, disinfecting, environmental sanitation, and practices that promote optimal healing.

STNU 109 PRINCIPLES OF SURGICAL PROCEDURES I
8 credits. 16 hours. (Lecture 4 hours. Clinical 12 hours.)
Focus is on diagnosis, pathology, and surgical sequence of general surgery, gynecological surgery, genitourinary surgery, and laparoscopic surgery. Included is discussion of postoperative care and complications.

STNU 110 PRINCIPLES OF SURGICAL PROCEDURES II
7 credits. 15 hours. (Lecture 3 hours. Clinical 12 hours.)
Focus is on diagnosis, pathology, and surgical sequence of general surgery, gynecological surgery, genitourinary surgery, and laparoscopic surgery. Included is discussion of postoperative care and complications.

STNU 111 CAREER DEVELOPMENT FOR THE SURGICAL TECHNOLOGIST
2 credits. 2 hours. (Lecture 2 hours.)
Resume development, interviewing techniques, and introduction to the current health care market. Emphasis on self-evaluation of professional skills and their potential application to the current health care market.

STNU 114 PRINCIPLES OF SURGICAL PROCEDURES III
7 credits. 13 hours. (Lecture 4 hours. Clinical 9 hours.)
Focus is on diagnosis, pathology, and surgical sequence with complex surgical specialties: neurosurgery, cardiovascular and peripheral vascular, thoracic, pediatric, geriatric, and trauma surgery. Included is discussion of postoperative care and complications.

SURVEYING

See Land Surveying, page 147.

TRAVEL AND TOURISM

Offered at Maple Woods

Tim Tjaden

TRAV 101 INTRODUCTION TO THE TRAVEL INDUSTRY
3 credits. 3 hours. (Lecture 3 hours.)
Survey of the basic components of the travel industry. Air travel, international travel, cruises, railroads, ground travel, and hotels. Also, career opportunities in each area.

TRAV 102 DESTINATION GEOGRAPHY
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: TRAV 101 or permission from the
An overview of major travel destinations. Reviews the fundamentals of locational, physical, and cultural geography. Emphasis on attractions and activities and on travel documents when needed.

**TRAV 103 TRAVEL SALES AND RESERVATIONS**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: TRAV 102 or permission from the instructor.
The fundamentals of reservations, sales and marketing, group planning. Client counseling and schedule planning.

**TRAV 104 TRAVEL AGENCY OPERATIONS**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: TRAV 103 or permission from the instructor.
Survey of the major activities of travel specialists. Handling money, consumer protection, automation, communications, documents, liability, insurance, ticketing, job search.

**TRAV 105 COMPUTER RESERVATION SYSTEMS**
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: TRAV 104 or permission from the instructor.
Hands-on training in a major airline computer reservations system. Codes and inputting data. Building a PNR. Reservation formats. Pricing and ticketing. Reserving cars and hotels.

**TRAV 111 DESTINATION SPECIALIST: CARIBBEAN AND MEXICO**
3 credits. 3 hours. (Lecture 3 hours.)
Provides in-depth knowledge of the geography, climate, cultures, languages, and history of the region. Emphasis will be placed on both physical and cultural attractions and activities and on the dynamics of the tourism industry. Students will take a national certification test to become a destination specialist.

**TRAV 112 DESTINATION SPECIALIST: PACIFIC RIM**
3 credits. 3 hours. (Lecture 3 hours.)
Provides in-depth knowledge of the geography, climate, cultures, languages, and history of Australia, New Zealand, the Pacific Islands, and Asia. Emphasis on both physical and cultural attractions and activities and on the dynamics of the tourism industry. Students will take a national certification test to become a Destination Specialist.

**TRAV 113 DESTINATION SPECIALIST: NORTH AMERICA**
3 credits. 3 hours. (Lecture 3 hours.)
Provides in-depth knowledge of the geography, climate, culture, languages, and history of the United States and Canada. Emphasis on both physical and cultural attractions and activities and on the dynamics of the tourism industry. Students will take a national certification test to become a Destination Specialist.

**TRAV 114 DESTINATION SPECIALIST: WESTERN EUROPE**
3 credits. 3 hours. (Lecture 3 hours.)
Provides in-depth knowledge of the geography, climate, culture, languages, and history of Western Europe. Emphasis on both physical and cultural attractions and activities and on the dynamics of the tourism industry. Students will take a national certification test to become a Destination Specialist.

**TRAV 121 TRAVEL SALES AND CUSTOMER SERVICE**
3 credits. 3 hours. (Lecture 3 hours.)
Designed for airline, travel agency, and tour operator employees who have direct contact with the public. Emphasis on developing a customer service program to retain customers and enhance sales.

**TRAV 122 CRUISE COUNSELING AND MARKETING**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: TRAV 101 or permission of the instructor.
The fundamentals of arranging and selling cruises. Includes port facilities, services, itineraries, shore and optional excursions, and reference materials. Emphasis on cruise counseling, determining needs, making recommendations, customer service, and marketing.

**TRAV 124 ADVANCED STUDIES IN TRAVEL AND TOURISM**
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Permission of the instructor.
The capstone course for students seeking an Advanced Certificate in Travel Management or an A.A.S. Degree in Travel and Tourism. The student will complete a major project in corporate travel management or leisure travel management.

**VETERINARY TECHNOLOGY**

Offered at Maple Woods
Carole Maltby

**VETT 100 INTRODUCTION TO VETERINARY TECHNOLOGY**
2 credits. 2 hours. (Lecture 2 hours.)
Orientation to career opportunities available in veterinary technology. Professional ethics, public relations, and psychological adjustment of the student in terms of understanding the need for physical treatment and care of animals. Client relations, vaccination programs, regulatory organizations, receptionist duties, breeds and breed characteristics, neutering, puppy care, diets, and hospital management.
VETT 101 PRINCIPLES OF ANIMAL SCIENCE I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Principles of handling, housing, and management of animals. Basic dietary and sanitation requirements. Restraint and handling, administration of medications, bathing, skin scraping, and basic laboratory tests. Emphasis on animal physiology including the cell, muscle, nervous, respiratory, and cardiovascular systems. Introduction to anesthesia and general animal nursing.

VETT 110 PRINCIPLES OF ANIMAL SCIENCE II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: VETT 101.
Anesthesia and the physiology of the digestive, urinary, endocrine, and reproductive systems. Blood and specimen collection, basic bandaging, and introduction to surgical preparation and radiographic processing.

VETT 111 SANITATION AND ANIMAL CARE
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Introduction to microorganisms, sanitation, disinfectants, sterilization, and Zoonotic diseases and public health problems. Introduction to parasitology and vermin control, specimen preservation, instrument identification, cleaning, and sterilization, sanitary procedures in patient care.

VETT 200 VETERINARY HOSPITAL TECHNOLOGY I
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: VETT 101 and 110.
Administration of anesthetics and surgical assisting, bandaging, casting, blood transfusions, surgical preparations and postoperative procedures, parenteral fluid administration, and intravenous hookups. Introduction to orthopedics, electrocardiography, bone marrow cytology, and pharmacology.

VETT 201 CLINICAL PATHOLOGY TECHNIQUES I
4 credits. 7 hours. (Lecture 1 hour. Laboratory 6 hours.)
Introduction to laboratory procedures including preparation of blood smears, cell identification, fecal analysis, and parasitology. Urinalysis and urine sediment valuation.

VETT 202 VETERINARY ANATOMY
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: BIOL 101 or 106 and VETT 101 and 110.
Basic principles of anatomy using a systemic approach. Physiology as it relates to anatomy and applicable pathology involving the animal body systems. Comparison of the animal species using the cat for dissection.

VETT 203 LABORATORY ANIMAL TECHNOLOGY
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: VETT 101, 110, and 201.
Restraint and handling of laboratory animals and birds.

Blood collection, restraint, identification, medicating, anesthesia, and specimen collection. Technical skills for laboratory animal research.

VETT 209 EQUINE MEDICINE AND MANAGEMENT
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: VETT 212.
Breeds and types of horses and their use. A study of conformation as it relates to soundness, horse psychology, fitting, conditioning, first aid and restraint. Parasites and their control, farm management for safety, nutrition, mare care, breeding, foaling, hoof soundness, equine diseases and their prevention. Laboratory procedures.

VETT 210 VETERINARY HOSPITAL TECHNOLOGY II
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: VETT 200.
Administration of anesthetics, surgical assisting, bandaging, casting, blood transfusions, surgical preparations, and postoperative care. Administration of parenteral fluid and emergency treatments. Introduction to ophthalmology and dermatology.

VETT 211 CLINICAL PATHOLOGY TECHNIQUES II
5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)
Prerequisite: VETT 201.
Theory and performance in hematologic, urinalysis, clinical chemistry, and parasitology. Introduction to simple immunologic tests, blood coagulation tests, and bone marrow evaluation. Emphasis on hematology and hemoparasites.

VETT 212 LARGE ANIMAL TECHNOLOGY
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: VETT 101 and 110.
Techniques necessary to assist the veterinarian in a large animal or mixed practice and in research facilities. Bovine, porcine, ovine, and caprine medicine and management including restraint, blood collection, medicating, and nursing techniques.

VETT 213 RADIOLOGY AND ELECTRONIC PROCEDURES
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Intensive study and practice in radiological techniques, radiographic exposure techniques, film processing, contrast radiography, and machine electronics.

VETT 214 VETERINARY TECHNICIAN INTERNSHIP
6 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Two semesters of first-year veterinary technology courses.
Supervised intensive clinical study under the direction of cooperating veterinarian to provide 420 hours of actual work experience.
Administration and Faculty

Officers of the District ................................................................. 2
Administration ............................................................................. 2
Faculty ....................................................................................... 5
Emeriti ....................................................................................... 16
ADMINISTRATION AND FACULTY

OFFICERS OF THE DISTRICT

WAYNE E. GILES ................................................. Chancellor
Administrative Center
B.S., Southern Illinois University
M.S., Southern Illinois University
Ph.D., St. Louis University

JACK BITZENBURG ............................................... President
The Business & Technology College
B.S., Central Missouri State University
M.S., Central Missouri State University

DONALD S. DOUCETTE ........................................... Vice Chancellor
Education and Technology
Administrative Center
B.A., Cornell University
M.A., Arizona State University
Ph.D., Arizona State University

FRED L. GROGAN .................................. President
Longview
B.A., Bates College
M.A., Arizona State University
Ph.D., Arizona State University

Merna S. Saliman .................................. President
Maple Woods
A.A., Arapahoe Community College
B.A., Loretto Heights College
M.A., University of Northern Colorado
Ed.D., University of Northern Colorado

Jacqueline I. Snyder .................................. President
Penn Valley
A.A., Kansas City Kansas Community College
B.S. Ed., Kansas State University–Emporia
M.S., University of Kansas
Ed. D., University of Kansas

Allan H. Tunis .................................. Vice Chancellor
Administrative Services
Administrative Center
B.S., Wayne State University
M.S., Wayne State University
Ed.S., University of Missouri–Kansas City

Malcolm T. Wilson .............................................. President
Blue River
B.A., Kentucky State University
M.A., Murray State University

STANLEY R. ABRAHAMSON .......................... Director
Automotive Technology
Longview
B.S., Pittsburg State University
M.S., Pittsburg State University

SHELLI R. ALLEN .......................... Administrative Intern
Penn Valley
B.A., Truman State University
M.A., University of Iowa

James Baber .................................. Dean of Instruction
Penn Valley
B.A., Jackson State
M.S., Jackson State
Ed.D., Northern Illinois University

Melanie A. Bailey .......................... Director
Educational Opportunity Center
Penn Valley
B.S., University of Kansas–Lawrence
M.Ed., Howard University–Washington, DC
Ed.S., University of Missouri–Kansas City

Gail Barham .......................... Senior Project Associate
Administrative Center
A.A., Longview Community College
B.A., University of Missouri–Kansas City
M.S., Kansas State University

Elna Lynn Barron .......................... Associate Dean
Maple Woods
B.S., Missouri Western State College
M.Ed., William Woods University

Carolyn Basket .................................. District Director
Human Resources
Administrative Center
B.S., Alabama A&M University
M.A., Ottawa University

Margaret Boyd .......................... Associate Director
Training and Development
The Business & Technology College

Gloria Brady .................................. District Director
Purchasing and Contract Administration
Administrative Center
B.S., Quincy College

Beverlye J. Brown .......................... Associate Vice Chancellor
and Assistant to the Chancellor
Administrative Center
B.S., Birmingham–Southern College
M.A., University of Alabama

Jon L. Burke .......................... Dean of Student Development
Blue River
B.A., Armstrong Atlantic State University
M.S., Florida State University
Ed.D., University of Georgia

ADMINISTRATION

Marvin R. Aaron .......................... Associate Dean of Student
Development and Support Services
Longview
B.A., Wayland University
M.A., Eastern New Mexico University
Ed.S., Eastern New Mexico University
Ph. D., University of Missouri–Kansas City
JAMES D. EVERETT .................. Director, Technical Education and Enrollment Services
Business & Technology College
A.A.S., Maple Woods Community College
B.A., MidAmerica Nazarene
M.Ed., MidAmerica Nazarene
Ed.D., University of Missouri–Columbia

JOSEPH FIEDLER .................. District Associate Director
Financial Planning
Administrative Center
B.S., Alma College

DEBORAH GOODALL ............... Director, Career Education Consortium
Business & Technology College
B.S., University of Colorado
M.S., Central Missouri State University

REX G. HAYS ...................... Associate Director
Physical Facilities
Administrative Center
B.A., MidAmerica Nazarene College
M.B.A., Baker University

LEO J. HIRNER .................. Dean of Student Development & Support Services
Longview
B.S., University of Missouri–Kansas City
M.S., University of Missouri–Kansas City

MINDY MCCULLEN-LIGHT ........ Administrative Intern
Longview
B.A., University of Missouri–Columbia
WESLEY MEIXELSPERGER .................. District Director of Accounting and Finance, Administrative Center
B.S., Southwest Missouri State University
M.B.A., Southwest Missouri State University

JIM SEAMAN ..................... Dean of Economic and Resource Development, Business & Technology College
B.S., William Jewell College
M.B.A., Avila College

DARRELL MEYER ............. District Director, Physical Facilities, Administrative Center
B.S., Kansas State University

JANE A. SMELTZER .................... District Director, Management Systems and Procedures, Administrative Center
B.S., University of Missouri–Columbia
M.B.A., University of Missouri–Kansas City

MONICA MINGUCCI .................... Director, Applied Language Institute, Penn Valley
A.A., Faculdades Alcântara Machado
M.A., Central Missouri State University
Ph.D., University of Missouri at Kansas City

DAVID L. SMITH ..................... Dean of Instruction, Blue River
B.A., Old Dominion College
M.A., Old Dominion University
Ph.D., University of North Carolina–Chapel Hill

ELIZABETH N. MINIS ............. Dean of Student Services, Penn Valley
B.S., Emporia State University
M.S., Emporia State University
Ed.D., University of Missouri–Columbia

MARY TRUEX ......................... Associate District Director, Human Resources, Administrative Center
B.A., University of Northern Iowa

MARK MURTHA ...................... District Director of Applications Development, Administrative Center
A.A., Maple Woods Community College
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

REINHARD WEGLARZ ............... District Director, Management and Auxiliary Services, Administrative Center
B.S., Benedictine College
M.B.A., University of Missouri–Kansas City

JOHN REAM ......................... Director of Training and Performance Consulting, Business & Technology College
B.S., Southern Nazarene University
M.Div., Nazarene Theological Seminary
M.A., University of Missouri–Kansas City
Ed.S., University of Missouri–Kansas City

EUGENE SCHIEBER .................. Dean of Instruction and Student Services, Business & Technology College
B.S., Northwest Missouri State University
M.A., Northwest Missouri State University
Ed.Spec., University of Missouri–Kansas City

GARY SCHIEBER .................... District Director of Computer Services, Administrative Center
B.S., University of Missouri

JANE ZEITNER ....................... Acting Director of PACE, Longview
B.S., Brigham Young University
M.S., Avila College

WESLEY WINGFIELD .................. District Director, Network and User Services, Administrative Center
B.A., University of Miami
NCE, CCDA, CNE, MCP

BARBARA REINWALD .............. Senior Project Associate, MetroSoft, Administrative Center
A.A., Maple Woods Community College
B.S., Park College
M.P.A., University of Missouri

VAN MUSCHLER .................... Director, Western Missouri Public Safety Training Institute, Blue River
B.S., University of Missouri–St. Louis
M.A., National Louis University

KAREN WEST ....................... Assistant Dean of Planning and Development, Penn Valley
A.A., El Camino College
B.A., California State University
M.A., Pacific School of Religion
Ed.D., University of Missouri–Columbia

SUSAN WILSON ..................... District Director, Student Development, Administrative Center
B.S., Emporia State University

WESLEY MEIXELSPERGER ........... District Director of Accounting and Finance, Administrative Center
B.S., Southwest Missouri State University
M.B.A., Southwest Missouri State University

JANE A. SMELTZER .................... District Director, Management Systems and Procedures, Administrative Center
B.S., University of Missouri–Columbia
M.B.A., University of Missouri–Kansas City

DAVID L. SMITH ..................... Dean of Instruction, Blue River
B.A., Old Dominion College
M.A., Old Dominion University
Ph.D., University of North Carolina–Chapel Hill

MARY TRUEX ......................... Associate District Director, Human Resources, Administrative Center
B.A., University of Northern Iowa

MARK MURTHA ...................... District Director of Applications Development, Administrative Center
A.A., Maple Woods Community College
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

REINHARD WEGLARZ ............... District Director, Management and Auxiliary Services, Administrative Center
B.S., Benedictine College
M.B.A., University of Missouri–Kansas City

JOHN REAM ......................... Director of Training and Performance Consulting, Business & Technology College
B.S., Southern Nazarene University
M.Div., Nazarene Theological Seminary
M.A., University of Missouri–Kansas City
Ed.S., University of Missouri–Kansas City

EUGENE SCHIEBER .................. Dean of Instruction and Student Services, Business & Technology College
B.S., Northwest Missouri State University
M.A., Northwest Missouri State University
Ed.Spec., University of Missouri–Kansas City

GARY SCHIEBER .................... District Director of Computer Services, Administrative Center
B.S., University of Missouri

JANE ZEITNER ....................... Acting Director of PACE, Longview
B.S., Brigham Young University
M.S., Avila College
<p>| FACULTY |
|-----------------|-----------------|
| <strong>TONI Y. ALEXANDER</strong> | Project Success |
| B.S., University of Kansas | Penn Valley |
| M.B.A., Baker University | |
| <strong>WILLIAM ALLYN</strong> | Drafting |
| Business &amp; Technology College | Certified Design Drafter, ADDA |
| B.S., Central Missouri State University | |
| <strong>PAMELA JO ANTHONY</strong> | Nursing |
| R.N., Research Medical Center | Penn Valley |
| B.S.N., University of Missouri–Kansas City | |
| M.S.N., University of Missouri–Kansas City | |
| <strong>BRUCE APPEL</strong> | Outreach Counselor |
| Longview | M.A., University of Missouri–Kansas City |
| Ed.S., University of Missouri–Kansas City | |
| <strong>JOHN D. ARNOLD</strong> | Automotive |
| Longview | A.S.E., Master Automobile Technician |
| G.M., Master Technician | |
| <strong>SHARON BAGG</strong> | History |
| Blue River | Chair, Division of Natural/Social Sciences and Math |
| M.A., University of Missouri–Kansas City | |
| <strong>HOSSEIN BAHMAIE</strong> | Economics |
| Longview | B.S., University of Missouri–Kansas City |
| M.A., University of Missouri–Kansas City | |
| <strong>JAMES R. BARD</strong> | Chemistry |
| Maple Woods | B.S., University of Oklahoma |
| M.S., University of Arkansas | |
| Ph.D., University of Missouri–Kansas City | |
| <strong>CRAIG BARTHOLOMAUS</strong> | English |
| Penn Valley | B.A., University of Illinois |
| M.A., The Ohio State University | |
| Ph.D., University of Colorado | |
| <strong>DIANNE GRAFENTINE BEEDLE</strong> | Nursing |
| Penn Valley | A.S.N., Neosho County Community College |
| B.S.N., Pittsburg State University | |
| <strong>PAMELA BEERS</strong> | Practical Nursing |
| Penn Valley–Pioneer Campus | Diploma, Providence Hospital School of Nursing |
| B.S., St. Mary College | |
| <strong>JAMES Q. BEISEL</strong> | Business |
| Longview | B.S., Kansas State University, Agriculture |
| B.S., Kansas State University, Business Administration | |
| M.B.A., University of Kansas | |
| <strong>LINDA F. BELL</strong> | Child Development |
| Penn Valley | B.S., University of Arkansas, Pine Bluff |
| M.S., Emporia State University | |
| <strong>PATRICIA A. BERGE</strong> | Office Systems |
| Maple Woods | A.B., University of Kentucky |
| M.A., University of Missouri–Kansas City | |
| <strong>ROGER BIDWELL</strong> | Practical Nursing |
| Penn Valley | B.S.N., St. Lukes College of Nursing |
| M.S.N., University of Kansas | |
| <strong>JULIA BISHOP</strong> | Psychology |
| Maple Woods | B.A., University of Nebraska |
| M.A., University of Nebraska | |
| Ph.D., University of Nebraska | |
| <strong>MARY ANN BLITT</strong> | Foreign Language |
| Maple Woods | B.A., University of Colorado–Colorado Springs |
| M.A., Colorado State University | |
| <strong>GRETCHEN BLYTHE</strong> | Counseling |
| Longview | B.A., Ottawa University |
| M.S., Drake University | |
| <strong>MARY SUSANNE BOATRIGHT</strong> | Librarian |
| Blue River | B.A., University of Texas |
| M.L.S., University of Texas | |
| <strong>TODD I. BOWDISH</strong> | Biology |
| Penn Valley | B.S., Northeast Missouri State University |
| Ph.D., University of South Florida | |
| <strong>ARTHUR M. BRADY JR.</strong> | EMT – Paramedic |
| Penn Valley | Licensed EMT-Paramedic |
| A.A., Penn Valley Community College | B.A., University of Missouri-Columbia |
| <strong>REBECCA L. BURNS</strong> | Music |
| Blue River | A.A., McCook Community College |
| B.A., University of Northern Colorado | M.M., University of Nebraska |
| <strong>DENISE CALLAHAN</strong> | Dental Assisting |
| Penn Valley | A.A.S., Metropolitan Community Colleges |
| M.B.A., University of Kansas | |
| B.A., University of Missouri–Kansas City | |</p>
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurt Canow</td>
<td>Chair, Division of Humanities</td>
<td>Longview</td>
</tr>
<tr>
<td>Cheryl A. Carpenter-Davis</td>
<td>Physical Therapist Assistant</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Sybil Chandler</td>
<td>Environmental, Health and Safety Assistant</td>
<td>Business &amp; Technology College</td>
</tr>
<tr>
<td>Kimberly Chapman</td>
<td>Psychology</td>
<td>Blue River</td>
</tr>
<tr>
<td>Tim Chappell</td>
<td>Mathematics</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Bryan Chasteen</td>
<td>Counselor</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Theresa Chop</td>
<td>Occupational Therapy Assistant</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Kimberly Christensen</td>
<td>Mathematics</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>John Church</td>
<td>Mathematics</td>
<td>Longview</td>
</tr>
<tr>
<td>Lynda W. Clark</td>
<td>Business</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>Susan W. Clark</td>
<td>Reading</td>
<td>Longview</td>
</tr>
<tr>
<td>Frank Dean Cone</td>
<td>Education</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>Michael J. Connelly</td>
<td>Philosophy</td>
<td>Longview</td>
</tr>
<tr>
<td>Barbara Cooke</td>
<td>Counseling</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>Gene F. Cota</td>
<td>Biology</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Debora Craig-CLAAR</td>
<td>Speech, Director of Forensics</td>
<td>Longview</td>
</tr>
<tr>
<td>Bruce D. Culley</td>
<td>Business</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>Karen E. CURLS</td>
<td>Business</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Theodore M. Dinges</td>
<td>Business</td>
<td>Longview</td>
</tr>
<tr>
<td>Lynda W. Clark</td>
<td>Business</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>Paul D. Dammenga</td>
<td>Automotive</td>
<td>Longview</td>
</tr>
<tr>
<td>Terrence Davin</td>
<td>Biology</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Theodore M. Dinges</td>
<td>Business</td>
<td>Longview</td>
</tr>
</tbody>
</table>

**Degrees:**

<table>
<thead>
<tr>
<th>Name</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurt Canow</td>
<td>Doane College, Rice University, Southern Illinois University</td>
</tr>
<tr>
<td>Cheryl A. Carpenter-Davis</td>
<td>Cerritos College, Mid-America Nazarene College, Southern Illinois University</td>
</tr>
<tr>
<td>Sybil Chandler</td>
<td>Louisiana State University, Southern Mississippi</td>
</tr>
<tr>
<td>Kimberly Chapman</td>
<td>University of Missouri–Kansas City, University of Missouri–Kansas City</td>
</tr>
<tr>
<td>Tim Chappell</td>
<td>Pittsburg State University</td>
</tr>
<tr>
<td>Bryan Chasteen</td>
<td>William Jewell College, Emporia State</td>
</tr>
<tr>
<td>Theresa Chop</td>
<td>University of Kansas, University of Kansas</td>
</tr>
<tr>
<td>Kimberly Christensen</td>
<td>Aurora University, Northern Illinois University, Northern Illinois University</td>
</tr>
<tr>
<td>John Church</td>
<td>University of Chicago, University of Texas-Austin</td>
</tr>
<tr>
<td>Lynda W. Clark</td>
<td>Central State University, Oklahoma, Central State University, Oklahoma, University of Oklahoma</td>
</tr>
<tr>
<td>Susan W. Clark</td>
<td>University of Delaware, University of Delaware, University of Missouri-Kansas City</td>
</tr>
<tr>
<td>Frank Dean Cone</td>
<td>Missouri Valley College, Central Missouri State University, Central Missouri State University, University of Missouri-Columbia</td>
</tr>
<tr>
<td>Michael J. Connelly</td>
<td>Salisbury State University, University of Delaware</td>
</tr>
<tr>
<td>Barbara Cooke</td>
<td>University of Missouri–Kansas City, University of Missouri-Kansas City</td>
</tr>
<tr>
<td>Gene F. Cota</td>
<td>Johnson County Community College, Emporia State University, Emporia State University</td>
</tr>
<tr>
<td>Debora Craig-CLAAR</td>
<td>University of Redlands, Northwestern University, University of Missouri–Kansas City</td>
</tr>
<tr>
<td>Bruce D. Culley</td>
<td>University of Kansas, University of Kansas</td>
</tr>
<tr>
<td>Karen E. CURLS</td>
<td>Penn Valley Community College, Park College, Central Missouri State University, University of Missouri–Kansas City, University of Missouri–Kansas City</td>
</tr>
<tr>
<td>Theodore M. Dinges</td>
<td>Penn Valley Community College, Ferris State University</td>
</tr>
<tr>
<td>Paul D. Dammenga</td>
<td>Pennsylvania State University, Frostburg State University</td>
</tr>
<tr>
<td>Terrence Davin</td>
<td>Pennsylvania State University, Frostburg State University</td>
</tr>
<tr>
<td>Theodore M. Dinges</td>
<td>Washburn University, Washburn University</td>
</tr>
</tbody>
</table>

**Certifications:**

- A.S.E. Certified Master Automobile Technician
- Certified Public Accountant
- Certified Hazardous Materials Manager
PARAMJIT (RANI) K. DUGGAL ........................................ Biology
B.S., Rajasthan University, India
M.S., MS University, India
M.S., Bowling Green State University

EDWARD DURANT ........................................ Computer Science/Information Systems
B.A., Westminster College
M.B.A., University of Missouri–Kansas City

JOYCE ANNE DVORAK ........................................ English
B.S., Northern Illinois University
M.A., Northern Illinois University
Ph.D., Northern Illinois University

MARTHA J. EAGLE ........................................ Mathematics
A.B., William Jewell College
M.A., Central Missouri State University

MARGARET EASTER ........................................ Computer Science/Information Systems
B.S., Missouri Western State College
M.S., University of Missouri–Kansas City

SYLVIA L. EDWARDS ........................................ English
B.A., Hastings College
M.A., Fort Hays State University

KENNETH R. EICHMAN ................................ Mathematics
Chair, Mathematics and Engineering
B.S., Fort Hays State University
M.A., Fort Hays State University

DIANE M. ENKELMANN .................................... Business
B.A., Benedictine College
M.A., University of Missouri–Columbia
M.B.A., University of Missouri–Columbia

BARBARA EUBANK ........................................ Education
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

WILLIAM FAIRBANKS ........................................ Automotive
A.S.E. Certified Master Automobile Technician
B.S.Ed., Pittsburg State University

EUGENE J. FENSTER ........................................ Biology
B.A., State University of New York at Buffalo
M.Ph., The Graduate School and University Center of CUNY
Ph.D., The Graduate School and University Center of CUNY

CONNIE FLICK-HRUSKA .................................. Counselor
B.S., Slippery Rock University
M.Ed., University of Missouri–Columbia

JUDITH FLYNN ............................................. Reading
A.A., Metropolitan Community College
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

IRENE FORCH ........................................... Office Systems
B.S., Pittsburg State University
M.S., Drake University
Ph.D., University of Iowa

RANDALL FORCHEE ....................................... Engineering
B.S., University of Missouri–Rolla
M.S., University of Missouri–Rolla

WILLIAM C. FRANKEN ........................................ Industrial Technology
Certified Electronics Technician
B.A., Penn Valley Community College
B.S., Ottawa University
M.Ed., University of Missouri–Columbia

CORAL E. FRANKLIN ........................................ Nursing
B.S., University of Missouri–Kansas City

JENNIE FREDERICK ........................................ Art
B.F.A., Kansas City Art Institute
M.F.A., Indiana State University

MOIRA R. FREY ........................................ Chemistry
B.S., University of Wyoming
M.S., University of Washington

W. ANDREW GEOGHEGAN JR. ....................... Psychology
B.A., College of William and Mary
M.A., University of Missouri–Kansas City

ARMANDO GILKES ........................................ Counselor
B.A., Grinnell College
M.A., University of Iowa

CAROLE R. GILMORE .................................. Foreign Language
B.A., University of Missouri–Kansas City

ZOLA GORDY .................. Academic Achievement Center
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City
<table>
<thead>
<tr>
<th>Name</th>
<th>Major</th>
<th>Degrees</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIANA J. GRAHN</td>
<td>English</td>
<td>B.A., University of Missouri–Kansas City</td>
<td>Longview</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., University of Missouri–Kansas City</td>
<td></td>
</tr>
<tr>
<td>SHARON L. GRAVES</td>
<td>Nursing</td>
<td>B.S.N., Central Missouri State University</td>
<td>Penn Valley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.S.N., Bishop Clarkson College</td>
<td></td>
</tr>
<tr>
<td>CHERYL S. GROSSER</td>
<td>English</td>
<td>B.A., University of Missouri–Kansas City</td>
<td>Blue River</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chair, Division of Humanities</td>
<td></td>
</tr>
<tr>
<td>RADHEY GUPTA</td>
<td>Mathematics</td>
<td>B.Sc., Agra University</td>
<td>Longview</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.Sc., Agra University</td>
<td></td>
</tr>
<tr>
<td>MARTHA HAEHL</td>
<td>Mathematics</td>
<td>B.S., Wayland College</td>
<td>Penn Valley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., University of Kansas</td>
<td></td>
</tr>
<tr>
<td>TRACY D. HALL</td>
<td>Speech</td>
<td>B.A., University of Missouri–St. Louis</td>
<td>Penn Valley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., Wichita State University</td>
<td></td>
</tr>
<tr>
<td>SHARON HAMSA</td>
<td>Mathematics</td>
<td>B.A., Benedictine College</td>
<td>Longview</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., St. Louis University</td>
<td></td>
</tr>
<tr>
<td>THERESA HANNON</td>
<td>English</td>
<td>B.A., Indiana University</td>
<td>Blue River</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.F.A., Arizona State University</td>
<td></td>
</tr>
<tr>
<td>SHARI HARDEN</td>
<td>Biology</td>
<td>B.A., University of North Colorado</td>
<td>Blue River</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.S., Utah State University</td>
<td></td>
</tr>
<tr>
<td>JESS HARDING</td>
<td>Heating/Air Conditioning</td>
<td>A.A.S., Penn Valley</td>
<td>Business &amp; Technology College</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAUL HARDING</td>
<td>Heating/Air Conditioning</td>
<td></td>
<td>Business &amp; Technology College</td>
</tr>
<tr>
<td>CATHY K. HARDY-PARCELL</td>
<td>Music</td>
<td></td>
<td>Longview</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KENNETH G. HARTMAN</td>
<td>Political Science</td>
<td>B.A., Wake Forest University</td>
<td>Longview</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., University of Texas at Austin</td>
<td></td>
</tr>
<tr>
<td>JOHN HAWKINS</td>
<td>Physics</td>
<td>B.S., University of Missouri–Columbia</td>
<td>Penn Valley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.S., University of Missouri–Columbia</td>
<td></td>
</tr>
<tr>
<td>JOAN HENSON</td>
<td>Mathematics</td>
<td>B.A., Molloy Catholic College for Women</td>
<td>Penn Valley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.S., Adelphi University</td>
<td></td>
</tr>
<tr>
<td>CINTHIA A. HERBERT</td>
<td>Computer Science/Information Systems</td>
<td>B.S., Southwest Missouri State University</td>
<td>Longview</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELIZABETH HILL</td>
<td>Speech and Theater</td>
<td>B.A., Southeast Missouri State University</td>
<td>Maple Woods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B.S., Southeast Missouri State University</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., University of Missouri–Kansas City</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ph.D., Southern Illinois University–Carbondale</td>
<td></td>
</tr>
<tr>
<td>JUANAN HILL</td>
<td>Applied Language</td>
<td>B.A., Harding University</td>
<td>Penn Valley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.S., University of Mississippi</td>
<td></td>
</tr>
<tr>
<td>WILLIAM HODGKINSON</td>
<td>English</td>
<td>B.S., Central Michigan University</td>
<td>Penn Valley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., Central Michigan University</td>
<td></td>
</tr>
<tr>
<td>TERRY HOBBS</td>
<td>Mathematics</td>
<td>B.S., Central Missouri State University</td>
<td>Penn Valley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., Central Missouri State University</td>
<td></td>
</tr>
<tr>
<td>SHARON E. HOGAN</td>
<td>Sociology</td>
<td>B.S., Central Missouri State University</td>
<td>Blue River</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.S., Central Missouri State University</td>
<td></td>
</tr>
<tr>
<td>ROBERT J. HOLMAN</td>
<td>Business</td>
<td>B.S., Central Missouri State University</td>
<td>Blue River</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chair, Division of Business, Technology and Public Safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B.S., Central Missouri State University</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.A., Central Missouri State University</td>
<td></td>
</tr>
<tr>
<td>JIMMY HOLIMAN</td>
<td>Criminal Justice</td>
<td>A.A., Longview Community Colleges</td>
<td>Blue River, Police Academy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIANA J. GRAHN</td>
<td>English</td>
<td>B.M.E., Wheaton College</td>
<td>Longview</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.M., University of Missouri–Kansas City</td>
<td></td>
</tr>
</tbody>
</table>
PATRICIA P. ILLING ................................................. Reading
B.S.Ed., University of Missouri–Columbia
M.S., University of Kansas

PRISCILLA JACKSON-EVANS ........................ History
Chair, Division of Social Science
A.A., St. Joseph Junior College
B.A., University of Missouri–Columbia
M.A., University of Missouri–Columbia

JULIANNE JACQUES .......................... Counselor
B.S., University of Florida
M.Ed., University of Maryland

MARY ELLEN JENISON .......... Director, ABLE Program
Academic Bridges to Learning Effectiveness
A.A., Longview Community College
B.A., Avila College
M.A., University of Missouri–Kansas City

DENNIS J. JIRKOVSKY ....................... Computer Science/
Information Systems
Chair, Division of Communications
A.A.S., Maple Woods Community College
B.S., Missouri Western College
M.B.A., Rockhurst College

CHRISTOPHER L. JOHNSON ........ Geology/Geography
Physical Science
B.S., University of Wisconsin
M.S., University of Kansas

GARY H. JOHNSON ....................... Computer Science/
Information Systems
Microsoft Certified Systems Engineer
A.S., Metropolitan Junior College–Kansas City
B.S.B.A., Avila College
M.B.A., Avila College

MONICA JOHNSTON ....................... Computer Software
B.S., University of Kansas
M.B.A., Keller Graduate School of Management

THOMAS B. JONES ....................... History
B.A., University of Minnesota
M.A., Cornell University
Ph.D., Cornell University

DAN JUSTICE .............................. Engineering
B.A., University of Minnesota
M.S., University of Texas
Ph.D., University of Texas

JAMES E. KARASIEWICZ ............... English
Chair, Division of Communications
B.A., State University College of New York, Buffalo
M.A., State University College of New York, Brockport
Ph.D., Kansas State University

RUSSELL D. KEEVY ....................... English
A.A., Spokane Falls Community College
B.A., Eastern Washington University
M.A., Eastern Washington University

MAUREEN KENNEDY ....................... Counseling
B.A., Fontbonne College, St. Louis, MO
M.Ed., University of Missouri–Columbia

HAROLD KENYON ....................... EMT–Paramedic
Licensed EMT-Paramedic
A.A.S., Penn Valley Community College

RANDY KIDD ............................... Business
B.S., University of Kansas
M.B.A., Central Missouri State University

RICHARD KIMBERLY ............... Business
B.S., University of Wisconsin–Madison
M.B.A., University of Wisconsin–Oshkosh
Ed.S., University of Wisconsin–Stout
Ph.D., Texas A & M University

SHERRY E. KINNEY ....................... Nursing
A.A.S., Penn Valley Community College
B.S.-Nursing, Webster University

KATHRYNE KISER .......................... Speech Communication
B.A., University of Kansas
M.A., University of Kansas

KAREN S. KOMOROSKI .................. Nursing
B.S.N., Graceland College
M.N., University of Kansas
Ed.S., University of Missouri–Kansas City

KEET KOPECY .......................... Biology
B.S., University of Missouri–Kansas City
M.S., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

JOYCE S. KUHN ....................... Speech and Theater
B.A., Northern Colorado University
M.A., Northern Colorado University
CAROL JEAN KUZNACIC ........................................ Spanish
A.A., University of Wisconsin–Sheboygan
B.A., University of Wisconsin–Green Bay
M.A., Pennsylvania State University

NIC LAHUE ........................................................ Mathematics
Chair, Division of Physical Sciences, Math, CSIS
A.S., Kansas City Kansas Community College
B.S., Kansas State University
M.S., University of Missouri–Kansas City

PERRI L. LAMPE........................................... Political Science
A.A., William Woods College
M.S., University of Missouri–Columbia

SANDRA L. LANDUYT ............................... Biology
Chair, Division of Life Sciences
B.A., University of Missouri–Kansas City
B.S., University of Missouri–Kansas City
M.S., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

J. RONALD LEAKE ................................... Computer Science/
Information Systems
B.A., University of California, Berkeley

MARY A. LEE........................................................ English
B.A., Clarke College, Iowa
M.A., Bradley University, Illinois

STEVEN W. LEWIS................................................ Biology
B.A., Kansas University
B.S., Kansas University
M.A., University of Missouri–Kansas City

CHERYL SMITH LEWKOWSKY ............... Mathematics
A.B., William Jewell College
M.S., Kansas State University

MARK LIDMAN ........................................... English
B.A., University of Virginia
M.A., Purdue University
Ph.D., University of Missouri–Columbia

D. KIM LINDABERRY................................................... Art
B.F.A., Kansas City Art Institute
M.F.A., Georgia State University

TRISTAN LONDRé ........................................... Mathematics
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

PAUL D. LONG ....................................... Philosophy
Chair, Division of Social Science
B.A., University of Missouri–Kansas City
M.A., University of Kentucky

LEANN I. LOTZ ........................................ Mathematics
Chair, Division of Physical Sciences, Math, CSIS
B.A., William Jewell College
M.A., University of Missouri–Kansas City

J. DENNIS LOWDEN ................................... Philosophy
B.A., Regents College/University
M.A., University of Kansas

TERRI LOWRY ................................................ English
B.A., University of Missouri–Kansas City
M.F.A., University of Montana–Missoula

JERRY MACKE .......................................... Computer Science
B.A., St. Thomas College
Illinois Teacher's Certificate Intern Program,
Lewis University

OPZERINE D. MADISON .......................... Nursing
A.A., Penn Valley Community College
R.N., General Hospital and Medical Center
B.S.N., Avila College
M.A., Central Michigan University

ANNE MAHONEY ...................................... Speech & Drama
B.A., University of Arkansas
M.A., University of Kansas

CAROLE J. MALTBY ............................... Veterinary Technology
B.S., University of Missouri–Kansas City
D.V.M., University of Missouri–Columbia

DANIEL L. MARK ......................................... Biology
B.A., Drake University
M.A., Drake University
Ph.D., University of Illinois

DOUGLAS MARTIN ...................................... Chemistry
B.S., Clarkson College of Technology
M.S., Clarkson College of Technology
Ph.D., Clarkson College of Technology

TODD C. MARTIN ...................................... Biology
B.S., Kansas State University
Ph.D., University Of Minnesota–Twin Cities

STEPHANIE J. MASQUELIER ........................ Management
B.S., Virginia Commonwealth University
M.Ed., Virginia Commonwealth University
PAMELA G. MATTHIESEN ..................... Computer Science/Information Systems
B.S., Central Missouri State University
Maple Woods

GLORIA MAXWELL ............................................ Librarian
B.A., Central Missouri State University
M.A., Central Missouri State University
M.L.S., Emporia State University
Penn Valley

GARY D. MAY........ Computer Science/Information Systems
B.S., School of the Ozarks, Missouri
M.S., Central Missouri State University
M.S., Webster University
Maple Woods

TAMMIE B. MAY................................. Sociology
B.S., Sterling College
M.A., Central Missouri State University
Longview

DEBRA LEWIS MCCARTY...................... Reading
B.S., Northwest Missouri State University
M.A., University of Missouri–Kansas City
Maple Woods

GARY F. MCDANIEL............................. Automotive
A.S., Missouri Western State College
B.S., Northwest Missouri State University
M.S., Central Missouri State University
Longview

MICHELLE MCGEENY ......................... Reading
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City
Maple Woods

JAMES MCGRAW .................................. Counseling
B.S., University of Iowa
M.A., University of Iowa
Ed.D., University of Northern Colorado
Longview

SANDRA MCILNAY .......... Occupational Therapy Assistant
Registered Occupational Therapist
B.S., University of Kansas
M.S. Ed., University of Kansas
Penn Valley

MURVELL V. MCMURRY...................... Counselor
B.S., Lincoln University
M.Ed., Iowa State University
Penn Valley

LINDA SPOTTS MICHAEL...................... Business
B.S., Central Missouri State University
M.B.A., Central Missouri State University
Maple Woods

CONNIE MIGLIAZZO................................. Librarian
B.S., University of Missouri–Columbia
M.L.S., University of Missouri–Columbia
Blue River

DAVID C. MILLER................................. History
A.A., Hutchinson Community College
B.A., University of California at Riverside
M.A., University of Kansas
Ph.D., University of Kansas
Longview

DONALD MILLER................................. Chemistry
B.A., Taylor University
M.S., Purdue University
Blue River

MARGARET A. MILLER...................... Reference Librarian
B.A., Bethany College
M.A., University of Kansas
M.S., Emporia State University
Longview

MARJORIE A. MILLER ....................... Office Systems
B.S., Pittsburg State University
M.S., Central Michigan University
Longview

BRIAN MITCHELL................................. Biology
Chair, Division of Natural Sciences
B.S., Illinois State University
M.S., Illinois State University
Ph.D., University of Missouri–Columbia
Longview

GREGORY A. MITCHELL .................. Mathematics
B.S., University of Missouri–Rolla
M.S., University of Missouri–Columbia
Penn Valley

MARY ELIZABETH MOLEY.................. Art
B.A., University of Missouri–Kansas City
M.A., University of Kansas
Penn Valley

R. RANDALL MOORE......................... History
B.A., Virginia Wesleyan College
M.A., University of Richmond
Ph.D., University of South Carolina
Longview

ROBERT L. MORRIS.......................... Art
B.A.E., Kansas City Art Institute
M.F.A., University of Kansas
Penn Valley

VERLE D. MUHRER.......................... Philosophy
B.A., University of Missouri–Columbia
M.A., University of Missouri–Columbia
Penn Valley

PATRICIA L. MUNN ......................... Biology
B.S., University of Missouri–Columbia
M.S., University of Missouri–Columbia
Longview

CORDELIA MURPHY........ Child Growth and Development
B.G.S., University of Kansas
M.A., University of Kansas
Penn Valley
<table>
<thead>
<tr>
<th>Name</th>
<th>Degree(s)</th>
<th>Institution(s)</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>MELISSA J. NAPPER</td>
<td>Computer Science/Information Systems</td>
<td>Blue River</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A.A., Longview Community College</td>
<td>B.S., Park College</td>
<td></td>
</tr>
<tr>
<td>PATSY O'BRIEN</td>
<td>Nursing</td>
<td>Penn Valley</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S.N., Webster University</td>
<td>M.S.N., University of Missouri–Kansas City</td>
<td></td>
</tr>
<tr>
<td>JOHN R. O’CONNELL</td>
<td>Physical Education</td>
<td>Longview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.A., Fort Lewis College, Colorado</td>
<td>M.A., Adams State College, Colorado</td>
<td></td>
</tr>
<tr>
<td>HILDA OGILVIE</td>
<td>Nursing</td>
<td>Penn Valley</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S.N., University of Kansas</td>
<td>M.S.N., University of Missouri–Kansas City</td>
<td></td>
</tr>
<tr>
<td>MICHAEL L. PALMER</td>
<td>Business</td>
<td>Maple Woods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chair, Division of CSIS and Business</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., Kansas State University</td>
<td>M.B.A., Rockhurst College</td>
<td></td>
</tr>
<tr>
<td>CAROLYN A. PARKS</td>
<td>Surgical Technology</td>
<td>Penn Valley–Pioneer Campus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A.D.N., Illinois Central College</td>
<td>B.A.N., University of Illinois–Springfield</td>
<td></td>
</tr>
<tr>
<td>THOMAS S. PENNINGTON</td>
<td>Computer Science/Information Systems</td>
<td>Longview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chair, Division of Business</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., University of Missouri–Columbia</td>
<td>M.Ed., University of Missouri–Columbia</td>
<td></td>
</tr>
<tr>
<td>CARLOS PEREZ</td>
<td>Speech and Drama</td>
<td>Maple Woods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.F.A., Avila College</td>
<td>M.A., University of Missouri–Kansas City</td>
<td></td>
</tr>
<tr>
<td>RORY PERRODIN</td>
<td>Automotive</td>
<td>Longview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A.A.S., Dodge City Community College</td>
<td>B.S., Pittsburg State University</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M.S. VTE, Pittsburg State University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MICHAEL PETERS</td>
<td>EMT–Paramedic</td>
<td>Penn Valley</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Licensed EMT-Paramedic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., Quincy College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MICHELLE POTTS</td>
<td>English</td>
<td>Maple Woods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.A., Park College</td>
<td>M.A., University of Missouri–Kansas City</td>
<td></td>
</tr>
<tr>
<td>DEANNA POUDEL</td>
<td>Physics</td>
<td>Longview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.A., Grinnell College</td>
<td>M.S.M., Iowa State University</td>
<td></td>
</tr>
<tr>
<td>JUDITH A. RATT</td>
<td>Counselor</td>
<td>Longview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., Southeast Missouri State University</td>
<td>M.A., Southeast Missouri State University</td>
<td></td>
</tr>
<tr>
<td>ROBYN PRESTON-MCGEE</td>
<td>English</td>
<td>Blue River</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.A., University of Central Oklahoma</td>
<td>M.A., University of central Oklahoma</td>
<td></td>
</tr>
<tr>
<td>CARL PRIESENDORF</td>
<td>Geology/Geography</td>
<td>Longview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A.A., State Fair Community College</td>
<td>B.S., Central Missouri State University</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M.S., University of Missouri–Columbia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIRGINIA RAGAN</td>
<td>Geology and Geography</td>
<td>Maple Woods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., University of Missouri–Kansas City</td>
<td>M.S., University of Missouri–Kansas City</td>
<td></td>
</tr>
<tr>
<td>VICKI D. RAINIE</td>
<td>Reading</td>
<td>Penn Valley</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chair, Division of Humanities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.A., University of Missouri–Kansas City</td>
<td>M.A., University of Missouri–Kansas City</td>
<td></td>
</tr>
<tr>
<td>J. MICHAEL RAYNOR</td>
<td>English</td>
<td>Longview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A.A., Junior College of Kansas City</td>
<td>B.A., University of Nebraska–Omaha</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ph.D., University of Florence, Italy</td>
<td></td>
</tr>
<tr>
<td>LARRY A. REICHARD</td>
<td>Biology</td>
<td>Maple Woods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., Eastern Illinois University</td>
<td>M.S., Eastern Illinois University</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M.S., Michigan State University</td>
<td>Ph.D., Illinois State University</td>
<td></td>
</tr>
<tr>
<td>STEPHEN L. REINBOLD</td>
<td>Biology</td>
<td>Longview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., Eastern Illinois University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BETTY REYNOLDS</td>
<td>Practical Nursing</td>
<td>Penn Valley–Pioneer Campus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diploma, Mathers School of Nursing/Southern Baptist Hospital</td>
<td>B.S.N., University of Mobile</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.A.A., University of South Alabama</td>
<td>M.S.N., University of South Alabama</td>
<td></td>
</tr>
<tr>
<td>KAREN SUE RICHARDS</td>
<td>Computer Science/Information Systems</td>
<td>Maple Woods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., Calvary Bible College, Kansas City, Missouri</td>
<td>B.S., St. Mary College, Leavenworth, Kansas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., Central Missouri State University</td>
<td>M.S., Central Missouri State University</td>
<td></td>
</tr>
<tr>
<td>MELANIE ROBERTS</td>
<td>Counselor</td>
<td>Penn Valley</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.S., Iowa State University</td>
<td>M.A., University of Iowa</td>
<td></td>
</tr>
</tbody>
</table>
GWENDOLYN K. ROBERTSON ........................................... Physical Therapist Assistant
Licensed Physical Therapist
B.S., University of Kansas
M.A., University of Missouri–Kansas City

CLAYTON ROBINSON JR ... Counseling
B.S., Emporia State University
M.A., Webster University

DAWINELLE ROBINSON-WALKER ....... English
B.A., University of Missouri–Columbia
M.A., Kansas State University

MARIA ROBY ........................................ Nursing
B.S., University of Missouri–Columbia
B.S.N., University of Missouri–Columbia
M.S.N., University of Missouri–Kansas City

TRACY ROCKWELL ........... Health Information Technology
Registered Health Information Administrator
B.S., College of St. Mary

JENNIFER ROGERS ............................................ Spanish
B.A., University of Missouri–Columbia
M.A., University of Missouri–Columbia

JAN A. ROSENBLUM ....................... Counselor,
Educational Opportunity Center
B.A., College of Emporia, Kansas
M.S., Emporia State University

JUANITA L. ROSS ................. Office Systems
B.S., Bishop College
M.S., Central Missouri State University

GREGORY SANFORD ................. History
B.A., Iowa State University
M.A., Iowa State University

BARBARA SCHAEFER .................... Counseling
B.S., Southeast Missouri State University
M.A., Southeast Missouri State University

MARY HEATHER SCHARFE .......... Human Services
B.S.W., Central Missouri State University
M.S.W., University of Missouri–Columbia

EDWARD W. SCHAUFFLER ............. Automotive
A.A., Longview Community College
B.S., Central Missouri State University

ELLIOTT SCHIMMEL ..................... History
B.A., Fairleigh Dickinson University
M.A., Syracuse University
Ph.D., Florida State University

JENNIFER SCOTT ............... Health Information Technology
Registered Health Information Administrator
B.S., University of Kansas

CYNTHIA SEXTON PROCTOR .................. Physics
B.A., Hendrix College
M.S., University of Arkansas

LINDA SEYBERT ....................... Learning Disabilities
B.A., Rockhurst College
M.A., University of Missouri-Kansas City
Ph.D., University of Kansas

DAVID SHARP ............................... English
B.A., University of Missouri–Columbia
M.A., University of Missouri–Columbia

CORRINE E. SHAW ....................... Practical Nursing
Penn Valley–Pioneer Campus
A.D.N., Kansas City Kansas Community College
B.S.N., Mid-America Nazarene College

M. CATHERINE SHEELY ............. English
B.A., Aquinas College, Michigan
M.L.A., Baker University

LEAH SHELTON ......................... Special Needs Counselor
B.A., William Jewell
M.A., University of Missouri–Kansas City

JAMES A. SHIMEL .................... Manufacturing Technology
B.S., Finlay Engineering College

ROSEMARY SHOCKLEE-FUSARO ........ Nursing
B.S.N., Avila College
M.Ed., University of Missouri–Kansas City
M.S.N., University of Missouri–Kansas City

MARY A. SIMPSON ..................... Basic Skills
B.A., Claflin College
M.A., Florida A & M University

CEBRA SIMS ............................. Psychology
B.S., University of Kansas
M.A., University of Kansas
M.A., University of Missouri–Kansas City
Ph.D., University of Missouri-Kansas City
BOB SKRUKRUD .......................................... Mathematics
Chair, Division of Math, Science, Business
B.S., Winona State University
M.S., Truman State University

JAMES SMITH .............................................. Art
B.F.A., Kansas City Art Institute
M.A., M.F.A., University of Iowa

ROBERT E. SMITH................................. Chemistry
B.S., Brigham Young University
Ph.D., Brigham Young University

ROBERT J. SMITH................................. Counselor
Educational Opportunity Center
M.A., University of Missouri–Kansas City

ANDREA W. SPALTER ....................... Surgical Technology
B.S., College of Notre Dame

PATRICIA MCKEOWN SPARKS......................... English
B.A., University of Missouri-Kansas City
M.A., University of Missouri-Kansas City

LISA SPAULDING ........................................... English
B.A., Westminster College
M.A., University of Nebraska–Lincoln

HELEN Y. SPEED......................... Child Growth and Development
B.S., University of Arkansas at Pine Bluff
M.A., University of Missouri–Kansas City

CONNIE SPIES ........................................... Counselor
B.S., Missouri Western State College
M.S., University of Wisconsin/Stout

PAMELA B. STOCKMAN ......................... Physical Therapist
Licensed Physical Therapist
B.S., St. Louis University
M.S., University of Kansas

KENT STOLZ ......................................... Electronics
Business & Technology College
A.A.S., DeVry University
B.A., Mid-America Nazarene University
M.B.A., Keller Graduate School

J. MICHAEL STURGEON......................... Computer Science/Information Systems
Penn Valley
B.S., Missouri Western State College

MARY SVOBODA-CHOLLET ................. Child Growth and Development
Penn Valley
M.S., University of Kansas

DONALD S. SWANSON......................... Foreign Language
Longview
A.A., Skagit Valley College
B.A., Western Washington University
M.A., Washington State University
M.A., Bowling Green State University

JUDITH E. TAYLOR......................... Radiologic Technology
Penn Valley
Registered Radiologic Technologist
B.H.S., University of Missouri–Columbia
M.Ed., University of Missouri–Columbia

RONALD L. TAYLOR......................... Reading
Blue River
B.A., Simpson College
M.A., University of Missouri–Kansas City
Ed.S., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

PENNY TEPESCH ......................... Manufacturing Technology
Business & Technology College
Chair, Division of Technology
A.A., Longview Community College
B.S., Central Missouri State University
M.S., Central Missouri State University

KIMBERLY THEBEAU-SIERCKS .... Radiologic Technology
Penn Valley
Registered Radiologic Technologist
Registered Mammographer
B.S., Avila College
M.S., Kansas State University

NANCY THOMSON ......................... Education
Penn Valley
Chair, Division of Child Growth and Development,
Education
B.A., Barat College, Illinois
M.A., College of Holy Names, California
Ph.D., University of Kansas

ALANA TIMORA ........................................... Counselor
Longview
B.S., University of Southern Colorado
M.A., University of Missouri–Kansas City

JIM TJADEN ......................... Travel and Tourism
Maple Woods
Certified Travel Consultant, Destination Specialist,
Master Hotel Supplier
B.A., Macalester College
M.A., University of Iowa
Ph.D., University of Missouri–Kansas City
LETA H. TYHURST...................................... Learning Center
B.S., University of Missouri–Columbia
M.S., University of Missouri–Columbia

JENNIFER WALK........................................... Counselor
Educational Opportunity Center, Penn Valley
B.S., Central Missouri State University
M.S., University of Kansas

JOSEPH WALWIK.......................................... History
Blue River
B.A., Slippery Rock University
M.A., Southern Illinois University
Ph.D., American University

MICHAEL WARREN........................................... English
Maple Woods
B.A., University of Kansas
M.F.A., University of Montana
M.A., Central Missouri State University

W. DOUGLAS WASHER........................................... Philosophy
Longview
B.A., Southwest Missouri State University
M.A., University of Missouri–Columbia

LICIA R. WATSON.......................... Child Growth and Development
Penn Valley
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

LINDA C. WAUGH.......................... Nursing
Penn Valley
B.S.–Nursing, Graceland University
M.S.–Nursing, University of Missouri–Kansas City

JAMES K. WEAVER.......................... Business
Longview
A.B., Drury College
M.B.A., Drury College

JANET L. WEAVER.......................... Outreach Counselor
Maple Woods
B.A., University of Missouri–Kansas City
M.Ed., University of Missouri–Kansas City

dORETHER WELCH.......................... Sociology
Penn Valley
B.S., Avila College
M.S., Central Missouri State University
M.A., Webster University
M.S., University of Kansas

MATTHEW R. WESTRA.......................... Psychology
Longview
A.A., Golden West College
B.A., California State University–Fullerton
M.S., California State University–Los Angeles

MAUREEN WIEDERHOLT.......................... Practical Nursing
Penn Valley
B.S.N., Webster University

MICHAEL R. WIEMANN.......................... Computer Science/Information Systems
Blue River
B.S., Central Missouri State University
M.S., Central Missouri State University

F. KIM WILCOX........................................... Speech
Penn Valley
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

JEANNE C. WILLERTH.......................... Computer Science/Information Systems
Longview
B.A., Wayne State College
M.S., University of Missouri–Columbia
M.E., University of Kansas

F. ULA WILLIAMS.......................... Sign Language Interpreting
Maple Woods

ROBERT H. WILLIAMS.......................... Psychology and History
Maple Woods
A.A., Maple Woods Community College
B.A., William Jewell College
M.A., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

TAMMIE WILLIS.......................... Nursing
Penn Valley
B.A., Missouri Western State College
M.A., University of Missouri–Kansas City

LINDA WILSON.......................... Librarian
Maple Woods
B.A., Missouri Western State College
M.A., University of Missouri–Kansas City

PATRICIA A. WINBERG.......................... Nursing
Penn Valley
R.N., Research Medical Center
B.S.N., Avila College
M.S.N., University of Kansas Medical School of Nursing

CHERYL WINTER.......................... Mathematics
Blue River
A.A., Metropolitan Community Colleges
B.A., Avila College
M.S., Central Missouri State University

JANET K. WYATT.......................... Mathematics
Longview
B.S., University of Arkansas
M.A., University of Arkansas
GAYLA  R.  WYNN  ..................................................... Computer Science/Information Systems
A.A., Southwest Baptist College
B.S., Oklahoma Baptist University
M.A., Central Missouri State University

CHRISTINE  A. YANNITELLI  ................................ Counseling
B.A., Michigan State University
M.Ed., University of Missouri–Columbia
M.A., University of Missouri–Kansas City

DEMPSEY  A. YEARRY ................................................ Computer Science/Information Systems
B.S., DeVry Institute of Technology

WILLIAM  YOUNG ....................................................... History
B.A., Iowa State University
M.A., Iowa State University

RUTH  YUNKER .......................................................... Nursing
B.S.N., University of Kansas
M.Ed., University of Missouri–Kansas City

JANE  M. ZEITNER .................................................. Psychology
B.S., Brigham Young University
M.S., Avila College

STEPHANIE  ZERKEL ................................................ English
B.S.E., University of Arkansas at Little Rock
M.A., University of Arkansas at Little Rock

DENISE  ZORTMAN .................................................... Learning Resources
B.A., Adams State College
M.A., University of Denver

MELVIN  A. AYTES (1961-1995) ................................. Political Science
B.S., Central Missouri State University
M.A., Central Missouri State University

HAROLD  E. BAGGERLY (1964-1995)  ....................... Engineering
Licensed Professional Engineer
B.S., University of Kansas
M.S., University of Kansas

JOHN  W. BANKS (1969-1986) ................................. Office Systems
B.S., Central Missouri State University
M.A., University of Northern Iowa

NANCY  J. BANKS (1990-2000) ................................. Nursing
B.S., in Ed., Southwest Missouri State University
B.S.N., Avila College
M.S.N., Kansas University

EDITH  BARTHOLOMEW (1957-1985) ....................... English
A.B., Wheaton College
A.M., Northwestern University

EDWARD  BEASLEY (1968-1993) ............................. History
B.A., Lincoln University
M.A., Emporia State University
Ph.D., University of Missouri–Kansas City

MICHAEL  E. BENSON (1972-1997)  ......................... Criminal Justice
A.A., Kansas City, Kansas Community College
B.S., Central Missouri State University
M.A., University of Missouri – Kansas City
M.S.E., Central Missouri State University

MILTON  BENZ (1974-1990) ................................. Business
B.S.C., University of North Dakota at Grand Forks
M.B.A., Central Missouri State University

LEWIS  E. BERG (1957-1986) ................................. Mathematics
A.B., De Pauw University
M.A., Syracuse University

DALE  R. BIAGI (1965-1998) ................................. Geology and Geography
A.A., Kaskaskia College
B.S., Illinois State University
M.S., Illinois State University

ALDINE  BLANKENSHIP (1951-1979) ...................... Office Systems
A.A., Northeast Junior College
A.B., University of Northern Colorado
M.A., University of Northern Colorado

EMERITI*

Although several retired faculty members and administrators served in more than one capacity during their years with the institution, they are listed here according to the function and the unit to which they were assigned at the time of their retirement.

A.A., Graceland College
B.S., Central Missouri State University
M.A., Central Missouri State University
Spec. in Bus. Adm., Central Missouri State University

RITA  K. AUSTIN (1969-1986) ................................. Foreign Language
A.B., New York State College for Teachers
A.M., University of Kansas
SHERYL L. BLASCO (1966-1994) .............. Data Processing
B.S., Emporia State University
M.P.A., California State University

ANN E. BOEHM (1983-1989) ....................... Psychology
B.A., College of St. Catherine
M.Ed., St. Louis University
M.A., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

ELEANOR SMITH BOWIE (1971-2002) .......... Director of Title III Project
B.A., St. Augustine’s College
M.A., North Carolina Central University

STEPHEN BRAINARD (1970-1998) ............. President
B.S., State University of New York
M.S., Syracuse University
Ph.D., University of Missouri–Columbia

LORE D. BREED (1970-1986) ............... English
B.A., Avila College
M.A., University of Missouri–Kansas City
M.Ph., University of Kansas

RONALD L. BRINK (1969-1993) ............ Speech and Theater
Chair, Division of Communications
B.A., Missouri Valley College
M.A., University of Denver
Ph.D., University of Missouri–Kansas City

JOAN NANCE BROWN (1964-1994) ............. Mathematics
B.S., Harding College
M.A., University of Kansas

SUZANNE BROWN (1984–1994) ............... Health
Registered Record Administrator
B.S., Texas Woman’s University
M.S., Texas Woman’s University

ROBERT S. BUCHANAN (1971-1993) .......... English
A.B., University of Missouri–Columbia
M.A., University of Missouri–Columbia

RALPH E. BUGLEWICZ (1965-1993) .......... History and Russian
B.A., University of Kansas
M.A., University of Kansas

GEORGE A. BUNCH (1956-1989) .............. Social Science
B.S., Northwest Missouri State University
M.S., University of Kansas

A.B., Rockhurst College
A.M., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

B.S., Southwest Missouri State University
M.S., Central Missouri State University

A.B., Pittsburg State University
M.B.A., Harvard University
Ed.D., Harvard University

CAROL Y. BYRD (1996-2001) .......... Associate Dean of Nursing
Nursing Diploma, St. Margaret Hospital
B.S.N., Avila College
M.S.N., University of Missouri-Kansas City
Ph.D., University of Missouri-Kansas City

JEREMIAH CAMERON (1963-1989) .......... English
A.B., University of Indiana
A.M., University of Chicago
Ph.D., University of Missouri–Kansas City

KENNETH M. CARTER (1975-1992) .......... Automotive
A.S.E. Certified Master Truck Technician
B.S., Pittsburg State University
M.S., Pittsburg State University

KENNETH M. CARTER (1975-1992) .......... Automotive
A.S.E. Certified Master Truck Technician
B.S., Pittsburg State University
M.S., Pittsburg State University

B.F.A., Kansas City Art Institute
M.F.A., Kansas City Art Institute

Maple Woods
A.B., Rockhurst College
A.M., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

Penn Valley
B.S., Southwest Missouri State University
M.S., Central Missouri State University

Maple Woods
A.B., Pittsburg State University
M.B.A., Harvard University
Ed.D., Harvard University

Carol Y. Byrd (1996-2001) .......... Associate Dean of Nursing
Penn Valley
Nursing Diploma, St. Margaret Hospital
B.S.N., Avila College
M.S.N., University of Missouri-Kansas City
Ph.D., University of Missouri-Kansas City

Jeremiah Cameron (1963-1989) .......... English
Penn Valley
A.B., University of Indiana
A.M., University of Chicago
Ph.D., Michigan State University

Patrick R. Capranica (1965-1995) .......... Social Science
Longview
B.S., Pittsburg State University
M.S., Pittsburg State University

Longview
A.S.E. Certified Master Truck Technician
A.A.S., Longview Community College

Blue River
Licensed Psychologist
B.A., Eastern Kentucky University
M.Ed., Xavier University
Ph.D., University of Missouri–Kansas City

Penn Valley
B.A., William Jewell College
M.B.A., University of Missouri–Kansas City

Gregory A. Christy (1981-1992) .......... Drafting
Longview
B.S., Central Missouri State University
M.S., Central Missouri State University

Longview
B.F.A., Kansas City Art Institute
M.F.A., Kansas City Art Institute
<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
<th>Department</th>
<th>College/Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMAR G. CONRAD</td>
<td>1965-1995</td>
<td>Geology</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>B.S., University of Kansas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S., University of Kansas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HARVEY J. COOKI</td>
<td>1968-1995</td>
<td>Business</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Chair, Division of Business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.S., Emporia State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S., Emporia State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LARRY W. COX</td>
<td>1963-2001</td>
<td>History</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>A.B., Hastings College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.M., University of Missouri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WILLIAM PATRICK COYNE</td>
<td>1970-2000</td>
<td>Automotive Technology</td>
<td>Longview</td>
</tr>
<tr>
<td>A.S.E. Certified Master Automobile Technician</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.S., Pittsburg State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S., Pittsburg State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BETTY L. CRAFT</td>
<td>1975-2000</td>
<td>Office Systems</td>
<td>Longview</td>
</tr>
<tr>
<td>B.B.A., Washburn University of Topeka</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DARLENE CUMMINGS-HILL</td>
<td>1972-1995</td>
<td>Nursing</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>R.N., General Hospital and Medical Center</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.S.N., University of Kansas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.A., University of Missouri–Kansas City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S.N., University of Missouri–Kansas City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WILLIAM DAVID CRIM</td>
<td>1964-1991</td>
<td>Mathematics</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>B.S.E.E., University of Missouri–Columbia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S., New Mexico Highlands University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S.E.E., University Missouri–Columbia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.A., Huston Tillotson College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.Mus.Ed., University of Kansas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ed.D., Nova University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORVILLE L. DARBY</td>
<td>1956-1982</td>
<td>Economics</td>
<td>Longview</td>
</tr>
<tr>
<td>B.A., Wichita State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.A., University of Colorado</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HERMAN B. DAVIS</td>
<td>1969-1977</td>
<td>Criminal Justice</td>
<td>Longview</td>
</tr>
<tr>
<td>B.S., University of Missouri–Kansas City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DONALD H. DAY</td>
<td>1974-1986</td>
<td>Electronics</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>B.S.E.E., Finlay Engineering College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THOMAS E. DEWEY</td>
<td>1969-2000</td>
<td>Counseling</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>B.S., Pittsburg State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S., Pittsburg State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RICHARD DIKLICH</td>
<td>1972-2002</td>
<td>Automotive Technology</td>
<td>Longview</td>
</tr>
<tr>
<td>A.S.E. Certified Master Automobile Technician</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.S., Pittsburg State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M. ALBERT DIMMIT</td>
<td>1990-2000</td>
<td>History</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>B.S., Kansas State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.A., Kansas University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ph.D., Kansas University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAWRENCE DOWNS</td>
<td>1969-1986</td>
<td>Architecture</td>
<td>Longview</td>
</tr>
<tr>
<td>B.Arch., Washington University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.A., University of Missouri–Kansas City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERRY A. DOYLE JR</td>
<td>1966-1998</td>
<td>Physics</td>
<td>Maple Woods</td>
</tr>
<tr>
<td>A.B., William Jewell College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S., University of Missouri–Rolla</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RICHARD W. DRUMM</td>
<td>1983-1999</td>
<td>District Director</td>
<td>Human Services and Risk Management Administrative Center</td>
</tr>
<tr>
<td>B.A., Long Island University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.A., New York University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JAMES D. EARLY</td>
<td>1973-2002</td>
<td>Biology</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>B.S., Southwest Missouri State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.A., Southwest Missouri State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATTIE J. ELEY</td>
<td>1973-2002</td>
<td>Practical Nursing</td>
<td>Penn Valley/Pioneer</td>
</tr>
<tr>
<td>R.N., General Hospital and Medical Center</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.S.N., University of Kansas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.Ed., University of Missouri–Columbia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S.N., Bishop Clarkson College of Nursing and Health Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRICE ELLIS</td>
<td>1969-1995</td>
<td>History</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>B.S., Central Missouri State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.S., Central Missouri State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JOHN K. ENENBACH</td>
<td>1969-1995</td>
<td>Criminal Justice</td>
<td>Penn Valley</td>
</tr>
<tr>
<td>Licensed Attorney, State of Missouri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.A., Wichita State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J.D., University of Missouri–Kansas City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WILLIAM J. ENGEL</td>
<td>1969-1995</td>
<td>Business</td>
<td>Longview</td>
</tr>
<tr>
<td>B.S., Rockhurst College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.B.A., University of Missouri–Kansas City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ed.D., Nova University</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MARY LOU EUBANK (1980-2000) .... Computer Science/Information Systems
A.A., Longview Community Colleges
B.S.B.A., Central Missouri State University

LUIS M. FLORES, JR. (1973-2001) .... Psychology
A.B., University of the Philippines
M.S., Kansas State University

EDWIN MATTHEW FLYNN (1961-1995) .... Speech and Theater
A.B., University of Missouri–Columbia
A.M., University of Missouri–Columbia

ELLEN P. FORREST (1971-2000) .... Associate Vice Chancellor and Assistant to the Chancellor
B.A., Marymount Manhattan College
M.A., Fordham University

WILLIAM L. FOSTER (1987-1999) .... Associate Director
B.S.E., University of Arkansas
M.Ed., University of Arkansas

THOMAS R. GARRETT (1966-1989) .... Associate Director
A.S., Flat River Junior College
B.S., University of Missouri–Columbia
M.Ed., University of Missouri–Columbia

JOHN M. GAZDA (1957-1993) ....... English
B.A., University of Kansas
M.A., University of Kansas
Ph.D., University of Kansas

GARY F. GIBSON (1968-1992) ........... Business
B.S.B.A., University of Missouri–Columbia
M.Ed., University of Missouri–Columbia

KENNETH W. GILLESPIE (1971-1998) .... District Director
B.S., Central Missouri State University
M.S., Central Missouri State University

LOUIS E. GILHAM (1965-1993) ....... Counseling
B.S., Southwest Missouri State University
M.S., Central Missouri State University

FLORENCE W. GOLDMAN (1976-1986) .... Reading
B.S.Ed., Temple University
M.Ed., University of Illinois
Ph.D., University of Missouri–Kansas City

MARVIN GOLDSTEIN (1962-1999) .... Mathematics
B.S., University of Oklahoma
M.A., University of Oklahoma

CHARLES M. GOSSELIN (1970-1998) .... Associate Dean of Instructional Technology
B.S., Rockhurst College
M.S., University of Missouri–Kansas City

RONALD E. GREATHOUSE (1969-2000) .. Vice Chancellor
B.S., Pittsburg State University
M.S., Pittsburg State University

RICHARD L. HAIR (1973-2000) ............. Sociology
Licensed Clinical Marriage and Family Therapist
B.S., Rockhurst College
M.A., University of Notre Dame
M.Ed., Xavier University

DOROTHY HAMILTON (1973-1986) .... Nursing
B.A., Point Loma Nazarene College
M.A., Point Loma Nazarene College

CECIL N. HAMMONDS (1959-1996) .... District Director
B.S., University of Missouri–Kansas City
M.S., University of Kansas
Ph.D., Louisiana State University

BARBARA M. HANKINS (1971-1997) .... Art
B.F.A., University of Kansas
M.F.A., University of Kansas
Ed.D., Nova University

ROBERT M. HANKINS (1952-1985) .......... Biology
B.S., Emporia State University
M.S., Emporia State University
Ed.D., Nova University

LILLIAN HARRINGTON (1972-1988) .... Speech and English
B.A., Benedictine College
M.A., Catholic University of America

ELBERT C. HEATH (1972-1999) .......... Physics
A.A., Graceland College
B.S., Central Missouri State University
M.S., University of Missouri–Rolla
<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Program</th>
<th>Years</th>
<th>Institution/University</th>
<th>Degree(s)</th>
</tr>
</thead>
</table>
| **CHARLES F. HENRY** | District Director                                      | 1984-1994    | High Technology Training Resource Center      | B.S., Northeast Missouri State University  
|                     | Administrative Center                                 |              | M.A., Central Missouri State University       |                                                                           |
| **JOHN F. HERBST**  | Dean of Instruction Support Services                  | 1966-1988    | Administrative Center                         | A.B., Benedictine College  
|                     |                                                      |              | M.L.S., Case Western Reserve University       |                                                                           |
| **DAVID E. HERRON** | Mathematics                                           | 1965-1992    | Central Missouri State University             | B.S., Central Missouri State University  
|                     |                                                      |              | M.A., Central Missouri State University       |                                                                           |
| **DONALD J. HERZOQ**| English                                               | 1971-2000    | Longview                                      | B.S., Wisconsin State University at LaCrosse  
|                     |                                                      |              | M.A., Kansas State University Ed.D., University of Kansas |                                                                           |
| **KAREN HERZOG**    | Dean of Instruction                                    | 1971-1999    | Penn Valley                                   | B.S.L., Ozark Christian College  
|                     |                                                      |              | M.A., Kansas State University  
|                     |                                                      |              | Ph.D., University of Kansas                   |                                                                           |
| **JULIA HILL**      | Recruitment Coordinator                                | 1975-1992    | Penn Valley                                   | B.S., Lincoln University  
|                     |                                                      |              | M.S., University of Southern California       |                                                                           |
|                     |                                                      |              | Ed.D., Nova University                        |                                                                           |
| **THOMAS J. HILLENBRAND** | English                                               | 1988-2002    | Longview                                      | A.B., Loyola University of Chicago  
|                     |                                                      |              | M.A., Loyola University of Chicago            |                                                                           |
| **E. JAY HILTY JR** | Philosophy                                            | 1963-1992    | Maple Woods                                   | B.Mus., University of Colorado  
|                     |                                                      |              | M.A., University of Colorado                  |                                                                           |
| **JOYCE S. HILTY**  | Data Processing                                       | 1986-1993    | Maple Woods                                   | A.A.S., Maple Woods Community College  
|                     |                                                      |              | M.A., University of Colorado                  |                                                                           |
| **SARAH A. HOPKINS**| Director of PACE Program for Adult College Education | 1972-1998    | Longview                                      | B.S. in Ed., Central Missouri State University  
|                     |                                                      |              | M.A., Central Missouri State University       |                                                                           |
|                     |                                                      |              | Ph.D., University of Kansas                   |                                                                           |
| **DENNIS HRONEK**   | Associate Dean of Occupational/Continuing Education   | 1973-2000    | Blue River                                     | A.S., Hutchinson Junior College  
|                     |                                                      |              | B.S., University of Missouri–Columbia         |                                                                           |
|                     |                                                      |              | M.A., University of Missouri–Kansas City      |                                                                           |
| **RUTH M. HULSI**   | Nursing                                               | 1966-1983    | Penn Valley                                   | A.A., Moberly Junior College  
|                     |                                                      |              | R.N., Kansas City General Hospital and Medical Center |                                                                           |
| **JOHN A. KACZYNSKI**| Dean of Instruction                                    | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
|                     |                                                      |              | Ph.D., University of Missouri–Kansas City     |                                                                           |
| **LEON H. KEENS**   | Computer Science/Information Systems                   | 1969-1996    | Maple Woods                                   | B.S., Kansas State University  
|                     |                                                      |              | M.B.A., University of Missouri–Kansas City    |                                                                           |
| **JOHN F. HERBST**  | Assistant to the President                             | 1975-1989    | Maple Woods                                   | B.A., Valparaiso University  
|                     |                                                      |              | M.S., Indiana University                      |                                                                           |
| **E. JAY HILTY JR** | Philosophy                                            | 1963-1992    | Maple Woods                                   | B.A., University of Missouri–Kansas City  
|                     |                                                      |              | B.A., University of Missouri–Kansas City      |                                                                           |
| **ASHLEY L. JOHNSON**| Assistant to the President                             | 1975-1989    | Maple Woods                                   | B.A., University of Missouri–Kansas City  
|                     |                                                      |              | M.A., University of Missouri–Kansas City      |                                                                           |
| **RUTH M. HULSI**   | Nursing                                               | 1966-1983    | Penn Valley                                   | A.A., Moberly Junior College  
|                     |                                                      |              | R.N., Kansas City General Hospital and Medical Center |                                                                           |
| **JOHN A. KACZYNSKI**| Dean of Instruction                                    | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
|                     |                                                      |              | Ph.D., University of Missouri–Kansas City     |                                                                           |
| **ALEXIS M. KELLY** | Nursing                                               | 1966-1983    | Penn Valley                                   | A.A., Junior College of Kansas City  
|                     |                                                      |              | B.A., University of Missouri–Kansas City      |                                                                           |
| **JOHN A. KACZYNSKI**| Associate Dean of Instruction                         | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
| **JOHN A. KACZYNSKI**| Dean of Instruction                                    | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
| **JOHN A. KACZYNSKI**| Associate Dean of Instruction                         | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
| **JOHN A. KACZYNSKI**| Associate Dean of Instruction                         | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
| **JOHN A. KACZYNSKI**| Associate Dean of Instruction                         | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
| **JOHN A. KACZYNSKI**| Associate Dean of Instruction                         | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
| **JOHN A. KACZYNSKI**| Associate Dean of Instruction                         | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
| **JOHN A. KACZYNSKI**| Associate Dean of Instruction                         | 1966-2001    | Longview                                      | A.S., Flint Community College  
|                     |                                                      |              | A.B., University of Michigan–Flint            |                                                                           |
|                     |                                                      |              | M.S., University of Arizona                   |                                                                           |
PATRICIA A. KEMNER (1970-1990) ......................... Biology  
B.A., University of Missouri–Columbia  
M.S., University of Missouri–Kansas City  

HARRY A. KING (1973-1980) ......................... Social Science  
A.A., Junior College of Kansas City  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City  

KAREN KISTNER (1970-1997) .................... District Director  
Occupational Systems  
Administrative Center  
B.S., University of Kansas  
M.S., Emporia State University  
Ed.D., Nova University  

HAROLD B. KOCH (1966-2000) ......................... Psychology  
Licensed Psychologist  
Chair, Division of Social Science  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City  
Ph.D., University of Missouri–Kansas City  

Chair, Division of Technology  
B.S.Ed., Wayne State University  
M.S.Ed., University of Kansas  
Ph.D., University of Kansas  

IRENE G. KOROTEV (1973-1999) ......................... Librarian  
B.A., North Texas State University  
M.A., University of Missouri–Columbia  

HERBERT F. KRAMER (1956-1991) ......................... Mathematics  
B.S., University of Missouri–Kansas City  
M.S., University of Missouri–Kansas City  

JOANN KREKEL (1973-1994) ......................... Media Specialist  
A.A., Penn Valley Community College  
B.A., Baker University  
M.S., Central Missouri State University  

VIRGINIA KRUSE (1959-1979) ......................... Foreign Language  
A.B., University of Kansas  
A.M., University of Kansas  

MARILYN S. LANDER (1973-1993) ......................... Nursing  
R.N., Tuskegee Institute  
B.S.N., Avila College  
M.A., University of Missouri–Kansas City  

RUSSEL G. LER (1954-1983) ......................... Mathematics  
B.S., University of Missouri–Columbia  
M.S., University of Missouri–Columbia  

B.S., Central Missouri State University  
M.Ed., University of Missouri–Kansas City  

ALDO W. LEKER (1971-1997) ......................... President  
B.S., Southwest Missouri State University  
M.B.A., University of Missouri–Kansas City  

JONNE A. LONG (1969-2002) ......................... Senior Project Associate, MetroSoft  
B.A., Park College  
M.P.A., Park College  

ORLYN O. LOCKARD (1966-1989) ......................... Drafting and Design/Engineering Technology  
B.S.Ed., Central Missouri State University  
M.A., George Peabody College for Teachers  
Ed.S., Central Missouri State University  

A. K. LONGFELLOW (1955-1977) ......................... Dean of Students  
B.S., Central Missouri State University  
M.S., University of Kansas  

WANDA F. LORD (1962-1985) ......................... Office Systems  
B.S., University of Missouri–Columbia  
M.A., University of Missouri–Kansas City  

PATRICIA A. LORENZ (1971-2000) ......................... Biology  
Chair, Division of Life Sciences  
A.A.S., Penn Valley Community College  
B.S., St. Louis University  
Ph.D., University of Kansas  

L. DOONE LOUGHERY (1972-1991) ......................... Office Systems and Careers  
B.S.Ed., Northeast Missouri State University  
M.A.Bus.Ed., Northeast Missouri State University  

FORREST G. LOWE (1959-1993) ......................... Physics  
Licensed Professional Engineer  
B.S., Northwest Missouri State University  
M.S., Texas Christian University  
Ed.D., Nova University  

ROBERT LOWH (1971-1999) ......................... District Director  
B.S., Pittsburg State University  

21
WILLIAM J. MANN (1977-1993) .......................... Chancellor
Administrative Center
B.S., Northern Illinois University
M.S., Northern Illinois University
Ed.D., Northern Illinois University

Administrative Center
A.A., Junior College of Kansas City
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

JOSÉ MARTINEZ (1989-2000) ................... Aviation
Maintenance Technology
Maple Woods
Licensed Airframe and Powerplant Technician
Private Pilot with Instrument and Multiengine Ratings
B.S., Central Missouri State University

LOUISE S. MCCANTS (1983-1988) .................. District Director of Instructional Services
Administrative Center
B.S., Oklahoma State University
M.S., Oklahoma State University
Ph.D., Ohio State University

JOHNNIE W. MCCLINTON (1971-2001)... Dean of Campus Student Services
Blue River
Licensed Psychologist
B.A., Baylor University
M.S.Ed., Baylor University
Ph.D., University of Missouri–Columbia

THOMAS L. MCCLURB (1969-1999) ............... Psychology
Maple Woods
B.S., Purdue University
M.A., Ball State University

FLIN C. MCGHEE (1966-2000) ................. Chemistry
Penn Valley
Chair, Division of Physical Science
B.S., University of Houston
M.S., Texas A & M University
Ph.D., University of Kansas

FERN MEEK (1969-1992) ......................... Librarian
Longview
B.S., University of Kansas
M.L.S., Emporia State University

BARBARA MEHNERT (1971-1997) ............... Counselor
Longview
B.A., Vassar College
M.Ed., University of Pittsburgh
Ed.D., University of Kansas

JOHN MICHAEL (1987-2002) ................... District Director Enrollment Services
Administrative Center
B.S., Central Missouri State University
M.S.Ed., Central Missouri State University

LAUREN F. MILLER (1972-1997) ................. Philosophy
Chair, Division of Social Science
Longview
B.A., Antioch College
M.A., University of Pittsburgh

MICHAEL E. MILLER (1964-1997) ............. English
Chair, Division of Humanities
Longview
A.A., Junior College of Kansas City
B.A., University of Kansas
M.A., University of Kansas
Ph.D., University of Kansas

GEORGE E. MONTAG (1976-1985) ............... English
Longview
A.B., University of Cincinnati
M.Ed., Xavier University
M.A., Xavier University

GERALD N. MOORE (1971-1997) .................. Electronics
Maple Woods
Diploma, DeVry Institute of Technology
A.A., Metropolitan Community Colleges
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

THOMAS F. MORRIS (1965-1996) ................. English
Longview
B.A., University of Kansas
M.S., University of Kansas

ELNA B. MORROW (1981-1994) ..................... Counselor
Longview
B.A., Alabama State University
M.S., University of Nebraska–Omaha

STEWART E. NELSON (1963-1999) ............... History
Maple Woods
A.B., Park College
M.A., University of Kansas

Maple Woods
Chair, Division of Social Science
A.A., Junior College of Kansas City
B.S., Central Missouri State University
M.A., Louisiana State University
Ph.D., University of Missouri–Columbia

Longview
B.S., Concordia Teachers College
M.S., Central Missouri State University
Ph.D., University of Missouri–Kansas City
PAT KIPP O'NEIL (1987-2000) ................................. Counselor  
B.S., Molloy College  
M.A., Hofstra University  
M.A., University of Missouri–Kansas City  

REBECCA M. OWENS (1974-2002) .................. Fashion and  
Human Sciences  
Chair, Division of Business and Human Sciences  
B.S., Northwest Missouri State University  
M.Ed., University of Missouri–Columbia  

CLIFFORD NAYSMITH (1964-2001) .................. Sociology  
Chair, Division of Business  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City  

LEE ROY PITTS (1972-1997) ....................... Biology  
B.S., Pittsburg State University  
M.S., Pittsburg State University  

MARY JO PODREBARA (1982-1995) ................. Chemistry  
Chair, Division of Business  
B.A., Avila College  
M.A., University of Kansas  

JAMES L. PRATT (1970-2000) ....................... Computer Science/  
Information Systems  
Chair, Division of Business  
A.G.E., Flint Junior College  
B.S., University of Michigan  
B.S.E.E., University of Missouri–Columbia  
M.P.H., University of Michigan  

NORMAN C. PRESTON (1972-1983) ................. Mechanical  
Chair, Division of Business  
Technology  
B.S., Northwest Missouri State University  
M.S., University of Arkansas  

A. RAE PRITCH (1966-1992) ........................... English  
B.S., Northwestern University  
M.A., University of Missouri–Kansas City  
Ph.D., University of Missouri–Kansas City  

B.S., University of Missouri–Columbia  
M.Ed., University of Missouri–Columbia  
Ed.D., University of California–Los Angeles  

B.S., University of Missouri–Columbia  
M.A., University of Missouri–Kansas City  

HAROLD REESE (1939-1974) ....................... English  
B.A., Dakota Wesleyan University  
M.A., Northwestern University  

ROBIN RETZER (1969-2002) ....................... Project Analyst  
Administrative Center  
A.A., Metropolitan Junior College of Kansas City  
B.A., William Jewell College  
B.S., William Jewell College  

BURLON W. RICHARDSON (1985-1993) ............ Electronics  
Chair, Division of Business  
B.S., North Carolina State University  

ROBERT D. RICHEY (1983-1993) .................. Dean of  
Instructional Services  
B.S.Ed., Illinois State University  
M.A., University of Illinois  

ROBERT D. RICHMOND (1965-1995) ............... English  
B.S., Central Missouri State University  
M.S., University of Missouri–Kansas City  

RONALD G. ROWLAND (1965-1998) ............... Chemistry  
B.S., Kansas State University  
M.S., Kansas State University  

DAVID E. SACHEN (1969-1997) .................. German, Mathematics  
B.S., Rockhurst College  
M.A., University of Kansas  

JAMES H. SAMPSON (1963-1983) .................... Director  
Administrative Center  
A.B., William Jewell College  
A.M., University of Wyoming  

ALBERT W. SANDRING (1990-1995) ............... Drafting  
Licensed Professional Engineer  
B.S.M.E., Kansas State University  
M.B.A., University of Missouri–Columbia  

MARGARET P. SANDRING (1985-1995) ............ Office Systems  
B.S., Central Methodist College  
M.S., Central Missouri State University
<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Program</th>
<th>Location/Institution</th>
<th>Degrees/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEVERLY J. SCHWAAB</td>
<td>Librarian</td>
<td>Longview</td>
<td>A.A., Junior College of Kansas City</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B.A., Baker University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.S., Central Missouri State University</td>
</tr>
<tr>
<td>JEAN BARTZ SCURLOCK</td>
<td>Chemistry</td>
<td>Longview</td>
<td>A.B., University of Kansas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A.M., Smith College</td>
</tr>
<tr>
<td>LARRY E. SHERWOOD</td>
<td>Mathematics</td>
<td>Penn Valley</td>
<td>B.S., University of Missouri–Kansas City</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.A., University of Missouri–Kansas City</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ph.D., University of Missouri–Kansas City</td>
</tr>
<tr>
<td>CHARLES E. SHIELDS</td>
<td>District Director</td>
<td>Administrative Center</td>
<td>A.A., North Central Missouri College</td>
</tr>
<tr>
<td></td>
<td>Purchasing &amp; Auxiliary Services</td>
<td></td>
<td>B.S., University of Missouri–Columbia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.A., University of Missouri–Kansas City</td>
</tr>
<tr>
<td></td>
<td>Certified Purchasing Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>THOMAS H. SICKING</td>
<td>English, Journalism</td>
<td>Penn Valley</td>
<td>B.A., University of Missouri–Kansas City</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.A., University of Missouri–Kansas City</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ed.D., Nova University</td>
</tr>
<tr>
<td>DOROTHY L. SIMMONS</td>
<td>Nursing</td>
<td>Penn Valley</td>
<td>R.N., General Hospital and Medical Center</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B.S.N., Avila College</td>
</tr>
<tr>
<td>SUE M. SINTON</td>
<td>Nursing</td>
<td>Penn Valley</td>
<td>R.N., St. Joseph Hospital School of Nursing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B.A., University of Missouri–Kansas City</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.A., University of Chicago</td>
</tr>
<tr>
<td>ROBERT A. SLATER</td>
<td>English</td>
<td>Maple Woods</td>
<td>B.S., Northeast Missouri State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.F.A., University of Iowa</td>
</tr>
<tr>
<td>SHIRLEY FIETH SMITH</td>
<td>Office Systems</td>
<td>Longview</td>
<td>B.S., Central Missouri State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.A., Central Missouri State University</td>
</tr>
<tr>
<td>THEDA Y. SORENSON</td>
<td>Counseling</td>
<td>Longview</td>
<td>A.A., Hutchinson Community College</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B.A., Sterling College</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.A., Fort Hays State University</td>
</tr>
<tr>
<td>PHYLLIP P. STANDLEA</td>
<td>District Director</td>
<td>Administrative Center</td>
<td>B.S., Northwest Missouri State University</td>
</tr>
<tr>
<td></td>
<td>Instructional Services &amp; Professional</td>
<td></td>
<td>M.S., Emporia State University</td>
</tr>
<tr>
<td></td>
<td>Development</td>
<td></td>
<td>Ph.D., University of Missouri–Columbia</td>
</tr>
<tr>
<td>EVELYN R. STAATZ</td>
<td>Librarian</td>
<td>Longview</td>
<td>B.S., University of Missouri–Columbia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.A., University of Missouri–Columbia</td>
</tr>
<tr>
<td>SALLY STEINBACK</td>
<td>Political Science</td>
<td>Penn Valley</td>
<td>B.A., Beloit College</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.P.A., Syracuse University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>J.D., University of Missouri–Kansas City</td>
</tr>
<tr>
<td>BILL STILL</td>
<td>Machine Tool Technology</td>
<td>Maple Woods/BUSINESS &amp; TECHNOLOGY COLLEGE</td>
<td>B.S., Central Missouri State University</td>
</tr>
<tr>
<td>SUZANA SWAGER</td>
<td>Basic Skills</td>
<td>Blue River</td>
<td>B.A., Southwest Baptist College</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.S., Central Missouri State University</td>
</tr>
<tr>
<td>SCARLETT SWALL</td>
<td>Librarian</td>
<td>Longview</td>
<td>B.A., University of Tennessee</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.A., University of Denver</td>
</tr>
<tr>
<td>NANCY M. TAYLOR</td>
<td>Business and Office Reentry</td>
<td>Longview</td>
<td>A.A., Longview Community College</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B.S., Avila College</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.Ed., Central Missouri State University</td>
</tr>
<tr>
<td>G. DALE THOMAS</td>
<td>Dean of Instruction</td>
<td>Blue River</td>
<td>B.S.Ed., Central Missouri State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.S., Emporia State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D.A., Idaho State University</td>
</tr>
<tr>
<td>CLAUDE W. THOMSON</td>
<td>Management</td>
<td>Longview</td>
<td>B.S., Central Missouri State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.S., Central Missouri State University</td>
</tr>
<tr>
<td>PAUL THOMSON JR</td>
<td>President</td>
<td>Blue River</td>
<td>B.S., Missouri Valley College</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M.S., Southern Illinois University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ph.D., Southern Illinois University</td>
</tr>
</tbody>
</table>
GEORGE E. THORNTON (1970-1997) ................ Automotive Technology Longview
  A.S.E. Certified Master Automobile Technician
  A.A.S., Longview Community College
  B.S.E., Central Missouri State University
  M.S., Central Missouri State University

  B.A., University of Arkansas
  M.Sec.Ed., University of Arkansas

DORA WALSH (1994-1999) .................. Practical Nursing Penn Valley–Pioneer Campus
  R.N., Hammersmith, England
  S.C.M., Midwifery, London, England
  B.S.N., Graceland College

HELEN G. WEAVER (1960-1984) .................. Psychology Penn Valley
  B.A., University of Missouri–Columbia
  M.S., University of Pennsylvania

CHARLES H. WHEAT (1970-1997) ... Aviation Maintenance Technology Maple Woods
  Licensed Airframe and Powerplant Mechanic
  Licensed Commercial Airplane Pilot
  FAA Designated Mechanic Examiner
  A.A.S., Oklahoma State University
  B.S., Oklahoma State University
  M.S., Pittsburg State University

BEVERLY D. WHITAKER (1983-1994) .... Learning Center/Reading Maple Woods
  B.R.E., Northern Baptist Theological Seminary
  B.S., Sioux Falls College
  M.A., University of Missouri–Kansas City

LEVORA B. WHITMORE (1971-1995) .................. Nursing Penn Valley
  Chair, Division of Nursing
  B.S.N., University of Kansas
  M.A., University of Missouri–Kansas City

JAMES P. WHITWORTH (1965-1991) ............... Counseling Maple Woods
  B.S., Missouri Valley College
  M.S., Central Missouri State University

ARTHUR N. WILKINS (1956-1990) .................. District Director Academic Affairs & Research Administrative Center
  A.A., Junior College of Kansas City
  A.M., University of Chicago
  Ph.D., Washington University

DOROTHY M. WRIGHT (1955-1995) ................. Office Systems Penn Valley
  A.A., Penn Valley Community College
  B.S., Central Missouri State University
  M.A., University of Iowa
  Ed.D., Nova University

VIRGINIA D. YATES (1968-1984) .................. Reading Penn Valley
  B.S., Pittsburg State University
  M.A., University of Missouri–Kansas City
Index

A
Aaron, Marvin  R. 2
Abrahamson, Stanley  R. 2
Alexander, Toni Y 5
Allen, Shelli R. 2
Allyn, William 5
Anthony, Pamela Jo 5
Anway, Joseph H. 16
Appel, Bruce 5
Arnold, John D. 5
Austin, Rita K. 16
Aytes, Melvin A. 16
Brown, Suzanne 17
Brown, Joan Nance 17
Brown, Beverlye J. 2
Brink, Ronald L. 17
Breed, Lore D. 17
Brady, Gloria 2
Boyd, Margaret 2
Bowie, anor Smith 17
Banks, John W 16
Banks, Nancy J. 16
Bard, James R. 5
Bartholomew, Edith 16
Bartholomaus, Craig 5
Bartholomew, Edith 16
Bassett, Carolyn 2
Beasley, Edward 16
Beedle, Dianne
Grafentine 5
Beers, Pamela 5
Beisel, James Q. 5
Bell, Linda F 5
Benson, Michael E. 16
Benz, Milton 16
Berg, Lewis E. 16
Berge, Patricia A. 5
Biagi, Dale R. 16
Bidwell, Roger 5
Biagi, Dale R. 16
Bennon, Michael E. 16
Blankenship, Aldine 16
Blasco, Sheryl L. 17
Blitt, Mary Ann 5
Blythe, Gretchen 5
Boatright, Mary Susanne 5
Boehm, Ann E. 17
Bowdish, Todd I. 5
Bowie, anor Smith 17
Boyd, Margaret 2
Brady, Gloria 2
Brady Jr, Arthur M. 5
Breed, Lore D. 17
Brink, Ronald L. 17
Brown, Beverleye J. 2
Brown, Joan Nance 17
Brown, Suzanne 17
Buchanan, Robert S. 17
Buglewicz, Ralph E. 17
Bunch, George A. 17
Burke, Jon L. 2
Burks, Walter M. 17
Burnett, Wilma J. 17
Burns, Rebecca L. 5
Butler, Aaron C. 17
Butler, Christine Smith 3
Butler, Cynthia A. 3
Byrd, Carol Y 17
C
Callahan, Denise 5
Cameron, Jeremiah 17
Canow, Kurt 6
Capanica, Patrick R. 17
Carpenter-Davis, Cheryl A. 6
Carter, Kenneth M. 17
Case, Clydia A. 17
Case, Vernon L. 17
Chandler, Sybil 6
Chappell, Tim 6
Chasteen, Bryan 6
Chop, Theresa 6
Christensen, Kimberly 6
Christy, Gregory A. 17
Church, John 6
Clark, Lynda W 6
Clark, Susan W 6
Cline, Janet 3
Colburn, David W 3
Coleman, John P 17
Cone, Frank Dean 6
Connelly, Michael J. 6
Connie Migliazzo 11
Conrad, Omar G. 18
Cooke, Barbara 6
Cooke, Harvey J. 18
Cota, Gene F 6
Cox, Larry W 18
Coyne, William Patrick 18
Crabtree, Linda F 3
Craig-Claar, Deborah 6
Crim, William David 18
Cue, William 6
Culley, Bruce D. 6
Cummings-Hill, Darlene 18
Curls, Karen E. 6
Curtis, Rebecca R. 3
D
Damninga, Paul D. 6
Daniels, Desmond U. 18
Darby, Orville L. 18
Davin, Terrence 6
Davis, Herman B. 18
Day, Donald H. 18
Dewey, Thomas E. 18
Dexter, Karen 3
Diklich, Richard 18
Dimmitt, Jr, Albert 3
Dimmitt Sr, Albert 18
Dinges, Theodore M. 6
Donatello, Marilyn 3
Dourcette, Donald S. 2
Downs, Lawrence 18
Doyne, Jr, Perry A. 18
Drumm, Richard W 18
Dube, Charles E. 3
Durant, Edward 7
Dvorak, Joyce Anne 7
E
Eagle, Martha J. 7
Early, James D. 18
Easter, Margaret 7
Edwards, Sylvia L. 7
Eichman, Kenneth R. 7
Eley, Mattie J. 18
Elizabeth Lindquist 3
Ellis, Price 18
Ellison, Carole 3
Enenbach, John K. 18
Engel Jr, William J. 18
Enkelmann, Diane M. 7
Eubank, Barbara 7
Eubank, Mary Lou 19
Everett, James D. 3
Fairbanks, William 7
Fenster, Eugene J. 7
Flick-Hruska, Connie 7
Flores, Luis M., Jr 19
Flynn, Edwin Matthew 19
Flynn, Judith 7
Forch, Irene 7
Forchee, Randall 7
Forrest, Ellen P 19
Foster, William L. 19
Franken, William C. 7
Franklin, Cora E. 7
Frederick, Jennie 7
Frey, Moira R. 7
Garrett, Thomas R. 19
Gazda, John M. 19
Geoghegan Jr, W. Andrew 7
Gibson, Gary F 19
Giles, Wayne E. 2
Gilkes, Armando 6
Gillesp, Kenneth W 19
Gillham, Louis E. 19
Gilmore, Carole R. 7
Goldman, Florence W 19
Goodall, Deborah 3
Gordy, Zola 7
Gosselin, Charles M. 19
Grahn, Diana J. 8
Graves, Sharon L. 8
Greathouse, Ronald E. 19
Grogan, Fred L. 2
Grosser, Cheryl S. 8
Gupta, Radhey 8
H
Haehl, Martha 8
Hair, Richard L. 19
Hall, Tracy D. 8
Hamilton, Dorothy 19
Hammonds, Cecil N. 19
Hamsa, Sharon 8
Hankins, Barbara M. 19
Hankins, Robert M. 19
Hannon, Theresa 8
Harden, Sharl 8
Harding, Jess 8
Harding, Paul 8
Hardy-Parcell, Cathy K. 8
Harrington, Lillian 19
Hartman, Kenneth G. 8
Hawkins, John 8
Hays, Rex G. 3
Heath, Elbert C. 19
Henry, Charles F 20
Henson, Joan 8
Herbert, Cynthia A. 8
Herbst, John F 20
Herron, David E. 20
Hertzog, Donald J. 20
Hertzog, Karen 20
Higgason, Richard 8
Hill, Elizabeth 8
Hill, Juanan 8
Hill, Julia 20
Hillenbrand, Thomas J. 20
Hilty, Joyce S. 20
Hilty Jr, E. Jay 20
Hirner, Leo J. 3
Hobbs, Terry 8
Hodgkinson, William 8
Hogan, Sharon E. 8
Holiman, Jimmy 8
Holman, Robert J. 8
Hopkins, Sarah A. 20
Hronek, Dennis 20
Hulse, Ruth M. 20

26
Sorenson, Theda Y 24
Spalter, Andrea W 14
Sparks, Patricia
  McKeown 14
Spaulding, Lisa 14
Speed, Helen Y 14
Spies, Connie 14
Staatz, Evelyn R. 24
Standlea, Phyllip P 24
Steinback, Sally 24
Stephen Brainard 17
Still, Bill 24
Stockman, Pamela B. 14
Stockmyer, John G. 14
Stolz, Kent 14
Sturgeon, J. Michael 14
Svoboda-Chollet, Mary 14
Swager, Suzana 24
Swall, Scarlett 24
Swanson, Donald S. 14

T
Taylor, Judith E. 14
Taylor, Nancy M. 24
Taylor, Ronald L. 14
Tepesch, Penny 14
Thebeau-Siercks, Kimberly 14
Thomas, G. Dale 24
Thomson, Claude W 24
Thomson Jr, Paul 24
Thomson, Nancy 14
Thornton, George E. 25
Timora, Alana 14
Tjaden, Jim 14
Truex, Mary 4
Tunis, Allan H. 2
Turner, Helen M. 25
Tyhurst, Leta H. 15

V
Van Middlesworth, Charles 4

W
Walk, Jennifer 15
Walsh, Dora 25
Walwik, Joseph 15
Warren, Michael 15
Washe, W. Douglas 15
Watson, Licia R. 15
Waugh, Linda C. 15
Weaver, Helen G. 25
Weaver, James K. 15
Weaver, Janet L. 15
Weglarz, Reinhard 4
Welch, dorether 15

West, Karen 4
Wextra, Matthew R. 15
Wheat, Charles H. 25
Whitaker, Beverly D. 25
Whitmore, Levora B. 25
Wiederhold, Maureen 15
Wiemann, Michael R. 15
Wilcox, F. Kim 15
Willerth, Jeanne C. 15
Williams, F. Ula 15
Williams, Robert H. 15
Willis, Tammie 15
Wilson, Linda 15
Wilson, Malcolm T 2
Wilson, Susan 4
Winberg, Patricia A. 15
Wingfield, Wesley 4
Winter, Cheryl 15
Wright, Dorothy M. 25
Wyatt, Janet K. 15
Wynn, Gayla R. 16

Y
Yannitelli, Christine A. 16
Yates, Virginia D. 25
Yearry, Dempsey A. 16
Young, William 16
Yunker, Ruth 16

Z
Zeitner, Jane 4
Zeitner, Jane M. 16
Zerkel, Stephanie 16
Zortman, Denise 16