09/10

course catalog

Metropolitan Community College

NO ONE LIKE YOU. NO COLLEGE LIKE US.®

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Metropolitan Community College Catalog 2009-2010

✦NOTE✦

This catalog contains information that will familiarize you with Metropolitan Community College. Contents of this catalog are current as of the March 2009 publication. Material in the catalog relates to the operations and activities of Metropolitan Community College and is for informational purposes only. It does not represent enforceable contractual obligations of Metropolitan Community College. The college reserves the right to modify 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 staff at any of the campuses. Check out MCC's web site at www.mcckc.edu.

An online copy of the MCC 2009-2010 Catalog can be found at

www.mcckc.edu

Serving the four Missouri counties of metropolitan Kansas City
An Equal Opportunity/
Affirmative Action Employer

Welcome to Metropolitan Community College, and thank you for your interest in learning with us. MCC has come a long way since its founding in 1915: what was once a single building in downtown Kansas City has now grown to five campuses spread across four counties, making MCC the largest institution of higher education in Kansas City. Now serving more than 43,000 students a year, MCC has brought opportunity to hundreds of thousands of people over the years and has made an enormous cultural and economic impact on the Kansas City community.

As our student population grows and evolves, so, too, do our programs and services. Right now we're preparing for considerable growth in our allied health programs because we continue to hear from more and more students who are interested in those professions and because there is a critical need for skilled workers in those fields. We offer a number of unique modes of learning like distance education, study-abroad courses, and learning communities that accommodate various learning styles and help broaden students' perspectives.

The faculty and staff of MCC have long believed in providing a high quality education by delivering curriculum and programs that prepare students for a competitive global economy. In addition to educating individual students, we also serve local businesses and other community partners through continuing and community education programs and our Business & Learning Solutions division, which provides consulting and customized training programs for area businesses.

MCC remains committed to our mission of "Preparing Students. Serving Communities. Creating Opportunities." and we will continue to make every effort to ensure the success of our students, the viability of our community and the accessibility of our services. We look forward to working with you this year.

Jacqueline I. Snyder

Spring Semester 2009

First date for classes, day and evening	Monday, January 12
First date for Saturday classes	Saturday, January 17
Martin Luther King, Jr. holiday (no classes, day and evening)	Monday, January 19
Campus Inservice date (no classes, day or evening)	Tuesday, January 20
On-schedule state aid date	Monday, February 9
Convocation date (no classes day and evening)	Wednesday, February 25
Midterm	Friday, March 6
Spring break	March 9-14
Classes resume	Monday, March 16
Last date to withdraw without assessment	Monday, April 13
Last date for Saturday classes	Saturday, May 2
Last date for classes, day and evening	Wednesday, May 6
Reading day, evening finals only	Thursday, May 7
Final exams, day and evening	May 8-13
Saturday final exams	Saturday, May 9
Last date for finals	Thursday, May 14
Commencement	Friday, May 15
Grades due at 12 p.m. Noon	Friday, May 15

Spring Semester 2010

First date for classes (day and evening)	Monday, January 11
First date for Saturday class	Saturday, January 16
Martin Luther King Jr. holiday (no classes day or evening)	Monday, January 18
Campus Inservice date (no classes day or evening)	Tuesday, January 19
On-schedule state aid date	Monday, February 8
Convocation date (no classes day and evening)	Wednesday, February 17
Midterm	Thursday, March 4
Spring break	March 8-12
Classes resume	Monday, March 15
Last date to withdraw without assessment	Monday, April 12
Last date for Saturday classes	Saturday, May 1
Last date for classes, day and evening	Wednesday, May 5
Reading date, evening finals only	Thursday, May 6
Final exams, day and evening	Friday, May 7, 10, 11, 12
Saturday final exams	Saturday, May 8
Last date for day finals	Thursday, May 13
Commencement	Friday, May 14
Grades due 12 p.m. Noon	Friday, May 14

Summer Session 2009

First date for classes, day and evening	Monday, June 1
On-schedule state aid date	Thursday, June 11
Independence Day holiday observed (no classes)	Friday, July 3
Last date to withdraw without assessment	Wednesday, July 8
Last date for classes, day and evening	Thursday, July 23

Summer Session 2010

First date for classes, day and evening	Monday, June 7
On-schedule state aid date	Thursday, June 17
Independence Day holiday observed (no classes)	Monday, July 5
Last date for withdrawal without assessment	Wednesday, July 8
Last date for classes, day and evening	Thursday, July 29

Fall Semester 2009

New faculty orientation	August 13 and 14
New adjunct faculty orientation	Saturday, August 15
Campus Inservice date (no day and evening classes)	Monday, August 17
First date for day and evening classes	Tuesday, August 18
First date for Saturday classes	Saturday, August 22
Labor Day holiday (no classes)	Monday, September 7
On-schedule state aid day	Monday, September 14
Midterm	Friday, October 9
District Inservice (no classes day and evening)	Tuesday, October 20
Last date to withdraw without assessment	Monday, November 9
Thanksgiving holiday observed (no classes) (Holiday begins at 4 p.m. November 25)	November 26-29
Classes resume	Monday, November 30
Last date for Saturday classes	Saturday, December 5
Last date for day and evening classes	Tuesday, December 7
Reading date, evening finals only	Tuesday, December 8
Final exams, day and evening	December 9,10,11,14
Saturday final exams	Saturday, December 12
Last date for day finals	Tuesday, December 15
Grades due 12 p.m. Noon	Wednesday, December 16
Holiday break (offices closed)	December 24-January 1

N o matter where people live in the greater Kansas City metropolitan area, they're just minutes away from one of the five Metropolitan Community College campuses. There's MCC-Blue River in the east; MCC-Business & Technology, located near I-435 and Front Street; MCC-Longview to the south; MCC-Maple Woods in the Northland; and MCC-Penn Valley in Midtown.

ADMINISTRATIVE CENTER
Telephone (816) 759-1000
Fax (816) 759-1158
3200 Broadway
Kansas City, Missouri 64111-2429

MCC-BLUE RIVER
Telephone (816) 220-6500
Fax (816) 220-6511
20301 East 78 Highway
Independence, Missouri 64057-2052

MCC-BUSINESS & TECHNOLOGY
Telephone (816) 482-5200
Fax (816) 482-5256
1775 Universal Avenue
Kansas City, Missouri 64120-2429

MCC-LONGVIEW
Telephone (816) 672-2000
Fax (816) 672-2025
500 SW Longview Road
Lee's Summit, Missouri 64081-2105

MCC-MAPLE WOODS
Telephone (816) 437-3000
Fax (816) 437-3049
2601 NE Barry Road
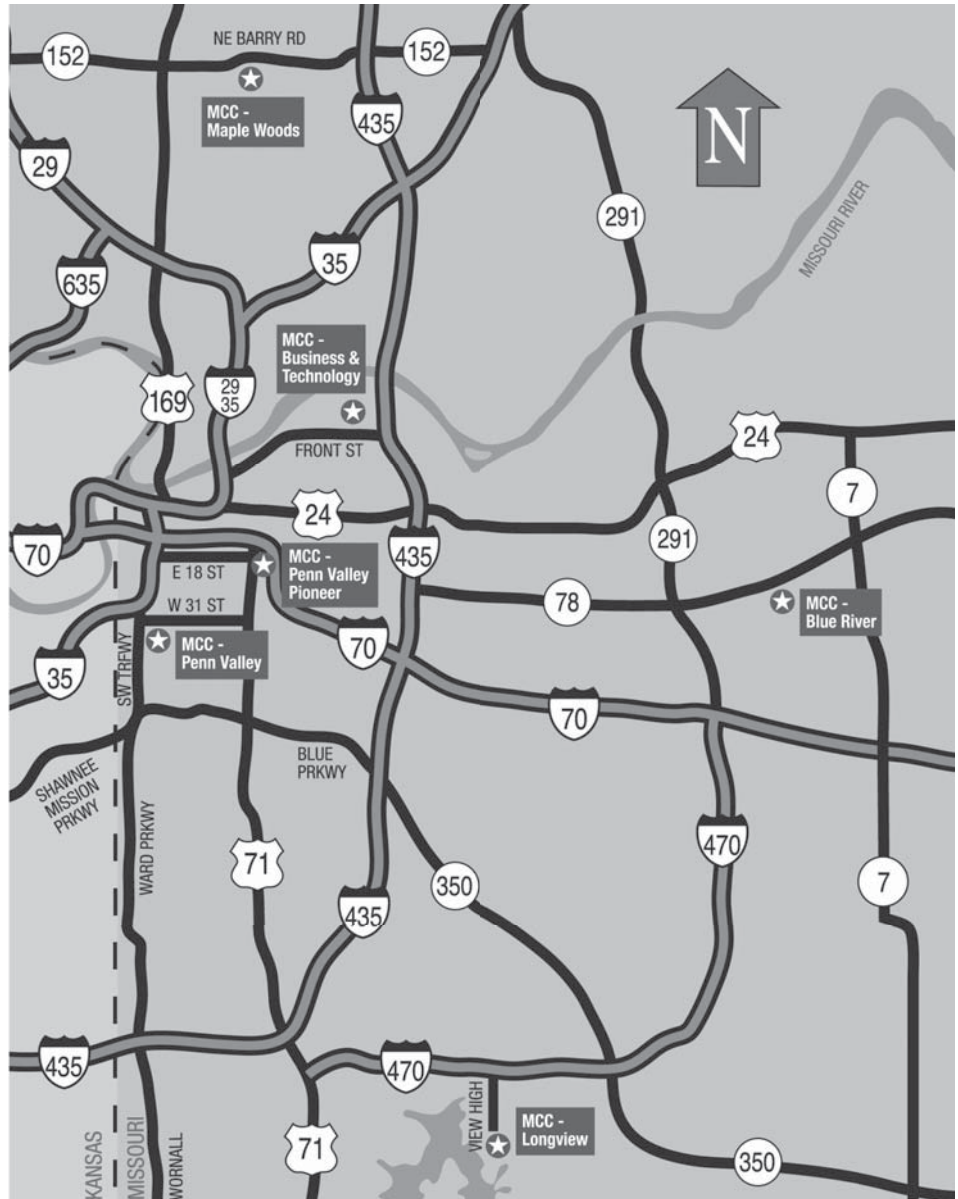Kansas City, Missouri 64156-1299

MCC-PENN VALLEY
Telephone (816) 759-4000
Fax (816) 759-4161
3201 Southwest Trafficway
Kansas City, Missouri 64111-2764

PIONEER LOCATION
Telephone (816) 482-5000
Fax (816) 482-5041
2700 East Eighteenth Street
Kansas City, Missouri 64127-2602

Preparing students, serving communities, creating opportunities.

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 of the District.

Vision

Learning is the focus of everything we do at Metropolitan Community College.

Student learning is central to our mission; employee learning is key to our strength; and organizational learning is the foundation for innovation and growth.

Learning is a lifelong process. Learners are whole persons with intellectual, physical, emotional, spiritual, social, ethical, vocational and economic dimensions.

As learners, as facilitators of learning, and as an organization, we accept responsibility to:

- Manage learning and commit the time and energy that meaningful learning requires.
- Encourage free, open and respectful exchange of ideas as a natural part of change.
- Synthesize tradition and innovation in order to enhance academic achievement.
- Design and implement structures and processes that promote learning.
- Draw on diversity to influence and inform learning.
- Engage in continuous assessment, reflection, and adaptation.
- Create a physical, social and intellectual environment that supports learning.
- Build partnerships that promote individual, institutional and community betterment.

Purpose Statements

- Provide courses and associate degree programs that prepare students to transfer to four-year colleges and universities to complete bachelor's degrees.
- Provide courses, certificates and associate degree programs to prepare students to enter the work force in skilled jobs and careers.
- Provide courses, certificates and associate degree programs to assist adult workers to upgrade their job skills, change careers, or advance in their careers.
- Provide instruction in core academic skills that prepare students to succeed in college-level courses and programs.
- Provide student development and support services to assist students to achieve their academic, career and personal goals.
- Provide and support activities to enhance student learning outside the classroom.
- Provide a range of services and accommodations to help all prospective students overcome barriers to access college programs and opportunities.
- Provide courses and other educational and cultural activities to enrich the lives of members of the community.
- Provide business support services and other training and assistance to support the economic development of the community.
- Collaborate with other educational institutions, community-based organizations, agencies, businesses and industries to meet the needs of the community.

Commitment to Diversity

Metropolitan Community College is committed to achieving freedom from all forms of discrimination and harassment in its policies, practices and endeavors. Further, MCC is committed to fostering a diverse community and to promoting greater awareness of and sensitivity to issues of diversity.

Toward that end, MCC asserts the dignity and worth of every human being and the value of diversity as a source of its strength, including diversity of race, gender, ethnicity, national origin, culture, sexual orientation, religion, disability, and perspective among students, faculty, staff and administrators.

Core Values

Excellence. MCC strives for excellence in all that we do. We pursue innovation with thought and purpose. We constantly seek to achieve the highest level of quality in our processes, programs and services.

Success. The fundamental standard of our performance is the success of our students. We strive to support the successful development of our employees and our communities.

Access. MCC is committed to eliminating barriers to the pursuit of higher learning. We strive to provide affordable and accessible opportunities to all members of our community.

Diversity. MCC embraces diversity in our student body, work force, curriculum and community. We know that diversity supports learning, excellence and preparation for global citizenry.

Integrity. MCC adheres to the highest standards of honesty and integrity in all that we do, in academics, in communication with constituents, and in institutional policies and practices.

Inquiry. MCC supports academic freedom for faculty and freedom of inquiry for students in pursuit of knowledge and truth. We seek to engender the skills and values of a general education in all graduates.

Care. MCC is committed to establishing and maintaining a caring, safe and supportive environment, secured on a foundation of civility and respect for the dignity of all persons.

Community. MCC strives to build, nurture and improve the communities of which we are part, and to collaborate with partners to serve the common good.

Opening Doors of Opportunity Since 1915

The roots of Metropolitan Community College go back to 1915, when the Kansas City Polytechnic Institute was founded at 11th and Locust Street. Then 234 students enrolled. Now more than 43,000 students a year attend five MCC campuses spread across four counties. In its long tradition of excellence, MCC has brought opportunity to hundreds of thousands of people and has made an enormous cultural and economic impact on the area.

In 1919, the institution became the Junior College of Kansas City and was the first two-year college in the United States to award the associate's degree. The Junior College continued to expand until 1964, when voters in suburban school districts—Belton, Center, Grandview, Hickman Mills, Lee's Summit, North Kansas City and Raytown—joined with the Kansas City School District to create the Metropolitan Community College District.

Five years later, three colleges — Longview, Maple Woods, and Penn Valley — opened their doors. In the 80s and 90s, Blue Springs, Fort Osage, Independence and Park Hill School District voted to join MCC. A campus was established at Blue Springs in 1984 and in 1995, the main campus at Independence was built. In 1997, these two campuses became Blue River Community College. In 1995, business services and technical training were centralized in a remodeled part of the Kansas City Merchandise Mart. Several expansions later, this facility became MCC's fifth campus in 2002, the Business & Technology College.

MCC-Longview

MCC-Longview overlooks Longview Lake in Lee's Summit and is on land donated to MCC by the family of R.A. Long, a pioneer lumberman. The campus's seven buildings include an exceptional Recreational Center and one that houses the college's nationally prominent automotive technology program. In 2001, MCC-Longview became the first community college to achieve Time magazine/Princeton Review's College of the Year honors.

MCC-Maple Woods

MCC-Maple Woods in the Northland gets its name from a nearby stand of sugar maple trees. The campus includes buildings for the veterinary technology program and a Human Services Center, which provides housing for area human services agencies as well as the college's child care and fitness center. The new Sports Training Center (STC) offers sports teams and individuals the chance to train inside year-round.

MCC-Penn Valley

Located near Penn Valley Park, MCC-Penn Valley is a huge enclosed campus that includes the Francis Child Development Institute and the Anna and Kemper Carter Center for Visual Arts and Imaging Technology. The campus is home to nearly a dozen health care career programs.

MCC-Blue River

Rapidly growing enrollment at MCC-Blue River has brought recent expansion of its main campus at Independence. MCC-Blue River serves Eastern Jackson County with quality transfer programs and a unique Public Safety Institute that houses Police and Fire Academies and EMT training.

MCC-Business & Technology

The MCC-Business & Technology building now includes all of the former Kansas City Merchandise Mart. A long list of technical programs puts MCC-Business & Technology at the cutting edge of today's technical world. With its latest expansion, MCC-Business & Technology now offers a 56,500 square foot meeting and exhibit hall.

MCC Foundation-Alumni Association

The MCC Foundation-Alumni Association (MCC Foundation) is the non-profit organization that raises and receives private gifts for Metropolitan Community College. Gifts to the MCC Foundation help thousands of students by providing scholarships, and maintaining MCC's tradition of excellence for the benefit of its students, faculty, staff, community and future students.

Scholarships and emergency funds raised by the Foundation help students of lesser opportunities who have the desire for a college education, but not the means. All students deserve the chance to better their lives through education. Scholarship requirements are detailed at www.mcckc.edu/pubs/campus ScholarshipLists.pdf.

In addition the MCC-Foundation:

- Provides funds for special campus projects such as libraries, athletics, technology, and child care
- Supports the enhancement and construction of new facilities
- Supports educational, literary and scientific activities of MCC
- Encourages greater community involvement, and helps MCC to help itself

Foundation Mission

To advance the mission of the Metropolitan Community College by attracting resources that increase student access to educational opportunities and support quality programs and environments that respond to the educational and workforce needs of the community.

Ways to Give

There are several easy ways to make a gift to the Metropolitan Community College Foundation:

Make a Credit Card Gift
Call the Foundation office at (816) 759-1195.

Make an Online Pledge
Go to www.mcckc.edu/foundation to fill out and submit this pledge on-line and your pledge will be processed quickly.

Mail a Check or Money Order
Make the donation payable to the Metropolitan Community College Foundation, 3200 Broadway, Kansas City, Missouri, 64111.

All gifts are administered in compliance with the donor's wishes and IRS regulations. No administrative costs are taken from gifts. Gifts may be designated unrestricted, which allows them to be used in the areas of greatest need, or you may specify a particular program or scholarship. Because the Foundation is a non-profit organization, most contributions are tax deductible as a charitable gift. To find out more, call (816) 759-1195 or visit www.mcckc.edu/foundation.

The following are the basic steps to apply for a scholarship.

1. Plan ahead. Most scholarships are reviewed in the spring for the following semester. If all MCC scholarships are not fully awarded or more funds become available later in the school year, MCC will reopen the review process for those funds still available. All scholarships are awarded based upon available funds.

2. Read requirements thoroughly. Read the scholarship and grant requirements carefully and refer to the contact information to find out where to obtain the right application. Meeting all the requirements of a scholarship does not automatically qualify you to receive a scholarship. A committee at each college awards the scholarships, unless otherwise noted. You must have a minimum 2.0 G.P.A. to be considered for any scholarships, unless a higher G.P.A. is noted.

3. Fill out an application. Fill out the MCC scholarship application and attach all the required information and documents. Applications with missing information will not be reviewed and you will miss your opportunity to qualify for a scholarship or grant. You may apply for up to six scholarships with one MCC application. Some require different applications. Metropolitan Community College Board of Trustee policy limits students from receiving more than one Institutional fee-paying scholarship per year. If the scholarship requires that you submit financial aid forms, you must complete a Free Application for Federal Student Aid. These forms are available from your high school counselor, your campus financial aid office or online at www.fafsa.ed.gov. When completing the form, use MCC's school code 002484 to speed processing.

4. Ask questions. If you have questions, contact the financial aid office at the college you plan to attend. Financial aid office hours vary from campus to campus, so please call ahead.

MCC Foundation and Institutional Scholarships
(Available at more than one MCC campus)

For all MCC Foundation scholarships the priority application deadline date is April 1. Please contact your campus financial aid office for additional information or visit the online Scholarship Booklet at http://www.mcckc.edu/pubs/campusScholarshipLists.pdf. The following listed scholarships are expected to have funds available for academic year 2007-08.

For a full listing of MCC scholarships and grants, go to:

http://mcckc.edu/mainasp?L=FAScholarships

Eligibility

Students who want to enroll in Metropolitan Community College have several avenues that lead to admission: a high school diploma, a General Educational 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.

College Admission

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

1. Complete the online MCC Application for Admission at www.mcckc.edu (http://www.mcckc.edu/).

   Note: Due to Missouri House Bill 1549, students may be required to provide documentation to verify legal status in the United States.

2. Request that the appropriate transcripts be sent to the MCC Student Data Center, 3200 Broadway, Kansas City, Missouri 64111.

   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.

   f. If you have already earned a degree, you are not required to see an advisor or take the placement test. However, these services are available to assist you in selecting appropriate courses. If you are planning to pursue a degree or certificate with MCC, it is important you consult with an advisor to ensure your enrollment includes all the necessary courses.

Students seeking admission to MCC should apply and send the required documents to the Student Data Center 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.

NOTE: Some MCC programs have special requirements. These are listed on the chart on page 37.

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 online at **www.mcckc.edu**.

MCC's dual credit program offers college credit for courses as part of daily scheduled classes at area high schools. Dual credit tuition and fees may be different from those set for on-campus courses, but they are the same for all high schools. High school students must talk to their high school counselor regarding eligibility requirements before enrolling .

NOTE: Metropolitan Community College does not give high school credit.

Admission to JCCC and KCKCC Programs

Metropolitan Community College (MCC) has established affiliate agreements with Johnson County Community College and Kansas City Kansas Community College (referred to below as Affiliate Colleges) in career fields not currently offered by MCC. These agreements allow MCC students who are in-district and Missouri residents to enroll in selected career programs offered at these institutions and pay MCC's tuition rates.

Policies and Procedures

1. A student in the Affiliate Program is responsible for tuition at the MCC rate.

2. Only courses that are not offered at MCC are covered by this Agreement. If you elect to take a course at the Affiliate College that is offered at MCC, you will be responsible for paying the out-of-state tuition.

3. Repeated course work is not covered by this Agreement. If you elect to repeat a course at the Affiliate College, you must pay the out-of-state tuition at that college.

4. Enrollment in the program is limited. Students must submit their transcripts and application for admission to the Affiliate College by the established deadline. Check with the Admissions Office at the Affiliate College.

5. Federal financial aid may not be granted by more than one college during each enrollment period. If you are seeking financial aid, contact the Financial Aid Office at the Affiliate College.

6. MCC reserves the right to make changes in the program at any time.

Admission Information

Admission and Enrollment Steps for MCC Affiliate Program Students

New Affiliate Program Students, complete steps 1 through 6.

1. Complete an application for admission and take a placement test at MCC.

2. Complete an Affiliate Program Student Agreement form and present it in person at any MCC Student Records office. This form is available at www.mcckc.edu or any MCC Student Records Office.

3. Complete and submit an application for admission to the Affiliate College Admissions Office. For selective admission programs you must be accepted by the program director before you can enroll in the classes.

Continuing Affiliate Program Students, complete steps 4 – 6

4. See the appropriate program advisor at the Affiliate College and register for degree-specific classes. See class schedule for registration information.

5. Pay tuition and fees at the Affiliate College.

6. If you are applying for financial aid, apply through the Financial Aid Office at the Affiliate College.

ADMISSION

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 non-refundable 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 Metropolitan Community College that all non-native speakers of English take the Applied Language Institute's English Placement Test. This test is only offered at the campuses. 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.

International Student Application Deadlines

Students from Overseas

Fall Semester	
(August-December)	July 1
Spring Semester	
(January-May)	December 1
Summer Semester	
(June-July)	May 1

Students Transferring from Another U.S. School
(must have written authorization from that school)

Fall Semester	
(August-December)	August 1
Spring Semester	
(January-May)	January 2
Summer Semester	
(June-July)	May 15

For more information visit
www.mcckc.edu/international.

Placement Testing

To help students succeed, most MCC students must take placement tests in reading, writing, and mathematics. Placement tests are required for the following groups of students:

1. All first-time students taking six or more credit hours.
2. Students who are not graduates of an accredited secondary school or who do not have a GED certificate.
3. Returning or transfer students taking six or more credit hours who have not successfully completed a college-level reading, English, and math course with a grade of C or better.
4. All students not tested previously who plan to enroll in reading, English, or math classes.

Additional Notes:

- Visiting students who have approval for enrollment from their home college will not be required to take the placement test.
- If a student has taken the ACT examination in the last two years, he or she may be able to use those scores in place of parts of the placement test. The student must submit the ACT scores to the Student Data Center, or bring an official score report when they come to test.
- Students whose native language is not English are strongly encouraged to take the CELSA test. Please contact testing center personnel for information.
- Students with disabilities who need testing accommodations must contact the Access Office before scheduling their placement tests.

Based on their test scores, all students will be placed in the appropriate reading, English, and math classes. Students with below college-level scores are required to take classes designed to improve their reading, writing, or math skills.

The reading, English, and math departments have set MCC's required entry-level standards for students. Students who wish to appeal these standards should contact the appropriate department chair.

Resident Classification

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

Definitions

Domicile. A residence established with the intent of making that residence a permanent home for an indefinite period.

Residency or Resident Status. That status achieved after proving a residency has been established.

Adult Student. A student who is twenty-one years or older.

Unemancipated Minor Student. A student younger than twenty-one years and who is under the care, custody, or support of a parent or legal guardian.

Emancipated Minor Student. A student younger than twenty-one years but who is not under the care, custody or support of a parent or legal guardian.

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. A person whose residence status is in the district.

Out of District Missouri Resident. A person whose residence status is in Missouri, but not in the district.

Out of State Resident. A person who lives in the United States, but not in the state of Missouri.

International Resident. A foreign national who is in the United States on an approved student visa status.

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.

If a nonresident adult student provides sufficient proof of the establishment of a domicile within the state of Missouri but not in the district, 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 student 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.

The resident status of a military member on active duty assigned to a Missouri duty station is determined by the location of that station. The person's spouse and unemancipated minor children have the same resident status.

Foreign Nationals. The domicile of a resident alien determines resident status. A foreign national in a student visa status approved solely for the purpose of education is an international student. The residence of a foreign national in a visa status permitting enrollment in education determines resident status.

Determining Resident Status

Students are responsible for providing documentation supporting resident status.

Evidence of Eligibility

Attendance at an institution of higher education is considered as temporary presence in the district or the state of Missouri and does not establish resident status.

Evidence of Domicile

The following offers sufficient proof of domicile.

1. Presence within the district or the state of Missouri for a minimum of twelve immediate past, consecutive months with proof of intent to make the district or the 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, or full-time employment, professional practice or to conduct a business.

Supporting Evidence

The following will be given significant weight, but will not conclusively prove establishment of domicile.

1. Continuous presence in the district or the state of Missouri during those periods when not enrolled as a student.
2. Marriage to a district or Missouri resident and maintenance of a common domicile with the resident spouse.
3. Substantial reliance on sources within the district or the state of Missouri for financial support.
4. Maintaining a domicile within the district or the state while absent.
5. Ownership of a home within the district or the 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.
3. Statement of intention to establish a domicile in the district or the state.
4. Automobile registration with an address in the district or the state.
5. Valid driver's license with an address in the district or the state.
6. Tax receipts from income, personal, and property taxes paid to the district or the state.

Certifying Residency

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

Penalty for Giving False Residency Information

The student's record will not be certified to any agency until he/she has paid the difference between the fees and tuition paid and the amount owed by a person of that resident status.

Help for Service Members

MCC is a Servicemember Opportunity College (SOC), one of more than 1,000 colleges and universities that provide advantages, including credit for military education, for military members and their families and for 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 who must withdraw from classes prior to completing the semester. Contact the campus registrar's office for refund information.

Tuition and Fees

The Metropolitan Community College Board of Trustees approves the schedule of tuition and fees annually. Your residency determines the amount you will be charged per credit hour. Residency must be established prior to the term start date.

In District Rate- To qualify for this rate you must reside in one of the following school districts: Belton, Blue Springs, Center, Fort Osage, Grandview, Hickman Mills, Independence, Kansas City, Lee's Summit, North Kansas City, Park Hill or Raytown.

Out of District Rate- To qualify for this rate, you must reside in the state of Missouri and outside of the school districts listed above.

Out of State (Non-Resident)- You are considered a non-resident if you do not reside in Missouri or are a foreign national who is in the U.S. in an approved student visa status.

Financial Responsibility

As a student at MCC, you become financially obligated and responsible to pay all charges for tuition and fees by the due date. If your financial aid award, scholarship, or payment from an external source becomes unavailable for any reason, you are ultimately responsible for the balance.

Failure to attend classes does not relieve you of the responsibility of paying your balance. To have charges removed or reduced, you must officially drop the classes within the refund period.

Any outstanding charges will result in a financial hold on your account. Financial holds will require that you pay your outstanding balance prior to re-enrolling, receiving a transcript, or diploma.

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.

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.

Tuition Payment Plan

Students in good financial standing with MCC are eligible to sign up for the payment plan. A non-refundable fee plus the first installment payment is required to enroll in the plan. This plan is available online at metrolink.mcckc.edu. The college will assess a fee for each late payment. Students who use the payment plan must follow the regulations for withdrawals and refunds. Students who withdraw from one or more classes are still required to pay all installments on time. Students who add classes to their schedule after executing a payment plan must pay all additional charges in full at that time.

Delinquent Accounts

Currently enrolled students who are delinquent in paying their account balance will receive warning notices informing them that they must pay their debts by a certain date or they will be turned over to outside collections. This includes placing the balance owed with the State of MO income tax intercept program and/or an outside collection agency. Students are responsible for all collection costs incurred.

Returned Checks

Students are responsible for paying all returned checks plus a $25 fee. Failure to do so may result in the check being turned over to the County Prosecuting Attorney's office for collection. A financial hold will be placed on your account, which will restrict enrollment and the ability to receive a transcript. You will also lose check-writing privileges for one year.

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.
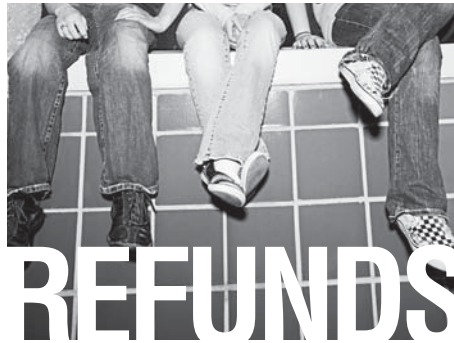
Refund Policy

To be eligible for a refund, students must officially drop their classes by the deadline in the Refund Schedule. Students may find the specific dates for the Refund Schedule in the Class Schedule each term. All refunds will first be applied to any debts the student owes to MCC.

Students receiving financial aid refunds should refer to their Financial Aid Handbook for disbursement information.

Financial Aid

One goal of Metropolitan Community College 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.

Information is available about student aid programs, their eligibility requirements, how to apply and what expectations and responsibilities recipients must meet. Access the MCC website (www.mcckc.edu), visit any of the campus financial aid offices, or call one of the following numbers:

MCC-Blue River	(816) 220-6566
MCC-Business & Technology	(816) 482-5252
MCC-Longview	(816) 672-2066
MCC-Maple Woods	(816) 437-3066
MCC-Penn Valley	(816) 759-4066

Students completing the Free Application for Federal Student Aid (FAFSA) should use the following number for all MCC campuses: **002484**. The FAFSA may be found on the web at www.fafsa.ed.gov.

To receive financial aid, you are expected to attend all classes on which the financial aid award is based. Award funds may be delayed if you do not attend the first class. If you stop attending all of your classes before completing 60% of the semester, you will owe money back to federal aid programs.
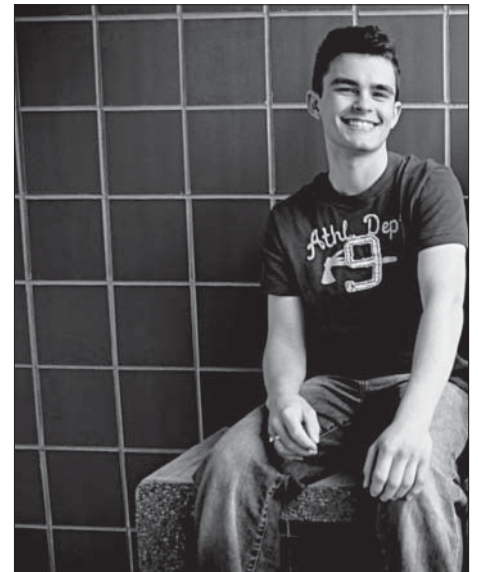
Academic Standards

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

A   Superior performance.

B   Highly satisfactory performance.

C   Satisfactory or average performance.

D   Unsatisfactory, but passing performance.

F   Failure; unsatisfactory performance.

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 satisfactory (C or above) performance for assigned work when a student chooses the satisfactory-unsatisfactory option (This option is discussed in the following section.)

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. (The satisfactory-unsatisfactory option is discussed in the following section.)

P   Passing or better performance in continuing education or noncredit courses.

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 if there is 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 choose to audit a class but receive no credit for it. The decision to audit must be made at registration.

Grade Reports

Final grade reports can be accessed at metrolink.mcckc.edu.

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.

Grade		Scholarship Points Per Credit Hour
A		4
B		3
C		2
D		1
F		0
W	(withdrawal)	0
S	(satisfactory)	0
U	(unsatisfactory)	0
P	(passing)	0
Au	(audit)	0

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 a W, P, I, S, U or Au or when duplicate courses have been repeated. The GPA does not include courses that have been excluded under academic forgiveness.

Repeating Classes

Students may repeat a class 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. There may be limits on the number of times a student may repeat the same class.

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.

A student who has done satisfactory course work but who misses 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 Incomplete (I).

2. Make up the final exam as soon as possible to remove the grade of Incomplete (I).

Grade Change

A change in a student's grade will be made only in extraordinary circumstances.

A grade change may be made by the instructor during the three instructional terms following the assignment of the grade. After this period, a grade change may be made only with the approval of the instructor and the dean of instruction.

When the instructor is unavailable or unable, the division chair may initiate a grade change with the approval of the dean of instruction and the president.

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.

Satisfactory Academic Progress

Students must maintain a certain grade point average and progress toward degree or certificate completion in order to continue enrollment.

All Federal financial aid recipients and some other scholarship recipients must meet specific standards for satisfactory academic progress. Students are advised to become familiar with the requirements of their scholarships and to seek assistance from the campus financial aid office or to refer to the Financial Aid Handbook at www.mcckc.edu.
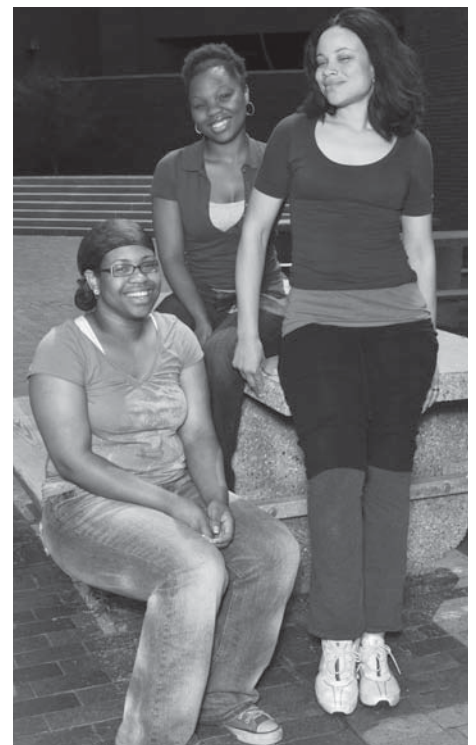
Academic Record

The college keeps an official academic record for each student, which includes the following:

1. The student's cumulative record including directory information, a list of all the courses the student has been enrolled in, the grades and scholarship points for those classes, the number of credit hours the student has attempted and earned, the cumulative grade point average, honors earned by the student and degrees or certificates the college has awarded to the student.

2. The student's degree plan.

3. The student's high school transcript and/or transcripts from other colleges and universities.

All items are kept in compliance with federal and state regulations.

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 Intervention and Support

Students whose grade point averages falls below 2.0 will be offered academic intervention and support. Students whose grade point average consistently remains below 2.0 even after academic intervention and support may be subject to additional intervention including academic restrictions, academic probation, and finally, academic exclusion for one semester.

Academic Renewal

Students may be eligible to have past poor academic performance excluded from calculation of current academic progress at MCC. Students requesting academic renewal may have grades earned at least five years prior to such a request eliminated from calculation of their current grade point averages at MCC. Other colleges and universities may have different policies.

Academic Integrity

MCC, as an academic community, expects all administrators, faculty, staff and students to behave as responsible members of the college community and to be honest and ethical in their academic work. To falsify or fabricate the results of one's research; to present the words, ideas, data, or work of another as one's own; or to cheat on an examination corrupts the essential process of higher education.

Students assume full responsibility for understanding and complying with MCC standards for academic integrity. If academic dishonesty is demonstrated, students may be subject to failure in an assignment, a course, or subject to even more severe consequences, including expulsion from MCC.

For more information on penalties and procedures related to academic dishonesty, see the Student Code of Conduct.

Transcripts

The MCC Student Data Center, 3200 Broadway, Kansas City, Missouri 64111 will provide transcripts of a student's academic record after receiving a written or on-line 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 no fee for providing transcripts requested on-line.

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.

Credit for Advanced Standing

Courses taken at other colleges and universities become part of a student's permanent record. However, only courses equivalent to those in a student's MCC program will be applied toward an MCC degree or certificate.

Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974 (FERPA) was enacted to protect student privacy and to provide for the right to inspect and review education records. More detailed information on MCC's FERPA policies can be found on page 22.

MCC designates a school official as a person employed by the college in an administrative, supervisory, academic or research, or support staff position (including law enforcement personnel); a person or company with whom the college has contracted as its agent to provide a service instead of using college employees or officials (such as an attorney, auditor, collections agent, or organization such as the National Student Clearinghouse); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the college.

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.

Attendance-Financial Aid

To receive financial aid, you are expected at attend all classes on which the financial aid award is based. Award funds may be delayed if you do not attend the first class. If you stop attending all of your classes before completing 60% of the semester, you will owe money back to federal aid programs.

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 or dropping the course through MetroLink. If a student officially withdraws from a class during the first three-fourths of the term, he or she will receive a W. Those who withdraw during the final quarter of the term will receive a W if they're passing the course or an F if they're failing.

NOTE: Students are responsible for withdrawing from courses they stop attending.

Withdrawal from College

Students who want to withdraw from all classes before the end of the semester should complete a drop/add form, which is available in the college's advising, counseling, or development center. When students can't personally obtain the form, it will be mailed to them.

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's 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

Metropolitan Community College expects 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.

Weapons including firearms, whether visible or concealed, shall not be permitted on district facilities or at district events. No person shall possess or carry any weapon as defined in Section 571.010, RSMo. including a firearm, whether concealed or visible, on district property. This prohibition shall also apply to vehicles on district property unless any such vehicle is operated by a commissioned police officer.

In addition to demonstrating honesty and integrity, students are expected to comply with all policies, regulations and procedures of Metropolitan Community College. 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 or online.

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 division 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 issues 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 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 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.

Student Employment Services

Make the connection between school and work with Student Employment Services. This office provides resource materials, computers, and expert advice on resumes, cover letters and interview questions. Preparing for the next career step is important and SES Coordinators are available to make individual appointments to assist with students' unique situations.

Opportunities on Project HIRE, the MCC Internet job bank, are easily accessed at www.projecthire.net and includes links to Kansas City's largest employer web sites. Watch for campus career fairs, a great way to network with company representatives, along with internships; available throughout the year. SES also helps students looking for work on-campus whether it is for Federal Work Study or regular student jobs, a convenient way to go to school and earn extra money.

Students should consider visiting their closest MCC-Student Employment Services office before graduation to help with job decisions.

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 students 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 MCC-Maple Woods and MCC-Penn Valley. Educational programs are also available for children age two-and-a-half to five. For more information, call the centers:

MCC-Maple Woods	(816) 468-8780
MCC-Penn Valley	(816) 759-4142

Every full-time staff person at the child care centers is trained in early childhood education. MCC-Penn Valley offers its own program in Child Growth and Development. Call (816) 759-4539 to learn more about the program.

Parking

A parking sticker is required to park on campus. Obtain a free sticker at the campus Public Safety Office (at Blue River, the information desk).

Textbooks and College Bookstores

MCC provides a bookstore at each of the district campuses. These stores are operated according to guidelines and policies approved by the Chancellor and the Board of Trustees.

Book costs are determined by the publishers of each title and MCC uses an industry standard markup of 25% on new textbooks to cover the costs of operating the bookstores. Based on data from past sales, the average price of a textbook at MCC is $71.00. A typical full-time student should expect to pay $300-$500 per semester for textbooks. At the end of each semester, each bookstore holds a buy back program and will purchase used textbooks from students. If a textbook is being used in a subsequent semester, that book will be purchased from the student for about 50% of the new text retail price. The used texts purchased during buy back will be made available for students in the following semester.

In a further effort to control the rapidly rising costs of textbooks, MCC has implemented a textbook rental program for selected classes. For a rental price of $39.00 students can use the book for the semester and simply return it to the bookstore after their final exam. Check with each store to see which classes have rental textbooks available.

College Libraries

Metropolitan Community College (MCC) libraries provide a variety of resources and services to assist students in their research needs. More than 70 online databases provide access to magazine, journal, and newspaper articles, plus reference information on current events, careers, law, health, history, science, business, literature and more. These databases may also be accessed by students from computers off-campus.

Each library has a collection of books and periodicals for class work, research, and leisure reading; video, and audio. Students attending one campus can use materials from any of the other MCC libraries. Borrowing procedures are similar on all campuses.

The MCC libraries belong to MOBIUS (Missouri Bibliographic Information User System), a consortium of over 60 academic libraries in the state. Through MOBIUS, library users have access to over 18 million items.

Our local MOBIUS cluster is WILO (Western Inter Library Organization), which is made up of the libraries of MCC, Avila, Kansas City Art Institute, Midwestern Baptist Theological Seminary, Rockhurst, St. Paul School of Theology, and William Jewell. Books from these libraires can be obtained using your library card or through the library interlibrary loan service.

MCC also belongs to KC REACHE, an alliance of Kansas City area colleges and universities. KC REACHE member colleges offer reciprocal borrowing privileges, inter-library loans, book delivery by mail, and access to online databases as well as other resources to all KC REACHE students. Distance learning students can now go to a library more conveniently located! Visit www.kcreache.org to find out more. The library staff includes professional librarians who provide assistance in reference and research. The libraries offer computers for access to the databases, the book catalog, and the Internet, as well as space for individual study or research.

More information is available at the MCC Library website, which is located at http://mcckc.edu/library. Individual campus libraries can also be accessed through this site.

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 will be given 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 others.

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 for services at least a month before enrolling, so that accommodations can be arranged in a timely manner. For more information, or to make an appointment, call:

MCC-Blue River	(816) 220-6651
MCC-Business & Technology	(816) 482-5606
MCC-Longview	(816) 672-2254
MCC-Maple Woods	(816) 437-3192
MCC-Penn Valley	(816) 759-4089
For relay calls, dial 711.	

For more information, visit the MCC website at: www.mcckc.edu/access.

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) 672-2053 or Penn Valley at (816) 759-4717.

Visit the ABLE website at www.mcckc.edu/programs/able.html.

Learning Assistance Centers

Each campus has a learning assistance center or teaching/learning center where students can receive individual 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 Centers

Reading 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. Programs can be designed to fit a student's special needs. For more information about MCC's reading study centers, call the following campuses:

MCC-Blue River	(816) 220-6770
MCC-Longview	(816) 672-2665
MCC-Maple Woods	(816) 437-3309

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 individual 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. Some campuses 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:

MCC-Blue River	(816) 220-6577
MCC-Business & Technology	(816) 482-5210
MCC-Longview	(816) 672-2237
MCC-Maple Woods	(816) 437-3095
MCC-Penn Valley	(816) 759-4089

MCC-PACE Program for Adult College Education

MCC-PACE is an evening, weekend and online program designed to provide working students a pathway to an Associate in Arts degree in six semesters or less. This is accomplished by offering a variety of instructional delivery options and support services that meet the changing educational needs of students while upholding high standards of excellence.

MCC-PACE focuses on increasing access to higher education for students whose lives require class scheduling options. Courses can be scheduled to minimize trips to campus. By attending class two evenings each week, students can complete 9 credit hours. Traditional 16-week or shorter duration courses are available. MCC-PACE has an outreach program that can bring the campus to the workplace. Classes are also offered at various community locations.

Many classes offered utilize instructional technologies to enhance learning and to allow more time and place flexibility for completing course work. Internet, hybrid and cable television courses are available through MCC-PACE.

Cable TV: Classes delivered over cable TV allow a student to be able to view either Comcast or Time Warner from their home.

Students viewing from home interact with the instructor by using the telephone and the web. Students may also attend class in the studio classroom

Internet: Some classes offered through MCC-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.

Hybrid: These classes combine classroom attendance with coursework 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 Internet access.

For more information about MCC-PACE call:

MCC-Blue River	(816)-220-6558
MCC-Business & Technology	(816) 482-5200
MCC-Longview	(816)-672-2200
MCC-Maple Woods	(816)-437-3077
MCC-Penn Valley	(816)-759-4079

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 encourage the success of 250 low-income, first generation college students or 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,
- counseling to provide academic assistance and assist with managing the daily stress,
- cultural enrichment to extend the social dimensions of the participants served,
- workshops to teach and/or strengthen skills needed for success.

These expanded services increase the likelihood of success. Call the Project Success office, (816) 759-4313, to schedule an appointment or visit its web site: www.mcckc.edu/pennvalley/success/.

PROJECT
816
759-4313
SUCCESS

Campus Life and Leadership

The mission of Campus Life and Leadership is to complement the academic program and enhance the sense of community on campus. This goal is accomplished by providing opportunities for students to develop, implement and participate in social, cultural, intellectual, recreational, governmental, and community service programs and events. These co-curricular experiences provide students with leadership skills that can be utilized in future educational, community and professional work environments.

Campus Life and Leadership also sponsors leadership and other activities throughout the year. For specific clubs and organizations, opportunities for involvement or how to start a club or organization, contact the Office of Campus Life and Leadership at your campus.

Athletics

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

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 MCC-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.

MCC-Blue River	(816) 220-6500
MCC-Longview	(816) 672-2400
MCC-Maple Woods	(816) 437-3555
MCC-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.; 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 Opportunity Center (EOC)

The Educational Opportunity Center provides prospective college students with college selection and admissions guidance, scholarship search, assistance in completing the Free Application for Federal Student Aid (FAFSA), career counseling, default student loan counseling, and GED referral and placement. Students already enrolled in college may also take advantage of these services. All services are free.

The EOC is funded by the U.S. Department of Education. The center is located at 3100 Main, Suite 100, Kansas City, MO 64111. For more information about EOC or to make an appointment with a counselor, call (816) 759-4400.

Educational Services

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

Transfer Programs

Liberal arts and science 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, Associate in Arts Teaching, 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: art, biology, business, chemistry, computer science, criminal justice, economics, education, engineering, english, foreign language, geography, geology, history, human services, mathematics, music, philosophy, physical education, physics, political science, psychology, social science, social work, sociology, speech and theater arts. Check out the online transfer and articulation agreements at **www.mcckc.edu.**

Career & Technical Programs

MCC offers nearly 70 career and technical 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 business and veterinary science to engineering and manufacturing technology. Although not originally designed for transfer, MCC has several articulation agreements built upon the A.A.S. degree, including business, drafting, automotive management, 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, allied health, mechanical and engineering technologies, computer support, fire science, 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, MCC offers basic skills 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.

Business & Learning Solutions

MCC Business & Learning Solutions provides customized solutions to workplace issues for business and industrial clients in and around Greater Kansas City. Seasoned performance consultants help each employer identify the company's needs, tailor a training program or consulting service to suit those needs, and deliver a solution that will improve the company's bottom line. The consultants, who have a proven record of success merging academic style with business acumen, are full-time subject matter experts in the fields of Assessment, Manufacturing Technology, Quality, Environmental Health & Safety, and Organizational Training & Development.

MCC Business & Learning Solutions is uniquely positioned to draw on the resources and facilities of MCC while still being able to partner with businesses in a way that extends beyond the normal realm of a community college, including providing the opportunity for participants to earn college credit. Additionally, with its workforce focus and a unique collaboration with the State of Missouri, the Business & Learning Solutions team is often able to help businesses secure state funding for their training initiatives. Long-standing clients include Harley-Davidson, Ford, Honeywell, and many others.

Cancellation of Classes

The campuses may find it necessary to cancel classes because of insufficient enrollment or other circumstances. Whenever possible, a class 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.

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 Metropolitan Community College.

Jacqueline I. Snyder
Chancellor

Nondiscrimination

The College's nondiscrimination statement, cited below, prohibits discrimination and harassment against individuals based on characteristics protected under federal and state law, as well as on the basis of sexual orientation. The college also prohibits retaliation based upon reporting of such violations.

Metropolitan Community College is committed to a policy of nondiscrimination on the basis of race, color, religion, sex, sexual orientation, age, birth, ancestry, national origin, or disability in admissions; educational programs, services 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.

Metropolitan Community College is committed to a policy of nondiscrimination on the basis of race, color, religion, sex, sexual orientation, age, birth, ancestry, national origin, or disability in admissions; educational programs, services 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:
Mark James, 3200 Broadway, Kansas City, Missouri 64111-2429; telephone (816) 759-1000.

MCC-Blue River:
Jon Burke, 20301 E. 78 Highway, Independence, Missouri 64057-2053; telephone (816) 220-6620.

MCC-Longview:
Janet Cline, 500 SW Longview Road, Lee's Summit, Missouri 64081-2105, telephone (816) 672-2326.

MCC-Maple Woods:
Shelli Allen, 2601 NE Barry Road, Kansas City, Missouri 64156-1299; telephone (816) 437-3175.

MCC-Penn Valley:
Lisa Minis, 3201 Southwest Trafficway, Kansas City, Missouri 64111-2764; telephone (816) 759-4114.

MCC-Business & Technology:
John Ream, 1775 Universal Ave., Kansas City, Missouri 64120-2427; telephone (816) 482-5229.

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.

Americans with Disabilities Act

Metropolitan Community College complies with the Americans with Disabilities Act and does not discriminate in admission or access to its programs on the basis of disability. If you need any accommodations due to a disability, contact the access professional at MCC-Blue River, (816) 220-6651; MCC-Longview, (816) 672-2254; MCC-Maple Woods and MCC-Business & Technology, (816) 437-3192; MCC-Penn Valley, (816) 759-4089. For relay calls, dial 711.

Sexual Harassment

Metropolitan Community College strongly believes 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 dean of students office.

Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974 (FERPA) was enacted to protect student privacy and to provide for the right to inspect and review education records. In compliance with FERPA (Public Law 93-380) and with Board Policy and District Regulation 7.30010, MCC has established the following with respect to students' education records:

1. Students are guaranteed the right to inspect and review their education records, and the right to request amendment of records they believe to be inaccurate or misleading. MCC also guarantees that a student's written consent will be obtained prior to releasing personally identifiable information from education records, other than basic directory information.

2. Basic directory information is not required by law to be restricted; however, the college does not release this information except for evidently valid reasons. Directory information means information contained in an education record of a student that would not generally be considered harmful or an invasion of privacy if disclosed. It includes, but is not limited to, the student's name, address, telephone listing, electronic mail address, photograph, date and place of birth, major field of study, dates of attendance, grade level, enrollment status (e.g., undergraduate or graduate, full-time or part-time), participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors, and awards received, and the most recent educational agency or institution attended. Students who desire to restrict any of the above directory information must apply in writing to the college records office at the time of enrollment each semester.

3. Certain exceptions to this policy exist when the disclosure of information from an education record is to school officials with legitimate educational interest, to other schools to which a student is transferring, to specified officials for audit or evaluation purposes, to appropriate parties in connection with financial aid to a student, to organizations conducting certain studies for or on behalf of the school, to accrediting organizations, to comply with a judicial order or lawfully issued subpoena, to appropriate officials in cases of health and safety emergencies, or in other circumstances allowed by FERPA.

4. MCC designates a school official as a person employed by the college in an administrative, supervisory, academic or research, or support staff position (including law enforcement personnel); a person or company with whom the college has contracted as its agent to provide a service instead of using college employees or officials (such as an attorney, auditor, collections agent, or organization such as the National Student Clearinghouse); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the college.

5. Upon written request to the college registrar, students may inspect information in their education record and will be given the opportunity to request amendment of any records they consider inaccurate or misleading. If necessary, college regulations and procedures provide for a hearing process.

6. Students have the right to file a complaint with the Family Policy Compliance Office in Washington, D.C., which handles FERPA complaints.

Nonimmigrant Alien Students

Metropolitan Community College is authorized under Federal law to enroll nonimmigrant alien students.

Drug Free Schools and Communities Act

Metropolitan Community College subscribes 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. Metropolitan Community College 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

Metropolitan Community College complies 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.mcckc.edu/crimereport. 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 this catalog may be found on the pages indicated.

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

College Relations Coordinator
MCC-Blue River
Telephone (816) 220-6548
20301 East 78 Highway
Independence, MO 64057

College Relations Coordinator
MCC-Business & Technology
Telephone (816) 482-5216
1775 Universal Avenue
Kansas City, MO 64120-2427

College Relations Coordinator
MCC-Longview
Telephone (816) 672-2568
500 SW Longview Road
Lee's Summit, MO 64081-2105

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

College Relations Coordinator
MCC-Penn Valley
Telephone (816) 759-4623
3201 Southwest Trafficway
Kansas City, MO 64111-2764

More information can be found at:

www.mcckc.edu

Continuing and Community Education

Each MCC campus provides a variety of continuing education programs for individuals to maintain occupational skills or retrain for new careers. Additionally, community programming for adults and youth offers education and enrichment opportunities.

The following is a sample of the continuing and community education programs on each of the campuses:

MCC-Blue River

(816) 220-6518 or mcckc.edu/brcommed

- CDL truck driver training
- A+ Essentials and Technician
- Driver's Education
- Certified Nursing Assistant state certification
- Retail Customer Service and Sales national certifications
- Financial services certification
- C.E.R.T. emergency response training
- Bookkeeping national certification
- Computer classes and training
- Spanish
- Online classes for business and personal interest
- Personal interest (exercise, art, life experiences)
- ACED (classes for adults with developmental disabilities)

MCC-Longview

(816) 672-2030 or mcckc.edu/lvcommed

- Adult leisure
- College for Kids/TeenLink
- ACED (classes for adults with developmental disabilities)
- FOCIS (divorce education classes)
- Computer classes
- Training for businesses (online and on-site)
- ed2go online classes
- Substitute Teacher Training
- Encore Career Workshop
- ESL noncredit

Continuing and community education programs can be customized for a group, company or organization. Contact a campus continuing and community education office or MCC Business & Learning Solutions to learn more. MCC Business & Learning Solutions, a division of MCC serving the training, consulting and business needs of area employers, can be reached at MCCBLS@mcckc.edu or (816) 482-5400.

MCC-Maple Woods

(816) 437-3011 or mcckc.edu/mwcommed

- Motorcycle safety
- College for Kids
- Storytelling
- Railroad conductor training
- CEADD (College Experience for Adults with Developmental Disabilities)
- Spanish classes
- Sign language
- Computer classes
- Veterinary technology
- Professional development
- Ed2Go online classes
- On-site training for businesses

MCC-Penn Valley

(816) 759-4022 or mcckc.edu/pvconted

- Pharmacy Technician Certification
- Phlebotomy Certification
- Certified Nurse Assistant
- Certified Restorative Nursing Assistant
- Certified Medication Technician
- Insulin Administration
- Level I Medication Aide
- Challenge Examinations for CNA and CMT
- CPR and First Aid
- EMT Refresher
- Professional Development
- Business Development
- Command Spanish

MCC-Business & Technology

(816) 482-5232 or mccbtc.com

- OSHA
- Environmental Health & Safety
- Information Technology
- Welding

graduation requirements.

Transfer Degree Programs

Degrees

Metropolitan Community College awards five degrees that can be transferred to a four-year college or university. They are:

Associate in Arts
Associate in Arts Teaching
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 MCC 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 be successfully complete at least 62 credit hours, although some degrees require more. (See specific requirements on the following pages.)

Students earning any of the five 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 courses and 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. Visit MCC's website at www.mcckc.edu for more information.

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 our-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.mcckc.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.

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

Degree Requirements

To receive an Associate in Arts degree, students must complete the following:

1. The graduation requirements for transfer degrees listed on page 25.

2. The general education requirements listed below.

3. Sufficient electives to bring their total number of credits to 62.

General Education Requirements

The general education courses strengthen students' basic skills and provide them with knowledge to competently function in a variety of environments- school, work and day-to-day life. MCC's general education outcomes provide students with opportunities to cultivate competencies in effective communication and critical thinking; value learning as an ongoing, lifelong process; acquire quantitative literacy skills; understand the principles of natural and physical sciences; appreciate the human condition through the study of humanities; and achieve an awareness of social, political, and behavioral environments. For more information, go to

http://mcckc.edu/gened

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	United States History to 1865
HIST 121	United States History Since 1865
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 and experiences, and conceptualize new ways of perceiving ideas. They will design carefully reasoned and creative presentations, both spoken and written.

Complete the following:

ENGL 101	Composition and Reading I ***and***
ENGL 102	Composition and Reading II ***and***
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)

SIGN 101	Conversational American Sign Language I
SIGN 102	Conversational American Sign Language II

History

HIST 133	Foundations of Western Civilization
HIST 134	Modern Western Civilization II

Humanities – any course

Music

MUSI 108	Music Appreciation
MUSI 116	Evolution of Jazz
MUSI 160	Music of the World's Cultures

Philosophy – any course

Speech and Drama

SPDR 103	Interpersonal Communication
SPDR 104	Discussion and Group Leadership
SPDR 106	Theater Appreciation
SPDR 110	Argumentation and Debate
SPDR 112	Oral Interpretation of Literature
SPDR 114	Theater and Western World
SPDR 128	Introduction to Film
SPDR 133	Intercultural Communication
SPDR 228	African 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.

Complete the following:

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 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.*

Anthropology - any course
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

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.

Complete a Writing Intensive course:

• 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.

and

Complete one of the following:

• An Interdisciplinary **Learning Community** structured around a single theme of two or more linked courses. At least one of the courses included will be numbered 100 or above. Learning communities provide students with a learning environment that encourages integration of content and skills from different disciplines and provides a more structured socialization process to enhance adaptation to a collegiate/academic environment. This option will enhance retention from semester to semester and will promote more successful learning in future semesters.

or

• A designated **Human Diversity** course to expose students to content intended to help them learn about behavior generated and reflected by the ideals, values and beliefs of diverse groups of people. Students will examine the sources of emotions, community, commonality and conflict associated with diversity and will gain cognitive awareness of their own perspectives as they relate to other groups and to other societies in the world. These courses will allow students to develop a deeper awareness and a greater understanding of issues related to race, ethnicity, gender, religion, sexual orientation, and political ideology within their own society or other societies.

The above requirements constitute the 42-credit hour block that upon completion will transfer by state policy in its entirety to any public college or university in Missouri and to those private colleges or universities that are signatories to the Missouri Credit Transfer Agreement.

Other Associate in Arts Degree Requirements

Computer–3 credits
Rationale: The Computer Science requirement will enable students to better understand the effect of computer-related technologies on society; to recognize responsible uses of computer-related technology; to apply these technologies in communication, solving problems, managing information, and thinking critically; to enhance general academic studies and business productivity; and to support life-long learning.

Complete the following:
   CSIS 110   Technology and Information Management
or
higher-numbered CSIS course

Electives–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.

Complete 17 credits of electives to total a minimum of 62 hours.
• 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

Student Participation in Assessment of Academic Achievement

MCC is committed to increasing student learning by continuous improvement of its curriculum, instruction, support services, and other institutional practices. The basis for improvement efforts are the results of MCC's program to assess student academic achievement.

Students will be asked, from time to time during their academic careers at MCC, to participate in various assessments of student learning, which may include state or national tests, portfolios, or other college assessment instruments. Students are expected to participate in these assessments as a responsibility of their enrollment in MCC Campuses.

Statement of Ethical Conduct and Assessment.

During the development of MCC's *Plan For Assessing Student Academic Achievement*, faculty wanted an assurance that the assessment program would focus on those issues associated with teaching, learning and curriculum revision. It was important for all constituent groups to know that assessment efforts and analysis and reporting of data generated by these efforts are conducted in ways that preserve high professional and ethical standards and that promote the best interests of students. The following is MCC's ethical statement:

Metropolitan Community College recognizes that the activities associated with assessment must be conducted in an ethical and professional manner. Information, data, and assessment activities designed to present an aggregate picture of MCC shall in no way be used to evaluate individual students or faculty. Also, students, faculty, and staff associated with assessment activities or projects will be treated in a manner that follows accepted practices for dealing with human subjects. The MCC assessment initiatives are designed and conducted so as to improve teaching and learning as well as overall institutional improvement.

The Associate in Arts Degree

Associate in Arts Degree

General Education Requirements	Credits	Semester Taken	Prerequisites
American Institutions: *(2 courses--one must be HIST)*			
HIST 120, 121, POLS 135, 136, 137	6		
Communications:			
ENGL 101	3		ENGL 30 or appropriate placement test score
ENGL 102	3		ENGL 101
SPDR 100 or SPDR 102	3		ENGL 30 or appropriate placement test score
Mathematics:			
MATH 119: College Mathematics or higher	3		MATH 110 or appropriate placement test score
Humanities: *(3 courses, 3 areas of study, 1 course must be Lit. or Phil.)*			
Art History or ART 108	3		See Courses section of this catalog for individual course prerequisites.
Foreign Language 101 or higher or SIGN 101 or 102	3-5		
HUMN	3		
Literature	3		
MSCM 112	3		
MUSI 108, 116 or 160	3		
PHIL	3		
SPDR 103, 104, 106, 110, 112, 114, 128, 133 or 228	3		
HIST/HUMN 133 or 134	3		
Natural Sciences: *(2 courses, 1 Biological and 1 Physical)*			
BIOL (Must include laboratory)	5		See Courses section of this catalog for individual course prerequisites.
CHEM, GEOG, GEOL (excluding GEOL 225), or PHYS (Must include laboratory)	4-5		
Social Sciences: *(2 courses, 2 areas of study)*			
ANTH	3		See Courses section of this catalog for individual course prerequisites.
ECON	3		
GEOG (excluding 104,110 and GIS Courses)	3		
HIST	3		
POLS	3		
PSYC	3		
SOCI	3		
SOSC	3		
Total General Education Courses	42		
Computer Science:			
CSIS 110 or higher CSIS course or credit by examination	3		
Electives: (courses must be numbered 100 or higher) 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.	17		
Total Credit Hours Required	**62**		

- All courses must be at least 100 level or higher
- Courses can only be used once to meet degree requirements
- You must complete a Writing Intensive course AND either a Human Diversity course or Learning Community as part of the General Education Requirements.

The Associate in Arts Teaching Degree

The Associates in Arts Teaching (AAT) degree is a pre-professional degree that prepares students to transfer to a four-year college or university offering a Bachelor's degree in Teacher Education. The AAT is a state-wide approved program and when completed in its entirety meets the first 2 years certification requirements for individuals pursuing either an early childhood, elementary or secondary education degree.

Degree Requirements

In order to receive the degree of AAT, students must complete the required courses below, obtain at least state required scores on the C-BASE, and earn a minimum 2.5 GPA. Because requirements may vary, students should consult the School of Education at the four-year transfer institution. In addition to verifying specific university minimums, education students should explore which elective courses will be accepted.

All education courses are open to both degree seeking and non-degree seeking students. For a complete list of education courses, refer to the Education section of the Course Descriptions.

Associate in Arts Teaching Degree

General Education Requirements	Credits	Semester Taken	Prerequisites
American Institutions: *(2 courses, one must be HIST)*			
HIST 120, 121, POLS 135, 136, 137	6		
Communications:			
ENGL 101	3		ENGL 30 or appropriate placement test score
ENGL 102	3		ENGL 101
SPDR 100 or SPDR 102	3		ENGL 30 or appropriate placement test score
Mathematics:			
MATH 119: College Mathematics or higher	3		MATH 110 or appropriate placement test score
Humanities: *(3 courses, 3 areas of study, 1 course must be Lit. or Phil.)*			
Art History or ART 108	3		
Foreign Language 101 or higher or SIGN 101 or 102	3-5		
HUMN	3		
Literature	3		See Courses section of this catalog for individual course prerequisites.
MSCM 112	3		
MUSI 108, 116 or 160	3		
PHIL	3		
SPDR 103, 104, 106, 112, 114, 128, 133 or 228	3		
HIST/HUMN 133 or 134	3		
Natural Sciences: *(2 courses, 1 Biological and 1 Physical)*			
BIOL (Must include laboratory)	5		See Courses section of this catalog for individual course prerequisites.
CHEM, GEOG, GEOL (excluding GEOL 225), or PHYS (Must include laboratory)	4-5		
Social Sciences: *(2 courses, 2 areas of study)*			
ANTH	3		
ECON	3		
GEOG (excluding 104,110 and GIS Courses)	3		
HIST	3		See Courses section of this catalog for individual course prerequisites.
POLS	3		
PSYC	3		
SOCI	3		
SOSC	3		
Total General Education Courses	42		
Education			
EDUC 200 Foundations of Education	3		ENGL 101
EDUC 201 Teaching Profession with Field Experience	3		ENGL 101
EDUC 270 Educational Psychology	3		PSYC 140
EDUC 280 Technology for Teachers	3		ENGL 101
Electives: (courses must be numbered 100 or higher) Working closely with both campus advisors and MCC education faculty is imperative when selecting electives. Electives will vary based on transfer institution and 4 year degree plan. Additionally there are elective courses that will be extremely beneficial for passing the C-BASE exam. (EDUC 285 Education of Exceptional Learners can be used as an elective.)	8		
Total Credit Hours Required	**62**		

- All courses must be at least 100 level or higher
- Courses can only be used once to meet degree requirements
- Students must complete a Writing Intensive course AND either a Human Diversity course or Learning Community as part of the General Education Requirements.
- Students must achieve a minimum GPA of 2.5
- Students must achieve minimum scores of 235 on each section of the C-BASE
- We recognize that four-year transfer institutions may have additional requirements including higher GPA, higher C-BASE scores, or additional courses that could be taken at the community college level. Students are encouraged to work closely with an advisor from the receiving institution so that they may understand and prepare to meet all entrance requirements.

The Associate in Computer Science Degree

The Associate in Computer Science (ACS) 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 and Information Systems 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 speak with an advisor or counselor to make sure they're taking the right classes.

There are two areas of concentration for the Associate in Computer Science degree.
1. Computer Science
2. Computer Information Systems

Degree Requirements

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

A.C.S. Computer Science

General Education Requirements	Credits	Semester Taken	Prerequisites
American Institutions			
Two of the following (one must be HIST): HIST 120 United States History to 1865 HIST 121 United States History Since 1865 POLS 135 Introduction to Political Science POLS 136 Introduction to American National Politics POLS 137 Introduction to State and Local Politics	6		
Communications			
ENGL 101	3		ENGL 30 or appropriate placement test score
ENGL 102	3		ENGL 101
SPDR 100 or SPDR 102	3		ENGL 30 or appropriate placement test score
Humanities (2 courses, 2 areas of study, 1 course must be Literature or PHIL)			
Art History	6-8		See Courses section of this catalog for individual course prerequisites.
Foreign Language 101 or higher or SIGN 101 or 102			
HUMN 133, 134			
Literature			
MSCM 112			
MUSI 108, 116, 160			
PHIL			
SPDR 103, 104, 106, 110, 112, 114, 128, 133, or 228			
HIST/HUMN 133 or 134			
Natural Sciences (one lab course)			
BIOL, CHEM, GEOG, GEOL (excluding GEOL 225), PHYS (must include lab)	5		See Courses section of this catalog for individual course prerequisites.
Social Sciences (one course)			
ANTH	3		See Courses section of this catalog for individual course prerequisites.
ECON			
GEOG 105, 111, 112, 113, 114, 207			
HIST			
POLS			
PSYC			
SOCI			
SOSC			
Students must complete a Writing Intensive course and either a Human Diversity course or Learning Community course as part of the General Education Requirements.			

A.C.S. Computer Science (cont)

Specific Program Requirements - Choose an Emphasis			
Computer Science Emphasis			

Five of the following:
CSIS 123   Programming Fundamentals
CSIS 223   Object-Oriented Programming
CSIS/MATH 141
      Discrete Structures for Computer Science I
CSIS 221   Introduction to Computer Architecture
CSIS 233   Web-Centric Programming
CSIS/MATH 241
      Discrete Structures for Computer Science II
CSIS 265   Graphical User Interface Programming
CSIS 271   Data Structures and Algorithm Analysis
	15		MATH 40/40L or appropriate placement test score (CSIS 123)
			MATH 110 and CSIS 123 (CSIS 223)
			MATH 120 or 150 (CSIS /MATH 141)
			CSIS 123 and MATH 120 (CSIS 221)
			MATH 110 and CSIS 223 (CSIS 233)
			MATH 141 and CSIS 223 (CSIS 241)
			CSIS 223 (CSIS 265)
			MATH 141 and CSIS 223 (CSIS 271)

15 Credit Hours from the following: MATH 150 Precalculus MATH 180 Analytic Geometry & Calculus I MATH 190 Analytic Geometry & Calculus II MATH 210 Analytic Geometry & Calculus III MATH 230 Differential Equations	15		MATH 110 or appropriate placement test score (MATH 150) MATH 130 or 150 (MATH 180) MATH 180 (MATH 190) MATH 190 or appropriate placement test score (MATH 210) MATH 190 (MATH 230)
Electives: CSIS or General Education	3		
Computer Information Systems Emphasis			
MATH 120 College Algebra	3		MATH 110 or appropriate placement test score

15 Credit Hours from the following:
CSIS 123   Programming Fundamentals
CSIS 223   Object-Oriented Programming
CSIS/MATH 141
      Discrete Structures for Computer Science I
CSIS 221   Introduction to Computer Architecture
CSIS 233   Web-Centric Programming
CSIS/MATH 241
      Discrete Structures for Computer Science II
CSIS 265   Graphical User Interface Programming
 	
CSIS 271   Data Structures and Algorithm Analysis
	15		MATH 40/40L or appropriate placement test score (CSIS 123)
			MATH 110 and CSIS 123 (CSIS 223)
			MATH 120 or 150 (CSIS /MATH 141)
			CSIS 123 and MATH 120 (CSIS 221)
			MATH 110 and CSIS 223 (CSIS 233)
			MATH 141 and CSIS 223 (CSIS 241)
			CSIS 223 (CSIS 265)
			MATH 141 and CSIS 223 (CSIS 271)

Electives: General Education, BSAD or CSIS	15		
Total Credit Hours Required	**62**		
Students must complete a Writing Intensive course and either a Human Diversity course or Learning Community course as part of the General Education Requirements.			

The Associate in Engineering Degree

Associate in Engineering
    Engineering .... 64-70 Credits
    Land Surveying.. 71 Credits

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 of 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.

The Associate in Engineering degree with Land Surveying emphasis is a preprofessional program that prepares students to transfer to a four-year college or university offering a Bachelor of Science degree in Surveying and Mapping. Students should check the catalog of the school they plan to transfer to or speak with a land survey program advisor or counselor to make sure they're taking the right classes.

Associate in Engineering

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865			
ECON 210	Macroeconomics *or*	3		
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Engineering Emphasis Specific Program Requirements				
CHEM 111	General College Chemistry I	5		MATH 120 (or appropriate placement test score) or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
ENGR 101	Intro to the Profession	1		
ENGR 104	Programming for Engineers and Scientists* *or*	3		MATH 120 and 130 or MATH 150 (ENGR 104) MATH 40/40L or appropriate placement test score (CSIS 123)
CSIS 123	Programming Fundamentals			
ENGR 113	Engineering Design & Microcomputer Applications* *or*	3-5		MATH 110 (ENGR 113) MATH 40/40L (ETEC 152)
ETEC 152	Engineering Graphics & CADD I			
ENGR 229	Statics	3		MATH 190 and PHYS 220
MATH 180	Analytic Geometry & Calculus I	5		MATH 130 or 150
MATH 190	Analytic Geometry & Calculus II	5		MATH 180
MATH 210	Analytic Geometry & Calculus III	5		MATH 190 or appropriate placement test score
MATH 230	Differential Equations	3		MATH 190
PHYS 220	Engineering Physics I	5		Enrollment in or completion of MATH 190
PHYS 221	Engineering Physics II	5		PHYS 220 and enrollment in or completion of MATH 210
Two of the following six courses: CHEM 221 Organic Chemistry I CHEM 222 Organic Chemistry II ENGR 223 Thermodynamics and Heat Transfer ENGR 230 Dynamics ENGR 233 Circuit Analysis I ENGR 240 Mechanics of Materials		6-10		CHEM 112 (CHEM 221) CHEM 221 (CHEM 222) MATH 190 and PHYS 220 (ENGR 223) ENGR 229 (ENGR 230) ENGR 229 (ENGR 240) PHYS 221 or concurrent enrollment (ENGR 233)
Total Credit Hours Required		**64-70**		
*Students may substitute BIOL 101 or CHEM 112 for either ENGR 104 or ENGR 113.				

Land Surveying Emphasis Specific Program Requirements				
ENGR 104	Programming for Engineers and Scientists	3		MATH 120, 130 or 150
ETEC 152	Engineering Graphics and CADD I	5		MATH 40/40L or appropriate placement test score
ETEC 153	Descriptive Geometry	3		ETEC 153
GEOL 101	Physical Geology	5		
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
MATH 190	Analytic Geometry and Calculus II	5		MATH 180
MATH 210	Analytic Geometry and Calculus III	5		MATH 190 or appropriate placement test score
PHYS 220	Engineering Physics I	5		Enrollment in or completion of MATH 190
PHYS 221	Engineering Physics II	5		PHYS 220 and enrollment in or completion of MATH 210
SRVY 135	Elementary Surveying	3		MATH 105 or 130 or 150
SRVY 137	Subdivision Planning and Layout	3		SRVY 135 and ETEC 152
SRVY 235	Advanced Surveying	3		SRVY 135
SRVY 236	Boundary Control and Legal Principles	3		SRVY 135
SRVY 237	Evidence and Procedures for Boundary Location	3		SRVY 135
Total Credit Hours Required		**71**		

The Associate in Science Degree

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 courses.

Degree Requirements

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

A.S. Biology

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102 Composition and Reading II	3		ENGL 101
Complete two courses from the following (one must be HIST HIST 120 United States History to 1865 *or* HIST 121 United States History Since 1865 *or* POLS 135 Introduction to Political Science *or* POLS 136 Introduction to American National Politics *or* POLS 137 Introduction to State and Local Politics	6		
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Humanities Elective	3		
Specific Program Requirements			
BIOL 104 General Botany	5		
BIOL 106 General Zoology	5		
BIOL Elective: At least 3 hours must be 200 or above.	3-5		See Courses section of this catalog for individual course prerequisites.
CHEM 111 General College Chemistry I	5		MATH 120 (or appropriate placement test score) or two units of high school algebra and CHEM 107 or high school chemistry
CHEM 112 General College Chemistry II	5		CHEM 111
CHEM 221 Organic Chemistry I *and* CHEM 222 Organic Chemistry II *or* PHYS 130 General Physics I *and* PHYS 131 General Physics II	10		CHEM 112 (CHEM 221) CHEM 221 (CHEM 222) MATH 130 (PHYS 130) PHYS 130 (PHYS 131)
MATH 115 Statistics *and* MATH 120 College Algebra *or* MATH 180 Analytic Geometry and Calculus I	5-6		MATH 110 or appropriate placement test score (MATH 115 & 120) MATH 130 or 150 (MATH 180)
Electives	3-6		See Courses section of this catalog for individual course prerequisites.
Total Credit Hours Required	**62-65**		

A.S. Chemistry

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102 Composition and Reading II	3		ENGL 101
HIST 120 United States History to 1865 *and* HIST 121 United States History Since 1865 *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		
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements			
CHEM 111 General College Chemistry I	5		MATH 120 (or appropriate placement test score) or two units of high school algebra and CHEM 107 or high school chemistry
CHEM 112 General College Chemistry II	5		CHEM 111
CHEM 221 Organic Chemistry I	5		CHEM 112
CHEM 222 Organic Chemistry II	5		CHEM 221
MATH 180 Analytic Geometry & Calculus I	5		MATH 130 or 150
MATH 190 Analytic Geometry & Calculus II	5		MATH 180
MATH 210 Analytic Geometry & Calculus III	5		MATH 190
PHYS 220 Engineering Physics I	5		Enrollment in or completion of MATH 190
PHYS 221 Engineering Physics II	5		PHYS 220 and enrollment in or completion of MATH 210
Special Program Electives	4		See Courses section of this catalog for individual course prerequisites.
Total Credit Hours Required	**64**		

Accreditation

The Metropolitan Community College District—including Blue River , Longview, Maple Woods, Penn Valley and Business & Technology —is accredited by the Higher Learning Commission of the North Central Association. For information on this accreditation association, contact the Commission online at www.ncahigherlearningcommission.org or by phone at 312-263-0456. To review MCC's accreditation materials, please contact the chancellor's office at 816-759-1050.

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

CAMPUS	PROGRAM	ACCREDITING AGENCY
MCC–Blue River	Police Academy	Peace Officer Standards and Training Program (POST)
	Fire Academy	Missouri Division of Fire Safety International Fire Service Training Association
MCC–Business & Technology	CISCO	CISCO Networking Academy
	Drafting & Design CAD	American Design Drafting Association (ADDA) AutoDesk Authorized Training Center
	Environmental Health & Safety	Authorized OSHA Training Center, Region 7
	Industrial Technologies - Welding	American Welding Society (AWS)
	Manufacturing Technology	National Institute for Metalworking Skills (NIMS) Mastercam
MCC–Longview	Automotive Technology	National Automotive Technicians' Educational Foundation (NATEF)
MCC–Maple Woods	Veterinary Technology	American Veterinary Medical Association
MCC–Penn Valley	Dental Assisting	American Dental Association Commission on Dental Accreditation
	Paramedic	Missouri State Department of Health - Bureau of —Paramedic Emergency Medical Services
	Health Information Technology	Council on Occupational Education
	Practical Nursing	Missouri State Board of Nursing National League for Nursing
	Professional Nursing	Missouri State Board of Nursing National League for Nursing
		Accreditation Council for Occupational Therapy Education
	Occupational Therapy Assistant	American Occupational Therapy Association
	Physical Therapist Assistant	Commission on Accreditation in Physical Therapy Education
	Radiologic Technology (Radiography)	Joint Review Committee on Education in Radiologic Technology
	Respiratory Care	Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the Committee on Accreditation for Respiratory Care (CoARC) (Through JCCC)
	Surgical Technology	Accreditation of Allied Health Education Professionals (CAAHEP)

Career & Technical Programs & Certificates

Certificates

In addition to two-year associate degrees, Metropolitan Community College awards certificates to students who complete various career and technical programs. While each campus offers some of the same certificates, others are offered only at one of the MCC campuses. The chart on the following page shows where each program is available.

Associate in Applied Science Degree

MCC also awards the Associate in Applied Science degree for various career and technical occupations. Again, while each campus offers some of the same Applied Science degrees, others are offered only at one of the campuses. 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 MCC 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 includes both general education requirements and specialized requirements. Some programs also require general education or other electives to bring students' total credits to the number needed for a degree. Specific requirements for each program are described on pages 38 to 133. A minimum of 18 credit hours of general education is required for an A.A.S. degree. Within these 18 credit hours, all A.A.S. degrees will have nine credit hours in Communications and American Institutions. The remaining nine credit hours will provide students with educational experiences to complement MCC's established general education components.

A.A.S. General Education Core Curriculum

ENGL 101 Composition & Reading I	3
SPDR 100 Fundamentals of Speech *or*	
SPDR 102 Fundamentals of Human Communications	3
One of the following American Institutions courses:	
HIST 120 United States History to 1865	
HIST 121 United States History Since 1865	
POLS 135 Introduction to Political Science	
POLS 136 Introduction to American National Politics	
POLS 137 Introduction to State and Local Politics	3
Any course(s) numbered 100 or above from the following disciplines:	
ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 & 110 and GIS courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR	3-6
Any course(s) numbered 100 or above from the following disciplines:	
BIOL, CHEM, GEOG (104 &110), GEOL, MATH, PHSC, PHYS	3-6
Minimum Total General Education Credit Hours	**18**

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 courses.

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.mcckc.edu** for more information.

Location of Career & Technical Programs

PV: Penn Valley   MW: Maple Woods   LV: Longview   BR: Blue River   BT: Business & Technology

D-Degree only   D/C-Degree and certificate   C-Certificate only

Program	PV	MW	LV	BR	BT
Apparel and Textiles	D				
Audio Engineering Technology #	D	D	D	D	
Automotive Technology			D/C		
Collision Repair Technology +			D/C		
Ford ASSET, GM ASEP			D		
Mechanical or Merchandising			D		
Biotechnology ††	D/C	D/C	D/C	D/C	
Business					
Accounting	D	D	D	D	
Administrative Support Assistant	C	C	C	C	
Entrepreneurship	C	C	C	C	
Financial Services Program	C	C	C	C	
Logistics Management	D	D	D	D	
Management	D	D	D	D	
Office Management	D	D	D	D	
Child Growth & Development	D/C				
Computer Aided Drafting & Design					D/C
Computer Science & Info. Systems					
Cisco (CCNA)					D/C
Cisco (CCNP)					D/C
Cisco (Security)					D/C
Database	D/C	D/C	D/C	D/C	
Game Programming	D/C	D/C	D/C	D/C	
Interactive Media		D/C	D/C		
Networking	D/C			D/C	
Programming	D	D/C	D/C	D/C	
Technical Support		D		D	
Criminal Justice					
Adult Corrections	D		D		
Juvenile Services	D				
Police Science				D/C	
Dental Assisting	D/C				
Digital Prepress Technician	C				
Engineering Technology					
Architecture					D
Civil Engineering					D
Computer and Electronics					D
Electronics					D
Mechanical/Manufacturing Eng.					D
Envir. Health & Safety Tech.					D/C
Environmental Specialist					D/C
Health and Safety Specialist					D/C
Fire Science Technology				D/C	
Foreign Language Interpreting		C			
Forensic Chemistry #	D	D	D	D	
Game Development ††	D	D	D	D	
Game Advanced ††	C	C	C	C	
Geographic Information Systems		C	C		
Graphic Design	D				
Grounds & Turf Management			D/C		
Horticulture ††			C		
Health Information Technology	D				
Coding Specialist	C				
Heating, Vent. & Air Cond.				D/C	
HVAC Job Ready				C	
Hospitality Management ††					
Chef Apprenticeship	D	D	D	D	
Food and Beverage					
or Hotel/Motel	D	D	D	D	

Program	PV	MW	LV	BR	BT
Human Services					
Correctional Services			D		
Drug Addiction Services			D		
Generalist			D/C		
Mental Health Services			D/C		
Workers in Devel. Disabilities			C		
Youth Care Services			D		
Youth Development Worker			C		
Youth Work			C		
Industrial Technologies					
Bricklayer †					D
Construction Carpentry †					D
Construction Cement Masons †					D
Construction Ironworking †					D
Construction Laborer †					D
Construction Management					D
Electric Utility Line Technician					D/C
Glaziers †					D
Industrial Electrical					D/C
Industrial Maintenance					D/C
Electrician †					D
Welding					C
Industrial Mechanic †					D
Industrial Pipefitter/Sprinkler Fitter †					D
Industrial Welder †					D
Inside Wiring †					D
Instrumentation & Controls					D/C
Lineman Tech/Cable Splicer †					D
Millwright					D/C
Painter †					D
Plumbing †					D
Sheet Metal †					D
Stationary Engineer					D/C
Interior Design ††	D/C	D/C	D/C	D/C	
International Studies	C	C	C	C	
Land Surveying			D/C		
Manufacturing Technology					D/C
CNC Operator					C
Manufacturing Career					C
Medical Transcription	C				
Mortuary Science #	D	D	D	D	
Music Technology #	D	D	D	D	
Nursing, Practical	C				
Nursing, Professional	D				
Occupational Education	D	D	D	D	D
Occupational Therapy Assistant	D				
Paralegal Practice	D				
Paramedic	D/C				
Paraprofessional Educator	D	D	D	D	
Physical Therapist Assistant	D				
Polysomnography ††	D	D	D	D	
Radiologic Technology	D				
Railroad Operations ††	D	D	D	D	
Respiratory Care ††	D				
Sign Language Interpreting		D			
American Sign Language		C			
Surgical Technology	C				
Veterinary Technology		D			

+   Coop with Area Career Centers
†   Apprenticeship programs
††   Articulated with Johnson County Community College
#   Articulated with Kansas City Kansas Community College

In addition to the requirements for admission to the college, students must meet specific conditions before they may enroll in certain career and technical 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.

Program	College	Application Information	Special Requirements
Dental Assisting	MCC-Penn Valley	See page 59	High school diploma, 2.5 GPA, or GED certificate; ENGL 101 with a minimum grade of C and DENA 100.
Fire Academy	MCC-Blue River	See page 68	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.
Ford Automotive Student Service Educational	MCC-Longview	See page 41	Early application, approval by a Ford, Mazda, or Lincoln-Mercury dealer, high school diploma or GED certificate, and satisfactory placement test scores and Bennet mechanical comprehension, and a good driving record. Must be 18 years of age prior to first semester internship.
General Motors Automotive Service Educational	MCC-Longview	See page 41	Early application, approval by a General Motors dealer, high school diploma or GED certificate, and satisfactory placement test scores and Bennet mechanical comprehension, and a good driving record. Must be 18 years of age prior to first semester internship.
Health Information Technology	MCC-Penn Valley	See page 77	Minimum 2.5 grade point average in high school and previous college courses or GED score of 245.
Medical Transcription	MCC-Penn Valley	See page 110	Minimum GPA 2.5, typing minimum 45 words per minute, completion of ENGL 101 and CSIS 115 or equivalent.
Occupational Therapy Assistant	MCC-Penn Valley	See page 120	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.
Paramedic	MCC-Penn Valley	See page 122	EMS 150 with a minimum grade of C or a Missouri EMT license.
Physical Therapist Assistant	MCC-Penn Valley	See page 124	Completion of program specific admission requirements including at a minimum: submission of a completed program application, completion of prerequisite courses as outlined in program application, minimum grade point average of 2.5 in courses taken as outlined on the curriculum checklist, and minimum grade of "C" in Introduction to Physical Therapy and biology courses.
Police Academy	MCC-Blue River	See page 58	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.
Practical Nursing	MCC-Penn Valley	See page 113	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.
Professional Nursing	MCC-Penn Valley	See page 114	Required Compass scores or any necessary developmental courses with a grade of C or better, completion of prerequisites with both a minimum grade of C and cumulative prerequisite GPA of 2.75 or better and submission of a program application during defined application periods. Upon completion of all admission requirements applicants are ranked and those within the required ranking range are eligible to take the TEAS entrance exam. A minimum score on the TEAS is required for admission to the program.
Professional Nursing LPN-ADN Bridge Program	MCC-Penn Valley	See page 116	Completion of program specific admission requirements including completion of prerequisite courses with a GPA of 2.75 or better. Required Compass scores and/or corresponding developmental courses. Licensed as an LPN in Missouri. Application submitted after completion of admission requirements, ranked ordered based on point system to determine eligibility to take LPN entrance exam. Required scores on entrance exam must be met for admission.
Radiologic Technology	MCC-Penn Valley	See page 126	Completion of prerequisite courses with minimum grade of C and a minimum overall GPA of 2.5.
Respiratory Care JCCC	MCC-Penn Valley	See page 129	Completion of prerequisite courses with minimum grade of C and a minimum overall 2.0 GPA.
Sign Language Interpreting	MCC-Maple Woods	See page 130	Application by April 4. Completion of ENGL 101, ENGL 102, SPDR 100/102, SIGN 101, SIGN 103 and SIGN 104 with a grade of C or better. Completion of SIGN 102 with a grade of B or better.
Surgical Technology	MCC-Penn Valley	See page 132	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. Must be at least 17 years old when the program is completed.
Veterinary Technology	MCC-Maple Woods	See page 133	Application by March 15 for fall enrollment. Completion of BIOL 106.

Apparel and Textiles

Offered at MCC-Penn Valley

A.A.S. Apparel and Textiles-Design
and Product Development .... 68-70 Credits
A.A.S. Apparel and Textiles-
Merchandising and Marketing .... 68-70 Credits

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

A.A.S. Apparel and Textiles-Design and Product Development

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology or higher *or*	5		
CHEM 101	Survey of Chemistry or higher			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score.
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History since 1865			
Foreign Language: any foreign language		3-5		
MATH 100	Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score.
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score.
Any Art History course.		3		
Specific Program Requirements				
Courses offered at MCC-Penn Valley				
ART 110	Drawing I	3		
ART 130	Fashion Illustration I	3		
APTX 100	Introduction to Apparel Studies	3		
APTX 111	Aesthetics and Design for Apparel and Textiles	3		
APTX 112	Apparel Construction	3		
APTX 113	Advanced Clothing Construction	3		APTX 111 and 112
APTX 118	Costume History-Ancient Mesopotamia Through the Nineteeth Century	3		
APTX 211	Pattern Design-Flat Pattern	3		APTX 113
APTX 212	Textiles	3		
APTX 215	Pattern Design-Draping	3		APTX 113
APTX 217	20th Century Costume History	3		APTX 118
APTX 225	Pattern Design-CAD	3		APTX 211 and 215
APTX 250	Computer Aided Fashion Illustration	3		ART 130
APTX 275	Portfolio Presentation	3		ART 108, 150, 151, or 159 and ART 130, and APTX 211 and 215
Electives		3		
Suggested Electives:				
ART 102	Computers in Design			
ART 131	Fashion Illustration II			
ART 142	Fiber			
ART 244	Digital Photography			
ART 245	Web Design (Prereq: ART 102 & 244)			
APTX 240	Special Topics in Clothing Construction			
Total Credit Hours Required		**68-70**		

Apparel and Textiles (cont)

A.A.S. Apparel and Textiles-Merchandising and Marketing

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology or higher, *or*	5		
CHEM 101	Survey of Chemistry or higher			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score.
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History since 1865			
Foreign Language: any foreign language		3-5		
MATH 100	Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score.
Any Art History course.		3		
Specific Program Requirements				
BSAD 101	Accounting Principles I	3		
BSAD 102	Accounting Principles II	3		BSAD 101 or 2 years of high school accounting
BSAD 205	Marketing	3		
APTX 100	Introduction to Apparel Studies	3		
APTX 111	Aesthetics and Design for Apparel and Textiles	3		
APTX 112	Apparel Construction	3		
APTX 118	Costume History - Ancient Mesopotamia Through the Nineteeth Century	3		
APTX 119	Visual Merchandising	3		APTX 100 and 111
APTX 212	Textiles	3		
APTX 217	20th Century Costume History	3		APTX 118
APTX 218	Merchandising Field Experience	3		APTX 119, 220 and 221
APTX 220	Merchandising I	3		APTX 100, MATH 100 or above
APTX 221	Merchandising II-Global Issues	3		APTX 220 or concurrent enrollment
ECON 210	Macreconomics	3		MATH 40/40L or appropriate placement score
Electives		3		
Suggested Electives:		3		
CSIS 116	Desktop Publishing			
CSIS 129	E-Commerce			
CSIS 128	Web Development			
ART 244	Digital Photography			
Total Credit Hours Required		**68-70**		

Audio Engineering

Offered at Kansas City Kansas Community College
Coordinated at MCC

A.A.S. Audio Engineering .... 67-69 Credits

This is a terminal degree program for students who wish to find employment in a recording-related aspect of the music business or who wish to transfer to another school and pursue a bachelor's degree in a field such as music composition or music technology. Because requirements differ by institution, students wishing to transfer should check with the music faculty or the transfer institution regarding variations in this degree program. Students must be accepted into the program by both MCC and KCKCC. The student is awarded the degree from KCKCC upon successful completion of all requirements.

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

A.A.S. Audio Engineering

Specific Program Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
SPDR 100	Speech	3		ENGL 101
PSYC 140	General Psychology *or*	3		
SOCI 160	Sociology			
MATH 120	College Algebra	3		MATH 110 or appropriate placement test
MUSI 108	Music Appreciation	3		
Humanities Core		3		
Specific Program Requirements *Must be taken at Kansas City Kansas Community College*				
HUDV 101	Strategies for Excellence/Lifelong Learning	1-2		
ENGR 108	Electronic Circuit Fundamentals	3		
ENGR 115	Circuit Analysis I	3		
MUSC 106	Music Applications for Computer	3		
MUSC 136	Introduction to the Music Business	3		
MUSC 250	Audio & Recording Techniques	3		
MUSC 260	Advanced Recording Techniques I	3		
MUSC 261	Advanced Recording Techniques II	3		
MUSC 262/63	Recording Practicum & Portfolio	2		
Can be taken at KCKCC or MCC				
MUSC 111	Music Theory I (MUSI 110)	4		
MUSC 112	Music Theory II (MUSI 111)	4		
MUSC 240	Sound Editing & Synthesis	3		
Performance Groups (2 semesters) *or*				
Piano Class/ Applied Piano (2 semesters)		2		
Voice Class/ Applied Voice (2 semesters) *or*				
Other Applied Lessons (2 semesters)		2		
NASC 130	Introductory Physics (at KCKCC) *or*	3		
PHYS 101	Introductory Physics (at MCC)	5		
Electives: 6 credit hours from the following: MUSC 107 Advanced Music Computing (3) MUSC 157 Live Sound Reinforcement I (1) MUSC 158 Live Sound Reinforcement II (1) MUSC 201 Songwriting MUSC 230 Music and Multimedia (3) MUSC 233 Music Video Practicum (3) MUSC 240 Sound Editing & Synthesis MUSC 264 Automated Mixing		6		
Total Credit Hours Required		**67-69**		

Automotive Technology

Offered at MCC-Longview

A.A.S. Automotive Technology
- Mechanical .... 70 Credits
- Merchandising .... 64 Credits
- Ford/ASSET .... 88 Credits
- General Motors/ASEP .... 88 Credits
- Automotive Technology Certificate ...... 52 Credits
- Collision Repair Technology .... 69 Credits
- Collision Repair Technology Certificate 40 Credits

Automotive Technology programs can lead to an Associate in Applied Science degree, but many students take classes for job enhancement or personal interest. Either way, our automotive classes prepare students for jobs in the automotive industry. Two options open to all qualified students are the Mechanical and Technical Merchandising options. The *Mechanical Option* prepares students to work in dealerships, service centers, or independent repair facilities. The *Merchandising Option* prepares students to work as an 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.

Two additional degree options include *General Motors ASEP Option* and the *Ford/Mazda ASSET Option*. (Note: These 2 programs have special admission requirements.)

The Automotive Technology Department also offers two certificate programs, which include *Automotive Technology Certificate Program* and the *Collision Repair Technology Certificate Program*.

A.A.S. Automotive Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech *or*	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 & 110), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI		3-6		
Any course(s) numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH, PHYS		3-6		
Minimum Total General Education Credit Hours		18		
Specific Program Requirements				
Mechanical				
AUTO 150	Automotive Power Plants	6		
AUTO 160	Diagnosis and Repair	6		AUTO 150, 166 and 176
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 150 and 166
AUTO 264	Air Conditioning	4		
AUTO 272	Automatic Transmissions	6		
AUTO 279	Automotive Electronic Systems	6		AUTO 166

The *Mechanical Option* prepares students to work as a technician in dealerships, service centers, independent garages or service stations.

Merchandising				
AUTO 100	Automotive Internship I *or*	3		One semester automotive coursework for AUTO 100
BSAD 127	Management Internship I			
AUTO 101	Automotive Internship II *or*	3		AUTO 100 (for AUTO 101) or BSAD 127 (for BSAD 128)
BSAD 128	Management Internship II			
AUTO 150	Automotive Power Plants	6		
AUTO 160	Diagnosis and Repair	6		AUTO 150, 166 and 176
AUTO 166	Automotive Electrical Systems	6		
AUTO 170	Automotive Braking Systems	4		
AUTO	Elective	3		
BSAD 100	Introduction to Accounting *or*	3		
BSAD 101	Accounting Principles I			
BSAD 106	Principles of Salesmanship	3		
BSAD 109	Principles of Supervision	3		
BSAD 112	Retailing Principles	3		
BSAD 205	Marketing	3		

The *Merchandising Option* prepares students to work as an assistant service manager, automotive service center trainee, automotive salesperson, factory service representative, parts counterperson, or service salesperson.

Automotive Technology (Cont.)

Ford/ASSET				200202
AUTO 105	Cooperative Work Experience I	3		Approval of automotive coordinator
AUTO 106	Cooperative Work Experience II	3		Approval of automotive coordinator
AUTO 107	Cooperative Work Experience III	3		Approval of automotive coordinator
AUTO 108	Cooperative Work Experience IV	3		Approval of automotive coordinator
AUTO 150	Automotive Power Plants	6		
AUTO 160	Diagnosis and Repair	6		AUTO 150, 166 and 176
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 150 and 166
AUTO 260	Advanced Diagnosis	6		Be a student in good standing in the General Motors ASEP or Ford Motor Co. ASSET program
AUTO 264	Air Conditioning	4		
AUTO 272	Automatic Transmissions	6		
AUTO 278	Electronic Engine Control	6		AUTO 166 and be a student in the Ford Motor Co. ASSET program
GM/ASEP				200206
AUTO 105	Cooperative Work Experience I	3		Approval of automotive coordinator
AUTO 106	Cooperative Work Experience II	3		Approval of automotive coordinator
AUTO 107	Cooperative Work Experience III	3		Approval of automotive coordinator
AUTO 108	Cooperative Work Experience IV	3		Approval of automotive coordinator
AUTO 150	Automotive Power Plants	6		
AUTO 160	Diagnosis and Repair	6		AUTO 150, 166 and 176
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 150 and 166
AUTO 260	Advanced Diagnosis	6		Be a student in good standing in the General Motors ASEP or Ford Motor Co. ASSET program
AUTO 264	Air Conditioning	4		
AUTO 272	Automatic Transmissions	6		
AUTO 277	Specialized Electronics Training	6		AUTO 166 and class member of General Motors ASEP class.
Total Credit Hours Required				

Automotive Technology Certificate

300300 - Approved: 12/2004 (Fall 2005)

Specific Program Requirements		Credits	Semester Taken	Prerequisites
AUTO 150	Automotive Power Plants	6		
AUTO 160	Diagnosis and Repair	6		AUTO 150, 166 and 176
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 150 and 166
AUTO 264	Air Conditioning	4		
AUTO 272	Automatic Transmissions	6		
AUTO 279	Automotive Electronic Systems	6		AUTO 166
Total Credit Hours Required		**52**		

Automotive Technology (Cont.)

A.A.S. Automotive Collision Repair Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing *or*	3		ENGL 101
ENGL 102	Composition and Reading II			
HIST 120	United States History to 1865 *or*	3		
HIST 120	United States History since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business	3		MATH 20/20L or appropriate placement test score
PHYS 104	Foundations of Physical Science *or*	5		
PHYS 101	Introductory Physics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
BSAD 100	Introduction to Accounting	3		
BSAD 109	Principles of Supervision	3		
EHSS 100	Intro to Environmental Health and Safety	3		
Specific Program Requirements *Provided by participating articulation agreement schools*				
AUTO 120	MIG and Structural Welding	3		Accepted into the articulation program for Auto Collision Repair
AUTO 125	Structural Analysis and Damage Repair	6		Accepted into the articulation program for Auto Collision Repair
AUTO 130	Non-Structural Analysis and Damage Repair	6		Accepted into the articulation program for Auto Collision Repair
AUTO 135	Plastics and Adhesives	3		Accepted into the articulation program for Auto Collision Repair
AUTO 140	Automotive Painting	4		Accepted into the articulation program for Auto Collision Repair
AUTO 141	Automotive Refinishing	4		Accepted into the articulation program for Auto Collision Repair
AUTO 166	Automotive Electrical Systems	6		
AUTO 172	Automotive Suspension and Steering	4		
AUTO 264	Air Conditioning	4		
Total Credit Hours Required		**69**		

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

Collision Repair Technology Certificate

Specific Program Requirements *Provided by participating articulation agreement schools*		Credits	Semester Taken	Prerequisites
AUTO 120	MIG and Structural Welding	3		Accepted into the articulation program for Auto Collision Repair
AUTO 125	Structural Analysis and Damage Repair	6		Accepted into the articulation program for Auto Collision Repair
AUTO 130	Non-Structural Analysis and Damage Repair	6		Accepted into the articulation program for Auto Collision Repair
AUTO 135	Plastics and Adhesives	3		Accepted into the articulation program for Auto Collision Repair
AUTO 140	Automotive Painting	4		Accepted into the articulation program for Auto Collision Repair
AUTO 141	Automotive Refinishing	4		Accepted into the articulation program for Auto Collision Repair
Specific Program Requirements				
AUTO 166	Automotive Electrical Systems	6		
AUTO 172	Automotive Suspension and Steering	4		
AUTO 264	Air Conditioning	4		
Total Credit Hours Required		**40**		

Biotechnology

Offered at Johnson County Community College
Coordinated at MCC

A.S. Biotechnology .... 80 Credits
A.A.S. Biotechnology.............................. 65-67 Credits
   Biotechnology Certificate .... 35-37 Credits

The Biotechnology Associate of Science degree program will prepare students who wish to pursue a baccalaureate degree in the biological sciences. Upon completion of this degree, students will be able to find entry-level or higher positions in the diverse field of biotechnology. Along with the basic and more advanced courses, students will take specialized courses in subjects such as laboratory safety and biotechnology methods. 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. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

The Biotechnology Associate in Applied Science degree program will prepare students to work in biotechnology laboratories associated with university medical centers, research institutions, and a variety of industrial applications. The biotechnology certificate is for students seeking employment in the biotechnology industry either in private or academic research laboratories. 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. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

A.S. Biotechnology

Specific Program Requirements *Must be taken at one of the MCC Campuses*		Credits	Semester Taken	Prerequisites
CHEM 111	General College Chemistry I	5		MATH 120 or two units of high school Algebra and CHEM 107 or high school Chemistry
CHEM 112	General College Chemistry II	5		CHEM 111
CHEM 221	Organic Chemistry I	5		CHEM 112
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
MATH 115	Statistics	3		MATH 110 or appropriate placement test score
PHYS 130	General Physics I	5		MATH 130
PHYS 131	General Physics II	5		PHYS 130
SOCI 160	Introduction to Sociology or			
SOCI 163	Social Problems or			
POLS 234	Introduction to International Relations	3		
SPDR	Oral Communications Elective	3		
HUMN	Electives	6		See Courses section of this catalog for individual course prerequisites.
ECON/Social Science Electives		6		
PHED	Elective	1		
BIOL 230	Microbiology for Biotechnology	5		
Must be taken at Johnson County Community College				
BIOL 135	Principles of Cell & Molecular Biology*	4		
BIOL 150	Biology of Organisms*	5		
BIOL 160	Introduction to Biotechnology*	2		
BIOT 165	Laboratory Safety*	1		
BIOL 205	General Genetics*	4		
May be taken at any MCC campus or JCCC BIOL 208	Microbiology* (MCC) *or*	5		
BIOT 260	Biotechnology Methods*	5		
CHEM 250	Biochemistry*	4		
BIOT 265	Biotechnology Internship (Optional)*	4		
Total Credit Hours Required		**80**		

Oral Communication Electives that will transfer from MCC to JCCC: SPDR 100, 102, 103, 133
Humanities Electives that will transfer from MCC to JCCC: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 142, 150, 151, 165, 220, 221, 222, 223, FREN 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, SPDR 114, 128
Social Science Electives that will transfer from MCC to JCCC: ANTH 100, ECON 110, 210, 211, GEOG 111, 112, HUSC 162, POLS 135, 136, 137, PSYC 140, SOCI 160, 162, 163, 170
Physical Education Electives that will transfer from MCC to JCCC: DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 140, 141, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

*Prerequisite/corequisite required

Biotechnology (Cont.)

A.A.S. Biotechnology

Specific Program Requirements *Must be taken at one of the MCC Campuses*	Credits	Semester Taken	Prerequisites
BIOL 109 Anatomy & Physiology	5		BIOL 100 or CHEM 105
CHEM 105 Introductory Chemistry for Health Sciences *Note: CHEM 105 must be taken before BIOL 135, BIOT 160 and BIOT 165*	5		
CHEM 205 Organic Chemistry	5		CHEM 105 or CHEM 111
CSIS 115 Introduction to Microcomputer Applications	3		
ENGL 101 Composition and Reading I	3		
ENGL 215 Technical Writing	3		ENGL 101
MATH 103 Technical Mathematics I (or higher)	3-5		MATH 40/40L
HUMN Humanities Elective	3		
ECON/Social Sciences/Economics Elective	3		See Courses section of this catalog for individual course prerequisites.
PHED Physical Education Elective	1		
Must be taken at Johnson County Community College			
BIOL 135 Principles of Cell & Molecular Biology*	4		
BIOL 145 Human Anatomy and Physiology Dissection*	1		
BIOT 160 Introduction to Biotechnology*	2		
BIOT 165 Laboratory Safety*	1		
BIOL 205 General Genetics*	4		
May be taken at any MCC campus of JCCC BIOL 208 Microbiology (MCC)* *or* BIOL 230 Microbiology for Biotechnology	5		
BIOL 260 Biotechnology Methods*	5		
BIOL 265 Biotechnology Internship*	4		
PHYS 133 Applied Physics*	5		
Total Credit Hours Required	**65-67**		

Humanities Electives that will transfer from MCC to JCCC: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 142, 150, 151, 165, 220, 221, 222, 223, GERM 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, SPDR 114, 128
Physical Education Electives that will transfer from MCC to JCCC: DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 140, 141, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180
Social Science Electives that will transfer from MCC to JCCC: ANTH 100, ECON 110, 210, 211, GEOG 111, 112, HUSC 162, POLS 135, 136, 137, PSYC 140, SOCI 160, 162, 163, 170

*Prerequisite/corequisite required

Biotechnology Certificate

Specific Program Requirements *Must be taken at one of the MCC Campuses*	Credits	Semester Taken	Prerequisites
CHEM 105 Introductory Chemistry for Health Sciences *Note: CHEM 105 must be taken before BIOL 135, BIOT 160 and BIOT 165*	5		
CHEM 205 Organic Chemistry	5		CHEM 105 or CHEM 111
MATH 103 Technical Mathematics I (or higher)	3-5		MATH 40/40L
Must be taken at Johnson County Community College			
BIOL 135 Principles of Cell & Molecular Biology*	4		
BIOT 160 Introduction to Biotechnology*	2		
BIOT 165 Laboratory Safety*	1		
May be taken at any MCC campus of JCCC BIOL 208 Microbiology (MCC)* *or* BIOL 230 Microbiology for Biotechnology	5 5		
BIOT 260 Biotechnology Methods*	5		
PHYS 133 Applied Physics*	5		
BIOT 265 Biotechnology Internship (Optional)*	4		
Total Credit Hours Required	**35-37**		

*Prerequisite/corequisite required

Business

Offered at all Campuses

A.A.S. Business
Accounting .... 63 Credits
Logistics Management............................ 63 Credits
Management.. 63 Credits
Office Management .... 63 Credits
  Administrative Support
  Assistant Certificate............................ 30 Credits

Enterpreneurship Certificate................ 16 Credits
Financial Services
Program Certificate.............................. 21 Credits

This program offers an Associate in Applied Science degree with emphasis areas in accounting, logistics management, management and office management, and the Administrative Support Assistant and Financial Services Program, and Enterpreunership Certificates.

A.A.S. Business

General Education Requirements		Credits	Semester Taken	Prerequisites
ECON 210	Macroeconomics	3		MATH 40/40L or appropriate placement test score
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business *or*	3		MATH 20/20L or appropriate placement test score (MATH 100)
MATH 110	Intermediate Algebra or higher			MATH 40/40L or appropriate placement test score (MATH 110)
PSYC 140	General Psychology *or*	3		
SOCI 160	Sociology			
SPDR 100	Fundamentals of Speech *or*	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
Specific Program Requirements				
BSAD 101	Accounting Principles I	3		
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30 or appropriate placement test score
BSAD 254	Business Law I *or*	3		
BSAD 255	Business Law II *or*			
BSAD 270	Legal Environment of Business			
CSIS 115	Intro to Microcomputer Applications	3		
Electives	Any course numbered 100 or above	6		
Specific Emphasis Requirements				
Accounting				
BSAD 102	Accounting Principles II	3		BSAD 101
BSAD 153	General Ledger Accounting Systems, PC	3		BSAD 101
BSAD 154	Managerial Accounting	3		BSAD 101
BSAD 155	Accounting Applications Using Spreadsheet	3		BSAD 101
BSAD 202	Intermediate Accounting I	3		BSAD 102
BSAD 252	Individual Income Tax	3		BSAD 101
BSAD Electives		3		
Logistics Management				
BSAD 210	Logistics Management	3		
BSAD 211	Operations Management	3		
BSAD 212	Transportation Operations and Management	3		
BSAD 213	Warehouse and Distribution Centers	3		
BSAD Electives		9		
Management				
BSAD 105	Human Resources Management	3		
BSAD 109	Principles of Supervision	3		
BSAD 120	Organizational Behavior	3		
BSAD 127	Management Internship I	3		
BSAD 128	Management Internship II	3		BSAD 127
BSAD Electives		6		
Office Management				
BSAD 103	Business English	3		ENGL 30 or appropriate placement test score
BSAD 161	Professional Development and Business Careers	3		
BSAD 190	Office Management	3		
CSIS 103	Document Processing I	3		
CSIS 104	Document Processing II	3		CSIS 103
CSIS 116	Introduction to Desktop Publishing	3		CSIS 103 or 115
BSAD Electives		3		
Total Credit Hours Required		**63**		

Business (Cont.)

Administrative Support Assistant Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 103	Business English	3		ENGL 30 or appropriate placement test score
BSAD 150	Business Essentials	3		
BSAD 161	Professional Development and Business Careers	3		
BSAD 221	Business Communications	3		ENGL 30 or appropriate placement test score
CSIS 103	Document Processing I	3		
CSIS 104	Document Processing II	3		CSIS 103
CSIS 115	Introduction to Microcomputer Applications	3		
CSIS 116	Introduction to Desktop Publishing	3		CSIS 103 or 115
CSIS 162	Introduction to Multimedia	3		CSIS 110 or 115
CSIS 215	Advanced Microcomputer Applications	3		CSIS 115
Total Credit Hours Required		**30**		

Financial Services Program Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 101	Accounting Principles I	3		
BSAD 103	Business English	3		
BSAD 113	Special Problems in Business	3		
BSAD 120	Organizational Behavior	3		
BSAD 155	Accounting Applications Using Spreadsheets	3		BSAD 101
BSAD 221	Business Communications	3		ENGL 30 or appropriate placement test score
CSIS 115	Introduction to Microcomputer Applications	3		
Total Credit Hours Required		**21**		

Entrepreneurship Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 101	Accounting	3		
BSAD 205	Marketing	3		
BSAD 215	Entrepreneurship Theory and Practice	3		
BSAD 219	Planning and Growing an Entrepreneurial Venture	3		
BSAD 224	Entrepreneurship Experience	4		BSAD 215 & BSAD 219
Total Credit Hours Required		**16**		

Child Growth and Development

Offered at MCC-Penn Valley

A.A.S. CDCG .... 65-67 Credits
    Child Growth & Development
      Certificate .... 30 Credits

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:

1. Attend Child Growth and Development Orientation. Contact the Child Growth and Development Department for scheduled orientations.
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 MCC-Penn Valley pertinent to this process will be used solely for MCC-Penn Valley's internal purposes in determining the suitability of the applicant for admission to the program.
3. Complete the MCC-Penn Valley admissions process.

Every student in the CDCG program should be aware that the Missouri State Board of Education may refuse to issue or renew, or may suspend or revoke a certificate of license to teach if an individual has pleaded or been found guilty of a felony or crime involving moral turpitude whether or not sentence is imposed; upon evidence that the certificate was obtained by fraud, deception, misrepresentation or bribery; upon evidence of incompetence, immorality or neglect of duty; or if the certificate holder is subject to discipline in another state.

A.A.S. Child Growth & Development

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech *or*	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104, 110 and GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR.		3-5		
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH, PHYS		3-5		
Total General Education Requirements		**18**		
Specific Emphasis Requirements				
CDCG 101	Fundamentals of Early Care and Education	3		ENGL 30 or appropriate placement test score, or concurrent enrollment
CDCG 110	Child Health, Safety and Nutrition	3		ENGL 30 or appropriate placement test score
CDCG 113	Child Growth and Development I	3		CDCG 101, ENGL 30 or appropriate placement test score
CDCG 128	Curriculum in Early Childhood Education	3		CDCG 113
CDCG 132	Learning Environment I	3		ENGL 30 or appropriate placement test score
CDCG 149	Child Development Internship I	3		CDCG 113, ENGL 101
CDCG 201	Language Development	3		CDCG 113 and 132, ENGL 101
CDCG 213	Child Growth & Development II	3		CDCG 149 or concurrent enrollment
CDCG 217	Literature for Children	3		ENGL 30 or appropriate placement test score
CDCG 220	Child Care Management	3		CDCG 110, 113 and 132
CDCG 236	Learning Environments II	3		CDCG 213
CDCG 255	Child Development Internship II	3		CDCG 236 or concurrent enrollment
CDCG 260	Education of the Exceptional Child	3		CDCG 149
CDCG 262	Families, Early Care, and Communities	3		ENGL 30 or appropriate placement test score
CDCG 270	Portfolio Design	2		Final semester in AAS program
HUSC 100	Careers in Human Sciences	3		ENGL 30 or appropriate placement test score, or concurrent enrollment
Total Credit Hours Required		**65-67**		

Child Growth and Development Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
SPDR 100	Fundamentals of Speech or	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
CDCG 101	Fundamentals of Early Care and Education	3		
CDCG 110	Child Health, Safety and Nutrition	3		
CDCG 113	Child Growth and Development I	3		CDCG 101
CDCG 128	Curriculum in Early Childhood Education	3		
CDCG 132	Learning Environments I	3		
CDCG 149	Child Development Internship I	3		CDCG 113
CDCG 217	Literature for Children	3		
HUSC 100	Careers in Human Sciences	3		
Total Credit Hours Required		**30**		

Computer Aided Drafting & Design Technology

Offered at MCC-Business &Technology

A.A.S. Computer Aided Drafting & Design
   Technology .... 64-65 Credits
   Computer Aided Drafting
      & Design Certificate........................... 14Credits

This program leads to an Associate in Applied Science degree and certificate. The degree prepares the student for employment in a broad range of engineering, architectural and related fields. Graduates will have a strong background with multiple computer aided design technologies and an understanding of basic design principles in various engineering and architectural fields. This program transfers to area universities if the student wishes to pursue a four-year degree in Computer Aided Drafting and Design.

A.A.S. Computer Aided Drafting and Design Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
EHSS 111	Introduction to Health & Safety for General Industry	1		
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 120	College Algebra *and*	5-6		MATH 110 (MATH 120)
MATH 130	Trigonometry			MATH 120 (MATH 130)
	or			MATH 110 or appropriate placement test score
MATH 150	Precalculus			(MATH 150)
PHYS 130	General Physics I	5		MATH 130 (PHYS 130)
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
ETEC 152	Engineering Graphics and CADD I	5		MATH 40/40L
ETEC 153	Descriptive Geometry	4		ETEC 152
ETEC 155	Introduction to Residential Architecture	3		ETEC 152
ETEC 170	CADD I, Alternate	3		ETEC 152
ETEC 200	Applied Statics & Mechanics	3		MATH 104 or 130
ETEC 258	Introduction to Machine Design	3		ETEC 152
ETEC 265	Introduction to Civil Design	3		ETEC 152
ETEC 268	Structural Steel Blueprint Reading	3		ETEC 152
ETEC 269	CADD II	4		ETEC 152 or 169
ETEC 270	Parametric Modeling *or*	3		ETEC 152 or 169
ETEC 271	Parametric Modeling, Alternate			
ENGR 101	Introduction to the Profession	1		
*Electives must be from the following disciplines: ETEC, SRVY, ENGR, MATE		3		
Total Credit Hours Required		**64-65**		

Computer Aided Drafting and Design Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
ETEC 152	Engineering Graphics and CADD I	5		MATH 40/40L or appropriate placement test score
ETEC 170	CADD I, Alternate	3		ETEC 152
ETEC 269	CADD II	4		ETEC 152 or 169
ETEC 270	Parametric Model *or*	3		ETEC 152 or 169
ETEC 271	Parametric Modeling, Alternate			
Total Credit Hours Required		**14**		

Offered at all Campuses

Computer Science & Information Systems

The Associate in Applied Science in Computer Science and Information Systems degree programs are intended to qualify individuals for entry-level positions in computer-related industry.

A.A.S. Computer Science and Information Systems
CCNP .... 62 Credits
CISCO .... 64 Credits
Database Management. .... 63 Credits
Game Programming .... 69 Credits
Interactive Digital Media .... 63 Credits
Networking... 63 Credits
Programming .... 63 Credits
Security.. 63 Credits
Technical Support .... 63 Credits
    CCNA and CCNP Certificate .... 32 Credits
    CCNA and Security Certificate .... 27 Credits
    Cisco Academy Certificate................... 16 Credits
    Cisco and Technology Certificate .... 31 Credits

Computer Support Technology I
Certificate .... 30 Credits
Computer Support Technology II
Certificate .... 45 Credits
Database Programming (Access)
Certificate .... 30 Credits
Database Programming (Oracle)
Certificate .... 30 Credits
Game Programming Certificate .... 30 Credits
Interactive Digital Media I Certificate ... 15 Credits
Interactive Digital Media II Certificate .. 30 Credits
Networking Certificate .... 15 Credits
Programming Certificate...................... 30 Credits

A.A.S. Computer Science and Information Systems

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 United States History to 1865 *or* HIST 121 United States History Since 1865	3		
MATH 110 Intermediate Algebra *or* Higher mathematics course	3		MATH 40/40L
SPDR 100 Fundamentals of Speech *or* SPDR 102 Fundamentals of Human Communications	3		ENGL 30 or appropriate placement test score
Two courses from the following list: ART 102 Computers in Design I ECON 210 Macroeconomics ECON 211 Microeconomics ENGL 215 Technical Writing MATH 115 Statistics PHIL 200 Logic PHIL 203 Ethics PSYC 140 General Psychology SPDR 101 Advanced Speech	6		ECON 210/211 (MATH 40/40L or appropriate placement test score) ENGL 101 (ENGL 215) MATH 110 or appropriate placement test score (MATH 115) SPDR 100 (SPDR 101)
Specific Program Requirements			
BSAD 120 Organizational Behavior	3		
BSAD 221 Business Communications	3		ENGL 30 or appropriate placement test score
CSIS 110 Technology and Information Management	3		
CSIS 115 Introduction to Microcomputer Applications	3		
Six of the following: CSIS 111 Microcomputer Hardware Concepts CSIS 123 Programming Fundamentals CSIS 128 Web Development CSIS 129 Into to E-Commerce CSIS 143 Database Design and Management CSIS 151 Microcomputer Operating Systems Concepts CSIS 161 Telecommunications and Network Fundamentals CSIS 162 Introduction to Digital Media CSIS 170 Information Security, Ethics and Risk Assessment CSIS 177 Database Application and Design with Access	18		CSIS 110 (CSIS 111) MATH 40/40L or appropriate placement test score (CSIS 123) CSIS 110 or 114 (CSIS 128) CSIS 110 (CSIS 129) CSIS 110 or 115 (CSIS 143) CSIS 110 (CSIS 151) CSIS 110 and CSIS 115 (CSIS 161) CSIS 110 or 115 (CSIS 162) CSIS 110 (CSIS 170) One Windows based course (CSIS 177)
Specific Emphasis Requirements			
CISCO			
CSIS 112 Networking Basics - CCNA1	4		CSIS 110 or 115
CSIS 113 Router and Routing Basics - CCNA2	4		CSIS 112
CSIS 212 Switching Basics & Intermediate Routing - CCNA3	4		CSIS 113
CSIS 213 WAN Technologies - CCNA4	4		CSIS 212

Computer Science & Information Systems (Cont.)

Database Management				
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement test score
CSIS 143	Database Design and Management	3		CSIS 110 or CSIS 115
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123
CSIS 177 CSIS 277 CSIS 233 CSIS 244	Database Application and Design with Access **and** Database Programming with Access and Advanced Access Features **or** Web-Centric Programming **and** ORACLE Database Programming	6		One Windows-based course (CSIS 177) CSIS 123 and 177 (CSIS 277) MATH 110 and CSIS 223 (CSIS 233) CSIS 123 and 144 (CSIS 244)
Game Programming				
ART 104	3D Computer Animation I	3		ART 102 or CSIS 110 or CSIS 115
CSIS 117	Introduction to Computer Game Creation	3		CSIS 110
CSIS 118	Introduction to Game Design	3		CSIS 117
CSIS 137	Beginning Game Programming	3		CSIS 117 and 123
CSIS 200	Advanced Game Programming	3		CSIS 137
CSIS 204	Beginning Math & Physics Game Programming	3		CSIS 117 and MATH 120
CSIS 237	Expert Game Programming	3		CSIS 200, 204, 206
Interactive Digital Media				
Five of the following: CSIS 128 CSIS 129 CSIS 162 CSIS 170 CSIS 228 CSIS 262 CSIS 263	 Web Development Introduction to E-Commerce Introduction to Digital Media Information Security, Ethics and Risk Assessment Advanced Web Development Advanced Digital Media Design and Development Digital Video Production	15		CSIS 110 or 115 (CSIS 128) CSIS 110 (CSIS 129) CSIS 110 or 115 (CSIS 162) CSIS 110 (CSIS 170) CSIS 128 (CSIS 228) CSIS 162 (CSIS 262) CSIS 162 (CSIS 263)
Networking				
CSIS 161	Telecommunications and Network Fundamentals	3		CSIS 110
CSIS 171 CSIS 172	LAN Novell Netware **or** LAN Windows Server	3		CSIS 161 (CSIS 172)
CSIS 174	Technologies Used on Local Area Networks	3		CSIS 171
CSIS 175	Service and Support of Local Area Networks	3		CSIS 171
CSIS 178	Internetworking with TCP/IP	3		CSIS 172 or equivalent background
Programming				
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement test score
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123
CSIS 233	Web-Centric Programming	3		MATH 110 and CSIS 223
Two of the following: CSIS 143 CSIS 221 CSIS 250 CSIS 265 CSIS 271	 Database Design and Management Intro to Computer Architecture Assembler Programming Graphical User Interface Programming Data Structures and Algorithm Analysis	6		CSIS 110 or 115 (CSIS 143) CSIS 131 and MATH 120 (CSIS 221) CSIS 120 and 123 (CSIS 250) CSIS 223 (CSIS 265) MATH 141 and CSIS 223 (CSIS 271)
Technical Support				
CSIS 111	Microcomputer Hardware Concepts	3		
CSIS 151	Microcomputer Operating Systems Concepts	3		CSIS 110
CSIS 161	Telecommunications and Network Fundamentals	3		CSIS 110
CSIS 281	Support Technologies	3		CSIS 111, 151 and 161
CSIS 291	Computer Support Practicum	3		Concurrent enrollment or completion of CSIS 111, 151, 161, and 281

Computer Science & Information Systems (Cont.)

CCNP

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition & Reading I	3		ENGL 30 or appropriate placement score
HIST 120 United States History to 1865 or HIST 121 United States History Since 1865	3		
MATH 110 Intermediate Algebra or Higher Mathematics course	3		MATH 40/40L or appropriate placement test score
SPDR 100 Fundamentals of Speech or SPDR 102 Fundamentals of Human Communication	3		
Two courses from the following list:			
ART 102 Computers in Design I ECON 210 Macroeconomics ECON 211 Principles of Economics II – Microeconomics ENGL 215 Technical Writing MATH 115 Statistics PHIL 200 Logic PHIL 203 Ethics PSYC 140 General Psychology SPDR 103 Interpersonal Communication SPDR 133 Intercultural Communications	6		MATH 40/40L or appropriate placement test score (ART 102) MATH 40/40L or appropriate placement test score (ECON 210 & 211) ENGL 101 (ENGL 215) MATH 110 or appropriate placement test score (MATH 115)
Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSIS 110 Technology & Information Management	3		
Choose three of the following courses: CSIS 111 Microcomputer Hardware Concepts CSIS 123 Programming Fundamentals CSIS 128 Web Development CSIS 129 Intro to E-Commerce CSIS 143 Database Design and Management CSIS 151 Microcomputer Operating Systems Concepts CSIS 161 Telecommunications and Network Fundamentals CSIS 162 Introduction to Digital Media CSIS 170 Information Security, Ethics and Risk Assessment CSIS 177 Database Application and Design with Access	9		CSIS 110 (CSIS 111) MATH 40/43 or appropriate placement test score (CSIS 123) CSIS 110 or 115 (CSIS 128) CSIS 110 (CSIS 129) CSIS 110 or 115 (CSIS 143) CSIS 110 (CSIS 151) CSIS 110 (CSIS 161) CSIS 110 or 115 (CSIS 162) CSIS 110 (CSIS 170) One Windows based course (CSIS 177)
Emphasis Area			
CSIS 112 Networking Basics: CCNA1	4		CSIS 110 or 115
CSIS 113 Router and Routing Basics: CCNA2	4		CSIS 112
CSIS 212 Switching Basics & Intermediate Routing: CCNA3	4		CSIS 113
CSIS 213 WAN Technologies: CCNA4	4		CSIS 212
CSIS 216 Advanced Routing: CCNP1	4		CSIS 213
CSIS 217 Implementing Secure Converged Wide-Area Networks: CCNP2	4		CSIS 213
CSIS 218 Multilayer Switching: CCNP3	4		CSIS 213
CSIS 219 Network Troubleshooting: CCNP4	4		CSIS 213
Total Credit Hours Required	**62**		

Computer Science & Information Systems (Cont.)

Security

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition & Reading I	3		ENGL 30 or appropriate placement score
HIST 120 United States History to 1865 or HIST 121 United States History Since 1865	3		
MATH 110 Intermediate Algebra or Higher Mathematics course	3		MATH 40/40L or appropriate placement test score
SPDR 100 Fundamentals of Speech or SPDR 102 Fundamentals of Human Communication	3		
Two courses from the following list: ART 102 Computers in Design I ECON 210 Macroeconomics ECON 211 Principles of Economics II – Microeconomics ENGL 215 Technical Writing MATH 115 Statistics PHIL 200 Logic PHIL 203 Ethics PSYC 140 General Psychology SPDR 103 Interpersonal Communication SPDR 133 Intercultural Communications	6		MATH 40/40L or appropriate placement test score (ART 102) MATH 40/40L or appropriate placement test score (ECON 210 & 211) ENGL 101 (ENGL 215) MATH 110 or appropriate placement test score (MATH 115)

Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSIS 110 Technology & Information Management	3		
Choose five of the following courses: CSIS 111 Microcomputer Hardware Concepts CSIS 123 Programming Fundamentals CSIS 128 Web Development CSIS 129 Intro to E-Commerce CSIS 143 Database Design and Management CSIS 151 Microcomputer Operating Systems Concepts CSIS 161 Telecommunications and Network Fundamentals CSIS 162 Introduction to Digital Media CSIS 177 Database Application and Design with Access	15		CSIS 110 (CSIS 111) MATH 40/40L or appropriate placement test score (CSIS 123) CSIS 110 or 115 (CSIS 128) CSIS 110 (CSIS 129) CSIS 110 or 115 (CSIS 143) CSIS 110 (CSIS 151) CSIS 110 (CSIS 161) CSIS 110 or 115 (CSIS 162) One Windows based course (CSIS 177)
Emphasis Area			
CSIS 112 Networking Basics: CCNA1	4		CSIS 110 or 115
CSIS 113 Router and Routing Basics: CCNA2	4		CSIS 112
CSIS 170 Information Security, Ethics & Risk Assessment	3		CSIS 110
CSIS 212 Switching Basics & Intermediate Routing: CCNA3	4		CSIS 113
CSIS 213 WAN Technologies: CCNA4	4		CSIS 212
CSIS 272 Network Security I	4		CSIS 213
CSIS 273 Network Security II	4		CSIS 272
Total Credit Hours Required	**63**		

Computer Science & Information Systems (Cont.)

Cisco Academy Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 112	Networking Basics: CCNA1	4		CSIS 110 or 115
CSIS 113	Router and Routing Basics: CCNA2	4		CSIS 112
CSIS 212	Switching Basics and Intermediate Routing: CCNA3	4		CSIS 113
CSIS 213	WAN Technologies: CCNA4	4		CSIS 212
Total Credit Hours Required		**16**		

CCNA and Security Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 112	Networking Basics: CCNA1	4		CSIS 110 or 115
CSIS 113	Router and Routing Basics: CCNA2	4		CSIS 112
CSIS 170	Information Security, Ethics and Risk Assessment	3		CSIS 110
CSIS 212	Switching Basics and Intermediate Routing: CCNA3	4		CSIS 113
CSIS 213	WAN Technologies: CCNA4	4		CSIS 212
CSIS 272	Network Security I	4		CSIS 213
CSIS 273	Network Security II	4		CSIS 272
Total Credit Hours Required		**27**		

CCNA and CCNP Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 112	Networking Basics: CCNA1	4		CSIS 110 or 115
CSIS 113	Router and Routing Basics: CCNA2	4		CSIS 112
CSIS 212	Switching Basics and Intermediate Routing: CCNA3	4		CSIS 113
CSIS 213	WAN Technologies: CCNA4	4		CSIS 212
CSIS 216	Advanced Routing: CCNP1	4		CSIS 213
CSIS 217	Remote Access: CCNP2	4		CSIS 213
CSIS 218	Multilayer Switching: CCNP3	4		CSIS 213
CSIS 219	Network Troubleshooting: CCNP4	4		CSIS 213
Total Credit Hours Required		**32**		

Cisco and Technology Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120 BSAD 221	Organizational Behavior *or* Business Communications	3		ENGL 30 or appropriate placement test score (BSAD 221)
CSIS 110 CSIS 115	Technology and Information Management *or* Intro to Microcomputer Applications	3		
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 112	Networking Basics: CCNA1	4		CSIS 110 or 115
CSIS 113	Router and Routing Basics: CCNA2	4		CSIS 112
CSIS 151	Microcomputer Operating Systems Concepts	3		CSIS 110
CSIS 161	Telecommunications and Network Fundamentals	3		CSIS 110
CSIS 212	Switching Basics and Intermediate Routing: CCNA3	4		CSIS 113
CSIS 213	WAN Technologies: CCNA4	4		CSIS 212
Total Credit Hours Required		**31**		

Computer Support Techonlogy I Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120	Organizational Behavior	3		
BSAD 150	Business Essentials	3		
BSAD 221	Business Communications	3		Completion of ENGL 30 or satisfactory score on ASSET
CSIS 110	Technology and Information Management	3		
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 115	Introduction to Microcomputer Applications	3		
CSIS 151	Microcomputer Operating Systems Concepts	3		CSIS 110
CSIS 161	Telecommunications & Network Fundamentals	3		CSIS 110
CSIS 281	Application Support Technologies	3		CSIS 111, 151, 161
CSIS 291	Computer Support Practicum	3		Concurrent enrollment or completion of CSIS 111, 151, 161 and 281
Total Credit Hours Required		**30**		

Computer Science & Information Systems (Cont.)

Computer Support Techonlogy II Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120	Organizational Behavior	3		
BSAD 150	Business Essentials	3		
BSAD 221	Business Communications	3		Completion of ENGL 30 or satisfactory score on ASSET
CSIS 110	Technology and Information Management	3		
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 115	Introduction to Microcomputer Applications	3		
CSIS 151	Microcomputer Operating Systems Concepts	3		CSIS 110
CSIS 161	Telecommunications & Network Fundamentals	3		CSIS 110
CSIS 162	Introduction to Multimedia	3		CSIS 110 or 115
CSIS 171	LAN Novell Netware	3		
CSIS 215	Advanced Microcomputer Applications	3		CSIS 115
CSIS 251	Advanced Microcomputer Operating Systems Concepts	3		CSIS 151
CSIS 281	Application Support Technologies	3		CSIS 111, 151, 161
CSIS 291	Computer Support Practicum	3		Concurrent enrollment or completion of CSIS 111, 151, 161 and 281
Elective CSIS 120 or above		3		Check catalog
Total Credit Hours Required		**45**		

Programming Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology and Information Management	3		
CSIS 115	Introduction to Microcomputer Applications	3		
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement test score
CSIS 128	Web Development	3		CSIS 110 or 115
CSIS 143	Database Design and Management	3		CSIS 110 or 115
CSIS 161	Telecommunications & Network Fundamentals	3		CSIS 110
CSIS 170	Information Security, Ethics & Risk Assessment	3		CSIS 110
CSIS 177	Database Application and Design with ACCESS	3		One Windows-based course
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123
CSIS 233	Web Centric Programming	3		MATH 110 and CSIS 223
Total Credit Hours Required		**30**		

Database Programming (ACCESS) Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology and Information Management	3		
CSIS 115	Introduction to Microcomputer Applications	3		
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate score on placement test
CSIS 129	Electronic Commerce	3		CSIS 110
CSIS 143	Database Design and Management	3		CSIS 110 or 115
CSIS 170	Information Security, Ethics & Risk Assessment	3		CSIS 110
CSIS 177	Database Application and Design with ACCESS	3		One Windows-based course
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123
CSIS 277	Database Programming with ACCESS and Advanced ACCESS	3		CSIS 123 and CSIS 177
CSIS 290	Computer Science/Information Systems Field Project	3		
Total Credit Hours Required		**30**		

Database Programming (ORACLE) Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology and Information Management	3		
CSIS 115	Introduction to Microcomputer Applications	3		
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate score on placement test.
CSIS 128	Web Development	3		CSIS 110 or 115
CSIS 129	Electronic Commerce	3		CSIS 110
CSIS 143	Database Design and Management	3		CSIS 110 or 115
CSIS 144	Introduction to SQL with Oracle	3		CSIS 115
CSIS 170	Information Security, Ethics, and Risk Assessment	3		CSIS 110
CSIS 233	Web Centric Programming	3		MATH 110 and CSIS 223
CSIS 244	Oracle Database Programming	3		CSIS 123 and CSIS 144
Total Credit Hours Required		**30**		

Computer Science & Information Systems (Cont.)

Game Programming Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
ART 104	3D Computer Animation I	3		ART 102 or CSIS 110 or CSIS 115
CSIS 110	Technology and Information Management	3		
CSIS 117	Intro to Games	3		CSIS 110
CSIS 118	Beginning Game Design	3		CSIS 117
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate score on placement test
CSIS 137	Beginning Game Programming	3		CSIS 117 and CSIS 123
CSIS 200	Advanced Game Programming	3		CSIS 137
CSIS 204	Beginning Math/Physics Game Programmers	3		CSIS 117 and MATH 120
CSIS 237	Expert Programming	3		CSIS 200, 204 and 206
CSIS 290	CSIS Field Project	3		
Total Credit Hours Required		**30**		

Interactive Digital Media I Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology & Information Management	3		
CSIS 115	Introduction to Microcomputer Applications	3		
CSIS 128	Web Development	3		CSIS 110 or 115
CSIS 162	Introduction to Digital Media	3		CSIS 110 or 115
Electives (choose one course from the following four):				
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate score on placement test
CSIS 129	Introduction to E-Commerce			CSIS 110
CSIS 170	Information Security, Ethics & Risk Assessment			CSIS 110
ART 102	Computers in Design 1			
Total Credit Hours Required		**15**		

Interactive Digital Media II Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology & Information Management	3		
CSIS 115	Introduction to Microcomputer Applications	3		
CSIS 128	Web Development	3		CSIS 110 or 115
CSIS 129	Introduction to E-Commerce	3		CSIS 110
CSIS 162	Introduction to Digital Media	3		CSIS 110 or 115
CSIS 170	Information Security, Ethics & Risk Assessment	3		CSIS 110
CSIS 262	Advanced Digital Media Design and Development	3		CSIS 162
CSIS 290	Computer Science/Information Systems Field Project	3		
Electives (choose two courses from the following seven):				
ART 102	Computers in Design I	6		CSIS 110 (CSIS 117)
CSIS 117	Introduction to Computer Game Creation			CSIS 117 (CSIS 118)
CSIS 118	Beginning Game Design			MATH 40/40L or appropriate placement test score. (CSIS 123)
CSIS 123	Programming Fundamentals			MATH 110 and CSIS 123 (CSIS 223)
CSIS 223	Advanced Programming Fundamentals			CSIS 128 (CSIS 228)
CSIS 228	Advanced Web Development			CSIS 162 (CSIS 263)
CSIS 263	Digital Video Production			
Total Credit Hours Required		**30**		

Networking Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 151	Microcomputer Operating Systems Concepts	3		CSIS 110
CSIS 161	Telecommunications & Network Fundamentals	3		CSIS 110
CSIS 171	LAN Novell Netware	3		
CSIS 174	Technologies Used on Local Area Networks	3		CSIS 171
CSIS 175	Service & Support of Local Area Networks	3		CSIS 171
Total Credit Hours Required		**15**		

Criminal Justice

Offered at MCC-Blue River, MCC-Longview and MCC-Penn Valley

A.A.S. Criminal Justice Adult
   Corrections Emphasis .... 66-68 Credits
A.A.S. Criminal Justice Juvenile
   Services Emphasis .... 66-68 Credits
A.A.S. Criminal Justice Police
   Science .... 62 Credits

Police Science Certificate-600 Program ....33 Credits

This program leads to the Associate in Applied Science degree with three emphasis areas: Adult Corrections, Juvenile Services and Police Science. The program prepares students for jobs in law enforcement and corrections. The Police Science program is offered at MCC-Blue River.

A.A.S. Criminal Justice

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 United States History to 1865 *or* HIST 121 United States History Since 1865 *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 or higher numbered course	3		MATH 20/20L or appropriate placement test score
PSYC 140 General Psychology	3		
SOCI 160 Sociology	3		
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ECON, HIST, Foreign Language	3-5		
Specific Core Requirements			
CRJU 101 Intro to Criminal Justice	3		
CRJU 122 Procedural Law	3		
CRJU 165 Criminology	3		
CRJU 168 Juvenile Delinquency	3		
CRJU 169 Family Violence and Sexual Abuse	3		
CRJU 223 Criminal Law I *or* CRJU 230 Missouri Criminal Law	3		
Specific Emphasis Requirements			
Adult Corrections Emphasis			
CRJU 105 American Corrections	3		CRJU 101
CRJU 126 Corrections in the Community	3		
CRJU 162 Correctional Psychology	3		
CRJU 200 Internship in Criminal Justice	3		15 credit hours of CRJU including CRJU 101
CRJU 228 Fundamentals of Probation and Parole	3		
CRJU 233 Principles of Management in Criminal Justice Systems *or* CRJU 236 Correctional Administration	3		
Electives: Any course(s) numbered 100 or above from the following disciplines: CRJU, Foreign Language, HUMS, PSYC, SOCI	9		
Juvenile Services Emphasis			
CRJU 200 Internship in Criminal Justice	3		15 credit hours of CRJU including CRJU 101
CRJU 215 Juvenile Law	3		
CRJU 244 Group and Individual Counseling in Corrections	3		CRJU 105
HUMS 160 Principles of Youth Work	3		
HUMS 166 Behavior Management	3		
PSYC 245 Adolescent Psychology	3		PSYC 140
Electives: Any course(s) numbered 100 or above from the following disciplines: ANTH, CRJU, Foreign Language, HUMS, PSYC	9		
Total Credit Hours Required	**66-68**		

Criminal Justice (Cont.)

This program leads to an Associate in Applied Science Degree. It prepares students for jobs as police officers.

A.A.S. Criminal Justice - Police Science

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business or higher numbered course	3		MATH 20/20L or appropriate placement test score
PSYC 140	General Psychology *or*	3		
SOCI 160	Sociology			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ECON, HIST, Foreign Language		3-5		
Police Science Emphasis Requirements				
LWEN 100	Introduction to Public Safety	2		
LWEN 101	Introduction to Law Enforcement	3		LWEN 100
LWEN 111	Law Enforcement Operational Procedures	3		LWEN 101
LWEN 112	Traffic Control and Investigation	3		LWEN 101
LWEN 114	Law Enforcement Report Writing	3		LWEN 100
LWEN 122	Procedural Law for Law Enforcement	3		LWEN 101
LWEN 143	Defensive Tactics for Law Enforcement	1		LWEN 101
LWEN 200	Law Enforcement Skills	3		LWEN 101
LWEN 203	Criminal Investigation I for Law Enforcement	3		LWEN 101
LWEN 204	Criminal Investigation II for Law Enforcement	3		LWEN 101 and 203
LWEN 230	Missouri Statutory Law	3		LWEN 101
EMS 110	First Responder	3		
Electives				
Any course numbered 100 or above from the following disciplines: BSAD, CRJU, HIST, HUMS, LWEN, POLS, PSYC, SOCI or Foreign Language		9-11		
Total Credit Hours Required		**62**		

This program provides basic peace officer training. With the completion of the Police Training Academy the candidate will have the required training to apply at any Class A County department. All instructors at the academy are current members of area police departments and possess the Missouri Peace Officer Standards and Training Program,(POST) state instructor certification.

Police Science Certificate - 600 Program

Specific Program Requirements		Credits	Semester Taken	Prerequisites
LWEN 100	Introduction to Public Safety	2		
LWEN 101	Introduction to Law Enforcement	3		LWEN 100
LWEN 111	Law Enforcement Operational Procedures	3		LWEN 101
LWEN 112	Traffic Control and Investigation	3		LWEN 101
LWEN 114	Law Enforcement Report Writing	3		LWEN 100
LWEN 122	Procedural Law for Law Enforcement	3		LWEN 100
LWEN 143	Defensive Tactics for Law Enforcement	1		LWEN 101
LWEN 200	Law Enforcement Skills	3		LWEN 101
LWEN 203	Criminal Investigations I for Law Enforcement	3		LWEN 101
LWEN 204	Criminal Investigations II for Law Enforcement	3		LWEN 101 and 203
LWEN 230	Missouri Statutory Law	3		LWEN 101
EMS 110	First Responder	3		
Total Credit Hours Required		**33**		

Dental Assisting

Offered at MCC-Penn Valley

A.A.S. Dental Assisting.......................... 71-77 Credits
      Dental Assisting Certificate .... 51 Credits

This program, which leads to either an Associate in Applied Science degree or a certificate of proficiency, prepares the student to enter the workforce as a trained dental assistant. 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 MCC-Penn Valley.
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 MCC-Penn Valley 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.

A.A.S. Dental Assisting

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 109	Human Anatomy and Human Physiology (BIOL 110 and 210 may be substituted)	6-10		BIOL 100 or CHEM 105
BIOL 208	Microbiology	5		BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 100, 104, 106, 108, 109, or 110.
BIOL 100	Cell Biology *or*	3-5		
CHEM 105	Introductory Chemistry			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 110	Intermediate Algebra (or higher)	3		MATH 40/40L
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
DENA 100	Introduction to Dental Assisting	1		
DENA 101	Body Structure and Function	2		Admission to the Dental Assisting program
DENA 102	Head and Neck Anatomy	2		Admission to the Dental Assisting program
DENA 103	Dental Anatomy	2		Admission to the Dental Assisting program
DENA 104	Dental Emergencies and Pharmacology	1		Admission to the Dental Assisting program
DENA 105	Dental Materials I	2		Admission to the Dental Assisting program
DENA 108	Oral Microbiology & Infection Control	2		Admission to the Dental Assisting program
DENA 110	Chairside Assisting I	5		Admission to the Dental Assisting program
DENA 115	Dental Radiology I	4		DENA 102
DENA 125	Clinical Experience I	2		Admission to the Dental Assisting program and completion of CPR for healthcare workers
DENA 205	Dental Materials II	3		DENA 105
DENA 210	Chairside Assisting II	5		DENA 110
DENA 215	Dental Radiology II	2		DENA 115
DENA 225	Dental Office Management	2		Enrollment in the Dental Assisting program
DENA 230	Oral Pathology	1		DENA 108 and 110
DENA 250	Clinical Experience II	4		DENA 125
DENA 260	Dental Assisting Seminar	2		DENA 125
Total Credit Hours Required		**71-77**		

Dental Assisting (Cont.)

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
DENA 100	Introduction to Dental Assisting (prerequisite)	1		
DENA 101	Body Structure and Function	2		Admission to the Dental Assisting program
DENA 102	Head and Neck Anatomy	2		Admission to the Dental Assisting program
DENA 103	Dental Anatomy	2		
DENA 104	Dental Emergencies and Pharmacology	1		
DENA 105	Dental Materials I	2		Admission to the Dental Assisting program
DENA 108	Oral Microbiology and Infection Control	2		
DENA 110	Chairside Assisting I	5		Admission to the Dental Assisting program
DENA 115	Dental Radiology	4		DENA 102
DENA 125	Clinical Experience I	2		Admission to the Dental Assisting program
DENA 205	Dental Materials II	3		DENA 105
DENA 210	Chairside Assisting II	5		DENA 110
DENA 215	Dental Radiology II	2		DENA 115
DENA 225	Dental Office Management	2		Enrollment in the Dental Assisting program
DENA 230	Oral Pathology	1		DENA 108 and 110
DENA 250	Clinical Experience II	4		DENA 125
DENA 260	Dental Assisting Seminar	2		DENA 125
Total Credit Hours Required		**51**		

Digital Prepress

Offered at MCC-Penn Valley

Digital Prepress Technician Certificate .... 24 Credits

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

Digital Prepress Technician Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
ART 102	Computers in Design I	3		
ART 115	Orientation to Graphic Communications	3		
ART 202	Computers in Design II	3		ART 102
ART 281	Introduction to Digital Prepress - File Preparation	3		ART 102 and 115
ART 282	Digital Prepress - Advanced Color Correction	3		ART 102 and 115
ART 283	Advanced Prepress	3		ART 115, 202, 281, 282
ART 285	Variable Data Publishing	3		ART 202, 281 and 282
ART 290	Digital Prepress Internship	3		ART 283 and 285
Total Credit Hours Required		**24**		

Engineering Technology

Offered MCC-Business & Technology

A.A.S. Engineering Technology .... 64-68 Credits
      Architecture .... 64 Credits
      Civil Engineering................................. 64 Credits
      Mechanical/Manufacturing................... 68 Credits
      Computer & Electronics....................... 63 Credits
      Electronics .... 62 Credits

This program leads to an Associate in Applied Science degree and prepares the student to enter the workforce in the mechanical engineering, civil engineering, architecture, computer and electronics fields. Graduates will have a strong background in mathematics, design principles, computer aided design and other technologies relating to the engineering fields. Graduates will assist engineering professionals in the design process and be an integral part of the design team. This program transfers to area universities if the student wishes to pursue a four-year degree in engineering technology or related degree.

For the A.A.S. in Computer Aided Drafting and Design Technology see pg. 49.

A.A.S. Engineering Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
EHSS 111	Introduction to Health & Safety for General Industry	1		
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
HIST 120	U.S. History to 1865 *or*	3		
HIST 121	U.S. History since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
Specific Program Requirements for:				
Civil & Mechanical/Maufacturing Engineering & Architecture				
ETEC 152	Engineering Graphics and CADD I	5		MATH 40/40L or appropriate placement test score
ETEC 153	Descriptive Geometry	4		ETEC 152
ETEC 200	Structural Design	3		MATH 104 or 130
ETEC 268	Structural Steel Blueprint Reading	3		ETEC 152
ETEC 269	CADD II	4		ETEC 152 or 169
ENGR 101	Introduction to the Profession	1		
PHYS 130	General Physics	5		MATH 120 or appropriate placement test score.
Specific Emphasis Requirements				
Architecture				
ETEC 155	Introduction to Residential Architecture	3		ETEC 152
ETEC 170	CADD I, Alternate	3		ETEC 152
ETEC 210	Introduction to Commercial Architecture	3		ETEC 152 and 155
ETEC 211	Building Information Modeling	3		ETEC 220
ETEC 265	Introduction to Civil Design	3		ETEC 152
SRVY 135	Elementary Surveying	3		MATH 105, 130 or 150
Specific Emphasis Requirements				
Civil Engineering				
ETEC 265	Introduction to Civil Drafting	3		ETEC 152
GEOG 120	Introduction to Geographic Information Systems	3		
GEOG 220	GIS Database and Design	3		GEOG 120
GEOG 224	Applications in Geographic Information Systems	3		GEOG 120 and 220
SRVY 135	Elementary Surveying	3		MATH 105, 130 or 150
SRVY 235	Advanced Surveying	3		SRVY 135
Specific Emphasis Requirements				
Mechanical/Manufacturing Engineering				
ETEC 258	Introduction to Machine Design	3		ETEC 152
ETEC 270	Parametric Modeling *or*	3		ETEC 152 or 169
ETEC 271	Parametric Modeling, Alternate			
MATE 116	Geometric Dimensioning and Tolerancing Printreading	2		MATE 115
MATE 130	Machining for Related Occupations	5		
MATE 210	Computerized Numerical Control - Lathe	3		MATE 101 or 130. MATH 104 or concurrent enrollment.
MATE 215	Computer Numerical Control - Mill	3		MATE 101 or 130. MATH 104 or concurrent enrollment.
MATE 225	Master Cam I	3		CSIS 110, MATE 210 and 215
Total Credit Hours Required		**64-68**		

General Education Requirements (Computer & Electronics, and Electronics)		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
EHSS 111	Introduction to Health & Safety for General Industry	1		
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
HIST 120	U.S. History to 1865 *or*			
HIST 121	U.S. History since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150

Specific Program Requirements Computer & Electronics Engineering Technology		Credits	Semester Taken	Prerequisites	
CSIS 123	Programming Fundamentals	3		MATH 40/40L or placement test	
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123	
CSIS 271	Data Structures & Algorithm Analysis	3		MATH 141 and CSIS 223	
ETEC 152	Engineering Graphics & CADD I	5		MATH 40/40L	
ETEC 110	Basic Electronics	3		MATH 103	
ETEC 111	Microcomputer Hardware Repair	3			
ETEC 118	AC Circuit Analysis	4		ETEC 110 or ETEC 110	
ETEC 130	Digital Electronics	3		ETEC 110 or ETEC 110	
ETEC 220	Analog Devices	4		ETEC 118	
ETEC 230	Microcontroller Architecture	4		ETEC 130	
ETEC 240	Design Project or	3		ETEC 270	
ETEC 275	Build Project			ETEC 260	
ENGR 101	Introduction to the Profession	1			
INTE 271	Programmable Logic Controller I	3		INTE 110 and INTE 175	
Specific Program Requirements Electronics Engineering Technology					
CHEM 111	General College Chemistry I	5		MATH 120 or placement test, or two units of high school algebra and CHEM 107 or high school chemistry.	
CSIS 123	Programming Fundamentals	3		MATH 40/40L or placement test	
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123	
ETEC 152	Engineering Graphics & CADD I	5		MATH 40/40L	
ETEC 110	Basic Electronics	3		MATH 103	
ETEC 111	Microcomputer Hardware Repair	3			
ETEC 118	AC Circuit Analysis	4		ETEC 110 or INTE 110	
ETEC 130	Digital Electronics	3		ETEC 110 or INTE 110	
ETEC 220	Analog Devices	4		ETEC 118	
ETEC 230	Microcontroller Architecture	4		ETEC 130	
ETEC 240	Design Project or	3		ETEC 270	
ETEC 275	Build Project			ETEC 260	
ENGR 101	Introduction to the Profession	1			
Total Credit Hours Required		**62**			

Environmental Health & Safety Technology

Offered at MCC-Business &Technology

A.A.S. Envir. Health & Safety Tech...............................69-72 Credits
    Envir. Health & Safety Tech Cert.............................33 Credits
A.A.S. Health & Safety..64-67 Credits
    Health & Safety Specialist Certificate ....30 Credits
A.A.S. Environmental..69-71 Credits

    Environmental Specialist Certificate ....30 Credits

This program provides a specialized technical background necessary to work in the field of environmental health and safety.

A.A.S. EHSS Environmental Health and Safety Technology Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology *or*	5-6		BIOL 100 or CHEM 105 (BIOL 109)
BIOL 102	Enviromental Science *or*			
BIOL 108	Introductory Anatomy and Physiology *or*			
BIOL 109	Anatomy and Physiology			
BSAD 221	Business Letters and Reports *or*	3		ENGL 30 or appropriate placement test score (BSAD 221, ENGL 119)
ENGL 119	Introduction to Report Writing *or*			ENGL 101 (ENGL 215)
ENGL 215	Technical Writing			
CHEM 105	Introductory Chemistry *or*	5		MATH 20 or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
CHEM 111	General College Chemistry I			
CSIS 115	Intro to Microcomputer Applications	3		
GEOL 103	Environmental Geology	5		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Math I	3		MATH 40/40L (MATH 103)
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104, 110 & GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5		
Specific Program Requirements				
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
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 205	Principles of Industrial Hygiene *or*	3		EHSS 200 and CHEM 102, 105 or 111 (EHSS 205)
EHSS 218	Industrial Process and Hazard Control			EHSS 200 (EHSS 218)
EHSS 210	Incident and Accident Investigation *or*	3		EHSS 200 (EHSS 210)
EHSS 211	Workers Compensation Legislation for EHS			
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
EHSS 217	Concepts of Waste Minimization, Recycling and Pollution Prevention *or*	3		EHSS 203 (EHSS 217)
EHSS 230	Waste Management			
EHSS 220	Air Quality Management *or*	3		EHSS 203 (EHSS 220)
EHSS 225	Water Quality Management			
Total Credit Hours Required		**69-72**		

Environmental Health & Safety Technology (Cont.)

Environmental Health and Safety Technology Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 221	Business Communications *or*	3		ENGL 30 or appropriate placement test score (BSAD 221)
ENGL 119	Introduction to Report Writing *or*			ENGL 101 (ENGL 215)
ENGL 215	Technical Writing			
EHSS 101	Hazardous Material Management and Emergency Response Operations	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
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 205	Principles of Industrial Hygiene	3		EHSS 200 and CHEM 102, 105 or 111
EHSS 210	Incident and Accident Investigation *or*	3		EHSS 200 (EHSS 210)
EHSS 211	Workers Compensation Legislation for EHS			
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
EHSS 217	Concepts of Waste Minimization, Recycling, and Pollution Prevention *or*	3		EHSS 203 (EHSS 217)
EHSS 230	Waste Management			
Total Credit Hours Required		**33**		

A.A.S. EHSS Health and Safety

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 108	Introductory Anatomy and Physiology *or*	5-6		
BIOL 109	Anatomy and Physiology			
BSAD 221	Business Communications *or*	3		ENGL 30 or appropriate placement test score (BSAD 221, ENGL 119)
ENGL 119	Introduction to Report Writing *or*			ENGL 101 (ENGL 215)
ENGL 215	Technical Writing			
CHEM 105	Introductory Chemistry *or*	5		MATH 20 or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
CHEM 111	General College Chemistry I			
CSIS 115	Intro to Microcomputer Applications	3		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Math I* *or*	3		MATH 40/40L (MATH 103) MATH 110 or appropriate placement test score (MATH 120)
MATH 120	College Algebra			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 & 110 & GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5		
Specific Program Requirements				
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
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 205	Principles of Industrial Hygiene	3		EHSS 200, either CHEM 102, 105 or 111
EHSS 210	Incident and Accident Investigation	3		EHSS 200
EHSS 211	Workers Compensation Legislation for EHS	3		
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
EHSS 218	Industrial Process and Hazard Control	3		EHSS 200
Total Credit Hours Required		**64-67**		
*minimum requirements				

Environmental Health & Safety Technology (Cont.)

Health and Safety Specialist Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 221	Business Communications	3		Satisfactory ASSET score or ENGL 30 (BSAD 221)
EHSS 101	Hazardous Material Management and Emergency Response Operations	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
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 205 EHSS 218	Principles of Industrial Hygiene *or* Industrial Process and Hazard Control	3		EHSS 200, either CHEM 102, 105 or 111 (EHSS 205) EHSS 200 (EHSS 218)
EHSS 210 EHSS 211	Incident and Accident Investigation *or* Workers Compensation Legislation for EHS	3		EHSS 200
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
Total Credit Hours Required		**30**		

A.A.S. EHSS Environmental

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101 BIOL 102	General Biology *or* Environmental Science	5		
BSAD 221 ENGL 119 ENGL 215	Business Communications *or* Introduction to Report Writing *or* Technical Writing	3		ENGL 30 or appropriate placement test score (BSAD 221, ENGL 119) ENGL 101 (ENGL 215)
CHEM 105 CHEM 111	Introductory Chemistry* *or* General College Chemistry I	5		MATH 20 or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
CSIS 115	Intro to Microcomputer Applications	3		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
GEOL 103	Environmental Geology	5		
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	United States History to 1865 *or* United States History Since 1865 *or* Introduction to Political Science *or* Introduction to American National Politics *or* Introduction to State and Local Politics	3		
MATH 103 MATH 104 MATH 120 MATH 130	Technical Math I* *and* Technical Math II* *or* College Algebra *and* Trigonometry	6		MATH 40/40L (MATH 103) MATH 103 (MATH 104) MATH 110 or appropriate placement test score (MATH 120) MATH 120 or appropriate placement test score (MATH 130)
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104, 110 & GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5		
Specific Program Requirements				
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
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
The student must complete three of the four following classes: EHSS 217 EHSS 220 EHSS 225 EHSS 230	Concepts of Waste Minimization, Recycling, and Pollution Prevention Air Quality Management Water Quality Management Waste Management	9		EHSS 203 (EHSS 217) EHSS 203 (EHSS 230)
Total Credit Hours Required		**69-71**		

Environmental Health & Safety Technology (Cont.)

Environmental Specialist Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 221	Business Communications	3		ENGL 30 or appropriate placement test score (BSAD 221)
EHSS 101	Hazardous Material Management and Emergency Response Operations	3		
EHSS 110	Properties and Hazards of Hazardous Materials	3		
EHSS 200	Safety and Health Regulations and Standards	3		EHSS 203
EHSS 202	Transportation and Storage of Hazardous Materials	3		
EHSS 203	Environmental Regulations	3		
EHSS 204 / EHSS 217	Emergency Preparedness and Planning *or* Concepts of Waste Minimization, Recycling, and Pollution Prevention	3		EHSS 200 and 203 (EHSS 204) EHSS 203 (EHSS 217)
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
EHSS 220	Air Quality Management	3		EHSS 203
EHSS 225	Water Quality Management	3		EHSS 203
Total Credit Hours Required		**30**		

Fire Science Technology

Offered at MCC-Blue River

A.A.S. Fire Science Technology .... 66-68 Credits
    Fire Science Certificate .... 24 Credits

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

Fire Academy

Most metropolitan fire departments require FFI and FFII certification prior to employment. The Public Safety Institute of MCC-Blue River 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.

A.A.S. Fire Science Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	United States History to 1865 *or* United States History Since 1865 *or* Introduction to Political Science *or* Introduction to American National Politics *or* Introduction to State and Local Politics	3		
MATH 103	Technical Mathematics I	3		MATH 40/40L
PSYC 140	General Psychology	3		
SPDR 100 SPDR 102	Fundamentals of Speech *or* Fundamentals of Human Communication	3		ENGL 30 or appropriate placement test score
Electives from one of the following: ECON, HIST or Foreign Language		3-5		
Specific Program Requirements				
EMS 150	Emergency Medical Technician-Basic	8		Student must be 18 years old by the end of the course
FSTE 169	Fire Prevention	3		
FSTE 170	Hazardous Materials Awareness and Operations	3		
FSTE 172	Firefighting Tactics and Strategy	3		
FSTE 179	Fire Fighter I	4		
FSTE 183	Incident and Disaster Management	3		
FSTE 189	Fire Fighter II	3		FSTE 179
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 200
FSTE 202	Fire Service Administration	3		FSTE 200 and 201
FSTE 203	Managing in Today's Fire Service	3		FSTE 200, 201 and ENGL 101
PHED 107	Physical Fitness I	1		
PHED 108	Physical Fitness II	1		PHED 107
PHED 109	Physical Fitness III	1		PHED 108
Total Credit Hours Required		**66-68**		

Fire Science Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
EMS 150	Emergency Medical Technician-Basic	8		
FSTE 169	Fire Prevention	3		
FSTE 170	Hazardous Materials Awareness and Operations	3		
FSTE 179	Fire Fighter I	4		
FSTE 189	Fire Fighter II	3		FSTE 179
PHED 107	Physical Fitness I	1		
PHED 108	Physical Fitness II	1		PHED 107
PHED 109	Physical Fitness III	1		PHED 108
Total Credit Hours Required		**24**		

Foreign Language Interpreting

Offered at MCC-Maple Woods

Foreign Language
Interpreting Certificate .... 15 Credits

This program provides students with the fundamentals of foreign language interpreting with an emphasis in medical and legal settings. Admission to the program required.

Foreign Language Interpreting Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
FLIN 100	Introduction to Interpreting	3		Appropriate profiency test
FLIN 105	Fundamentals of Interpreting	3		FLIN 100 or concurrent enrollment
FLIN 110	Medical Interpreting	3		FLIN 105
FLIN 115	Legal Interpreting	3		FLIN 105
FLIN 120	Practicum	3		FLIN 110 and FLIN 115
Total Credit Hours Required		**15**		

Forensic Chemistry

Offered at Kansas City Kansas Community College
Coordinated at MCC

A.A.S. Forensic Chemistry .... 68-70 Credits

There are two goals for this program: 1) direct placement into a crime or chemistry related laboratory, or 2) continuation of degree in forensics, chemistry, dentistry, pre-law, pre-med, environmental science, etc. Stu-dents must be accepted into the program by both MCC and KCKCC. The student is awarded the degree from KCKCC upon successful completion of all requirements. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

A.A.S. Forensic Chemistry

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
BIOL Electives Any Biology course except BIOL 204	4-5		See Courses section of this catalog for individual course prerequisites.
CHEM 111 General College Chemistry I	5		MATH 120 or two units of high school algebra and CHEM 107 or high school chemistry
CHEM 112 General College Chemistry II	5		CHEM 111
CRJU 165 Criminology	3		
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102 Composition and Reading II	3		ENGL 101
MATH 180 Analytic Geometry & Calculus I	5		MATH 130 or 150
PHYS Physics Electives	4-5		
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Humanities Core Elective: Choose two of the following: Literature, Philosophy, ART 108, MUSI 108, HIST/HUMN 133, or HIST/HUMN 134	6		See Courses section of this catalog for individual course prerequisites.
Suggested Social Science Core Electives Include: PSYC 140, SOCI 160, ANTH 100	3		
Specific Program Requirements *Must be taken at Kansas City Kansas Community College*			
CHEM 101 Introduction to Forensic Science	5		
CHEM 201 Forensic Science Analytical Techniques	3		
CHEM 211 Organic Chemistry I	3		
CHEM 213 Organic Chemistry I Lab	2		
CHEM 212 Organic Chemistry II	3		
CHEM 214 Organic Chemistry II Lab	2		
Recommended Courses (not necessary for degree): CHEM 250 Biochemistry CHEM 251 Biochemistry Lab	2-4		
Total Credit Hours Required	**68-70**		

Game Development

Offered at JCCC . Coordinated at all campuses.

A.A.S. Game Development .... 66-68 Credits
Game Advanced Certificate .... 29 Credits

The game development Associate in Applied Science degree provides students with the focused knowledge and understanding of game design and development useful in qualifying for entry level industry positions as game programmers, tool builders, collision detections developers, engine builders and interface programmers as well as video and online training developers, Q/A (Question/Answer) Testers, customer supporters and simulations developers. Completion of this degree program will greatly enhance students' ability to create code for 2D/3D graphics and real time virtual environments. Additional skills will include an understanding of game ethics, of the proper presentation of "game bibles" and of math and physics required to model a realistic game world. 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 or advisor before enrollment.

The advanced certificate in game programming provides tangible evidence that a student has completed all the requirement to be an entry level game programmer with additional skills in the art of game programming.

A.A.S. Game Development

Specific Prerequisite not Listed in Req Courses- can take at JCCC	Credits	Semester Taken	Prerequisites
CDTP 135 Desktop Photo Manipulation I: Photoshop *	1		
Specific Prerequisite not Listed in Req Courses- Can take at JCCC or MCC	Credits	Semester Taken	Prerequisites
CSIS 123 Programming Fundamentals	3		MATH 40 or appropriate score on placement test
Specific Program Requirements- Must be taken at JCCC	Credits	Semester Taken	Prerequisites
ANI 120 Conceptual Art for Animation	1		
ANI 145 Introduction to 3D Animation *	3		
CIS 235 Object-Oriented Programming using C++ * or CIS 250 Introduction to 3D Animation *	4		
CS 200 Concepts of Programming Algorithms using C++	4		
ENGL 140 Writing for Interactive Media *	3		
ENGL 150 Digital Narratives *	3		
GAME 102 The Business of Games	3		
GAME 140 Game Programming I- 2D *	4		
GAME 180 Artificial Intelligence for Games	3		
GAME 230 Game Programming II- 3D *	4		
GAME 110 Flash Gaming or GAME 255 Mobile Game Programming *	4		
GAME 250 Game Programming III- Capstone *	4		
MATH 191 Math & Physics for Games I * or PHYS 191 Math & Physics for Games I *	4		
Game Electives	3-4		
Game Electives- must choose from courses taken at JCCC			
CIM 140 Interactive Media Assets *	4		
ANI 245 Character Animation *	3		
CIS 243 Object-Oriented Analysis and Design *	4		
CIS 262 Project Management *	3		
MUS 156 MIDI Music Composition	3		
GAME 110 Flash Gaming	4		
GAME 255 Mobile Game Programming *	4		
* Prerequisite/corerequisite required			
Specific Programs Requirement- Must be taken at MCC	Credits	Semester Taken	Prerequisites
ENGL 101 Composition & Reading I	3		ENGL 30 or satisfactory score on the ASSET test
ENGL 240 Mythology	3		
CSIS 117 Introduction to Computer Game Creation	3		CSIS 110 Technology & Information Mgt.
MATH 120 College Algebra or	3		MATH 110 or satisfactory score on placement test
MATH 150 Precalculus or	5		MATH 110 or satisfactory score on placement test
MATH 175 Calculus for Business and Social Sciences or	3		MATH 120 or satisfactory score on placement test
MATH 180 Analytic Geometry and Calculus I or	5		MATH 130 or MATH 150
MATH 190 Analytic Geometry and Calculus II or	5		MATH 180
MATH 210 Analytic Geometry and Calculus III	5		MATH 190 or appropriate score on placement test
Social Science/Economics Elective	3		
Physical Education Elective	1		
Total Credit Hours Required	**66-68**		

Social Science Electives that will transfer from MCC to JCCC:
ANTH 100, ECON 110, ECON 210, ECON 211, GEOG 111, GEOG 112, HUSC 162, POLS 135, POLS 136, POLS 137, PSYC 140, SOCI 160, SOCI 162, SOCI 163SOCI 170

Physical Education Electives that will transfer from MCC to JCCC:
DANC 100 DANC 111, EMTP 102, HUSC 108, PHED 105, PHED 106, PHED 107, PHED 108, PHED 109, PHED 110, PHED 113, PHED 114, PHED 117, PHED 118, PHED 119, PHED 120, PHED 121, PHED 122, PHED 123, PHED 126, PHED 127, PHED 128, PHED 129, PHED 130, PHED 131, PHED 135, PHED 136, PHED 137, PHED 140, PHED 141, PHED 143, PHED 144, PHED 145, PHED 146, PHED 147, PHED 157, PHED 158, PHED 159, PHED165, PHED 166, PHED 167, PHED 168, PHED173, PHED174, PHED 179, PHED 180.

Game Programming Advanced Certificate

Specific Prerequisite not Listed in Req Courses- can take at JCCC	Credits	Semester Taken	Prerequisites
CS 200 Concepts of Programming Algorithms Using C++	4		
Specific Prerequisite not Listed in Req Courses- Can take at JCCC or MCC	Credits	Semester Taken	Prerequisites
CSIS 123 Programming Fundamentals	3		MATH 40 or appropriate score on placement test
MATH 120 College Algebra or	3		MATH 110 or appropriate score on placement test
MATH 150 Precalculus	5		MATH 110 or appropriate score on placement test
Specific Prerequisite Requirement- Must be taken at JCCC	Credits	Semester Taken	Prerequisites
GAME 110 Flash Gaming	4		
GAME 140 Game Programming I -2D *	4		
GAME 255 Mobile Game Programming *	4		
GAME 180 Artificial Intelligence for Games *	3		
GAME 230 Game Programming II- 3D *	4		
MATH 191 Math & Physics for Games I * or PHYS 191 Math & Physics for Games I *	4		
* Prerequisite/Corequisite required			
Specific Programs Requirement- Must be taken at MCC	Credits	Semester Taken	Prerequisites
CSIS 117 Introduction to Computer Game Creation	3		CSIS 110 Technology & Information Mgt.
CSIS 118 Introduction to Game Design	3		CSIS 117 Intro to Computer Game Creation
Total Credit Hours Required	**29**		

Geographic Information Systems

Offered at MCC-Maple Woods and MCC-Longview

Geographic Information Systems
Certificate .... 33-39 Credits

This is a professional certificate that gives the GIS user the tools needed to obtain a good job in the field of GIS or to advance in their chosen field. It also prepares students to complete their AA degree or transfer to a four-year institution. GIS professionals are found in the fields of city, county and state government, economics, natural resources, conservation, pollution, industry, science, infrastructure planning, public works, transportation, architecture, education, healthcare, travel, and space industry.

Geographic Information Systems Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
GEOG 120 Introduction to Geographic Information Systems	3		
GEOG 220 GIS Database and Design	3		GEOG 120
GEOG 224 Applications in Geographic Information Systems	3		GEOG 120 and 220
GEOG 228 Administrative Issues in GIS	3		GEOG 120
GEOG 230 Geographic Information Systems Internship	1-3		GEOG 120 and 220
One of the following: CSIS 128 Web Development CSIS 143 Database Design and Management CSIS 144 Introduction to SQL with ORACLE CSIS 177 Database Application and Design with Access	3		CSIS 110 or 115 (CSIS 128) CSIS 110 or 115 (CSIS 143) CSIS 115 (CSIS 144) One Windows based course (CSIS 177)
One of the following: GEOG 105 World Geography GEOG 113 Cultural/Human Geography GEOG 114 Introduction to Geography GEOG 207 Geography of the United States and Canada GEOG 210 Economic Geography	3		
One of the following: GEOG 104 Physical Geography GEOL 101 Physical Geology GEOL 103 Environmental Geology	5		
Two courses from the following (not taken above): BIOL 101, 104, 106, 117 BSAD 204, 205, 210, 211, 212, 213 CSIS 128, 143, 144, 177 CRJU 101, 112, 132 ETEC 152, 169 ECON 110, 210, 211 GEOG 104, 105, 110, 113, 114, 207, 210 GEOL 101, 103 SRVY 135, 137, 240	6-10		See Courses section of this catalog for individual course prerequisites.
Total Credit Hours Required	**33-39**		

Graphic Design

Offered at MCC-Penn Valley

A.A.S. Graphic Design................................ 63 Credits

This program leads to the Associate in Applied Science degree and prepares students for jobs as graphic designers or commercial artists.

A.A.S. Graphic Design

General Education Requirements		Credits	Semester Taken	Prerequisites
ART 102	Computers in Design I	3		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
SPDR 100	Fundamentals of Speech *or*	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
Any ART History course		3		
Specific Program Requirements				
ART 100	Art Fundamentals I	3		
ART 103	Design Foundations	3		
ART 110	Drawing I	3		
ART 115	Orientation to Graphic Communications	3		
ART 123	Color Theory	3		ART 103 or concurrent enrollment
ART 139	Photography I	3		
ART 160	Graphic Design I	3		ART 202 or concurrent enrollment
ART 202	Computers in Design II	3		ART 102
ART 244	Digital Photography	3		ART 102
ART 245	Web Design	3		ART 102 and ART 244
ART 250	Printmaking *or*	3		
ART 254	Silk Screen Printing I			
ART 260	Graphic Design II	3		ART 160
ART 264	Art Portfolio – Graphic Design	3		ART 260
ART 281	Introduction to Digital PrePress - File Preparation	3		ART 102 and 115
ART	Elective	3		
Total Credit Hours Required		**63**		

Recommended Art Electives:
ART 165 Cartooning
ART 170 Ceramics I
ART 220 Painting I
ART 230 Sculpture
ART 242 Photography II
ART 246 Advanced Web Design
ART 250 Printmaking
ART 254 Silk Screen Printing I
ART 255 Silk Screen Printing II
ART 270 Illustration
ART 280 Special Studies
ART 283 Advanced Prepress
ART 282 Digital Prepress - Advanced Color Correction

Grounds and Turf Management

Offered at MCC-Longview

A.A.S. Grounds & Turf Management .... 64 Credits
    Grounds Maintenance Certificate .... 18 Credits
    Horticulture Certificate (JCCC) .... 29 Credits

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. Students must be accepted into the program by both MCC and JCCC. The student is awarded the certificate from JCCC upon successful completion of all requirements. It is the student's responsibility to check with an MCC counselor or advisor before enrollment in the Horticultural certificate program.

A.A.S. Grounds & Turf Management

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 104	General Botany	5		
BIOL 202	Ecology	5		BIOL 101 or 104 or 106
CHEM 105	Introductory Chemistry	5		
ECON 110	Introduction to Economics	3		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business	3		MATH 20/20L or appropriate placement test score
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
AGBS 100	The Green Industry-Introduction to 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	9		AGBS 106 (AGBS 206)
AGBS 153	Special Topics in Horticulture III			
AGBS 200	Occupational Internship			
AGBS 206	Advanced Landscape Design and Maintenance			
PHED 117	Golf I	1		
Total Credit Hours Required		**64**		

Grounds Maintenance Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
AGBS 100	The Green Industry-Introduction to 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**		

Grounds and Turf Management

Horticulture Certificate

Offered at Johnson County Community College
Coordinated through MCC-Longview

Specific Program Requirements *Must be taken at MCC-Longview*	Credits	Semester Taken	Prerequisites
AGBS 135 Turfgrass Management I	3		
AGBS 206 Advanced Landscape Design & Maintenance	3		
Specific Program Requirements *Must be taken at Johnson County Community College*			
HORT 135 Landscape Design	3		
HORT 150 Fruits, Vegetables and Herb Crops	2		
HORT 214 Woody Plants I, Deciduous	3		
HORT 215 Woody Plants II, Evergreen	3		
HORT 220 Herbaceous Plants	3		
HORT 225 Plant Problems*	3		HORT 214 and 220
Electives *May be taken at Metropolitan Community College or Johnson County Community College*			
Complete 6 credit hours of electives from the following: May be taken at JCCC: SPD 128 Business and Professional Speech HORT 160 Garden Center Operations May be taken at MCC: BSAD 219 Planning & Growing an Entrepreneurial Venture BSAD 150 Introduction to Business	6		
Total Credit Hours Required	**29**		

Health Information Technology

Offered at MCC-Penn Valley

A.A.S. Health Information Technology........ 69 Credits
   Coding Specialist Certificate................ 35 Credits

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 MCC-Penn Valley.
2. Submit transcripts of high school and college work both to the MCC-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 2510 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.

A.A.S. Health Information Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 108	Introductory Anatomy and Physiology	5.0		
BIOL 137	Intro to Pathology	4.0		BIOL 108
ENGL 101	Composition and Reading I	3.0		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3.0		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3.0		ENGL 30
Elective (PSYC 140 Strongly Recommended)		3.0		
Specific Program Requirements				
CSIS 115	Intro to Microcomputer Applications	3.0		
Three of the following: CSOF 102, 103, 104, 106, 108		3.0		
HITE 101	Intro to Health Information Technology Profession	2.0		
HITE 102	Health Record Systems, Analysis and Control	3.5		
HITE 103	Medical Terminology for Health Records	3.0		
HITE 106	Health Care Statistics	3.0		HITE 102
HITE 108	Legal Aspects of Health Information Technology Profession	2.0		HITE 102
HITE 109	Directed Practice I	2.5		BIOL 108 and HITE 102
HITE 110	Pharmacology	1.5		BIOL 108 and HITE 103
HITE 200	Intro to Classification Systems	1.0		
HITE 201	Quality Management	3.0		HITE 108
HITE 202	Classification Systems, Nomenclatures, Indexes, and Registers I	4.0		HITE 200
HITE 203	Directed Practice II	2.0		BIOL 108, HITE 202 and 210; or BIOL 108 and concurrent enrollment in HITE 202 and 210
HITE 206	Specialized Health Records Systems	2.0		
HITE 207	Classification Systems, Nomenclatures, Indexes, and Registers II	3.0		BIOL 108 and HITE 202
HITE 208	Directed Practice III	2.0		HITE 203
HITE 210	Classification Systems and Nomenclatures for Ambulatory Care	3.0		HITE 200, BIOL 108 or concurrent enrollment in BIOL 108
HITE 211	Organization and Administration in Health Information	3.0		HITE 201, 202 and 203
HITE 212	Intro to Medical Insurance and Office Procedures	1.5		HITE 103, 202, 210 and BIOL 108
Total Credit Hours Required		**69**		

Health Information Technology (Cont.)

Coding Specialist Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BIOL 108	Introductory Anatomy and Physiology	5.0		
BIOL 137	Introduction to Pathology	4.0		BIOL 108
CSIS 115	Introduction to Microcomputer Applications	3.0		
HITE 103	Medical Terminology for Health Records	3.0		
HITE 110	Pharmacology	1.5		BIOL 108 and HITE 103
HITE 200	Introduction to Classification Systems	1.0		
HITE 202	Classification Systems, Nomenclatures, Indexes, and Registers I	4.0		HITE 200
HITE 203	Directed Practice II	2.0		BIOL 108, HITE 202 and 210; or BIOL 108 and concurrent enrollment in HITE 202 and 210
HITE 206	Specialized Health Records Systems	2.0		
HITE 207	Classification Systems, Nomenclatures, Indexes, and Registers II	3.0		BIOL 108 and HITE 202
HITE 208	Directed Practice III	2.0		HITE 203
HITE 210	Classification Systems and Nomenclatures for Ambulatory Care	3.0		HITE 200, BIOL 108 or concurrent enrollment in BIOL 108
HITE 212	Intro to Medical Insurance and Office Procedures	1.5		HITE 103, 202, 210, BIOL 108
Total Credit Hours Required		**35**		

Heating, Ventilation & Air Conditioning

Offered at MCC-Business & Technology

A.A.S. HVAC.. 66-68 Credits
    HVAC Certificate................................. 42 Credits
    HVAC Job Ready Certificate................ 23 Credits

This program offers degree and certificate options leading to heating, ventilation and air conditioning careers.

A.A.S. Heating, Ventilation and Air Conditioning Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Mathematics I* **and**			MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
MATH 104	Technical Mathematics II*			
	or	6		
MATH 120	College Algebra **and**			
MATH 130	Trigonometry			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 or 110 and GIS courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5		See Courses section of this catalog for individual course prerequisites.
Specific Program Requirements				
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 135	Residential Heating and Air Conditioning I	4		HVAC 109 (or take concurrently), HVAC 111, 120 and 230 (or take concurrently)
HVAC 136	Residential Heating and Air Conditioning II	4		HVAC 135
HVAC 221	Commercial Refrigeration	4		HVAC 109 and 120
HVAC 230	Sheet Metal Layout and Fabrication	4		
HVAC 235	Systems Installation	3		HVAC 136 and 230
HVAC 240	Geo-Thermal & Air Source Heat Pumps	3		HVAC 136
INTE 124	Employment Strategies for Technical Careers	3		
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
9 hours from the following:				
INTE 115	Electrical Print Reading			INTE 110 (INTE 115)
INTE 271	Programmable Logic Controllers I			INTE 110 and 175 (INTE 271)
INTE 272	Programmable Logic Controllers II	9		INTE 115 and 271 (INTE 272)
EHSS	Electives			
HVAC	Electives			
INTE	Electives			
Total Credit Hours Required		**66-68**		

*minimum requirements

Heating, Ventilation & Air Conditioning (Cont.)

Heating, Ventilation and Air Conditioning Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
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 135	Residential Heating and Air Conditioning I	4		HVAC 109 (or take concurrently), HVAC 111, 120 and 230 (or take concurrently)
HVAC 136	Residential Heating and Air Conditioning II	4		HVAC 135
HVAC 221	Commercial Refrigeration	4		HVAC 109 and 120
HVAC 230	Sheet Metal Layout and Fabrication	4		
HVAC 235	Systems Installation	3		HVAC 136 and 230
HVAC 240	Geo-Thermal & Air Source Heat Pumps	3		HVAC 136
HVAC 201 INTE 175	Stationary Engineering or Electric Motor Controls	3		HVAC 111 and 120 (HVAC 201) HVAC 109 and INTE 115 (INTE 175)
INTE 124	Employment Strategies for Technical Careers	3		
MATH 103	Technical Mathematics I	3		MATH 40 or 40L
Total Credit Hours Required		**42**		

Heating, Ventilation and Air Conditioning – Job Ready Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
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 135	Residential Heating and Air Conditioning I	4		HVAC 109 (or take concurrently), HVAC 111, 120 and 230 (or take concurrently)
HVAC 136	Residential Heating and Air Conditioning II	4		HVAC 135
HVAC 230	Sheet Metal Layout and Fabrication	4		
Total Credit Hours Required		**23**		

Hospitality Management

Offered at Johnson County Community College
Coordinated at MCC

A.A.S. Hospitality Mgmt.
 Chef Apprenticeship .... 75 Credits
A.A.S. Hospitality Mgmt.
 Food and Beverage .... 66 Credits
A.A.S. Hospitality Mgmt.
 Hotel and Lodging .... 64 Credits

 This program leads to an Associate in Applied Science degree with three options: Chef Apprenticeship, Hotel and Lodging, 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. 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 requirement changes at the degree-granting institution. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
CSIS ___ Computer Science Elective	1		
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
HUMN ___ Humanities Elective	3		See Courses section of this catalog for individual course prerequisites.
MATH 100 Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
PSYC 140 General Psychology	3		
SPDR 100 Fundamentals of Speech *or* SPDR 102 Fundamentals of Human Communication *or* SPDR 103 Interpersonal Communications	3		ENGL 30 or appropriate placement test score (SPDR 102)
Specific Program Requirements *Must be taken at Johnson County Community College*			
HMEC 151 Nutrition and Meal Planning	3		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.
HMGT 120 Food Service Sanitation	1		
HMGT 121 Perspectives of Hospitality Management	3		
HMGT 123 Professional Cooking I*	3		
HMGT 128 Supervisory Management*	3		
HMGT 220 American Regional Cuisine*	3		
HMGT 223 Fundamentals of Baking	3		
HMGT 226 Garde-Manger*	3		
HMGT 228 Advanced Hospitality Management*	3		
HMGT 230 Professional Cooking II*	3		
HMGT 231 Advanced Food Preparation*	4		
HMGT 271 Seminar in Hospitality Management: Purchasing	3		
HMGT 273 Hospitality Cost Accounting*	3		
HMGT 277 Seminar in Hospitality Management: Menu Planning*	3		
HMGT 279 Beverage Control	3		
HMGT 281 Culinary Arts Practicum I*	2		
HMGT 282 Culinary Arts Practicum II*	2		
HMGT 285 Culinary Arts Practicum III*	2		
HMGT 286 Culinary Arts Practicum IV*	2		
HMGT 287 Culinary Arts Practicum V*	2		
HMGT 288 Culinary Arts Practicum VI*	2		
HMGT ___ Hospitality Program Elective	3		
Total Credit Hours Required	**75**		

 *Prerequisite/corequisite required

Hospitality Management (Cont.)

A.A.S. Hospitality Management Food and Beverage

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
MATH 100 Mathematics for Business or higher	3		MATH 20 or 20L or appropriate placement test score
PSYC 140 General Psychology	3		
SPDR 100 Fundamentals of Speech *or* SPDR 102 Fundamentals of Human Communications *or* SPDR 103 Interpersonal Communications	3		ENGL 30 or appropriate placement test score (SPDR 102)
Computer Elective	1		See Courses section of this catalog for individual course prerequisites.
Humanities Requirement	3		
Specific Program Requirements *Must be taken at Johnson County Community College*			
HMEC 151 Nutrition and Meal Planning	3		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.
HMGT 120 Food Service Sanitation	1		
HMGT 121 Perspectives of Hospitality Management	3		
HMGT 123 Professional Cooking I*	3		
HMGT 126 Food Management*	4		
HMGT 128 Supervisory Management	3		
HMGT 150 Seminar: Food Service Sales & Marketing	3		
HMGT 207 Hospitality Human Resource Management*	3		
HMGT 221 Design and Facilities Management*	3		
HMGT 228 Advanced Hospitality Management*	3		
HMGT 230 Professional Cooking II*	3		
HMGT 268 Hospitality Managerial Accounting*	3		
HMGT 271 Seminar in Hospitality Management: Purchasing	3		
HMGT 273 Hospitality Cost Accounting*	3		
HMGT 277 Seminar in Hospitality Mgmt: Menu Design & Planning*	3		
HMGT 279 Beverage Control	3		
Hospitality Program Elective - must choose from one course JCCC	3		
Total Credit Hours Required	**66**		

Computer Elective must be one of the following: CSOF 100, 101, 102, 103, 104, 106, CSIS 115
Humanities Elective must be one of the following: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 142, 150, 151, 165, 220, 221, 222, 223, FREN 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, SPDR 114, 128
*Hospitality Electives at JCCC:
HMGT 130   Hospitality Law
HMGT 203   Hotel Sales and Marketing*
HMGT 223   Fundamentals of Baking
HMGT 250   Introduction to Catering
HMGT 256   Casino Management
HMGT 275   Seminar in Hospitality Management: Internship

*Prerequisite/corequisite required

Hospitality Management (Cont.)

A.A.S. Hospitality Management Hotel and Lodging

Specific Program Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
MATH 100	Mathematics for Business or higher	3		MATH 20 or 20L or appropriate placement test score
PSYC 140	General Psychology	3		
SPDR 100 SPDR 102 SPDR 103	Fundamentals of Speech *or* Fundamentals of Human Communications *or* Interpersonal Communications	3		ENGL 30 or appropriate placement test score (SPDR 102)
PHED 158	First Aid/CPR	2		
Computer Elective		1		See Courses section of this catalog for individual course prerequisites.
Humanities Elective		3		
Specific Program Requirements *Must be taken at Johnson County Community College*				
HMGT 120	Food Service Sanitation	1		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.
HMGT 121	Perspectives of Hospitality Management	3		
HMGT 123	Professional Cooking I*	3		
HMGT 128	Supervisory Management	3		
HMGT 132	Seminar: Housekeeping Operation	3		
HMGT 203	Hotel Sales and Marketing*	3		
HMGT 207	Hospitality Human Resource Management*	3		
HMGT 228	Advanced Hospitality Management*	3		
HMGT 230	Professional Cooking II*	3		
HMGT 235	Seminar: Risk Management and Loss Prevention	3		
HMGT 265	Front Office Management	3		
HMGT 268	Hospitality Managerial Accounting*	3		
HMGT 273	Hospitality Cost Accounting*	3		
HMGT 275	Seminar in Hospitality Management: Internship*	3		
HMGT 279	Beverage Control	3		
Recommended Hospitality Management Program Electives		3		
Total Credit Hours Required		**64**		

Computer Elective must be one of the following: CSOF 100, 101, 102, 103, 104, 106, CSIS 115.
Humanities Elective must be one of the following: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 142, 150, 151, 165, 220, 221, 222, 223, FREN 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, SPDR 114, 128
Hospitality Electives at JCCC:
FL 133   Basic Spanish/Hospitality Management
HMEC 151   Nutrition and Meal Planning
HMGT 126   Food Management*
HMGT 130   Hospitality Law
HMGT 221   Design and Facilities Management*
HMGT 223   Fundamentals of Baking
HMGT 250   Introduction to Catering
HMGT 256   Casino Management
HMGT 271   Seminar in Hospitality Management: Purchasing
HMGT 277   Seminar in Hospitality Management: Menu Planning

Human Services

Offered at MCC-Longview

A.A.S. Human Services
Correctional Services .... 60-62 Credits
A.A.S. Human Services
Drug Addiction Services .... 65-67 Credits
A.A.S. Human Services Generalist............. 62 Credits
A.A.S. Human Services
Mental Health Services................... 64-66 Credits
Drug Addiction Services Certificate ..... 30 Credits
Mental Health Technician Certificate ... 23 Credits

Youth Care Services .... 63-65 Credits
Workers in Developmental
Disabilities Certificate. .... 25 Credits
Youth Development
Worker Certificate .... 12-14 Credits
Youth Work Certificate .... 33 Credits

This program offers an Associate in Applied Science degree and certificate options. The program prepare students for career advancement or entry-level jobs that assist families with their social, behavioral, educational, or mental health needs.

A.A.S. Human Services Correctional Services

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology *or*	3-5		
BIOL 132	Human Nutrition			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
PSYC 162	Correctional Psychology	3		PSYC 140
SOCI 160	Sociology	3		
ANTH 110	Cultural Anthropology *or*	3		
SOSC 171	Comparative Ethnic and Cultural Studies			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
CRJU 118	Legal Aspects of Correction *or*	3		
CRJU 203	Criminal Investigations I			
CRJU 126	Corrections in the Community *or*	3		
HUMS 126	Corrections in the Community			
CRJU 126	Correctional Administration *or*	3		
HUMS 126	Correctional Administration			
CSIS 110	Technology and Information Management *or*	3		
CSIS 115	Introduction to Microcomputer Applications			
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	1		HUMS 100
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168
HUMS 202	Human Services Practicum II	3		HUMS 201
HUMS 203	Colloquia I	1		HUMS 201 corequisite
HUMS 204	Colloquia II	1		HUMS 202 corequisite
HUMS 210	Interviewing and Interpersonal Communications	3		PSYC 162
HUMS 220	Social Welfare	3		HUMS 100
Total Credit Hours Required		**60-62**		

Human Services (Cont.)

A.A.S. Human Services Drug Addiction Services

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology *or*	3-5		
BIOL 132	Human Nutrition			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
PSYC 162	Correctional Psychology	3		PSYC 140
PSYC 148	Group Processes	3		PSYC 140
SOCI 160	Sociology	3		
ANTH 110	Cultural Anthropology *or*	3		
SOSC 171	Comparative Ethnic and Cultural Studies			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
CRJU 275	Alcohol and Drug Addiction *or*	3		
HUMS 275	Alcohol and Drug Addiction			
CRJU 280	Addiction Counseling with Special Populations *or*	3		
HUMS 280	Addiction Counseling with Special Populations			
CRJU 285	Addiction Client Management *or*	3		
HUMS 285	Addiction Client Management			
CSIS 110	Technology and Information Management *or*	3		
CSIS 115	Introduction to Microcomputer Applications			
HUMS 100	Introduction to Human Services	3		
HUMS 163	Therapeutic Activities and Recreation	3		
HUMS 168	Introduction to Practicum	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 100 and 168
HUMS 202	Human Services Practicum II	3		HUMS 201
HUMS 203	Colloquia I	1		HUMS 201 corequisite
HUMS 204	Colloquia II	1		HUMS 202 corequisite
HUMS 210	Interviewing and Interpersonal Communications	3		PSYC 162
HUMS 220	Social Welfare	3		HUMS 100
Total Credit Hours Required		**65-67**		

Human Services (Cont.)

A.A.S. Human Services Generalist

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology *or*	3-5		
BIOL 132	Human Nutrition			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
PSYC 162	Correctional Psychology	3		PSYC 140
PSYC 146	Industrial and Organizational Psychology	3		PSYC 140
SOCI 160	Sociology	3		
ANTH 110	Cultural Anthropology *or*	3		
SOSC 171	Comparative Ethnic and Cultural Studies			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
CSIS 110	Technology and Information Management *or*	3		
CSIS 115	Introduction to Microcomputer Applications			
HUMS 100	Introduction to Human Services	3		
HUMS 163	Therapeutic Activities and Recreation	3		
HUMS 168	Introduction to Practicum	1		
HUMS 171	Crisis Intervention	1		
HUMS 173	Humanistic Perspective on Aging	1		
HUMS 174	Counseling Issues with Today's Families	1		
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168
HUMS 202	Human Services Practicum II	3		HUMS 201
HUMS 203	Colloquia I	1		HUMS 201 corequisite
HUMS 204	Colloquia II	1		HUMS 202 corequisite
HUMS 210	Interviewing and Interpersonal Communications	3		PSYC 162
HUMS 220	Social Welfare	3		HUMS 100
HUMS 270	Social Psychology of Aging *or*	3		
PSYC 270	Social Psychology of Aging			
HUMS 275	Alcohol and Drug Addiction *or*	3		
CRJU 275	Alcohol and Drug Addiction			
Total Credit Hours Required		**62**		

Human Services (Cont.)

A.A.S. Human Services Mental Health Services Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology *or*	3-5		
BIOL 132	Human Nutrition			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
PSYC 162	Correctional Psychology	3		PSYC 140
PSYC 148	Group Processes	3		PSYC 140
SOCI 160	Sociology	3		
SOSC 171	Comparative Ethnic and Cultural Studies	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
CRJU/ SOCI 169	Family Violence and Sexual Abuse	3		
CRJU 230	Criminal Law II	3		
CSIS 110	Technology and Information Management *or*	3		
CSOF 105	Computer Survival			
HUMS 100	Introduction to Human Services	3		
HUMS 163	Therapeutic Activities and Recreation	3		
HUMS 168	Introduction to Practicum I	1		HUMS 100
HUMS 171	Crisis Intervention	1		HUMS 100 or PSYC 140
HUMS 190	Community Mental Health	3		
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168 and approval of the coordinator
HUMS 202	Human Services Practicum II	3		HUMS 201 and approval of the coordinator
HUMS 203	Human Services Colloquia I	1		HUMS 201 corequisite
HUMS 204	Human Services Colloquia II	1		HUMS 202 corequisite
HUMS 210	Interviewing and Interpersonal Communications	3		PSYC 162
HUMS 220	Social Welfare	3		HUMS 100
HUMS/ CRJU 275	Alcohol and Drug Addiction	3		
Total Credit Hours Required		**64-66**		

Mental Health Technician Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
PSYC 140	General Psychology	3		
READ 108	College Success Skills	3		
SOCI 160	Sociology	3		
CRJU 162	Correctional Psychology *or*	3		PSYC 162 (HUMS 210)
HUMS 210	Interviewing & Interpersonal Communications			
HUMS 100	Introduction to Human Servicees	3		
HUMS 168	Introduction to Practicum	1		HUMS 100
HUMS 190	Community Mental Health	3		
HUMS 201	Human Services Practicum I	3		HUMS 168 and co-enrollment in HUMS 203
HUMS 203	Human Services Colloquia I	1		HUMS 168 and co-enrollment in HUMS 201
Total Credit Hours Required		**23**		

Human Services (Cont.)

A.A.S. Human Services Youth Care Services

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology *or*	3-5		
BIOL 132	Human Nutrition			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
PSYC 162	Correctional Psychology	3		PSYC 140
SOCI 160	Sociology	3		
SOSC 171	Comparative Ethnic and Cultural Studies or	3		
ANTH 171	Comparative Ethnic and Cultural Studies			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
PSYC 240	Child Development	3		PSYC 140
PSYC 245	Adolescent Psychology	3		PSYC 140
Specific Program Requirements				
CRJU 168	Juvenile Delinquency *or*	3		
SOCI 168	Juvenile Delinquency			
CSIS 110	Technology and Information Management *or*	3		
CSIS 115	Introduction to Microp			
HUMS 100	Introduction to Human Services	3		
HUMS 160	Principles of Youth Work	3		
HUMS 163	Therapeutic Activities and Recreation	3		
HUMS 166	Behavior Management Techniques for Children/Youths	3		
HUMS 168	Introduction to Practicum	1		HUMS 100
HUMS 201	Human Services Practicum I	3		HUMS 100, 168
HUMS 202	Human Services Practicum II	3		HUMS 201
HUMS 203	Colloquia I	1		HUMS 201 corequisite
HUMS 204	Colloquia II	1		HUMS 202 corequisite
HUMS 210	Interviewing and Interpersonal Communications	3		PSYC 162
HUMS 220	Social Welfare	3		HUMS 100
Total Credit Hours Required		**63-65**		

Drug Addiction Services Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
PSYC 140	General Psychology	3		
SOCI 160	Sociology	3		
PSYC 162	Correctional Psychology	3		PSYC 140
CRJU 275	Alcohol and Drug Addiction *or*	3		
HUMS 275	Alcohol and Drug Addiction			
CRJU 280	Addiction Counseling with Special Populations *or*	3		HUMS 275 and CRJU 275
HUMS 280	Addiction Counseling with Special Populations			
CRJU 285	Addiction Client Management *or*	3		HUMS 280 or CRJU 280
HUMS 285	Addiction Client Management			
HUMS 100	Introduction to Human Services	3		
HUMS 168	Introduction to Practicum	1		HUMS 100
HUMS 172	Aging, Alcoholism and Medications *or*	1		
HUMS 175	Spirituality in Addiction Recovery *or*			
HUMS 176	Addiction Management *or*			
HUMS 177	Positive Dependency *or*			
HUMS 178	Women's Issues in Addiction			
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168
HUMS 203	Colloquia I	1		HUMS 201 corequisite
Total Credit Hours Required		**30**		

Human Services (Cont.)

Workers in Developmental Disabilities Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
PSYC 140	General Psychology	3		
PSYC 243	Human Lifespan Development	4		PSYC 140
READ 108	College Success Skills	3		
Specific Program Requirements				
HUMS 100	Introduction to Human Services	3		
HUMS 168	Introduction to Practicum	1		HUMS 100
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168
HUMS 203	Colloquia I	1		HUMS 201 corequisite
HUMS 215	Developmental Disabilities	4		HUMS 100
Total Credit Hours Required		**25**		

Youth Development Worker Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
HUMS 100	Introduction to Human Services	3		
HUMS 160	Principles of Youth Work	3		
HUMS 168	Introduction to Practicum	1		HUMS 100
HUMS 199	Human Services Seminar	1-3		
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168
HUMS 203	Colloquia I	1		HUMS 201 corequisite
Total Credit Hours Required		**12-14**		

Youth Work Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
POLS 136	Introduction to American National Politics	3		
PSYC 140	General Psychology	3		
PSYC 245	Adolescent Psychology	3		PSYC 140
SOCI 160	Sociology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
CSIS 110 CSIS 115	Technology and Information Management *or* Introduction to Microcomputer Applications	3		
HUMS 100	Introduction to Human Services	3		
HUMS 160	Principles of Youth Work	3		
HUMS 168	Introduction to Practicum	1		HUMS 100
HUMS 191	Youth Development Seminar	1		
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168
HUMS 203	Colloquia I	1		HUMS 201 corequisite
Total Credit Hours Required		**33**		

Industrial Technologies

Offered at MCC-Business & Technology

A.A.S. Industrial Technologies
A.A.S. Indus. Tech. Bricklayer .... 63-65 Credits
A.A.S. Indus. Tech
 Construction Carpentry........................ 63-66 Credits
A.A.S. Indus. Tech
 Construction Cement Masons .... 63-66 Credits
A.A.S. Indus. Tech
 Construction Ironworking..................... 65-67 Credits
A.A.S. Indus. Tech
 Construction Laborer .... 63-65 Credits
A.A.S. Indus. Tech
 Construction Management .... 63 Credits
A.A.S. Indus. Tech Electric
 Utility Line Technician .... 65-66 Credits
 Electric Utility Line Technician Cert .... 47-48 Credits
A.A.S. Indus. Tech Glaziers................... 63-66 Credits
A.A.S. Indus. Tech. Industrial Electrical . 62-64 Credits
 Industrial Electrical Certificate .... 32 Credits
A.A.S. Indus. Tech.
 Industrial Maintenance .... 64-66 Credits
 Industrial Maintenance Certificate ..... 32 Credits

Welding Job Ready Certificate .... 18 Credits
A.A.S. Indus. Tech. Inside Wiring
 3 & 5-year program............................. 63-65 Credits
A.A.S. Indus. Tech. Millwright .... 67-69 Credits
 Millwright Certificate .... 33 Credits
A.A.S. Indus. Tech. Painter................... 63-65 Credits
A.A.S. Indus. Tech. Plumbing .... 63-65 Credits
A.A.S. Indus. Tech. Sheet Metal........... 63-65 Credits
A.A.S. Indus. Tech. Stationary Engineer 67-69 Credits
 Stationary Engineer Certificate............ 33 Credits
A.A.S. Lineman Tech/Cable Splicer .... 63 Credits
A.A.S. Indus. Maintenance Electrician .. 63-65 Credits
A.A.S. Industrial Mechanic .... 65-67 Credits
A.A.S. Industrial Welder .... 65-67 Credits
A.A.S. Industrial Pipefitter/Sprinkler Fitter 63-65 Credits
A.A.S. Instrumentation & Controls......... 63-64 Credits
 Instrumentation & Controls Certficate 32-33 Credits

This program offers degree and certificate options leading to technical careers in Industrial Technology.

A.A.S. Industrial Technologies

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103	Technical Mathematics I* **and**			MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
MATH 104	Technical Mathematics II*			
	or	6		
MATH 120	College Algebra **and**			
MATH 130	Trigonometry			
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (Except 104,110 or GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5 or 6-9 see emphasis area		
*minimum requirements				
Specific Program Requirements				
Bricklayer (General Education Requirements 3-5)				
BSAD 109	Principles of Supervision	3		
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
INTE 151	Industrial Rigging	3		
SRVY 135	Elementary Surveying	3		MATH 105 or MATH 130 or MATH 150
Bricklaying Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		**63-65**		

* Federally approved bricklaying apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Industrial Technologies (Cont.)

Construction Carpentry (General Education Requirements 6-9)

BSAD 109	Principles of Supervision	3		
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
INTE 151	Industrial Rigging	3		
Carpentry Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		**63-66**		

* Federally approved carpentry apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Construction Cement Masons (General Education Requirements 6-9)

BSAD 109	Principles of Supervision	3		
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
SRVY 135	Elementary Surveying	3		MATH 105 or MATH 130 or MATH 150
Cement Masons Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		**63-66**		

* Federally approved cement masons apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Construction Ironworking (General Education Requirements 3-5)

BSAD 109	Principles of Supervision	3		
CSIS 110	Technology and Information Management	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
MATE 201	Basic Metallurgy	3		MATE 101
PHYS 101	Introductory to Physics	5		
Ironworking Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		**65-67**		

* Federally approved ironworking apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Construction Laborer (General Education Requirements 3-5)

BSAD 109	Principles of Supervision	3		
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 200	Safety and Health Regulations and Standards	3		
EHSS 205	Principles of Industrial Hygiene	3		EHSS 200 and either CHEM 102, 105 or 111
SRVY 135	Elementary Surveying	3		MATH 105 or MATH 130 or MATH 150
Construction Laborer Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		**63-65**		

* Federally approved construction laborer apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Industrial Technologies (Cont.)

Glaziers (General Education Requirements 6-9)				
BSAD 109	Principles of Supervision	3		
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
SRVY 135	Elementary Surveying	3		MATH 105 or MATH 30 or MATH 150
Glazer Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		63-66		

* Federally approved glazer apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Industrial Electrical (General Education Requirements 3-5)				
CSOF 100	Introduction to Personal Computing	1		
EHSS 111	Introduction to Health & Safety for General Industry	1		
INTE 110	Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	3		
INTE 142	National Electric Code	3		INTE 110
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 225	Industrial Print Reading	3		INTE 115
INTE 271	Programmable Logic Controller I	3		INTE 110 and 175
INTE 272	Programmable Logic Controller II	3		INTE 115 and 271
INTE 273	Variable Speed Motors and Drives	3		INTE 175 and 271
INTE 277	Program Logic Controller Troubleshooting	3		INTE 115 and 271
INTE 275	Electric Motor Controls II	3		INTE 175
INTE 276	Electrical Troubleshooting	3		INTE 275
Electives: CHEM, CSIS, INTE, MATE, PHYS		6		
Total Credit Hours		62-64		

Industrial Maintenance (General Education Requirements 3-5)				
CSOF 100	Introduction to Personal Computing	1		
EHSS 111	Introduction to Health & Safety for General Industry	1		
INTE 110	Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115	Electrical Print Reading	3		INTE 110
INTE 122	Welding Layout and Fabrication	3		
INTE 124	Employment Strategies for Technical Careers	3		
INTE 140	Fundamentals of Industrial Maintenance	3		
INTE 142	National Electric Code	3		INTE 110
INTE 150	Fundamentals of Hydraulics	3		
INTE 151	Industrial Rigging	3		
INTE 167	Welding I SMAW	3		
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
MATE 115	Blueprint Reading for the Trades	3		
MATE 130	Machining for Related Occupations	5		
Electives: CHEM, CSIS, INTE, MATE, PHYS		6		
Total Credit Hours		64-66		

Industrial Technologies (Cont.)

Inside Wiring - 3 year program (General Education Requirements 3-5)

CSIS 115	Introduction to Microcomputer Applications	3		
INTE 271	Programmable Logic Controller I	3		INTE 110 and 175
INTE 275	Electric Motor Controls II	3		INTE 175
INTE 276	Electrical Troubleshooting	3		INTE 275
INTE 277	Programmable Logic Controller Troubleshooting	3		INTE 115 and 271
Electrical Apprenticeship		30		
Total Credit Hours		**63-65**		

* Federally approved inside wiring apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Inside Wiring - 5 year program (General Education Requirements 3-5)   201820

CSIS 115	Introduction to Microcomputer Applications	3		
Electrical Apprenticeship		42		
Total Credit Hours		**63-65**		

* Federally approved inside wiring apprenticeship program that contains a minimum 750 clock hours of classroom instruction and 10,000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Millwright (General Education Requirements 3-5)   201809

CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
INTE 110	Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 122	Welding Layout and Fabrication	3		
INTE 124	Employment Strategies for Technical Careers	3		
INTE 140	Fundamentals of Industrial Maintenance	3		
INTE 150	Fundamentals of Hydraulics	3		
INTE 151	Industrial Rigging	3		
INTE 167	Welding I SMAW	3		
INTE 168	Welding II SMAW	3		INTE 167
INTE 260	Pipe Fitting Fundamentals	3		HVAC 201
MATE 115	Blueprint Reading for the Trades	3		
MATE 116	Geometric Dimensioning and Tolerancing	2		MATE 115
MATE 130	Machining for Related Occupations	5		
Electives: CHEM, CSIS, INTE, MATE, PHYS		6		
Total Credit Hours		**67-69**		

Painter (General Education Requirements 3-5)   201815

BSAD 109	Principles of Supervision	3		
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
EHSS 200	Safety and Health Regulations & Standards	3		
INTE 151	Industrial Rigging	3		
Painter Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		**63-65**		

* Federally approved painter apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Plumbing (General Education Requirements 3-5)

CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
INTE 151	Industrial Rigging	3		
Electives from CHEM, CSIS, INTE, MATE, or PHYS		6		
Plumber Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		**63-65**		

* Federally approved plumber apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Industrial Technologies (Cont.)

Sheet Metal (General Education Requirements 3-5)				
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
INTE 151	Industrial Rigging	3		
Electives from CHEM, CSIS, INTE, MATE or PHYS		6		
Sheet Metal Apprenticeship (Credit by Certification*)		30		
Total Credit Hours		**63-65**		

> * Federally approved sheet metal apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Stationary Engineer (General Education Requirements 3-5)				
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	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 111 and 120
HVAC 221	Commercial Refrigeration	4		HVAC 109 and 120
HVAC 230	Sheet Metal Layout & Fabrication	4		
INTE 110	Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	3		
INTE 150	Fundamentals of Hydraulics	3		
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 270	Instrumentation & Process Controls	3		INTE 225 & 272
INTE 271	Programmable Logic Controller I	3		INTE 110 and 175
Total Credit Hours Required		**67-69**		

A.A.S. Indus. Tech. Construction Management

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business *or*	3		MATH 20/20L or appropriate placement test score (MATH 100)
MATH 110	Intermediate Algebra			MATH 40/40L or appropriate placement test score (MATH 110)
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: ART 108, 150, 151, PHIL 100, PSYC 140, SOCI 160, HIST 120, 121, POLS 135, ENGL 215		6		
Specific Program Requirements				
BSAD 100	Introduction to Accounting *or*	3		
BSAD 101	Accounting Principles I			
BSAD 109	Principles of Supervision *or*	3		
BSAD 120	Organizational Behavior			
BSAD 127	Management Internship I *and*	6		
BSAD 128	Management Internship II			
	or			
	Select three of the following four CSMG courses:			
CSMG 150	Construction Management Leadership			
CSMG 160	Construction Project Management			
CSMG 170	Communications for the Construction Trades			
CSMG 180	General and Specialty Contractor Dynamics			
BSAD 219	Planning and Growing an Entrepreneural Venture *or*	3		
BSAD 204	Business Management			
BSAD 153	General Ledger Accounting Systems, PC *or*	3		BSAD 101 (BSAD 153)
CSIS 115	Intro to Microcomputer Applications *or*			
CSIS	Any Programming Language Course			
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		
BSAD 254	Business Law I *or*	3		
BSAD 255	Business Law II *or*			
BSAD 270	Legal Environment of Business			
CSMG 110	Problem Solving/Decision Making	1		
CSMG 120	OSHA and Site Security	1		
CSMG 130	Cost Awareness/Production Control	1		
CSMG 140	Beginning Print Reading	2		
CSMG 205	Intermediate Print Reading	2		CSMG 140
CSMG 210	Accident Prevention and Loss Control	1		
CSMG 220	Construction Planning and Scheduling	2		
CSMG 230	Productivity Improvement	2		
CSMG 250	Construction Estimating	2		
CSMG 260	Contract Documents	2		
CSMG 270	Advanced Print Reading	2		CSMG 205
Total Credit Hours Required		**63**		

A.A.S. INTE Electric Utility Line Technician

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103R	Technical Mathematics I with Review* *and*			MATH 20/20L with appropriate placement score (MATH 103R)
MATH 104	Technical Mathematics II*			MATH 103 (MATH 104)
	or	6-7		MATH 110 or appropriate placement test score (MATH 120)
MATH 120	College Algebra and			MATH 120 or appropriate placement test score (MATH 130)
MATH 130	Trigonometry			
Specific Program Requirements				
CSIS 115	Introduction to Microcomputer Applications	3		
LINE 104	Pole Climbing Skills	5		
LINE 105	Electrical Distribution Systems	3		INTE 110
LINE 106	Safety and Accident Prevention	3		
INTE 110	Industrial Electrical Principles	3		Completion of or current enrollment in MATH 103
INTE 120	INTE Internship I	3		
INTE 124	Employment Strategies for Technical Careers	3		
LINE 210	Pole Framing and Construction Specifications	3		LINE 104 & 106
LINE 215	Setting and Replacing Poles	3		LINE 104 & 106
INTE 220	INTE Internship II	3		
LINE 237	Transformer Theory and Installation	3		LINE 106, INTE 110 and LINE 210
LINE 241	Conductor Installation and Metering	3		LINE 237
LINE 250	Fusing, Substations, & Voltage Regulation	3		LINE 241
LINE 251	Installation and Troubleshooting Underground Distribution Systems	3		LINE 250
LINE 252	Advanced Pole Climbing	3		LINE 104 and 106
Total Credit Hours Required		**65-66**		

*minimum requirements

Electric Utility Line Technician Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 115	Introduction to Microcomputer Applications	3		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate
LINE 104	Pole Climbing Skills	5		
LINE 105	Electrical Distribution Systems	3		INTE 110
LINE 106	Safety and Accident Prevention	3		
INTE 110	Industrial Electrical Principles	3		Completion of or current
LINE 210	Pole Framing and Construction Specifications	3		LINE 104 and 106
LINE 215	Setting and Replacing Poles	3		LINE 104 and 106
LINE 237	Transformer Theory and Installation	3		LINE 106, INTE 110 and LINE 210
LINE 241	Conductor Installation and Metering	3		LINE 237
LINE 250	Fusing, Substations, & Voltage Regulation	3		LINE 241
LINE 251	Installation and Troubleshooting Underground Distribution Systems	3		LINE 250
LINE 252	Advanced Pole Climbing	3		LINE 104 and 106
MATH 103	Technical Mathematics I *or*	3-4		MATH 40/40L or appropriate placement test score
MATH 103R:	Technical Mathematics I w/ Review			MATH 103
MATH 104:	Technical Mathematics II	3		MATH 20/20L or appropriate placement test score
Total Credit Hours Required		**47-48**		

Industrial Technologies (Cont.)

Industrial Electrical Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSOF 100 Introduction to Personal Computing	1		
EHSS 111 Introduction to Health and Safety in General Industry	1		
INTE 110 Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115 Electrical Print Reading	3		INTE 110
INTE 142 National Electric Code	3		INTE 110
INTE 175 Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 271 Programmable Logic Controller I	3		INTE 110 and 175
INTE 273 Variable Speed Motors and Drives	3		INTE 175 and 271
Any 2 of the following: INTE 272 Programmable Logic Controller II INTE 275 Electric Motor Controls II INTE 277 Program Logic Controller Troubleshooting INTE 225 Industrial Print Reading	6		INTE 115 and 271 INTE 175 INTE 115 and 271 INTE 115
Electives: CHEM, CSIS, INTE, MATE, PHYS	3		
Total Credit Hours Required	**32**		

Industrial Maintenance Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSOF 100 Introduction to Personal Computing	1		
EHSS 111 Introduction to Health and Safety in General Industry	1		
INTE 110 Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115 Electrical Print Reading	3		INTE 110
INTE 122 Layout & Fabrication	3		
INTE 140 Fundamentals of Industrial Maintenance	3		
INTE 142 National Electric Code	3		INTE 110
INTE 150 Fundamentals of Hydraulics	3		
INTE 151 Industrial Rigging	3		
INTE 167 Welding I SMAW	3		
INTE 175 Electric Motor Controls I	3		HVAC 109 or INTE 115
MATE 115 Blueprint Reading for the Trades	3		
Total Credit Hours Required	**32**		

Millwright Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSIS 115 Introduction to Microcomputer Applications	3		
EHSS 111 Introduction to Health and Safety in General Industry	1		
INTE 110 Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 122 Welding Layout & Fabrication	3		
INTE 140 Fundamentals of Industrial Maintenance	3		
INTE 150 Fundamentals of Hydraulics	3		
INTE 151 Industrial Rigging	3		
INTE 167 Welding I SMAW	3		
INTE 168 Welding II SMAW	3		INTE 167
INTE 260 Pipe Fitting Fundamentals	3		HVAC 201
MATE 115 Blueprint Reading for the Trades	3		
MATE 116 Geometric Dimensioning & Tolerancing Printreading	2		MATE 115
Total Credit Hours Required	**33**		

Stationary Engineer Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
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 111 and 120
HVAC 221	Commercial Refrigeration	4		HVAC 109 and 120
INTE 110	Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115	Electrical Print Reading	3		INTE 110
INTE 150	Fundamentals of Hydraulics	3		
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 271	Programmable Logic Controller I	3		INTE 110 and 175
Total Credit Hours Required		**33**		

Welding Job Ready Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
INTE 122	Welding Layout and Fabrication	3		
INTE 151	Industrial Rigging	3		
INTE 167	Welding I SMAW	3		
INTE 168	Welding II SMAW	3		INTE 167
MATE 115	Blueprint Reading for the Trades	3		
MATH 103	Technical Math I	3		MATH 20/20L or appropriate placement test score
Total Credit Hours Required		**18**		

AAS INTE – Lineman Technician/Cable Splicer

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101:	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120: HIST 121: POLS 135: POLS 136: POLS 137:	United Stated History to 1865 or United States History Since 1865 or Introduction to Political Science or Introduction to American National Politics or Introduction to State and Local Politics	3		
SPDR 100:	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103: MATH 104: MATH 120: MATH 130:	Technical Mathematics I and Technical Mathematics II or College Algebra and Trigonometry	6		MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
SPAN 100:	Beginning Occupational Spanish	3		

Specific Program Requirements		Credits	Semester Taken	Prerequisites
LINE 106:	Safety and Accident Prevention	3		
INTE 110:	Industrial Electrical Principles	3		MATH 103
INTE 120:	INTE Internship I	3		
INTE 124:	Employment Strategies for Technical Careers	3		
INTE 220:	INTE Internship II	3		
Lineman Technician/Cable Splicer Apprenticeship*		30		
Total Credit Hours Required		**63**		
*Federally approved Lineman Technician/Cable Splicer apprenticeship program that contains a minimum of 450 clock hours of classroom and instruction and 8000 clockhours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.				

Industrial Technologies (Cont.)

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	United States History to 1865 *or* United States History Since 1865 *or* Introduction to Political Science *or* Introduction to American National Politics *or* Introduction to State and Local Politics	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103 MATH 104 MATH 120 MATH 130	Technical Mathematics I* **and** Technical Mathematics II* **or** College Algebra **and** Trigonometry	6		MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
Any course numbered 100 or higher from the following disciplines: ART, ATH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (Except 104, 110 or GIS Courses),HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5		

AAS INTE – Industrial Maintenance Electrician

Specific Program Requirements		Credits	Semester Taken	Prerequisites
EHSS 100:	Introduction to Environmental, Health & Safety	3		
INTE 124:	Employment Strategies for Technical Careers	3		
INTE 225:	Industrial Electrical Print Reading	3		
INTE 272: INTE 277:	Programmable Logic Controller II or Programmable Logic Controller Troubleshooting	3		INTE 115 AND INTE 271
INTE 276:	Electrical Troubleshooting	3		INTE 275
Industrial Maintenance Electrician Apprenticeship*		30		
Total Credit Hours Required		**63-65**		
*Federally approved Industrial Maintenance Electrician apprenticeship program that contains a minimum of 450 clock hours of classroom and instruction and 8000 clockhours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.				

AAS INTE – Industrial Mechanic

Specific Program Requirements		Credits	Semester Taken	Prerequisites
EHSS 100:	Introduction to Environmental, Health & Safety	3		
INTE 124:	Employment Strategies for Technical Careers	3		
INTE 150:	Fundamentals of Hydraulics	3		
INTE 151:	Industrial Rigging	3		
MATE 130:	Machining for Related Occupations	5		
Industrial Mechanic Apprenticeship*		30		
Total Credit Hours Required		**65-67**		
*Federally approved Industrial Mechanic apprenticeship program that contains a minimum of 450 clock hours of classroom and instruction and 8000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.				

AAS INTE – Industrial Welder

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110:	Technology & Information Management	3		
LINE 106:	Safety and Accident Prevention	3		
INTE 124:	Employment Strategies for Technical Careers	3		
INTE 151:	Industrial Rigging	3		
MATE 130:	Machining for Related Occupations	5		
Industrial Welders Apprenticeship*		30		
Total Credit Hours Required		**65-67**		
*Federally approved Industrial Welder apprenticeship program that contains a minimum of 450 clock hours of classroom and instruction and 8000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.				

Industrial Technologies (Cont.)

AAS INTE – Industrial Pipefitter/Sprinkler Fitter

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology & Information Management	3		
LINE 106	Safety and Accident Prevention	3		
INTE 124:	Employment Strategies for Technical Careers	3		
INTE 150:	Fundamentals of Hydraulics	3		
INTE 151:	Industrial Rigging	3		
Industrial Pipefitter/Sprinkler Fitter Apprenticeship*		30		
Total Credit Hours Required		**63-65**		
*Federally approved Industrial Pipefitter/Sprinkler Fitter apprenticeship program that contains a minimum of 450 clock hours of classroom and instruction and 8000 clock hours of on-the-job training. Transcripted upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.				

AAS INTE – Instrumentation & Controls

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	United States History to 1865 *or* United States History Since 1865 *or* Introduction to Political Science *or* Introduction to American National Politics *or* Introduction to State and Local Politics	3		
MATH 120 MATH 130 MATH 150	College Algebra **and** Trigonometry **or** Precalculus	5-6		MATH 110 or appropriate placement score MATH 120 or appropriate placement or score MATH 110 or appropriate placement score
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement score

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement score
EHSS 111	Intro to Health & Safety for General Industry	1		
ETEC 110	Basic Electronics	3		Completion of or concurrent enrollment in MATH 103 or higher
ETEC 111	Microcomputer Hardware Repair	3		CSIS 110
ETEC 118	AC Circuit Analysis	4		ETEC 110 or INTE 110
ETEC 130	Digital Electronics	3		Completion of or concurrent enrollment ETEC 110 or INTE 110
ETEC 220	Analog Devices	4		ETEC 118
ETEC 230	Microcomputer Architecture	4		ETEC 130
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 225	Industrial Electrical Print Reading	3		INTE 115
INTE 270	Instrumentation & Process Control	3		INTE 225 and INTE 272
INTE 271	Programmable Logic Controllers I	3		INTE 110 and INTE 175
INTE 272	Programmable Logic Controllers II	3		INTE 115 and INTE 271
INTE 277	Programmable Logic Controller Troubleshooting	3		INTE 115 and INTE 271
Total Credit Hours Required		**63-64**		

Instrumentation & Controls Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement score
EHSS 111	Intro to Health & Safety for General Industry	1		
ETEC 110	Basic Electronics Principles	3		Completion of or concurrent enrollment in MATH 103 or higher
ETEC 118	AC Circuit Analysis	3		ETEC 110 or INTE 110
ETEC 130	Digital Electronics	4		Completion of or concurrent enrollment ETEC 110 or INTE 110
ETEC 230	Microcomputer Architecture	4		ETEC 130
MATH 120 MATH 130 MATH 150	College Algebra **and** Trigonometry **or** Precalculus	5-6		MATH 110 or appropriate placement score MATH 120 or appropriate placement or score MATH 110 or appropriate placement score
Electives: *Choose three of the following:*		**9**		
ETEC 111	Microcomputer Hardware Repair			CSIS 110
INTE 175	Electric Motor Controls I			HVAC 109 or INTE 115
INTE 270	Instrumentation & Process Control			INTE 225 and INTE 272
INTE 271	Programmable Logic Controllers I			INTE 110 and INTE 175
Total Credit Hours Required		**32-33**		

Interior Design

Offered at Johnson County Community College
Coordinated at MCC

A.A.S. Interior Design ....68 Credits
A.A.S. Interior Entrepreneurship...........................68 Credits
A.A.S. Interior Merchandising...............................68 Credits
    Interior Design Retail Sales/Manufacturers
        Representative Certificate.........................30 Credits
    Interior Products Sales Representative
        Certificate...17 Credits
    Interior Design Advanced Certificate.............31 Credits
    Interior Design Merchandising Entrepreneurship
        Certificate...31 Credits

This program leads to an Associate in Applied Science degree. Associates 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. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

A.A.S. Interior Design

Specific Program Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
ART 150	History of Art I	3		
BSAD 221	Business Communications	3		
ECON 110 ECON 210	Introduction to Economics *or* Macroeconomics	3		MATH 40/40L or appropriate placement test score (ECON 210)
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
MATH 100	Mathematics for Business	3		MATH 20/20L or appropriate placement test score
Elective:	Physical Education or Health (see below)	1		See Courses section of this catalog for individual course prerequisites.
Specific Program Requirements *Must be taken at Johnson County Community College*				
DRAF 164	Architectural Drafting for Interior Design	3		
DRAF 264	CAD:Interior Design*	3		
ITMD 121	Interior Design	3		
ITMD 123	Space Planning*	3		
ITMD 125	Interior Textiles	3		
ITMD 129	Design Presentation*	3		
ITMD 132	Materials and Resources	3		
ITMD 133	Furniture & Ornamentation/Antiquity to Renaissance	3		
ITMD 140	Window Treatments*	1		
ITMD 145	Upholstered Furniture*	1		
ITMD 148	History of Asian Furniture and Design*	2		
ITMD 149	Casegoods*	1		
ITMD 150	Asian Rugs and Carpets	1		
ITMD 180	Leadership in Design	1		
ITMD 213	Lighting Design & Planning*	3		
ITMD 221	Residential Design*	3		
ITMD 231	Furniture and Ornamentation/Renaissance to 20th Century	3		
ITMD 239	Capstone: Interior Design*	2		
ITMD 271	Budget & Estimating*	3		
ITMD 273	Interiors Seminar: Practices and Procedures*	2		
ITMD 282	Interiors Internship I*	1		
ITMD 284	Interiors Internship II*	1		
MKT 134	Professional Selling	3		
Total Credit Hours Required		**68**		

*Prerequisite/corequisite required

*Additional recommended ITMD courses, not included in program requirements:
ITMD 127   Elements of Floral Design*
ITMD 143   Accessory Fundamentals*
ITMD 175   Advanced Floral Design
ITMD 189   Sustaining Design
ITMD 250   20th Century Designers
ITMD 295   Field Study: Design and Merchandising*
ITMD 296   Interior Design: The Orient (Travel for Credit)
Health, Physical Education and Recreation Elective must be one of the following: DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 141, 142, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

*Prerequisite/corequisite required

A.A.S. Interior Entrepreneurship

Specific Program Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
ART 150	History of Art I	3		
BSAD 221	Business Communications	3		Satisfactory ASSET score or completion of ENGL 30
ECON 110 ECON 210	Introduction to Economics *or* Macroeconomics	3		MATH 40/40L or appropriate placement test score (ECON 210)
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
MATH 100	Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
Elective:	Physical Education or Health (see below)	1		See Courses section of this catalog for individual course prerequisites.
Business/Marketing/Entreprenuership Electives at MCC or JCCC**		9		
Specific Program Requirements *Must be taken at Johnson County Community College*				
DRAF 164	Architectural Drafting for Interior Design	3		
ITMD 121	Interior Design	3		
ITMD 123	Space Planning*	3		
ITMD 125	Interior Textiles	3		
ITMD 132	Materials and Resources	3		
ITMD 133	Furniture and Ornamentation/Antiquity to Renaissance	3		
ITMD 180	Leadership in Design	1		
ITMD 231	Furniture and Ornamentation/Renaissance to 20th Century	3		
ITMD 237	Capstone: Merchandising and Entrepreneurship*	2		
ITMD 271	Budgeting & Estimating*	3		
ITMD 273	Seminar: Business Practices and Procedures*	2		
ITMD 282	Interiors Internship I*	1		
ITMD 284	Interiors Internship II*	1		
MKT 134	Professional Selling	3		
ITMD	Electives*	9		
Total Credit Hours Required		**68**		

*Prerequisite/corequisite required

**Recommended Business/Entrepreneurship/Marketing Electives at MCC:
BSAD 101   Accounting Principles I
BSAD 219   Planning and Growing an Entrepreneurial Venture
BSAD 205   Marketing
*Recommended Business/Entrepreneurship/Marketing Electives at JCCC:
ENTR 131   Financial Management for Small Business
ENTR 142   FastTrack Business Plan
ENTR 160   Legal Issues for Small Business
ENTR 180   Opportunity Analysis
MKT 221   Retail Management
*Recommended Interior Electives at JCCC:
ITMD 127   Elements of Floral Design
ITMD 140   Window Treatments*
ITMD 143   Accessory Fundamentals*
ITMD 145   Upholstered Furniture*
ITMD 147   Lighting Basics*
ITMD 148   History of Asian Furniture and Design
ITMD 149   Casegoods*
ITMD 150   Asian Rugs and Carpets
ITMD 175   Advanced Floral Design*
ITMD 213   Lighting Design and Planning*
ITMD 225   Interior Textiles II*
ITMD 250   20th Century Designers
ITMD 295   Field Study: Design and Merchandising*
ITMD 296   Interior Design: The Orient (travel for credit)*
Health, Physical Education and Recreation Elective must be one of the following: DANC 100, 111, 112, 121, 122, 123, 131, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 141, 142, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

*Prerequisite/corequisite required

Interior Design (Cont.)

A.A.S. Interior Merchandising

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
ART 150 History of Art I	3		
BSAD 221 Business Communications	3		
ECON 110 Introduction to Economics *or* ECON 210 Macroeconomics	3		MATH 40/40L or appropriate placement test score (ECON 210)
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
MATH 100 Mathematics for Business	3		MATH 20/20L or appropriate placement test score
Elective: Physical Education or Health	1		See Courses section of this catalog for individual course prerequisites.
Business/Marketing Electives at MCC or JCCC**	6		
Specific Program Requirements *Must be taken at Johnson County Community College*			
DRAF 164 Architectural Drafting/Residential Interior Design	3		
ITMD 123 Space Planning*	3		
FASH 125 Visual Merchandising	3		
FASH 135 Image Management *or* ITMD 180 Leadership Design	1		
ITMD 121 Interior Design	3		
ITMD 125 Interior Textiles*	3		
ITMD 132 Materials and Resources	3		
ITMD 133 Furniture and Ornamentation/Antiquity to Renaissance	3		
ITMD 231 Furniture and Ornamentation/Renaissance to 20th Century	3		
ITMD 237 Capstone: Merchandising & Entrepreneurship*	2		
IMTD 271 Budgeting & Estimating*	3		
ITMD 273 Interiors Seminar: Business Practices & Procedures*	2		
ITMD 282 Interiors Internship I*	1		
ITMD 284 Interiors Internship II*	1		
MKT 134 Professional Selling	3		
ITMD Electives*	9		
Total Credit Hours Required	**68**		

*Recommended Interior Electives at JCCC:
ITMD 127   Elements of Floral Design
ITMD 140   Window Treatments*
ITMD 143   Accessory Fundamentals*
ITMD 145   Upholstered Furniture*
ITMD 147   Lighting Basics*
ITMD 148   History of Asian Furniture and Design
ITMD 149   Casegoods*
ITMD 150   Asian Rugs and Carpets
ITMD 175   Advanced Floral Design*
ITMD 213   Lighting Design and Planning*
ITMD 225   Interior Textiles II*
ITMD 250   20th Century Designers
ITMD 295   Field Study: Design and Merchandising*
ITMD 296   Interior Design: The Orient (travel for credit)
*Recommended Business/Marketing Electives at JCCC:
BUS 145   Small Business Management
MKT 121   Retail Management
MKT 221   Sales Management
**Recommended Business/Marketing Electives at MCC:
BSAD 112   Retailing Priciples
BSAD 205   Marketing
Health, Physical Education and Recreation Elective must be one of the following: DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 141, 142, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

*Prerequisite/corequisite required

Interior Design (Cont.)

Interior Design Retail Sales/Manufacturers Representative Certificate

Specific Program Requirements *Must be taken at one of the MCC campuses*	Cred-its	Semester Taken	Prerequisites
BSAD 112 Retailing Principles	3		
MATH 100 Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
Specific Program Requirement *Must be taken at Johnson County Community College*			
FASH 125 Visual Merchandising	3		
FASH 135 Image Management	1		
ITMD 121 Interior Design I	3		
ITMD 125 Interior Textiles	3		
ITMD 132 Materials and Resources	3		
ITMD 271 Budgeting and Estimating*	3		
ITMD 282 Interiors Internship I	1		
ITMD 284 Interiors Internship II	1		
MKT 121 Retail Management	3		
MKT 134 Professional Selling	3		
ITMD: Electives*	3		
Total Credit Hours Required	**30**		

*Recommended Electives:
ITMD 127:   Elements of Floral Design
ITMD 140:   Window Treatments
ITMD 143:   Accessory Fundamentals*
ITMD 145:   Upholstered Furniture*
ITMD 147:   Lighting Design and Planning*
ITMD 149:   Casegoods*
ITMD 213:   Lighting Design and Planning*
ITMD 225:   Interior Textiles II*
ITMD 231:   Furniture and Ornamentation: Renaissance–20th Century
ITMD 273:   Seminar: Practices and Procedures*

*Prerequisite/corequisite

Interior Products Sales Representative Certificate

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
MATH 100 Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
Specific Program Requirement *Must be taken at Johnson County Community College*			
FASH 135 Image Management	1		See JCCC course descriptions in the Courses section of this catalog for individual course pre-requisites.
ITMD 121 Interior Design I	3		
ITMD 125 Interior Textiles	3		
ITMD 132 Materials and Resources	3		
ITMD 282 Interiors Internship I*	1		
MKT 134 Professional Selling	3		
Total Credit Hours Required	**17**		

*Prerequisite/corequisite

Interior Design (Cont.)

Interior Design & Merchandising Entrepreneurship Certificate

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
BSAD 219 Planning and Growing an Entrepreneurial Venture	3		
MATH 100 Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
Specific Program Requirement *Must be taken at Johnson County Community College*			
DRAF 164 Architectural Drafting/Residential Interior Design	3		
ITMD 121 Interior Design	3		
ITMD 125 Interior Textiles	3		
ITMD 132 Materials and Resources	3		
ENTR 180 Opportunity Analysis	2		
ITMD 123 Space Planning*	3		
ITMD 271 Budgeting and Estimating*	3		
ITMD 273 Interiors Seminar: Practices and Procedures*	2		
ITMD 282 Interiors Intership I*	1		
ENTR 160 Legal Issues for Small Business	2		
ENTR 142 Fast Trac Business Plan	3		
Choose 3 of the 5 one-credit hour courses *Must be taken at Johnson County Community College*			
ITMD 127 Elements of Floral Design	1		
ITMD 175 Advanced Floral Design*	1		
ITMD 140 Window Treatments*	1		
ITMD 145 Upholstered Furniture*	1		
ITMD 147 Lighting Basics*	1		
Additional Recommended ENTR Coursework *Must be taken at Johnson County Community College*			
ENTR 195 Franchising*	3		
ENTR 220 Entrepreneurial Marketing*	2		
ENTR 131 Financial Management for Small Business*	2		
Total Credit Hours Required	**31**		

Interior Design Advanced Certificate

This certificate is designed for students who wish to be certified or registered interior designers.
Students must have completed the Interior Design AAS degree.

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
ART 103 Design Foundations *or*	3		
ART 151 Art History II	3		
Specific Program Requirement *Must be taken at Johnson County Community College*			
DRAF 230 Intermediate CAD: AutoCAD* *or* ART 129 Design Color	3		
ITMD 225 Interior Textiles II*	3		
ITMD 223 Commercial Design*	3		
ITMD 219 Issues in Interior Design*	3		
ITMD 234 Kitchen and Bath: Planning and Design*	3		
Interior Design Electives	3		
Interior Design Electives *Must be taken at Johnson County Community College* *Choose 3 credit hours from the following list*			
ITMD 127 Elements of Floral Design	1		
ITMD 143 Accessory Fundamentals*	1		
ITMD 175 Advanced Floral Design*	1		
ITMD 250 20th Century Designers	1		
ITMD 295 Field Study: Design and Merchandising*	3		
ITMD 296 Interior Design: The Orient	3		
Total Credit Hours Required	**21**		

*Prerequisites/corequisites required

International Studies

International Studies Certificate.......................24-28 Credits

Offered at MCC-Penn Valley, Blue River, Maple Woods, Longview

International Studies Certificate

This program is designed to enable students to develop a fundamental level of international and intercultural competence, and to prepare them to assume their role in a politically, economically and culturally interdependent world. The program is especially beneficial to students planning to transfer to four-year colleges and universities and to students desiring international education.

General Education Requirements	Credits	Semester Taken	Prerequisites
HUMN 103 Introduction to International Studies	3		
GEOG 105 World Geography	3		
One of the following Humanities courses:			
ART 108, ART 205, ENGL 150, ENGL 151, ENGL 167, ENGL 220, ENGL 221, ENGL 265, HUMN 140, HUMN 141, MUSI 160, PHIL 102	3		
One of the following History courses:			
HIST 133, HIST 134, HIST 145	3		
One of the following Social Science courses:			
ANTH 110, ECON 210, GEOG 111, GEOG 112, GEOG 113, POLS 234, SOSC 171	3		
One Foreign Language course 100 or above	3-5		
One of the following Human Diversity courses:			
ENGL 152, ENGL 155, ENGL 265, HIST 140, MUSI 116, SOCI 164, SOCI 210, SPDR 228	3		
One elective from the following:			
BIOL 238, BIOL 239, SPDR 133 or a second Humanities, History, Science or Foreign Language course from the selected international courses above	3-5		BIOL 101, 104, or 106 for BIOL 239
Total Credit Hours Required	**24-28**		

Land Surveying

Offered at MCC-Longview

A.A.S. Land Surveying .... 65-68 Credits
    Land Surveying Certificate .... 24-26 Credits

This program leads to an Associate in Applied Science degree or certificate prepares an individual to take the state-licensing exam to become a Registered Land Surveyor in the state of Missouri and Kansas.

A.A.S. Land Surveying

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
ENGL 215	Technical Writing	3		ENGL 101
GEOL 101 PHYS 106	Physical Geology *or* General Astronomy	5		
HIST 120 HIST 121	United States History to 1865 United States History Since 1865	3		
ECON 110 ECON 210 PHIL 203 POLS 135 POLS 136 POLS 137	Intro to Economics Macroeconomics Ethics Introduction to Political Science Introduction to American National Politics Introduction to State and Local Politics	3		ECON 210 (MATH 40/40L or appropriate placement score)
MATH 105 MATH 120 MATH 130 MATH 150	Algebra and Trigonometry for Land Surveyors *or* College Algebra *and* Trigonometry *or* Precalculus	4-6		MATH 40/40L or appropriate placement score MATH 110 or appropriate placement test score (MATH 120, 130 and 150)
MATH 115	Statistics	3		MATH 110 or appropriate placement test score
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
BSAD 219	Planning and Growing an Entrepreneurship Venture	3		
ETEC 152	Engineering Graphics and CADD I	5		MATH 40/40L
GEOG 120	Introduction to Geographic Information Systems	3		
SRVY 135	Elementary Surveying	3		MATH 105 or MATH 130 or MATH 150
SRVY 137	Subdivision Planning and Layout	3		SRVY 135 and DRAF 152
SRVY 235	Advanced Surveying	3		SRVY 135
SRVY 236	Boundary Control and Legal Principles	3		SRVY 135
SRVY 237	Evidence and Procedures for Boundary Location	3		SRVY 135
SRVY 244	Fundamentals of GPS Surveying	3		SRVY 135
Two courses from the following list: BSAD 101 Accounting and Principles I ETEC 269 CADD II GEOG 220 GIS Database and Design		6-7		ETEC 152 or 169 (ETEC 269) GEOG 120 (GEOG 220)
Total Credit Hours Required		**65-68**		

Land Surveying Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
ETEC 152	Engineering Graphics and CADD I	5		MATH 40/40L
MATH 105 MATH 120 MATH 130 MATH 150	Algebra & Trigonometry for Land Surveyors *or* College Algebra *and* Trigonometry *or* Precalculus	4-6		MATH 40 or appropriate on placement test score (MATH 105) MATH 110 or appropriate placement test score (MATH 120, 130 and 150)
SRVY 135	Elementary Surveying	3		MATH 105, 130 or 150
SRVY 137	Subdivision Planning and Layout	3		SRVY 135 and ETEC 152
SRVY 235	Advanced Surveying	3		SRVY 135
SRVY 236	Boundary Control and Legal Principles	3		SRVY 135
SRVY 237	Evidence and Procedures for Boundary Location	3		SRVY 135
Total Credit Hours Required		**24-26**		
This certificate prepares an individual to take the state-licensing exam to become a Registered Land Surveyor with the state of Missouri.				

Manufacturing Technology

Offered at MCC-Business & Technology

A.A.S. Manufacturing Technology .... 68-70 Credits
    Manufacturing Technology
        Certificate .... 40 Credits
    Manufacturing Computer Numerical
        Control Operator Certificate........ 22-24 Credits
    Manufacturing Technology
        Career Certificate .... 12 Credits

This Manufacturing Technology 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, and certificates 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.

A.A.S. Manufacturing Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Math I* *and*			MATH 40/40L or appropriate placement test score (MATH 103)
MATH 104	Technical Math II*			MATH 103 (MATH 104)
	or	6		MATH 110 or appropriate placement test score (MATH 120)
MATH 120	College Algebra *and*			MATH 120 or appropriate placement test score (MATH 130)
MATH 130	Trigonometry			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ECON, ENGL, Foreign Language, GEOG (except 104, 110 and GIS Courses), PHIL, PSYC, SOSC		3-5		
Specific Program Requirements				
CSOF 100	Introduction to Personal Computing	1		
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 124	Employment Strategies for Technical Careers	3		
MATE 100	Introduction to Manufacturing Technology	2		
MATE 101	Machining and Tooling I	5		MATE 100
MATE 102	Machining and Tooling II	5		MATE 100 and 101
MATE 103	Machining and Tooling III *and*			MATE 102
MATE 104	Machining and Tooling IV			MATE 103 or concurrent enrollment (MATE 104)
	or	6		MATE 102 (MATE 105)
MATE 105	Manufacturing Internship I *and*			MATE 102 (MATE 205)
MATE 205	Manufacturing Internship II			
MATE 114	Metrology	2		
MATE 115	Blueprint Reading for the Trades	3		
MATE 116	Geometric Dimensioning and Tolerancing Printreading	2		MATE 115
MATE 131	NIMS Level I Credentials Job Planning, Benchwork, etc. *and*			
MATE 132	NIMS Level I Credentials Milling *and*			
MATE 133	NIMS Level I Credentials Lathe-Chucking *and*	5		MATE 100, 101, 102, 115 and MATH 103.
MATE 134	NIMS Level I Credentials Lathe-Turning *and*			
MATE 135	NIMS Level I Credentials Surface Grinding			
MATE 201	Basic Metallurgy	3		MATE 101
MATE 210	Computerized Numerical Control-Lathe	3		MATE 101 or 130; MATH 104 or concurrent enrollment
MATE 215	Computerized Numerical Control Mill	3		MATE 101 or 130; MATH 104 or concurrent enrollment
MATE 225	Master Cam I	3		CSIS 110, MATE 210 and 215
MATE 226	Master Cam II	3		MATE 225
Total Credit Hours Required		**68-70**		

*minimum requirements

Manufacturing Technology Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
SPDR 100	Fundamentals of Speech	3		English 30 or appropriate placement test score
Specific Program Requirements				
MATE 100	Introduction to Manufacturing Technology	2		
MATE 101	Machining and Tooling I	5		MATE 100
MATE 102	Machining and Tooling II	5		MATE 100 and 101
MATE 114	Metrology	2		
MATE 115	Blueprint Reading for the Trades	3		
MATE 116	Geometric Dimensioning and Tolerancing Printreading	2		MATE 115
MATE 210	Computerized Numerical Control-Lathe	3		MATE 101 or 103; MATH 103 or concurrent enrollment
MATE 215	Computerized Numerical Control-Mill	3		MATE 101 or 103; MATH 103 or concurrent enrollment
MATE 225	Master Cam I	3		CSOF 100, MATE 210 or 215
MATH 103 MATH 104 *or* MATH 120 MATH 130	Technical Math I* *and* Technical Math II* College Algebra *and* Trigonometry	6		MATH 40 or 40L or appropriate placement test score (MATH 103) MATH 103 (MATH 104) MATH 110 or appropriate placement test score (MATH 120) MATH 120 or appropriate placement test score (MATH 130)
Total Credit Hours Required		**40**		

Manufacturing Computer Numerical Control Operator Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
MATE 100 MATE 101 MATE 130	Introduction to Manufacturing Technology *and* Machining & Tooling I *or* Machinig for Related Occupations	5-7		MATE 100 (MATE 101)
MATE 114	Metrology	2		
MATE 115	Blueprint Reading for the Trades	3		
MATE 210	Computer Numerical Control - Lathe	3		MATE 101 or 130, MATH 103 or concurrent enrollment
MATE 215	Computer Numerical Control - Mill	3		MATE 101 or 130, MATH 103 or concurrent enrollment
MATH 103	Technical Mathematics I	3		MATH 40/40L or appropriate score on placement test
INTE 124	Employment Strategies for Technical Careers	3		
Total Credit Hours Required		**22-24**		

Manufacturing Technology Career Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSOF 100	Introduction to Personal Computing	1		Keyboarding skills equivalent to or co-enrollment in CSOF 80
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 101	Introduction to Industrial Technologies	1		
INTE 124	Employment Strategies for Technical Careers	3		
MATE 100	Introduction to Manufacturing Technology	2		
MATE 117	Materials, Processes and Quality	4		
Total Credit Hours Required		**12**		

Medical Transcription

Offered at MCC-Penn Valley

Medical Transcription Certificate .... 30 Credits

   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.

Admission to the Program
   Enrollment is limited. Students must apply for admission and meet the following requirements:

1. Be admitted to MCC-Penn Valley.
2. Submit transcripts from each college previously attended to MCC-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 CSIS 115 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.

Medical Transcription Certificate

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
Specific Program Requirements			
BIOL 108 Introductory Anatomy and Physiology	5		
BSAD 161 Professional Development *or* BSAD, CSOF Elective	3		
CSIS 115 Introduction to Microcomputer Applications	3		
HITE 103 Medical Terminology for Health Records I	3		
MTRN 101 Medical Transcription I	5		ENGL 101 and CSIS 115
MTRN 112 Medical Transcription II	5		HITE 103 and MTRN 101 and concurrent enrollment in MTRN 113
MTRN 113 Medical Terminology for Health Records II	3		BIOL 108, HITE 103, and MTRN 101
Total Credit Hours Required	**30**		

Music Technology

Offered at Kansas City Kansas Community College
Coordinated at MCC

A.A.S. Music Technology .... 67-70 Credits

This program leads to a program of Associate in General Studies with an emphasis in Music Technology. The degree is for students wishing to pursue employment in a technology-related aspect of the music business. Students must be accepted into the program by both MCC and KCKCC. The student is awarded the degree from KCKCC upon successful completion of all requirements. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

A.A.S. Music Technology

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102 Composition and Reading II	3		
PSYC 140 General Psychology *or* SOCI 160 Sociology	3		
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 120 College Algebra	3		MATH 110 or appropriate placement test score
MUSI 108 Music Appreciation	3		
Humanities Core	3		
Specific Program Requirements *Can be taken at KCKCC or MCC*			
MUSC 111 Music Theory I (MUSI 110)	4		
MUSC 112 Music Theory II (MUSI 111)	4		
MUSC 213 Music Theory III (MUSI 201)	4		
MUSC 214 Music Theory IV (MUSI 202)	4		
Performance Groups (3 semesters)	2		
Piano / Applied Piano (4 semesters) *or* Other Applied Lessons (4 semesters)	4		
Different instrument or voice to above *Either this requirement or below must be piano*			
Piano Class/ Applied Piano (2 semesters) *or* Voice Class/ Applied Voice (2 semesters) *or* Other Applied Lessons (2 semesters)	2		
Different instrument or voice to above *Either this requirement or above must be piano*			
NASC 130 Introductory Physics at KCKCC *or*	3		
PHYS 101 Introductory Physics at MCC	5		
Specific Program Requirements *Must be taken at KCKCC*			
HUDV 101 Strategies for Academic Excellence/Lifelong Learning			
MUSC 106 Music Applications for Computer			
MUSC 107 Advanced Music Computing			
MUSC 201 Songwriting			
MUSC 230 Music and Multimedia	3		
MUSC 240 Sound Editing and Synthesis	3		
MUSC 250 Audio and Recording Techniques	3		
Specific Program Requirements *Must be taken at KCKCC*			
Total Credit Hours Required	**67-70**		
* If Applied Piano is used to satisfy piano requirement, a different instrument must be chosen for this requirement.			

Nursing, Practical

Offered at MCC-Penn Valley

Practical Nursing Certificate .... 43 Credits

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 Metropolitan Community College.
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.

Practical Nursing Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
PNUR 100	Personal and Vocational Concepts	1		Students must meet entrance requirements and must be accepted into Practical Nursing program
PNUR 102	Fundamentals of Practical Nursing I	1.5		Entry to Practical Nursing program
PNUR 103	Fundamentals of Practical Nursing II	8.5		PNUR 102 or CNA
PNUR 104	Body Structure and Function	2		Successful completion of all previously attempted courses in the program
PNUR 110	Pharmacology	3.5		
PNUR 128	Mental Health Nursing	2.5		Successful completion of all previously attempted courses in the program
PNUR 132	The Childbearing Family	4		PNUR 100, 102 or equivalent, PNUR 103 and 104
PNUR 138	Nursing of the Adult I	9		Successful completion of all previously attempted courses; PNUR 100, 102, 103, 104 and 110
PNUR 144	Nursing of the Adult II	8		PNUR 100, 102 or equivalent, 103, 104, 110 and 138
PNUR 146	Leadership	3		Successful completion of all previously attempted courses in the program
Total Credit Hours Required		**43**		

Nursing, Professional

Offered at MCC-Penn Valley

A.A.S. Professional Nursing ....70-76 Credits
LPN-ADN Bridge Program..74-80 Credits

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 care facilities.

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 the 15 causes listed in Section 335.066 of the Missouri Revised Statues 1986. Copies of this law are available from the Missouri State Board of Nursing.

Accreditation

• The nursing program is approved by the Missouri State Board of Nursing and is accredited by The National League of Nursing Accrediting Commission.

• The Missouri State Board of Nursing can be contacted at 3605 Missouri Boulevard, P.O. Box 656, Jefferson City, MO 65102-0656; telephone (573) 751-0681

• The National League for Nursing Accrediting Commission can be contacted at 61 Broadway, 33rd floor, New York, NY 10006; telephone (212) 363-5555

Admission Requirements for the beginning nursing student:
1. Apply to college
2. Request official copies of all transcripts sent to the Metropolitan Community College, Student Data Center, 3200 Broadway, Kansas City, MO 64111
3. Compass
• Must be completed for all applicants to Professional Nursing Program
• If Compass is more than two years old student will be required to retake
o Required Compass Scores:
- Reading 85
- English 65
- Algebra 40
• Any developmental courses required based on Compass scores must be completed with a grade of "C" or better
• ACT/SAT scores will not be accepted in place of Compass scores
4. Prerequisites
• Introduction to Cell Biology (BIOL 100) or Introductory Chemistry for Health Sciences (CHEM 105)
• General Psychology (PSYC 140)
• Anatomy and Physiology (BIOL 109) OR Human Anatomy (BIOL 110) and Human Physiology (BIOL 210)
• All prerequisites and courses within the curriculum plan must be completed with a grade of "C" or better
5. GPA
• Combined GPA for prerequisite courses must be 2.75 or better
6. Application deadline
• Applications for fall semester will be accepted from the first Thursday in January through the end of the business day on the first Thursday in February.
• Applications for the spring semester will be accepted from the first Thursday in August through the end of the business day on the first Thursday in September
• Must be postmarked by these dates or date stamped in office; applications will not be accepted if not within the published application period
• Faxed applications will not be accepted
• If not admitted to semester applied for student is required to reapply during the next application period
• Applications will not be accepted until all admission requirements have been met with the exception of the entrance exam
• A notification policy will be included with admission information packet

7. Entrance Testing
• The TEAS (Test of Essential Academic Skills) is the required entrance exam
• Students are eligible to take the TEAS after completion of all other admission requirements and submission of a program application
• Students eligible to take the entrance exam will be based on rank ordering and a predetermined number of exams will be given
• If a student takes and passes the entrance exam, but is not admitted based on rank ordering, the student would not be required to repeat the entrance exam the next time they apply
• Students will be allowed one retake of TEAS
• TEAS scores are valid for two years

Ranking of Applications

Ranking of applicants will be done following completion of admission requirements 1-6. Ranking will be used to determine eligibility to take the TEAS and for admission to the program. Ranking points will be assigned as follows:
1. Prerequisite GPA to the hundredth (i.e. prerequisite GPA of 3.57 = 3.57 ranking points)
2. One point for having documentation of completing a CNA course or three months of direct patient care experience. Experience must be documented on the Health Care Experience Verification form
3. One point for having completed Microbiology with a "C" or better at the time of application
4. One point for being in-district
5. Total points from all of the above will be added together and applicants rank ordered based on those totals
6. Student will receive a copy of their points and ranking in notification letter following application.

Procedure for Students Transferring Credits from another Professional Nursing Program
In addition to meeting all admission requirements listed, transfer students from other nursing programs are required to submit the following:
1. Official transcript from previous nursing program submitted to the Student Data Center as well as the MCC-Penn Valley Nursing Division
2. Letter of reference from the director of previous nursing program
3. School catalog from previous program
4. The Division Chair may require course descriptions and syllabi for all previous nursing courses in order determine transfer credits. Only courses with a grade of "C" or better will be considered for transfer.
5. Nursing courses greater than two years old will not be accepted for transfer.
6. Completion of RNUR 230 (Leadership/Management/Trends) and RNUR 244 (Adult Nursing III) at MCC will be required of all transfer students

Satisfactory Progress

All prerequisites, general education requirements and all nursing courses in the nursing curriculum must be passed with a grade of "C" or better. 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.

Nursing, Professional (Cont.)

A.A.S. Professional Nursing
This curriculum plan is for the beginning nursing student and leads to the A.A.S. in Nursing degree.

202702 - Revised:1/2009 Effective Summer 2009

Prerequisite Courses:		Credits	Semester Taken	Prerequisites
BIOL 100	Intro to Cell Biology *or*	3-5		MATH 20/20L or appropriate placement test score
CHEM 105	Introductory Chemistry			
BIOL 109	Anatomy and Physiology *or*	6-10		BIOL 100 or CHEM 105 (BIOL 109)
BIOL 110	Human Anatomy *and*			BIOL 100 or CHEM 105 and BIOL 110 (BIOL 110
BIOL 210	Human Physiology			& 210)
PSYC 140	General Psychology	3		
General Education Requirements				
BIOL 208	Microbiology	5		BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 101, 104, 106, 108, 109, or 110.
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
Students transferring one of these courses from out of state will be required to complete POLS 153 The Missouri Constitution.				
PSYC 243	Human Lifespan Development	4		PSYC 140
SOCI 160	Sociology	3		
SPDR 100	Fundamentals of Speech *or*	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
Specific Program Requirements				
RNUR 126	Fundamentals of Professional Nursing	6		Admission to the nursing program; completion of or concurrent enrollment in PSYC 243
RNUR 131	Essential Nursing Concepts	2		Admission to the nursing program; completion of or concurrent enrollment in PSYC 243
RNUR 134	Mental Health Nursing	4		Admission to nursing program; completion of RNUR 126, RNUR 131, PSYC 243; completion of or concurrent enrollment in BIOL 208
RNUR 138	Nursing Care of Women and Neonates	4		Admission to nursing program; completion of RNUR 126, RNUR 131, PSYC 243; completion of or concurrent enrollment in BIOL 208
RNUR 141	Adult Nursing I	3		Admission to nursing program; completion of RNUR 126, RNUR 131, PSYC 243; completion of or concurrent enrollment in BIOL 208
RNUR 230	Leadership/Management/Trends	2		Admission to nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, RNUR 234, RNUR 238, PSYC 243, BIOL 208; or admission to LPN Bridge program
RNUR 234	Child-Centered Nursing	4		Admission to nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, PSYC 243,BIOL 208; or admission to the LPN Bridge program
RNUR 238	Adult Nursing II	5		Admission to the nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, PSYC 243,BIOL 208; or admission to the LPN-Bridge program
RNUR 244	Adult Nursing III	7		Admission to the nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, RNUR 234, RNUR 238, PSYC 243,BIOL 208; or admission to the LPN Bridge program
Total Credit Hours Required		**70-76**		

Nursing, Professional (Cont.)

LPN-ADN Bridge Program

The LPN-ADN Bridge program allows licensed practical nurses to complete the requirements for an Associate in Applied Science in Nursing degree. Licensed Practical Nurses receive credit for knowledge and skills mastered in their practical nursing programs and work related experience following demonstration of competency through the LPN entrance exam.

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 ahs been found guilty of violating federal or state laws and for any of the 15 causes listed in Section 335.066 of the Missouri Revised Statues 1986. Copies of this law are available from the Missouri State Board of Nursing.

Accreditation
•The nursing program is approved by the Missouri State Board of Nursing and is accredited by The National League of Nursing Accrediting Commission
•The Missouri State Board of Nursing can be contacted at 3605 Missouri Boulevard, P.O. Box 656, Jefferson City, MO 65102-0656; telephone (573) 751-0681
•The National League of Nursing Accrediting Commission can be contacted at 61 Broadway, 33rd Floor, New York, NY 10006; telephone (212) 363-5555

Admission Requirements for the LPN Bridge Program
1. Apply to college
2. Request official copies of all non-MCC-KC transcripts sent to Metropolitan Community College, Student Data Center, 3200 Broadway, Kansas City, MO 64111
3. Compass
•   Must be completed for all new college students
•   If Compass is more than two years old student will be required to retake
•   Required Compass scores:
o   Reading 85
o   Writing 65
o   Algebra 40
•   Any developmental courses required based on Compass scores must be completed with a grade of "C" or better prior to submitting application
•   ACT/SAT scores will not be accepted in place of Compass scores
4. Application Prerequisites
•   All prerequisites must be completed prior to submitting an application to the LPN-ADN Bridge program with the exception of Professional Transitions, RNUR 115
•   All prerequisites must be completed with a minimum grade of "C"
•   Prerequisites are:
o   Introduction to Cell Biology (BIOL 100) OR Introductory Chemistry for Health Sciences (CHEM 105)
o   General Psychology (PSYC 140)
o   Anatomy and Physiology (BIOL 109) OR Human Anatomy (BIOL 110) and Human Physiology (BIOL 210)
o   Human Lifespan Development (PSYC 243)
o   Microbiology (BIOL 208)
5. GPA requirement
•   Combined GPA for all prerequisite courses must be 2.75 or better
6. LPN license
•   Submit copy of current Missouri Practical Nursing license with application
7. Application deadline
•   LPN-ADN Bridge applicants are admitted in the summer and fall semesters only
•   Application deadline is as follows:
o   Applications for admission to both semesters will be accepted from the third Thursday in February through the end of the business day on the second Thursday in March
o   Must be postmarked by these dates or date stamped in nursing office; applications will not be accepted if not within the published application period
o   Faxed applications will not be accepted
•   If not admitted to semester applied for student is required to reapply during next application period
•   Applications will not be accepted until all admission requirements have been met with the exception of the entrance exam

Nursing, Professional (Cont.)

8. Ranking
• Ranking of applicants will be done following completion of admission requirements 1-7. Ranking will be used to determine eligibility to take the entrance exam (See #9) and for admission to the program. Ranking points will be assigned as follows:
o Prerequisite GPA to the hundredth (i.e. prerequisite GPA of 3.57 = 3.57 ranking points)
o Two points for graduating from the MCC-Penn Valley Practical Nursing Program
o One point for being in-district or A+ eligible
o Applications for summer and fall 08 only:
• One point will be given to applicants who had a application on file prior to the change in admission policies AND met the new criteria when it was implemented (October, 2007)
o One point for documentation by employer/supervisor of six months experience as an LPN. Experience as and LPN must be documented on the LPN Experience Verification Form and submitted by employee/supervisor.
o Total points from all of the above will be added together and applicants rank order based on these totals
o Applicant will receive a copy of their points by notification letter following application deadline
9. Entrance Exam
• An entrance exam written by ATI (Assessment Technologies Institute) is required. The entrance exam tests LPN level nursing knowledge.
• Applicants are eligible to take the entrance exam after completion of all other admission requirements and submission of a program application
• ATI exams from other institutions will not be accepted
• Applicants eligible to take the entrance exam will be based on rank ordering (as listed in #8) and the predetermined number of exams to be given
• If an applicant takes and passes the entrance exam, but is not admitted based on rank ordering, the student would not be required to repeat the entrance exam the next time they apply as long as the exam results are less than two years old
• Applicants will be allowed one retake of the entrance exam
10. Procedure for notification
• Following submission of application the student will be notified by mail if admission criteria has been met or not met
• Following the application deadline students who met the admission criteria will be notified of eligibility for testing based on rank ordering within one month of the application deadline
• Notification will include written documentation of students ranking points
• Following completion of entrance testing the student will be notified by mail of eligibility for admission into the nursing program based on rank ordering
Satisfactory Progress
All prerequisites, general education requirements and all nursing courses in the nursing curriculum must be passed with a grade of "C" or better. 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.

Nursing, Professional (Cont.)

LPN-ADN Bridge Program

This program allows licensed practical nurses to complete the requirements for an Associate in Applied Science in Nursing degree.

Prerequisite Courses:				
BIOL 100 Introduction to Cell Biology *or* CHEM 105 Introductory Chemistry for Health Sciences	3-5		MATH 20/20L or appropriate placement test score
BIOL 109 Antomy and Physiology *or* BIOL 110 Human Anatomy *and* BIOL 210 Human Physiology	6-10		BIOL 100 or CHEM 105 (BIOL 109) BIOL 100 or CHEM 105 and BIOL 110 (BIOL 110 & 210)
PSYC 140 General Psychology	3		
BIOL 208 Microbiology	5		BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 101, 104, 106, 108, 109 or 110
PSYC 243 Human Lifespan Development	4		PSYC 140

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
The student must complete one of the following courses: HIST 120 United States History to 1865 *or* HIST 121 United States History since 1865 *or* POLS 135 Introduction to Political Science *or* POLS 136 Introduction to American National Politics *or* POLS 137 Introduction to State and Local Politics *Students transferring one of these courses from out of state will be required to complete POLS 153 The Missouri Constitution.*	3		
SOCI 160 Sociology	3		
SPDR 100 Fundamentals of Speech *or* SPDR 102 Fundamentals of Human Communication	3		ENGL 30 or appropriate placement test score

Specific Program Requirements			
Following successful completion of HESI LPN entrance exam credit will be given for RNUR 126, 131, 134, 138 and 141	19		
RNUR 115 Professional Transition	4		Completion of all prerequisites; admission to Nursing program
RNUR 230 Leadership/Management/Trends	2		Admission to nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, RNUR 234, RNUR 238, PSYC 243, BIOL 208; or admission to LPN Bridge program
RNUR 234 Child Centered Nursing	4		Admission to nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, PSYC 243, BIOL 208; or admission to LPN Bridge program
RNUR 238 Adult Nursing II	5		Admission to the nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, PSYC 243, BIOL 208; or admission to LPN Bridge program
RNUR 244 Adult Nursing III	7		Admission to the nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, RNUR 234, RNUR 238, PSYC 243, BIOL 208; or admission to LPN Bridge program
Total Credit Hours Required	**74-80**		

Occupational Education

Offered at all Campuses

A.A.S. Occupational Education .... 64-66 Credits

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

A.A.S. Occupational Education

General Education Requirements	Credits	Semester Taken	Prerequisites
BIOL 101 General Biology *or* CHEM 107 Preparatory General Chemistry *or* PHYS 101 Introductory Physics	5		MATH 104 (PHYS 112) MATH 110 (CHEM 107)
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 United States History to 1865 *and* HIST 121 United States History Since 1865 *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		MATH 110 (MATH 119) MATH 110 (MATH 120)
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 or 110 and GIS courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR	3-5		
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	2		
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	**64-66**		
*Must be taken at one of the four-year teacher education institutions.			

Occupational Therapy Assistant

Offered at MCC-Penn Valley

A.A.S. Occupational Therapy Assistant...... 73 Credits

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 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.

A.A.S. Occupational Therapy Assistant

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 100	Intro to Cell Biology	3		
BIOL 109	Anatomy and Physiology	6		BIOL 100 or CHEM 105
BIOL 150	Medical Terminology	2		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
PSYC 140	General Psychology	3		
Specific Program Requirements				
EMTP 102	Basic Emergency Patient Care	1		
OTHA 100	Intro to Occupational Therapy	2		
OTHA 102	Documentation Guidelines	2		Formal admission to the OTHA program
OTHA 103	Clinical Conditions	2		Formal admission to the OTHA program
OTHA 106	Therapeutic Interventions I	4		Formal admission to the OTHA program
OTHA 116	Level I Fieldwork I	1		Formal admission to the OTHA program
OTHA 118	Assistive Technology	2		BIOL 109, EMTP 102, and OTHA 100, 102, 103, 106 and 116
OTHA 120	Pediatrics	3		BIOL 109, EMTP 102, and OTHA 100, 102, 103, 106 and 116
OTHA 121	Level I Fieldwork II	0.5		BIOL 109, EMTP 102, and OTHA 100, 102, 103, 106 and 116 and concurrent enrollment in OTHA 120
OTHA 130	Analysis of Physical Performance	3		BIOL 109, EMTP 102, and OTHA 100, 102, 103, 106 and 116
OTHA 154	Applied Neurology	2		BIOL 109 or 110; and BIOL 210 and admission to OTHA or PTHA program
OTHA 201	Mental Health	2.5		OTHA 118, 120, 121, 130 and 154
OTHA 202	Physical Dysfunction	3		OTHA 118, 120, 121, 130 and 154
OTHA 203	Gerontology	3		OTHA 118, 120, 121, 130 and 154
OTHA 208	Therapeutic Interventions II	2		OTHA 118, 120, 121, 130 and 154
OTHA 212	Level I Fieldwork III	2		OTHA 118, 120, 121, 130 and 154
OTHA 217	Fieldwork Seminar	3		OTHA 118, 120, 121, 130 and 154
OTHA 222	Level II Fieldwork	12		OTHA 201, 202, 203, 208, 212 and 217
Total Credit Hours Required		**73**		

Paralegal Practice

Offered at MCC-Penn Valley

A.A.S. Paralegal Practice...................... 63-66 Credits

This program leads to an Associate in Applied Science degree. It teaches students to prepare and file legal documents, perform legal research, and manage a law office.

A.A.S. Paralegal Practice

Specific Program Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
SOCI 160	Sociology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (except 104, 110 and GIS Courses), GEOL, MATH, PHYS		3-6		
Specific Program Requirements				
CRJU 101	Introduction to Criminal Justice	3		
CSIS 110	Technology and Information Management *or*	3		
CSIS 115	Introduction to Microcomputer Applications			
PARA 100	Introduction to Paralegal Practice	3		
PARA 126	Criminal Law and Procedures	3		
PARA 176	Legal Research	3		PARA 100
PARA 177	Legal Writing	3		PARA 176
PARA 185	Ethics for the Paralegal	3		PARA 100
PARA 224	Criminal Evidence	3		PARA 100
PARA 290	Internship in Paralegal Practice	3		15 credit hours of Paralegal study or consent of department
PARA	Electives	12		
Electives from CRJU, Foreign Language, MATH or CSIS		6		
Total Credit Hours Required		**63-66**		

Paramedic

Offered at MCC-Penn Valley

A.A.S. Paramedic .... 73 Credits
    Paramedic Certificate .... 48 Credits

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 MCC-Penn Valley.
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 EMS 150 (or have a current EMT license) and a college anatomy and physiology course.

Applications Procedure
1. New students send application for admission to MCC-Penn Valley 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. Successful recommendation from the interview board.

A.A.S. Paramedic

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 108	Introductory Anatomy and Physiology *or* BIOL 109 or BIOL 110 or BIOL 210	5		
BIOL 150	Medical Terminology	2		
CHEM 105	Introductory Chemistry	5		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
MATH 110	Intermediate Algebra	3		MATH 40/40L
PSYC 140	General Psychology	3		
SOCI 160	Sociology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
EMS 150	Emergency Medical Technician	8		Student must be 18 years old by the end of the course
EMS 200	Intro to Paramedic Care	4.5		BIOL 108, or BIOL 109, or BIOL 110 & 210 admission to the Paramedic Program, and Missouri licensed EMT or equivalent from another state.
EMS 206	Paramedic Pharmacology	4.5		EMS 200
EMS 212	Emergency Cardiology	5		EMS 206
EMS 218	Medical Emergencies	3		EMS 212
EMS 224	Trauma Management	2.5		EMS 218
EMS 230	Care of Women and Children	2.5		EMS 224
EMS 236	Prehospital Care Integration	2		EMS 230
EMS 254	Paramedic Hospital Clinical	5.5		EMS 206
EMS 258	Paramedic Field Internship	5.5		EMS 230
Total Credit Hours Required		**73**		

Paramedic (Cont.)

Paramedic Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
BIOL 108　　Introductory Anatomy and Physiology **or** BIOL 109 or BIOL 110 or BIOL 210	5		
EMS 150　　Emergency Medical Technician	8		Student must be 18 years old by the end of the course and must hold a high school diploma or GED
EMS 200　　Introduction to Paramedic Care	4.5		BIOL 108, or BIOL 109, or BIOL 110 & 210 admission to the Paramedic Program, and Missouri licensed EMT or equivalent from another state.
EMS 206　　Paramedic Pharmacology	4.5		EMS 200
EMS 212　　Emergency Cardiology	5		EMS 206
EMS 218　　Medical Emergencies	3		EMS 212
EMS 224　　Trauma Management	2.5		EMS 218
EMS 230　　Care of Women and Children	2.5		EMS 224
EMS 236　　Prehospital Care Integration	2		EMS 230
EMS 254　　Paramedic Hospital Clinical	5.5		EMS 206
EMS 258　　Paramedic Field Internship	5.5		EMS 230
Total Credit Hours Required	**48**		

Physical Therapist Assistant

Offered at MCC-Penn Valley

A.A.S. Physical Therapist Assistant............ 72 Credits

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 health care facilities.

Because enrollment to the program is limited, there is a separate application to the program. Applicants are screened during the summer and those that are accepted begin the program in the fall.

Students should download the Prospective Student Letter and Program Application from the college's web site at ***http://www.mcckc.edu***. The documents can be found under the Physical Therapist Assistant Program's Career Information page.

Requirements
1. Admission to MCC-Penn Valley
2. Completion of program prerequisites including:
 BIOL 100 Introduction to Cell Biology
 ENGL 101 Composition and Reading
 BIOL 150 Medical Terminology
 PTHA 151 Introduction to Physical Therapy
3. Submission of completed program application by June 10th.
4. Minimum grade point average of 2.5 calculated on courses listed on the curriculum checklist.
5. Minimum grade of "C" in Introduction to Physical Therapy and biology courses.

Application Procedure
1. Apply to MCC.
2. Send transcripts to the Student Data Center
3. Complete program prerequisites
4. Submit completed application to the program by June 10th.
5. Since the number of applicants normally exceeds the number of slots in the program, the program has a selection process for admission. Admission to the program is primarily based on: academic performance, verbal communication, & written communication. Health care experience is also given consideration. Accepted students will be invited for an orientation session in the summer and will begin classes in the fall.

A.A.S. Physical Therapist Assistant

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 100	Intro to Cell Biology	3		
BIOL 109	Anatomy and Physiology	6		
BIOL 150	Medical Terminology	2		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Prerequisite Courses				
PTHA 151	Intro to Physical Therapy	2		
Specific Program Requirements				
EMTP 102	Basic Emergency Patient Care	1		
PTHA 152	Physical Therapy Fundamentals I	4		Formal acceptance into the program
PTHA 153	Kinesiology	4		BIOL 109, PTHA 152 and 160
PTHA 154	Applied Neurology	2		BIOL 109 or 110; and BIOL 210 and admission to OTHA or PTHA program
PTHA 155	Rehabilitation	4		PTHA 162
PTHA 158	Therapeutic Exercise	4		PTHA 162
PTHA 159	Orthopedic Pathology	2		BIOL 109, PTHA 152 and 160
PTHA 160	Medical Diseases	2		Formal acceptance into the program
PTHA 161	Physical Therapy Fundamentals II	4		BIOL 109, PTHA 152 and 160
PTHA 162	Clinical Experience I	2		PTHA 153, 154, 159, 161 and EMTP 102
PTHA 164	Pediatrics and Gerontology	2		PTHA 162
PTHA 170	Clinical Experience II	2		PTHA 162, concurrent enrollment in PTHA 155, 158, 164 and 171
PTHA 171	Clinical Seminar	2		PTHA 162
PTHA 172	Clinical Experience III	12		Completion of all other required courses in the PTHA program
Total Credit Hours Required		**72**		

Polysomnography/Sleep Technology

Offered at Johson County Community College. Coordinated at MCC

A.A.S. Polysomnography/Sleep Tech.... 66-72 Credits

Polysomnography is the physiologic recording of variables such as brain waves, eye movement, muscle tone, breathing and heart rhythm during sleep. More than 80 different types of sleep disorders have been identified, with obstructive sleep apnea (OSA) symptoms occurring in 1 out of every 20 people. Graduates of the program will enter the field as polysomnographic technicians and will be prepared to sit for the national exam administered by the Board of Registered Polysomnographic Technologists (BRPT) to gain the Registered Polysomnographic Technologist (RPSGT) credential . Students must be accepted into the program by both MCC and JCCC. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

A.A.S. Polysomnography/Sleep Technology

605100- Apprvoed 6/2008

Specific Program Requirements- Must be taken at JCCC		Credits	Semester Taken	Prerequisites
EMS 121	CPR I- Basic Live Support Healthcare Provider +	1		
PSG 125	Introduction to Sleep Medicine *	4		
PSG 130	Physiology of Sleep Medicine *	3		
PSG 140	Sleep Disorders *	4		
PSG 145	Sleep Study Instrumentation *	4		
PSG 150	Polysomnography I *	4		
PSG 245	Polysomnography Clinical I *	6		
PSG 250	Polysomnography II *	4		
PSG 255	Polysomnography Clinical II *	6		
PSG 265	Polysomnography Capstone	3		
Total Credits at JCCC		39		
* Prerequisite/Corerequisite required				
+ Students may take a PHED course at MCC if they current AHA BLS Health Care Provider Certification, otherwise students are required to take EMS 121- Basic Live Support Healthcare Provider at JCCC.				
Specific Program Requirements- Must be taken at MCC				
ENGL 101	Composition and Reading I	3		ENGL 30 or satisfactory score on the ASSET test
CHEM 105	Introductory Chemistry ^	5		
BIOL 108	Introductory Anatomy and Physiology ^ or	5		
BIOL 110	Human Anatomy ^ and			
BIOL 210	Human Physiology ^			BIOL 100 and BIOL 110 or CHEM 105
MATH 110	Intermediate Algebra ^ or			MATH 40 or MATH 40L or satisfactory score on placement test
MATH 120	College Algebra or higher			MATH 110or satisfactory score on placement test
BIOL 150	Medical Terminology ** or	2		
HITE 103	Medical Terminology for Health Records **	3		
Communications Elective		3		
Humanities Elective		3		
Social Science/Economics Elective		3		
Total Credits at MCC		27-33		
Total Program Credit Hours		**66-72**		
** or satisfactory completion of a health related degree or certificate				

Social Science and Economics Electives that will transfer from MCC to JCCC:
ANTH 100, ANTH 110, ECON 210, ECON 211, GEOG 111, GEOGO 112, HUSC 162, POLS 136, POLS 137, PSYC 140, SOCI 160, SOCI 162, SOCI 163, SOCI 170

Humanties Electives that will transfer from MCC to JCCC:
BSAD 221, ENGL 102, ENGL 215, SPDR 100, SPDR 102, SPDR 103, SPDR 133

Radiologic Technology

Offered at MCC-Penn Valley

A.A.S. Radiologic Technology .... 77 Credits

This program leads to an Associate in Applied Science degree and prepares students for entry-level jobs as radiologic technologists 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 40L or two semesters of high school algebra with a minimum grade of C within the last five years.
5. Completion of RATE 150 within the last 5 years.
6. Admission to MCC-Penn Valley.
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 MCC-Penn Valley.
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 and the MCC Student Data Center.

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 all high school and/or college transcripts to the program coordinator and the MCC Student Data Center.
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 in 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 MCC-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.

A.A.S. Radiologic Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 110	Human Anatomy	5		
BIOL 150	Medical Terminology	2		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	United States History to 1865 *or* United States History Since 1865 *or* Introduction to Political Science *or* Introduction to American National Politics *or* Introduction to State and Local Politics	3		
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
RATE 150	Introduction to Radiologic Technology	2		
RATE 160	Survey of Radiologic Technology	6		
RATE 162	Image Processing	2		RATE 160, 172 and 173
RATE 165	Patient Care	2		RATE 160
RATE 170	Radiation Biology and Protection	3		RATE 160 with concurrent enrollment in the corresponding semester of Clinical Experience
RATE 171	Radiographic Exposures I	3		Admission to program
RATE 172	Radiographic Positioning I	3		RATE 160, concurrent enrollment in RATE 165 and 173
RATE 173	Clinical Practice I	3		RATE 160 and concurrent enrollment in RATE 165 and 172
RATE 174	Radiographic Exposures II	3		RATE 160, 171, 172 and 173
RATE 175	Clinical Practice II	4		RATE 165, 172, 173 and concurrent enrollment in RATE 176
RATE 176	Radiographic Positioning II	3		BIOL 110, RATE 165, 172, 173, concurrent enrollment in RATE 162 and 175
RATE 178	Clinical Practice III	4		RATE 175 and 176
RATE 278	Imaging Modalities and Pathology	3		RATE 279, 280, 281 and concurrent enrollment in RATE 282
RATE 279	Radiographic Positioning III	2		RATE 176 and 178, concurrent enrollment in RATE 280, 281 and 285
RATE 280	Clinical Practice IV	4		RATE 162, 176, 178, concurrent enrollment in RATE 279, 281 and 285
RATE 281	Radiation Physics	3		RATE 162 and RATE 171
RATE 282	Clinical Training V	4		RATE 279, 280, 281 and 285 and concurrent enrollment in RATE 278
RATE 283	Final Seminar	2		RATE 279 and 280
RATE 285	Special Procedures	2		RATE 170, 171, 178, concurrent enrollment in RATE 279, 280 and 281
Total Credit Hours Required		**77**		

Railroad Operations Technology

Offered at Johnson County Community College
Coordinated at MCC

A.A.S. Railroad Op. Tech. Railroad
Conductor .... 64 Credits

This program leads to an Associate in Applied Science degree in Railroad Conductor. 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 or advisor before enrollment.

A.A.S. Railroad Op. Tech. Railroad Conductor

Specific Program Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
BSAD 150	Business Essentials	3		
CSOF 100	Introduction to Personal Computing	1		Keyboarding skills or enrollment in CSOF 80
CSOF 101	Introduction to Word Processing	1		Keyboarding skills with minimum of 35 wpm
CSOF 102	Introduction to Spreadsheet Applications	1		
ECON 110 ECON 210	Introduction to Economics or Macroeconomics	3		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
MATH 103	Technical Mathematics I	3		MATH 40/40L or satisfactory score on math placement test
PHED or Health Elective*		1		
PHIL 200	Logic	3		
SPDR 102	Personal Communications	3		ENGL 30 or appropriate placement test score
Specific Program Requirements *Must be taken at Johnson County Community College*				
MATH 134	Technical Mathematics II*	5		
PHIL 138	Business Ethics	1		
PHYS 133	Applied Physics*	5		
RRT 120	History of Railroading	3		
RRT 121	Railroad Technical Careers	3		
RRT 150	Railroad Operations	3		
RRT 165	Railroad Safety, Quality and Environment	3		
RRTC 123	Introduction to Conductor Service*	4		
RRTC 175	Conductor Mechanical Operations*	2		
RRTC 261	Conductor Service*	2		
RRTC 263	General Code of Operating Rules*	4		
RRTC 267	Conductor Field Application*	4		
Total Credit Hours Required		**64**		

Health, Physical Education and Recreation Elective must be one of the following: DANC 100, 111, 112, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 141, 142, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

*Prerequisite/corequisite required.

Respiratory Care

Offered at Johnson County Community College. Coordinated at MCC-Penn Valley

A.A.S. Respiratory Care........................ 75-78 Credits

This program, offered under the auspices of Johnson County Community College (JCCC), leads to an Associate in 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 MCC-Penn Valley and from the academic director at JCCC. 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. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

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 MCC-Penn Valley and from the academic director at JCCC.

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.

A.A.S. Respiratory Care

Specific Program Requirements *Must be taken at one of the MCC campuses*	Credits	Semester Taken	Prerequisites
BIOL 110 Human Anatomy^	5		
BIOL 208 Microbiology^	5		BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 101, 104, 106, 108, 109, or 110.
BIOL 210 Human Physiology^	5		BIOL 110, either BIOL 100 or CHEM 105
CHEM 105 Introductory Chemistry^	5		
ENGL 101 Composition and Reading I^	3		ENGL 30 or appropriate placement test score
MATH 110 Intermediate Algebra *or* MATH 120 College Algebra or higher^	3		MATH 40/40L (MATH 110) MATH 110 (MATH 120)
Social Science/Economics Elective	3		See Courses section of this catalog for individual course prerequisites.
Communications Elective	3		
Humanities Elective	3		
Specific Program Requirements *Must be taken at Johnson County Community College*			
EMS 121 CPR I Basic Life Support Healthcare Provider	1		
HC 101 Introduction to Health Care Delivery**	3		
RC 125 Beginning Principles of Respiratory Care*	4		
RC 130 Respiratory Care Equipment*	4		
RC 135 Cardiopulmonary Medicine I*	1		
RC 220 Clinical Cardiopulmonary Physiology*	2		
RC 230 Clinical Topics and Procedures I*	4		
RC 231 Clinical Topics and Procedures II*	4		
RC 233 Respiratory Care of Children*	2		
RC 235 Cardiopulmonary Medicine II*	2		
RC 236 Cardiopulmonary Medicine III*	2		
RC 240 Cardiopulmonary Pharmacology*	2		
RC 271 Clinical Practice I*	6		
RC 272 Clinical Practice II*	6		
Total Credit Hours Required	**75-78**		

^ Indicates prerequisite courses, which must be completed prior to the clinic year at Johnson County Community College. The elective courses must be completed for the AAS degree, which establishes eligibility for the National Board for Respiratory Care examinations.
**HC 101 is not a required course for the degree but is strongly encouraged. See the program application packet for details on how this course may be used to meet clinic-year eligibility requirements.
Economic and Social Science Elective must be one of the following: ANTH 100, 110, ECON 110, 210, 211, GEOG 111, 112, HUSC 162, POLS 135, 136, 137, PSYC 140, SOCI 160, 162, 163, 170
Communications Elective must be one of the following: SPDR 100, 102, 103, 133, ENGL 102, 175, BSAD 221
Humanities Elective must be one of the following: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 128, 142, 150, 151, 165, 167, 220, 221, 222, 223, FREN 203, HIST 120, 121, 133, 134,140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, 203, SPAN 203, 204, SPDR 114, 128

Sign Language Interpreting

Offered at MCC-Maple Woods

A.A.S. Sign Language Interpreting .... 65-68 Credits
American Sign Language Certificate ... 31 Credits

The degree program leads to an Associate in Applied Science degree, which prepares students for entry-level jobs as sign language interpreters. The certificate program leads to a certificate of proficiency in American Sign Language, which prepares students to communicate conversationally with American Sign Language users. The certificate does not prepare students for interpreting.

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 evaluate each applicant on the following factors: prerequisite coursework, materials in the application packet, SIGN 102 final exam and a selection interview.

Application Process

Submit the following items to the MCC-Maple Woods Admissions Office by April 4th.

1. An application for admission to MCC-Maple Woods.
2. A Sign Language Interpreting Program/American Sign Language Certificate Program Application.
3. A typed essay explaining why you want to enter the Sign Language Program or the American Sign Language Certificate Program (500 words or less).
4. Official transcripts from high school and/or colleges.
5. Complete ENGL 101, ENGL 102, SPDR 100/102, SIGN 101, SIGN 103, and SIGN 104 with a grade of C or better.
6. Complete SIGN 102 (American Sign Language 2), with a grade of B or better.

Satisfactory Progress

All prerequisites, general education requirements, and all program courses in the curriculum must be passed with a grade of "C" or better. Students may repeat a program course only once after receiving a grade of "D" or "F".

A.A.S. Sign Language Interpreting

Prerequisite Courses		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
SPDR 100	Fundamentals of Speech *or*	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
SIGN 101	American Sign Language I	3		
SIGN 102	American Sign Language II	3		SIGN 101
SIGN 103	Deaf Culture	3		
SIGN 104	Introduction to Interpreting	3		
General Education Requirements				
HIST 120	United States History to 1865 *or*	3		
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*			
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
BIOL	Any course numbered 100 or above *or*	3-6		MATH 20/20L or appropriate placement test score (MATH 100)
CHEM	Any course numbered 100 or above *or*			
GEOG 104	Principles of Physical Geography *or*			MATH 40/40L or appropriate placement test score (MATH 103 and MATH 110)
GEOG 110	Meteorology *or*			
GEOL	Any course numbered 100 or above *or*			
MATH	Any courses numbered 100 or above *or*			
PHSC	Any course numbered 100 or above *or*			
PHYS	Any course numbered 100 or above			
Specific Program Requirements				
SIGN 110	American Sign Language III	3		Acceptance into the Sign Language Interpreting program or American Sign Language Certificate program
SIGN 112	Fingerspelling	1		
SIGN 113	Cognitive Processing	3		Acceptance into the Sign Language Interpreting program
SIGN 115	Building Translation Skills	3		
SIGN 120	American Sign Language IV: Specialized Vocabulary	3		SIGN 110
SIGN 122	Linguistics	3		SIGN 110
SIGN 125	Consecutive Interpreting	3		SIGN 110, 112, 113 and 115
SIGN 215	Simultaneous Interpreting I	4		SIGN 120, 122, 125
SIGN 217	Practicum	3		SIGN 120, 122 and 125
SIGN 219	Sign Systems and Special Populations	3		SIGN 120, 122 and 125
SIGN 222	Transliteration	3		SIGN 215 and 219
SIGN 225	Simultaneous Interpreting II	3		SIGN 215
SIGN 230	Internship	3		SIGN 215, 217 and 219
Total Credit Hours Required		**65-68**		

Sign Language Interpreting (Cont.)

American Sign Language Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
SPDR 100 SPDR 102	Fundamentals of Speech *or* Fundamentals of Human Communication	3		ENGL 30 or appropriate placement test score
SIGN 101	American Sign Language I	3		
SIGN 102	American Sign Language II	3		SIGN 101
SIGN 103	Deaf Culture	3		
SIGN 104	Introduction to Interpreting	3		
Specific Program Requirements				
SIGN 110	American Sign Language III	3		Acceptance into the Sign Language Interpreting program or the American Sign Language Certificate program
SIGN 112	Fingerspelling	1		
SIGN 120	American Sign Language IV: Specialized Vocabulary	3		SIGN 110
SIGN 122	Linguistics	3		SIGN 110
Total Credit Hours Required		**31**		

This certificate prepares an English language user to communicate on an intermediate conversational skill level with an American Sign Language user. It does not prepare students for interpreting.

Surgical Technology

Offered at MCC-Penn Valley

Surgical Technology Certificate .... 51 Credits

This program leads to a certificate of proficiency and prepares students for entry-level jobs as operating room technicians.

Surgical Technology Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 108	Introductory Anatomy and Physiology	5		
BIOL 150	Medical Terminology	2		
Specific Program Requirements				
STNU 100	Introduction to Surgical Technology	2		BIOL 108, 150 and acceptance into the program
STNU 102	Intorduction to Fundamentals I	5		BIOL 108, 150 and acceptance into the program
STNU 103	Introduction to Fundamentals II	6		STNU 100, 102 and 106
STNU 105	Pharmacology for the Surgical Technologist	2		STNU 100, 102 and 106
STNU 106	Aseptic Technique for the Surgical Technologist	3		BIOL 108, 150 and acceptance into the program
STNU 109	Surgical Procedures I	8		STNU 103
STNU 110	Surgical Procedures II	8		STNU 109
STNU 111	Career Development for the Surgical Technologist	2		STNU 110
STNU 114	Surgical Procedures III	8		STNU 110
Total Credit Hours Required		**51**		

Veterinary Technology

Offered at MCC-Maple Woods

A.A.S. Veterinary Technology .... 78-80 Credits

The Veterinary Technology program is a two-year, full-time day program accredited by the American Veterinary Medical Association. This program provides the educational background necessary to perform nursing and technical duties used in clinical practice or research. Graduates of the program will be able to sit for the state and national board examinations to become a Registered Veterinary Technician.

Admission to the Program

Admission to the program is limited so that each student has full access to our outstanding instructors and facilities. To be admitted to the program, students must meet certain requirements. Students can view the requirements and obtain an application packet online at: mcckc.edu/vettech

Call the program office (816) 437-3235 for more information

A.A.S. Veterinary Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 *or*			
HIST 121	United States History Since 1865 *or*			
POLS 135	Introduction to Political Science *or*	3		
POLS 136	Introduction to American National Politics *or*			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Any course numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104,110 and GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR (ENGL 102 is recommended.)		3-5		See Courses section of this catalog for individual course prerequisites.
Specific Program Requirements				
BIOL 106	General Zoology (101 may also be used)	5		
BIOL 208	Microbiology	5		BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 101, 104, 106, 108, 109, or 110.
CHEM 105	Introductory Chemistry	5		
CSIS 115	Intro to Microcomputer Applications	3		
VETT 100	Introduction to Veterinary Technology	2		
VETT 101	Principles of Animal Science I	3		
VETT 108	Clinical Mathematics for Veterinary Technicans	1		Admission into Veterinary Technician Program.
VETT 110	Principles of Animal Science II	3		VETT 101
VETT 111	Sanitation and Animal Care	2		
VETT 200	Veterinary Hospital Technology I	3		VETT 101 and 110
VETT 201	Clinical Pathology Techniques	4		
VETT 202	Veterinary Anatomy	5		BIOL 101 or 106, VETT 101 and 110
VETT 203	Laboratory Animal Technology	2		VETT 101, 110 and 201
VETT 209	Equine Medicine and Management	3		VETT 212
VETT 210	Veterinary Hospital Technology II	3		VETT 200
VETT 211	Clinical Pathology Techniques II	5		VETT 201
VETT 212	Large Animal Technology	4		VETT 101 and 110
VETT 213	Radiology and Electronic Procedures	2		
VETT 214	Veterinary Technician Preceptorship	6		Two semesters of 1st year VETT tech courses
Total Credit Hours Required		**78-80**		

Course Descriptions

This section describes each of the for-credit courses offered by Metropolitan Community College. 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. For the most up-to-date information, please check the online catalog at www. mcckc.edu.

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

⊕   This symbol denotes courses that meet the Human Diversity requirement. Please see an academic advisor for details.

◆Agribusiness/Grounds and Turf Managment

MCC-Longview

AGBS 100 The Green industry -Introduction to Urban Agribusiness
3 credits. 3 hours. (Lecture 3 hours.)
Survey of arboricultural, oricultural, 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 owering trees, and deciduous and owering 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 in uence 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 151 Special Topics in Horticulture I
1 credit. 1 hour. (Lecture 1 hour.)
This course will cover current topics relevant to horticulture practices in the areas of ornamental horticulture, arboriculture, and turfgrass science.

AGBS 152 Special Topics in Horticulture II
2 credits. 2 hours. (Lecture 2 hours.)
This course will cover current topics relevant to horticultural practices in the areas of ornamental horticulture, arboriculture, and turfgrass science.

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. 15 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.

◆Allied Health

ALHT 100 Introduction to Healthcare Careers
2 credits. 2 hours. (Lecture 2 hours.)
Guided readings, discussions, writing and/or field experience(s) in health careers.

◆Anthropology

MCC-Longview
Melissa Eaton

ANTH 100 General Anthropology
3 credits. 3 hours. (Lecture 3 hours.)
Survey of physical and cultural anthropology. Concentrates on concepts of culture, social institutions and organization: economy, politics, family, religion, law, language, human evolution, human sexuality and archeology.

🌐ANTH 110 Cultural Anthropology
3 credits. 3hours. (Lecture 3 hours.)
Survey of cultural anthropology. Concentrates on concepts of culture, social institutions and organization: economy, politics, family, religion, law, language, kinship, and contemporary applications of anthropological methods.

ANTH 120 Introduction to Anthropology
3 credits. 3hours. (Lecture 3 hours.)
Archaelogy is the study of past cultures through their material remains. This course introduces archaelogical goals, methods, theories, and ethics. Topics include archaelogical survey, excavation, dating techniques, artifact analysis, conservation, cultural adaptation and change.

◆Apparel and Textiles

MCC-Penn Valley
Sheryl Farnan

APTX 40 Fundamentals of Apparel Construction
1 credit. 1 hour. (Lecture 1 hour.)
Introduction of basic apparel construction tools and terminology. It is recommended that students entering the program with no prior apparel construction experience take this course before enrolling in APTX 112.

APTX 100 Introduction to Apparel Studies
3 credits. 3 hours. (Lecture 3 hours.)
Survey of the components of the apparel industry, including manufacturing, retailing, textiles, and product development, with specific focus on career development.

APTX 111 Aesthetics and Design for Apparel and Textiles
3 credits. 3 hours. (Lecture 3 hours.)
Elements and principles of design. Examination of aesthetic factors relating to apparel and promotional retail settings affecting product development and consumer decisions.

APTX 112 Apparel 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. APTX 40 recommended for students entering program with no prior clothing construction experience.

APTX 113 Advanced Clothing Construction
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: APTX 111 and APTX 112.
The construction of a tailored garment. Identification and treatment of figure difficulties and fitting techniques.

APTX 118 Costume History - Ancient Mesopotamia Through the Nineteenth Century
3 credits. 3 hours. (Lecture 3 hours.)
Survey of history of dress from ancient times through the nineteenth century. Emphasis on connections of dress to political, social, and technological aspects of culture.

APTX 119 Visual Merchandising
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: APTX 100 and APTX 111.
Application of aesthetic elements and design principles to effectively merchandise product assortments for retail, wholesale and industry tradeshow settings. Course culminates in student production of PANACHE student fashion showcase.

APTX 211 Pattern Design - Flat Pattern
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: APTX 113.
Basic principles and methods of at pattern drafting. Development of skirt, bodice, pant and dress slopers; in full scale sizes. Cut, sew and fit muslin prototypes. Original design development from basic sloper. Pattern making process and design room techniques.

APTX 212 Textiles
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to fibers, textiles and all aspects of textile manufacturing process.

APTX 215 Pattern Design - Draping
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: APTX 113, APTX 211, or concurrent enrollment.
Basic principles and methods of pattern design through draping. Development of basic slopers in full scale sizes. Exploration of draping techniques and process of developing a draping plan to execute original designs.

APTX 216 Experimental Design
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: APTX 211 and APTX 215.
Examine diverse sources of inspiration, design process, creative development and technical execution of apparel through a combination of at pattern and draping. Students will explore shape, sillouette and surface design with emphasis on the use of traditional as well as non-traditional and recycled materials.

APTX 217 Twentieth Century Costume History
3 credits. 3 hours. (Lecture 3 hours.)
Prerequiste: APTX 118. History of dress and industry development throughout the twentieth century. Examination of the changing role of the designer in product development, in uences of mass communication, as well as social, political and economic in uences.

APTX 218 Merchandising Field Experience
3 credits. 16 hours. (Lecture 1 hour. Field Studies 15 hours.)
Prerequisites: APTX 119, 220, and 221.
Supervised experience in a merchandising setting with a cooperative firm. Students will be evaluated on professional work-place criteria and complete an internship portfolio project detailing their experience.

APTX 220 Merchandising I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: APTX 100 and MATH 100.
Application of merchandising principles for both manufacturing and retail firms. Study process of budget and assortment planning, development, and presentation of apparel and related products.

APTX 221 Merchandising II - Global Issues
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: APTX 220.
Examination of global trade and sourcing relevant both manufacturing and retail firms. Emphasis will be placed on the relationships of business, labor and government relevant to trade and consumption.

APTX 225 Pattern Design - CAD
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: APTX 211 and APTX 215.
Basic principles and methods of pattern design through computer aided design methods. Development of basic slopers in full scale sizes. Exploration of pattern design techniques and process through use of industry level computer software applications.

APTX 240 Special Topics in Clothing Construction
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: APTX 113.
Students will explore special topics related to apparel construction. Topics will include couture fitting and construction methods, knits, complex fitting issues, specialty fibers and fabric, costume development, specialty finish, and other specific issues. Special topics alternate each semester.

APTX 250 Computer Aided Fashion Illustration
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ART 130.
Fashion illustration techniques utilizing state-of-the art computer software and industry-level computer aided techniques.

APTX 251 Apparel Design Production
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: APTX 215.
Introduction to apparel production manufacturing methods and equipment used in the industry, including those used in layout, cutting and sewing. Students learn procedures of design from concept to hanger.

APTX 275 Design Portfolio Presentation
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: ART 108, 150, 151 or 159, and 130, and APTX 211 and 215.
This capstone course integrates skills in demographic analysis and target marketing, design process, pattern making technique and garment construction toward the development and completion of an apparel line. Emphasis on line presentation in a finished portfolio. Students will explore various formats for presentation.

◆Art

MCC-Blue River
  DeAnna Skedel

MCC-Maple Woods
  Jennie Frederick

MCC-Longview
  D. Kim Lindaberry
  James Smith

MCC-Penn Valley
  Mary Beth Moley
  Bernadette Torres
  Darlene Town

ART 100 Art Fundamentals I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Introduction to the elements and principles of art in two and three dimensional design. Exploration and 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. Emphasis on study of art styles, techniques, and media.

ART 102 Computers in Design I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Introduction to the computer as a design tool utilizing layout, drawing, and image-editing software. Students will learn how to use the software to design layouts, create graphics, format type, and prepare imagery for the production of Graphic Design projects. Students will also be introduced to the design principles which guide good design structure. Photoshop, Illustrator, InDesign and QuarkXpress is the software used.

ART 103 Design Foundations
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
An introductory study of the principles of visual perception and organization with the visual elements of line, shape, value, texture, and color. The course will primarily explore two-dimensional design in an achromatic mode.

ART 104 3D Computer Animation I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 102, or CSIS 110 or CSIS 115.
This course is an introduction to the fundamental concepts and techniques of the art of 3D computer animation. Using advanced 3D animation, modeling, editing, and graphics software students will learn to model and animate objects, characters, and environments.

ART 105 Digital Sketchbook
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
This is an introductory course to the digital environment where students will develop their artistic ability, aptitude, and personal aesthetics using digital media to create fine art and electronic imagery. Students will learn how to utilize a variety of computer hardware and input devices as well as preeminent photo editing, drawing, painting, and asset management software to create electronic and studio art imagery. Students will explore the integration of both raster and vector techniques and will learn how to utilize them along with more traditional art techniques. Students will also learn the practices of professional presentation of their work to the public. This class is not a requirement for the A.A.S. degree in Graphic Design.

ART 108 Survey of Art
3 credits. 3 hours. (Lecture 3 hours.)
A brief history of the Visual Arts, including painting drawing, sculpture and architecture. Global cultures from prehistoric times through present day will be covered.

ART 110 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 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 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 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 123 Color Theory
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 103 or concurrent enrollment.
An advanced study of the principles of visual perception and two-dimensional design with an emphasis in color theory and the elements of design including line, shape, value, texture.

ART 130 Fashion Illustration I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Fundamentals of fashion illustration with emphasis on fashion drawing techniques. Fabric rendering and materials, methods and formats used by fashion.

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 camera.)

ART 141 Beginning Jewelry Making I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
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 applying basic technical skills to 3D design problems, introduction to metal history and safety are integrated into the course subject matter.

ART 142 Fiber
3 credits. 3 hours. (Lecture 1 hour. Laboratory 5 hours.)
A variety of techniques within the discipline of fiber. Historical examples as well as contemporary techniques will be explored.

ART 147 Jewelry Making II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisites: ART 141.
This course builds upon the basic techniques taught in Metal/Silversmithing I. Students will be taught advanced techniques in wax carving, mold making, fabrication, construction, and metals manipulation. Students will develop and intermediate level of complexity in skill and mastery of execution.

ART 150 History of Art I
3 credits. 3 hours. (Lecture 3 hours.)
Historical events and their in uence on the development of architecture, painting, and sculpture from prehistoric times through the medieval periods in Western Civilization.

ART 151 History of Art II
3 credits. 3 hours. (Lecture 3 hours.)
Western civilization through the historical developments and relationships of architecture, painting, and sculpture from the Renaissance to present day.

ART 159 American Art History
3 credits. 3 hours. (Lecture 3 hours.)
Development of art in America, from Indian and colonial to contemporary times. The history of America through its relationship of architecture, sculpture, and painting.

ART 160 Graphic Design I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 202 or concurrent enrollment.
An introduction to the principles of the graphic design field. This includes the study of typography, layout, production methods, and career opportunities. Creative problem solving using hand tools and the computer.

ART 164 Lettering
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
The design of letter forms. Hand-lettering techniques with marker, brush, pen and ink.

ART 165 Cartooning
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 110.
Fundamentals of cartoon drawing styles and techniques used in advertising, greeting cards, gag, caricature and editorial cartoons.

ART 170 Ceramics I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Students will be introduced to the 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 ceramics including decoration and glazing. Studio experience concentration in pottery wheel techniques and glazing.

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 hand-building and/or slip-casting procedures.

ART 202 Computers in Design II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 102.
Advanced projects and tools are explored using the computer as a design tool utilizing layout, drawing, and image-editing software. Students develop advanced skills with the software and improved graphic design aesthetics.

ART 204 3D Computer Animation II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 104.
Students will explore advanced concepts of the art of 3D computer animation in this course. They will further develop their understanding of animation as they explore in greater detail the processes of character development, storyboard development, modeling, materials, lighting, effects, actions, lip-syncing, keyframing, camerawork, rendering, and compositing.

ART 205 Pre-Hispanic Art History
3 credits. 3 hours. (Lecture 3 hours.)
Survey of the art and architecture of Mesoamerica and South America prior to the arrival of the Spanish. Part I of the course will explore the civilization of the Olmec, the Zapotec, Teotihuacan, the Maya, the Aztec, as well as other ancient Civilizations of Central America and Mexico. Part II will highlight the art and architecture of South America, including civilizations in Ecuador, Peru and Bolivia.

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 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 processes for the development of a personal style.

ART 215 Watercolor Painting

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 110.
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 213.
Advanced study of drawing the figure from models. Introduction to new media and the study of various processes for the development of a personal 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.
Advanced study of painting styles, pictorial composition, design and color theory through the production of a series of exercises and paintings.

ART 222 Painting III

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 221.
Advanced color theory, use of media, and pictorial composition will be exhibited through a self directed plan of study and production of paintings.

ART 223 Painting IV

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 222.
Self directed projects geared to enhance creative awareness and expression. Projects will concentrate on developing advanced skills in composition, handling media, tools and color.

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 including 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 sculptural materials, forms, and imagery as a means of self-expression and communication.

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 traditional and contemporary concepts, media, and techniques. Projects will involve working with a variety of issues from figure modeling to environmental or site-specific aspects of sculpture.

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 under guidance of instructor.

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 to color processes. Increased emphasis on formal issues of image making in relation to content.

ART 241 Special Projects in Art

1-3 credits. 2-6 hours. (Laboratory 2-6 hours.)

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. (Lecture 1 hour. Laboratory 5 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 102.
Exploration of photographic techniques and themes using the computer, digital camera, and scanners. The industry standard software for image editing will be utilized.

ART 245 Web Design

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 102.
Concept and message development, design and production, publishing of web sites, visual design, color, typography, and digital graphics for the web will be stressed. Text-editing, web-authoring, and image-editing software will be used.

ART 246 Advanced Web Design

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 245.
Advanced site management, visual design, tools for creating tables and forms, implementing style sheets, adding behaviors and animation; designing with HTML, image-editing software, Dreamweaver and Flash.

ART 250 Printmaking

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Introduction to a variety of traditional contemporary printmaking processes, including on and off press techniques. Historical styles of printmaking and application to current trends. Exploration of relief, lithography, serigraphy, and intaglio printing techniques.

ART 254 Silk Screen Printing I

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Screen printing techniques from 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 screen printing in photography techniques with emphasis on two three color printing.

ART 256 Silk Screen Printing III

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 255.
Advanced problem solving techniques in fine arts and commercial screen-printing.

ART 260 Graphic Design II

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 160.
Advanced graphic design concepts which include analyzing client needs, idea and execution processes, defining successful elements of good visual communication, defining and analyzing trends of the graphic design industry. Explore these concepts through advanced projects utilizing traditional and computer tools.

ART 261 Graphic Design III

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 101, 202, and 260.
Advanced problem solving in corporate identify designs which include trademark, magazine, point-of-purchase and other designs.

ART 263 Art Portfolio

3 credits. 6 hours. (Laboratory 6 hours.)
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 260.
Selection and presentation of a Graphic Design portfolio along with interviewing techniques and employment searches. The student should be in last semester of the Graphic Design program.

ART 270 Illustration

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: ART 102, 103, and 110.
Illustration techniques involving research and visual problem solving. Emphases on research, style, media, clients and presentation with advertising and story illustrations.

ART 280 Special Studies

1-3 credits. 2-6 hours. (Laboratory 2-6 hours.)
Individual projects involving media and techniques chosen by the student with the advice of the instructor.

ART 281 Introduction to Digital Prepress - File Preparation

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: ART 102 and ART 115.
Introduction to the digital prepress process that follows a digital file from proper design techniques through output and contract proof. Emphasis on proper use of fonts, graphics and page layout applications to achieve predictable, accurate results.

ART 282 Digital Prepress-Advanced Color Correction

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ART 102 and ART 115.
Learn advanced color correction techniques that will turn almost any image into quality artwork. Focus on color theory, image quality, and color calibration to achieve predictable, high quality results. Also learn proper scanning and image capture techniques for line-art, grayscale and color originals. Students are encouraged to take ART 281 and ART 282 concurrently.

ART 283 Advanced Prepress

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ART 115, ART 202, ART 281 and ART 282.
Analysis of digital prepress files for proper construction. Emphasis on prevention for preparation and troubleshooting problem files.

ART 285 Variable Data Publishing

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: ART 202, 281, and 282.
An overview of variable data publishing technology. The course will focus on merging data and images to digitally print personalized products for data driven communications. Students are encouraged to take ART 283 and ART 285 concurrently.

ART 290 Digital Prepress Internship

3 credits. 14 hours. (Field Studies 14 hours.)
Prerequisite: ART 283 and ART 285.
Cooperative work experience in digital prepress.

◆Automotive Technology

MCC-Longview
John Arnold, Paul Damminga, William Fairbanks, Gary McDaniel, David Patience, Roy Perrodin, Edward Schauf er

AUTO 100 Automotive Internship I

3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: One semester of automotive course work.
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.
Cooperative on-the-job training.

AUTO 103 Fundamentals to Automotive Technology

3 credits. 3 hours. (Lecture 3 hours.)
This course is an introduction to the various mechanical and electrical systems of the automobile. Students will also learn basic service techniques while understanding the costs associated with purchasing, maintaining, and repairing an automobile.

AUTO 105 Cooperative Work Experience I

3 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Be a member of one of the corporate programs, maintain a c average.
Cooperative on-the-job training.

AUTO 106 Cooperative Work Experience II

3 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Be a member of one of the corporate programs, maintain a c average.
Cooperative on-the-job training.

AUTO 107 Cooperative Work Experience III

3 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Be a member of one of the corporate programs, maintain a c average.
Cooperative on-the-job training.

AUTO 108 Cooperative Work Experience IV

3 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: Be a member of one of the corporate programs, maintain a c average.
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, measure, 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 hours. Laboratory 9.5 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: Acceptance 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. Laboratory 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.)
A study of theory, construction, modern automotive electrical systems. Use of test equipment in trouble shooting and maintenance of batteries, starters, alternators, lighting, chassis wiring, ignition systems 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 power assist systems 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 steering gear, rack and pinion steering, power assist and power assist. Extensive coverage of four-wheel alignment, tire and wheel balance.

AUTO 174 Automotive Power Trains
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Theory of operation and service procedures of power trains including constant velocity joints, manual transmissions and transaxles, differentials and clutches.

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. History, theory of operation, diagnosis and repair of fuel systems including basic carburetion, various fuel injection systems.

AUTO 260 Advanced Diagnosis
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: Be a student in good standing in the General Motors ASEP or Ford Motor 7 Co.
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. Each student will be required to perform the duties of a service advisor and service manager.

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, and includes refrigerant reclaiming equipment.

AUTO 272 Automatic Transmissions
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Theory of operation, testing and diagnosis, disassembly and reassembly.

AUTO 277 Specialized Electronics Training
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisites: AUTO 166 and class member of a General Motors ASEP class.
Solid-state electronic principles and applications on devices as utilized on late model General Motors computer equipped vehicles. Includes GM certifications.

AUTO 278 Electronic Engine Control
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisites: AUTO 166 and be a student in the Ford Motor Co.
Asset program. Solid-state electronic principles and applications on devices as utilized on late model Ford Motor companys computer-equipped vehicles. Includes Ford certifications.

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
MCC-Blue River

BASK 13 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.

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.

BASK 21 Just Sentences
1 credit. 2 hours. (Laboratory 2 hours.)
This course is designed to include sentence fundamentals, verb recognition, sentence elements, sentence types, sentence errors and corrections.

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.

BASK 24 College Entrance Skills
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to basic study skills, college resources and college procedures.

BASK 26 Solving Word Problems
1 credit. 2 hours. (Laboratory 2 hours.)
Interpretation and solution of word problems in basic mathematics.

BASK 30 Academic Workshop
0 credit. 2 hours. (Laboratory 0 hour.)
Prerequisite: Concurrent enrollment in designated academic course.
Semester long academic workshop to support class lecture, class assignments, review class material and enhance student learning in subject matter classes.

BASK 39 Sentences to Paragraphs
1-3 credit. 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, ration and proportion, critical thinking and geometric concepts.

◆Biology

MCC-Blue River
Lisa Bonneau
Mehdi Borhan
Shari Harden
Todd Martin

MCC-Longview
Eugene Fenster
Keet Kopecky
Greg Loftin

MCC-Maple oods W
Rani Duggal
Larry Reichard
Paul Smith
Kenneth Snell
Cammie Snow

MCC-Penn alley V
David Belt
Mahmoud Bishr
Todd Bowdish
Gene Cota
Terrence Davin
Nancy Harrington
Steven Lewis

BIOL 100 Introduction to Cell Biology
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 20 or satisfactory score on the placement test.
Fundamental concepts preparatory to the study of physiology and microbiology with emphasis on the cell and subcellular structures.

BIOL 101 General Biology
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Biological principles and methods applied to selected groups of living organisms and their environment.

BIOL 102 Environmental Science
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
General principles of human ecology and environmental science. Examination of problems in human ecology such as population growth, resource allocation, and pollution. Field work.

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.)
Introductory view of structure and function in the human body and mechanics of homeostasis.

BIOL 109 Anatomy and Physiology
6 credits. 8 hours. (Lecture 4 hours. Laboratory 4 hours.)
Prerequisite: BIOL 100 or CHEM 105.
Structure and function in the human body and mechanisms of homeostasis.

BIOL 110 Human Anatomy
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Structure and function in the human body.

BIOL 118 Introduction to Biology
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Basic structure of life. Cell structure. Plant and animal systems. Diversity of life. Relationship of human beings to other living things and the interaction of biological and physical systems. Part of the instruction given by videotape.

BIOL 120 Bioethics
3 credits. 3 hours. (Lecture 3 hours.)
Biological and ethical implications of selected topics in modern biology, such as genetic engineering, human organ transplant, medical procedures prolonging the dying process, and experimentation on human beings.

BIOL 121 Directed Project
1 credit. 2 hours. (Laboratory 2 hours.)
Supervised introductory study of a topic in biology.

BIOL 132 Human Nutrition
3 credits. 3 hours. (Lecture 3 hours.)
Function of nutrients. Factors affecting the utilization of nutrients. Food pyramids and dietary allowances. Dietary calculation and evaluation. Special needs during the life cycle. Current issues in nutrition.

BIOL 137 Introduction to Pathophysiology
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisites: BIOL 110 and 210, or BIOL 108 or 109 or 109.
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 198 Service-learning in Biology
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
This is an experiential learning opportunity that links concepts and principles of biology to real-world application through community service. Includes 40-hours of on-task service to a community organization, agency, or public service provider per credit hour. The community service placement agency and service assignment will vary, dependent on the disciplinary course topic and learning objectives.

BIOL 202 Ecology
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: BIOL 101 or 104, or BIOL 106.
Study of interrelationships between organisms and their environment. Site visits to primary and secondary forests, grasslands, and aquatic ecosystems.

BIOL 204 Genetics
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BIOL 101 or 104, or 106.
This course is designed to cover four major topics in genetics: 1) transmission genetics 2) molecular structure of the gene 3) molecular functioning of the gene and 4) population and evolutionary genetics.

BIOL 208 Microbiology
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisites: BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 101, BIOL 104, BIOL 106, BIOL 108, BIOL 109, OR BIOL 110.
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.
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.
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 214 Principles of Genetics
4 credits. 6 hours. (Lecture 3 hours. Laboratory 3 hours.)
Prerequisites: BIOL 101 or BIOL 104 or BIOL 106.
Basic principles of heredity in animals, plants, and microorganisms. Mendelian and other principles of transmission genetics and cytogenetics. Molecular genetics of gene structure and function. Introduction to population genetics.

BIOL 220 Special Topics in Biology
1-5 credits. 1-10 hours. (Laboratory 2-10 hours.)
Prerequisite: Two courses in biological science.
Study of a biological topic of special interest under the supervision of a faculty member.

⦿BIOL 238 International Human Ecology
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Study of international human diversity with a focus on problem-solving by selected cultures. Students will visit villages, schools, and homes over a period of at least 18 days at selected international destinations acquiring knowledge and appreciation of local solutions to traditional and contemporary environmental challenges. Consent of the instructor required.

BIOL 239 International Field Biology
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisites: BIOL 101, BIOL 104, or BIOL 106.
Principles of ecology and natural history applied to ora and fauna of selected international field site. Students will spend at least 18 days in the field within selected countries acquiring in-depth knowledge of major biological taxa, ecosystems, and processes.

◆Business Administration

MCC-Blue River	*MCC-Longview*	*MCC- Maple Woods*
Lynn Canady	Theodore Dinges	James Moes
	Randy Kidd	Kimberly Luken
	Zach McNeil	

MCC-Penn Valley
Diane Enkleman

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 process of preparing financial statements in accordance with the Generally Accepted Accounting Principles. Includes accounting procedures for cash, accounts receivable, inventory, 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 103 Business English
3 credits. 3 hours. (Lecture 3 hours.)
Apply the English concepts and critical thinking skills to business writing and workplace applications via the Internet. Review of fundamentals of grammar, sentence structure, punctuation, and capitalization.

BSAD 105 Human Resources Management
3 credits. 3 hours. (Lecture 3 hours.)
This course provides an overview of the human resources management functions within an organization and the human resources management profession generally.

BSAD 109 Principles of Supervision
3 credits. 3 hours. (Lecture 3 hours.)
This course is an integrated approach involving a variety of issues confronting supervisors and provides practical solutions within a diversified workforce and a global marketplace. The course explores how supervisors relate to employees, other supervisors and upper management, and emphasizes skills applications couples with Internet activities that require students to seek current information.

BSAD 113 Special Problems in Business
3 credits. 3 hours. (Lecture 3 hours.)
Independent study in business related areas under the supervision of a faculty member.

BSAD 120 Organizational Behavior
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.)
On-the-job experience approved by the coordinator.

BSAD 128 Management Internship II
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: BSAD 127.
On-the-job experience approved by the coordinator.

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.)
Principles of personal financial planning enabling the student to achieve personal economic satisfaction and long-term financial security. Topics will include career planning, taxes, banking, consumer strategies, housing, transportation, insurance, investments, retirement and estate planning.

BSAD 153 General Ledger Accounting Systems, PC
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 101.
Investigations, application, and utilization of accounting software packages in a computerized business accounting system.

BSAD 154 Managerial Accounting
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 101.
Interaction between the fields of accounting and management with emphasis on analysis of accounting records for aiding managerial decision making.

BSAD 155 Accounting Applications Using Spreadsheets
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 101.
The emphasis of this course is to teach the solving of accounting problems utilizing spreadsheet programs as a tool.

BSAD 161 Professional Development and Business Careers
3 credits. 3 hours. (Lecture 3 hours.)
This course prepares students to match a career choice with their education, training, interests, abilities and current job market information. Topics and process will include self-assessment, career investigation and planning, employment communication, professional ethics and diversity issues.

BSAD 185 Customer Service
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement test score or completion of MATH 20; have completed or be simultaneously enrolled in BSAD 178 , BSAD 120, CSIS 115 , and BSAD 150; have demonstrated keyboarding proficiency of 35 words a minute with 90% accuracy.
Fundamental principles of serving customer needs. Instruction and practice in identifying and providing for customer needs, handling situations on the telephone, developing and using telemarketing strategies, and establishing professional work standards.

BSAD 190 Office Management
3 credits. 3 hours. (Lecture 3 hours.)
Organization and control of administrative office operations, staff and resources. Students will examine and apply functions and principles of management, leadership, problem solving, appraising, job design and analysis, and diversity practices.

BSAD 201 Cost Accounting
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 102.
Basic principles of cost accounting applied to job, process, and standard cost methods. Budget control and analysis of profits.

BSAD 202 Intermediate Accounting I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 102.
Practice and application of financial reporting accounting in accordance with the generally accepted accounting. Principles. Includes financial statements and related disclosures, asset measurement, income determination, valuation of liabilities and investments.

BSAD 204 Business Management
3 credits. 3 hours. (Lecture 3 hours.)
Principles and practices of business management developed around the framework of the functions of planning, organizing, and controlling. Specific topics covered includes: managerial ethics, group dynamics, employee motivation, communications, decision-making, leadership and management styles, productivity, and organizational effectiveness.

BSAD 205 Marketing
3 credits. 3 hours. (Lecture 3 hours.)
The principles of marketing involves the structure of marketing institutions in a global environment. The course includes analysis of marketing functions, consumer behavior, segmentation, market research, product planning, pricing, promotion, distribution and marketing strategies. Internet and electronic mail activities are integrated to develop competencies in data collection, application and task analysis.

BSAD 210 Logistics Management
3 credits. 3 hours. (Lecture 3 hours.)
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.

BSAD 211 Operations Management
3 credits. 3 hours. (Lecture 3 hours.)
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.

BSAD 212 Transportation Operations and Management
3 credits. 3 hours. (Lecture 3 hours.)
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.

BSAD 213 Warehouse and Distribution Centers
3 credits. 3 hours. (Lecture 3 hours.)
This 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 215 Entrepreneurship Theory & Practice
3 credits. 3 hours. (Lecture 3 hours.)
Provides a structure for understanding entrepreneurship as both a discipline and a process. Non-entrepreneurs will benefit by discovering how to function more effectively in entrepreneur-led organizations. Entrepreneurial students will benefit by learning how strategy, marketing, finance, legalities, and cash ow impact opportunities in terms of execution and growth, and how to position a new firm for success.

BSAD 219 Planning and Growing an Entrepreneurship Venture
3 credits. 3 hours. (Lecture 3 hours.)
A combined practical, hands-on, and academic approach to entrepreneurship via the creative and innovative process of recognizing opportunity, gathering resources and creating a feasibility study around conceptualizing a business idea and business plan.

BSAD 221 Business Communications
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement test score or completion of ENGL 30.
Business Communications identifies the scope and structure of communications within a business environment. The areas of study include writing processes involving a wide variety of business correspondences. Current methods of communication by technology are covered with direct applications utilizing Internet, Email, PowerPoint presentations, electronic files, employee and data privacy, resumes and interviewing techniques. Emphasis is placed on formal reports within the APA and MLA formats/structures.

BSAD 224 Entrepreneurship Experience
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: BSAD 215 and 219.
The Entrepreneurship Experience combines classroom lecture and the opportunity to further develop specific business skills as student teams work to assess and resolve problems of small businesses in the local area. Students will perform the research necessary to provide guidance and solutions to the small business challenges presented by the client. High quality written communication and presentation skills will be expected for all published and created 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 of principles of law related to business transactions. Topics include: sale of goods, partnerships, corporations, real property, security devices, bankruptcy, and estates.

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

MCC-Blue River *MCC-Longview* *MCC-Maple Woods*
Donald Miller Moira Frey Nelson Borys
MCC-Penn Valley
Douglas Martin, Michael Sweetland

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.
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 and CHEM 107 or high school chemistry.
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.
Chemical equilibrium, kinetics, electrochemistry, thermodynamics, and the reactions of the elements and their compounds explained in terms of bonding and energy relationships. A brief introduction to the chemistry of organic compounds is included.

CHEM 205 Introductory Organic Chemistry for Health Sciences
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: CHEM 105 or CHEM 111.
Basic concepts of organic and biological chemistry for health science students.

CHEM 221 Organic Chemistry I
5 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: CHEM 112.
Nomenclature, reactions, stereochemistry, and physical properties of alkanes, alkenes, alkynes, and allkyl halides. Exploration of the mechanisms and kinetics of organic reactions. Introduction to the chemical literature and to infrared, NMR, and mass spectroscopy.

CHEM 222 Organic Chemistry II
5 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: CHEM 221.
Nomenclature, reactions, stereochemistry, physical properties, and spectroscopy of aromatic compounds, alcohols, ethers, aldehydes, ketones, amines, carboxylic acids, and their derivatives. Further explorations of the mechanisms and kinetics of organic reactions. Introduction to biochemical compounds.

◆Child Growth and Development

MCC-Penn Valley
Linda Bell, Mary Svoboda-Chollet

CDCG 101 Fundamentals of Early Care and Education
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or appropriate placement test score, or concurrent enrollment.
This introductory course focuses on an overview of the field of early childhood care and education. The wide variety of types of early childhood program is explored, as are the characteristics and needs of young children. The preparation of environment and curriculum are examined, as are instructional and guidance techniques. Strategies for observation, documentation, and assessment are discussed. Teacher certification, ethics, and communication skills are detailed. This course covers the eight (8) subject areas of the Child Development Associate (CDA) credential. The guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards are followed in this course.

CDCG 110 Child Health, Safety and Nutrition
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or appropriate placement test score.
The Child Health, Safety and Nutrition course covers basic factors that affect children's health, safety and nutrition. Subject matter includes feeding habits, nutritional needs, health routines, hygiene, growth patterns, childhood diseases, first aid, CPR, safety and implications for children.The guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards are followed in this course.

CDCG 113 Child Growth and Development I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CDCG 101 and ENGL 30 or appropriate placement test score.
This course explores knowing and understanding young children's characteristics and needs; the multiple in uences on development and learning, and how to use this developmental knowledge to create health, respectful, supportive and challenging learning environments. The principles of child development are emphasized including language acquisition, creative expression, physical, cognitive and social/emotional development. The course follows the guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

CDCG 117 Fundamentals of Afterschool I
3 credits. 3 hours. (Lecture 3 hours.)
Fundamentals of Afterschool I covers the developmental needs and characteristics of the school-age child 5-12 years in non-school settings as addressed in Competency Goals I and II, Functional Areas Safe, Healthy, Program Environment, Physical, Cognitive, Communication and Creative of the Missouri Youth Development Credential. The Standards of the National AfterSchool Association are followed in this course.

CDCG 127 Fundamentals of Afterschool II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 117.
The Fundamentals of Afterschool II covers the developmental needs and characteristics of the school-age child 5-12 years in non-school settings as addressed in Functional Areas Self, Social, Guidance, Families, Program Management, and Professionalism of the Missouri Youth Development Credential. The Standards of the National AfterSchool Association are followed in this course.

CDCG 128 Curriculum in Early Childhood Education
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 113.
This course will examine developmentally appropriate practices and the teachers role in curriculum and instruction for young children. The purpose and characteristics of curriculum models past and present will be examined. Curriculum adaptation to accommodate diverse learners will be examined. Play as an overriding component of early childhood curriculum will be stressed. Development of activity plans, lesson plans based on developmentally appropriate practice for children at varying ages and stages will be required. The guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards are followed in this course.

CDCG 132 Learning Environments I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or appropriate placement test score.
The Learning Environments I course prepares students to understand and implement developmentally appropriate creative art experiences with children. In addition, the course teaches strategies to plan, develop, evaluate and integrate other subject matter such as math, science, language, literacy, and social studies into the curriculum. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards.

CDCG 149 Child Development Internship I
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: CDCG 113 and ENGL 101.
This course will engage students in a practical understanding of an early care and education environment and a practical understanding of methods of observing children. Students will actively interact with children in these settings. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards.

CDCG 201 Language Development
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CDCG 113, CDCG 132 and ENGL 101.
This course is an in-depth study of the basic use of tools and materials that stimulate imagination, reasoning, concept formation and communications through language development. The guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards are followed in this course.

CDCG 213 Child Growth Development II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CDCG 149 or concurrent enrollment.
This course provides an in-depth study of physical, social-emotional, language, and cognitive development of children, including those with different types of special needs and those who represent different cultures. The importance of the roles of the caregiver, the environment and the family will also be explored as it relates to the development of the child. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for Education of Young Children (NAEYC) standards.

CDCG 217 Literature for Children
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or appropriate test scores.
This course is a survey and history of literature appropriate for young children (birth through age 8). Criteria for selection and evaluation of childrens literature are included. Techniques for integrating childrens literature into the curriculum are emphasized. Reading and telling stories for various developmental stages are stressed. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards.

CDCG 220 Child Care Management
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CDCG 110, CDCG 113, CDCG 132.
This course is a survey of early-care and education programs. Students will study planning, developing and operating and earl-care and education center. Licensing, curriculum, and parent involvement will be included. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

CDCG 236 Learning Environments II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CDCG 213.
Students will gain knowledge of how to adapt early care and education curriculum and environments to meet the needs of all children, including those with special needs.This course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) Standards.

CDCG 255 Child Development Internship II
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: CDCG 236 or concurrent enrollment.
A supervised internship providing opportunities to gain teaching experience in early care and education settings. The course requires the planning of activities and designing of lessons for various educational levels and needs. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards.

CDCG 260 Education of the Exceptional Child
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CDCG 149.
An introduction to the education of infants, toddlers, preschoolers and school-agers with special needs and the interaction with their families. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

CDCG 262 Families, Early Care, and Communities
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or appropriate test score.
This course will prepare students to develop opportunities for partnership among families, schools, and communities. The course provides an in-depth study of the principles of parenting and family relationships as well as the skills necessary to work with the family unit. The importance of the teachers role in the school and community as applied to working with families of young children and the community is emphasized. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

CDCG 270 Portfolio Design
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Student must be in the final semester of their Associates degree in Applied Science (AAS).
This Portfolio Design course documents a student's competency in early care and education and will include a variety of artifacts from various courses taken throughout the Associates of Applied Science Program. This course prepares students to transfer to four-year institutions. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

CDCG 271 Special Topics in Child Growth and Development

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Guided readings and discussion in Child Growth and Development. Topics and materials will vary by instructor each semester. Specific reading list activities adn writing assignments to be determined by instructor. This course is intended to go into more detail and reserach beyond them aterial covered in the Child Growth and Develoment courses. The guidelines of Kansas and Missouri Core Competencies (K&MCC) for Early Care and Education Professionals and the National Association for the Educationof Young Children (NAEYC) standards are followed in this course.

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

MCC-Blue River	*MCC-Business & Technology*	*MCC-Longview*
Melissa Napper	Brian Lightfoot	Cinthia Herbert
	Ed McCarty	Dennis Jirovsky
		Gary Johnson
MCC-Maple Woods		*MCC-Penn Valley*
Gary May		Edward Durant
Karen Richards		Jerry Macke
Dempsey Yearry		Michael Sturgeon

CSIS 103 Document Processing I

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Introduction to simple tabulations, basic business letters, simple reports, centering and basic document layout. Keyboarding using a personal computer.

CSIS 104 Document Processing II

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: CSIS 103.
Advanced practice in formatting, paginating, and creating business letters, tabulation, manuscripts, reports, and rough drafts using the computer.

CSIS 110 Technology and Information Management

3 credits. 3 hours. (Lecture 3 hours.)
Introduces information management technology and its impact on social and political environments and life-long 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. Keyboarding skills are highly recommended.

CSIS 111 Microcomputer Hardware Concepts

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
This course introduces the student to maintenance, upgrading, setup, and expansion of personal computer hardware. Students will explore microcomputer architecture, functions, and components as well as methods and procedures for installation, troubleshooting, and modifications of computer systems.

CSIS 112 Networking Basics: CCNA1

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: CSIS 110 or CSIS 115.
This is the first of four courses leading to the Cisco Certified Network Associate (CCNA) designation. CCNA 1 introduces Cisco Networking Academy Program students to the networking field. The course focuses on the following: Network terminology; Network protocols; Local-area networks (LANs); Wide-area networks (WANs); Open System Interconnection (OSI) model; Cabling; Cabling tools; Routers; Router programming; Ethernet; Internet Protocol (IP) addressing; and Network standards.

CSIS 113 Router and Routing Basics: CCNA2

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: CSIS 112.
This is the second of four CCNA courses leading to the Cisco Certified Network Associate (CCNA) designation. CCNA 2 focuses on initial router configuration, Cisco IOS Software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Students will develop skills on how to configure a router, manage Cisco IOS Software, configure routing protocol on routers, and set the access lists to control the access to routers.

CSIS 115 Introduction to Microcomputer Applications

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Introduction to operation of computer software packages. Specific hands-on work with word processor, spreadsheet, database, and presentation software applications. Keyboarding experience and basic computer skills are recommended.

CSIS 116 Desktop Publishing

3 credits. 5 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: CSIS 103 or CSIS 115.
Concepts and applications of desktop publishing. Hands-on experience with functions of current desktop publishing software on a personal computer.

CSIS 117 Introduction to Computer Game Creation

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
This course provides an overview of the game industry including history, market, distribution and publishing channels, team roles, and career landscape. Technical topics include software engineering, artificial intelligence, game physics, computer graphics, and networking. Design topics include art and modeling, sound and music, history of games, game analysis, role of violence, gender issues in games, and game balance.

CSIS 118 Introduction to Game Design

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 117.
This course provides an overview of the game design that deconstructs popular games to explore how the systems work and to learn the basic concepts of game design, game technology, storytelling, character and user interface, core mechanics, and balance. The course includes detail coverage of game genres and design patterns.

CSIS 123 Programming Fundamentals

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATH 40/43 or appropriate score on placement test.
Introduction to the principles of good design and the characteristics common to all programming languages. Experience writing code in a particular programming language, and compare to other common programming languages. Write well structured, procedural programs based on problem solving strategies.

CSIS 128 Web Development

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110 or CSIS 115.
An in-depth 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 129 Introduction to E-Commerce
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
Introduction to electronic commerce (e-commerce) from software driven, hands-on perspective. Introduces theory and practice of conducting business over the Internet and World Wide Web. Examines business strategies, technologies, and integration for e-commerce. Examines e-commerce stores that incorporate advertising, marketing, branding, and business efficiency goals. Explores methods how to populate a store catalog, create site-wide navigation links and publish a store.

CSIS 137 Beginning Game Programming
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: CSIS 117 and CSIS 123.
The course is designed to present the skills and to provide the hands-on experience required to get started creating simple 2D games utilizing "C++" and other game programming applications. This course provides the groundwork for primary game development. Typical game topics will include Windows programming, sound, music, and working with graphics.

CSIS 141 Discrete Structures Comp 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 of computer science.

CSIS 143 Database Design and Management
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110 or CSIS 115.
Introduction to database design and management. Topics include terminology and concepts, data modeling, database design, relational databases, database query languages, distributed databases, physical database design, security and implementation. Aspects of privacy and ethical issues are discussed. Integrates database theory with a practical hands-on approach.

CSIS 144 Introduction to SQL with ORACLE
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 115.
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 151 Microcomputer Operating Systems Concepts
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
This course covers 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 and be able to install device drivers as well as compare and contrast major operating systems.

CSIS 161 Telecommunications and Network Fundamentals
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
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 Digital Media
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: CSIS 110 or CSIS 115.
An overview of digital media technology on the PC. The course focuses on four major themes: (1) the nature of digital media, (2) its hardware components, (3) its common software applications, and (4) the actual production of simple programs. Students will be introduced to instructional design concepts, screen design strategies, and navigation techniques, producing digital media components, and actual development of simple digital media programs.

CSIS 170 Information Security, Ethics and Risk Assessment
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
The proliferation and development of telecommunication network technology is examined as gateways or invitations to intrusion. Ways of investigating the management of risk and security of data and data systems are presented as a function of design through recovery and protection. The course assesses the information security environment within which organizations function today. Ethical issues such as monitoring employee computer use and proper limitations on the use of customer data are also discussed.

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 logic 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.
Fundamental skills necessary to effectively manage a network including setup of users, directories, and securities. Individual and team projects involving hands-on use of network utilities. Creation of logon scripts and user profiles. 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.
Recommend CSIS 123 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 180 Current Topics

1-4 credits. 1-4 hours. (Lecture 1-4 hours.)

Technical and applicational implications of innovations in hardware and software. Approval of instructor.

CSIS 200 Advanced Game Programming

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: CSIS 137.

This course is designed to provide hands-on experience and develop the skills required to create more complex two-dimensional games in the Windows environment. Typical game topics will include Windows programming, Graphics Device Interface (GDI), DirectX, sound, music, and working with graphics. Typical tasks will include setting up the environment, creating several games, and using music and sound in game programming concepts.

CSIS 204 Beginning Math and Physics for Game Programmers

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: CSIS 117 and MATH 120.

This introductory course focuses on the mathematics and physics concepts needed to program a variety of video game scenarios. Student will learn to use vectors and matrix transformations to model the motion of physical objects in two and three dimensions. Students will also learn various computer programming methods in order to model these mathematical and physical concepts.

CSIS 206 Introduction to Game Art

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 118.

This course provides an overview of game art. Topics include art concepts such as light, space, surface, form, and function. Technical topics include visual design principles, including graphic design, typography, and how visual design affects the game experience. Design topics include basic drawing and applications.

CSIS 212 Switching Basics and Intermediate Routing: CCNA3

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisites: CSIS 113.

This is the third of four courses leading to the Cisco Certified Network Associate (CCNA) designation. The course focuses on the following: Variable Length Subnet Masking (VLSM); Intermediate routing protocols such as RIP v2, single-area OSPF, and EIGRP; Command-line interface configuration of switches; Ethernet switching; Virtual LANs (VLANs); Spanning Tree Protocol (STP); VLAN Trunking Protocol (VTP). Students will also be required to apply lessons from CCNA 1 and 2 to a network and should be able to explain how and why a particular strategy is used.

CSIS 213 WAN Technologies: CCNA4

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisites: CSIS 212.

This is the last of four courses leading to the Cisco Certified Network Associate (CCNA) designation. The course focuses on the following topics: Advanced IP addressing techniques; Network Address Translation (NAT); Port Address Translation (PAT); Dynamic Host Configuration Protocol (DHCP); WAN technology and terminology; PPP; ISDN; DDR; Frame Relay and Network management. Students will be required to apply information from CCNA 1, CCNA 2, and CCNA 3 to a network and should be able to explain how and why a particular strategy isused.

CSIS 215 Advanced Microcomputer Applications

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 115.

Implementation and in-depth use of microcomputer software packages. Specific hands-on work with word processor, spreadsheet, database, and presentation software applications.

CSIS 216 Advanced Routing: CCNP1

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisites: CSIS 213.

CCNP 1: Advanced Routing is the first of four courses leading to the Cisco Certified Network Professional (CCNP) designation. CCNP 1 introduces students to scaling IP networks. Students learn to use VLSM, private addressing, and NAT to optimize IP address utilization. The majority of the course content related to learning how to implement the RIPv2, EIGRP, OSPF, IS-IS, and BGP routing protocols. In addition, the course details the important techniques used for route filtering and route redistribution.

CSIS 217 Implementing Secure Converged Wide-area Networks: CCNP2

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: CSIS 213.

Implementing Secure Converged Wide-area Networks: CCNP2 is the second of four courses leading to the Cisco Certified Network Professional (CCNP) designation. CCNP2 introduces students to providing secure enterprise-class network service for teleworkers and branch sites. Students will learn how to secure and expand the reach of an enterprise network with focus on VPN configuration and securing network access. Topics include: teleworker configuration and access, frame-mode MPLS, site-to-site IPSEC VPN, Cisco EZVPN, strategies used to mitigate network attacks, Cisco device hardening and IOS firewall features.

CSIS 218 Multilayer Switching: CCNP3

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: CSIS 213.

CCNP 3: Multilayer Switching is the third of four courses leading to the Cisco Certified Network Professional (CNP) designation. CNP 3 introduces students tot he deployment of the state-of-the-art campus LANs. The course focuses on the selection and implementation of the appropriate Cisco IOS services to build reliable scalable multilayer-switched LANs. Students will develop skills with VLANs, VTP, STP, inter-VLAN routing, multilayer switching, redundancy, Cisco AVVID solutions, QoS issues, campus LAN security, and emerging transparent LAN services. This hands-on lab-oriented course stressed the design, implementation, operation, and troubleshooting of switched and routed environments.

CSIS 219 Network Troublshooting: CCNP4

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: CSIS 213.

CCNP4: Network Troubleshooting is the last of four course leading tot he Cisco Certified Network Professional (CCNP) certification. CCNP: 4 teaches students about troubleshooting network problems. The course focuses on the documenting and baselining a network, troubleshooting methodologies and tools, and Layer 1 to 7 troubleshooting.

CSIS 221 Introduction to Computer Architecture

3 credits. 3 hours. (Lecture 3 hours.)

Prerequisite: CSIS 123 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 223 Object-Oriented Programming

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MATH 110 and CSIS 123.

Introduction to object-oriented programming for students with procedural background. Data encapsulation, information hiding, built-in classes and libraries, inheritance, polymorphism, simple graphical user interfaces, user-defined classes and event-driven programming. Basic object-oriented design, maintainable software, software reuse, class hierarchies, design patterns and Universal Modeling Language. Uses object-oriented language.

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 233 Web-Centric Programming

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATH 110 and CSIS 223.

Develop sophisticated GUI programs that work in a World Wide Web or intranet environment. Programs deal with database, multimedia, hypertext, network operating system, client/serve and n-tier configurations, security and privacy.

CSIS 237 Expert Game Programming

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: CSIS 200, 204, and 206.

This course will provide an opportunity for students to obtain the knowledge and skills necessary to create 3D multiplayer games. Topics include 3D models of players, vehicles, items, and structures; audio and music; graphical user interfaces and menus; UV wrapped textures and skins; environmental effects and outdoor terrain. Typical game topics will include Windows programming, Graphics Device Interface (GDI), DirectX, sound, music, and working with graphics. Typical tasks will include setting up the environment, creating several games, and using music and sound in a game programming concepts.

CSIS 241 Discrete Structures for Computer Science II

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 141 and CSIS 223.

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 244 ORACLE Database Programming

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 123 and CSIS 144.

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 250 Assembler Programming

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110 and CSIS 123.

Assembler language programming with disk files, various data formats, and debugging techniques.

CSIS 251 Advanced Microcomputer Operating Systems Concepts

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 151.

This covers the advanced concepts and features of a command line and graphical user interface operating systems for microcomputers.

CSIS 262 Advanced Digital Media 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 how to create and edit more complex audio elements, learn to use authoring tools, create an optical media based multimedia application and discuss the most current issues facing multimedia developers.

CSIS 263 Digital Video Production

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 162.

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 265 Graphical User Interface Programming

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 223.

This course is designed for programmers to write programs for operating systems that support Graphical User Interfaces. Topics include graphical user interface concepts, message-driven architecture, multitasking, and threads, dynamic linking and the application programmer interface library. These topics will be discussed from and Object-Oriented design perspective.

CSIS 269 Securing Wireless Networks

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: CSIS 113.

This introductory course to Wireless LANs focuses on the design, planning, implementation, operation and troubleshooting of Wireless LANs. It covers a comprehensive overview of technologies, security, and design best practices with particular emphasis on hands on skills in the following areas: Wireless LAN setup & troubleshooting; 802.11 (a, b, and g) technologies, products & solutions; Radio Technologies; WLAN applications and site surveys; Resilient WLAN products, design, installation, configuration and troubleshooting; WLAN security; Vendor interoperability strategies; Emerging wireless technologies

CSIS 271 Data Structures and Algorithm Analysis

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 141 and CSIS 223.

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 272 Network Security I

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: CSIS 213.

This course focuses on the overall security processes in a network with particular emphasis on hands on skills in the following areas: Security policy design and management; Security technologies, products and solutions; Firewall and secure router design, installation, configuration, and maintenance; Authentication Authorization and Accounting (AAA) implementation using routers and firewalls; Securing the network at both layer 2 and 3 of the OSI model. CCNA preparation is required.

CSIS 273 Network Security II

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: CSIS 272.

This course focuses on the overall security processes in a network with particular emphasis on hands-on skills in the following areas: Security policy design and management; Security technologies, products and solutions; Firewall and secure router design, installation, configuration, and maintenance; Intrusion Detection System (IDS) implementation using routers and firewalls; Virtual Private Network (VPN) implementation using routers and firewalls.

CSIS 277 Database Programming with Access and Advanced Access Features
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 123 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 use several advanced features (of the constantly growing number of features) of the Access database management system.

CSIS 281 Support Technologies
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 111, 151, and 161.
Learn concepts and techniques related to computer support staff. Topics will include user needs analysis and assessment, troubleshooting, product evaluation strategies, and computer facilities management.

CSIS 290 Computer Science/Information Systems Field Project
3-5 credits. 6-10 hours. (Field Studies 6-10 hours.)
Actual or simulated on-the-job work experience in the area of degree emphasis.

CSIS 291 Computer Support Practicum
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Concurrent enrollment or completion of CSIS 111, 151, 161 and 281.
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 293 Computer Science/Information Systems Major Field Project
6 credits. 12 hours. (Field Studies 12 hours.)
Actual or simulated on-the-job work experience in the area of degree emphasis.

◆Computer Software
Offered at all campuses

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. Laboratory 1 hour.)
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. Laboratory 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. Laboratory 1 hour.)
An introduction to spreadsheet applications.

CSOF 103 Introduction to Database
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Introduction to database.

CSOF 104 Introduction to Microcomputer Operating Systems
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
An introduction to microcomputer operating systems.

CSOF 106 Introduction to Presentation Software
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
This course is a hands-on introduction to presentation software. Learn how to design and create computerized presentations using popular presentation software packages.

CSOF 107 Assistive Technology for Computer Applications
1 credit. 1hour. (Lecture 0.5 hour. Laboratory 1 hour.)
This course demonstrates assistive technology and how it can assist individuals with disabilities in fulfilling their educational and career goals. Students who take this course, can either focus on their own assistive technology needs or obtain an overview of assistive technology that can be used in their own career field.

CSOF 108 Introduction to Internet
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 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
MCC Business & Technology

CSMG 110 Problem Solving/Decision Making
1 credit. 1 hour. (Lecture 1 hour.)
Topics include information to help the supervisor understand that effective decision-making is a vitally important management skill. Processes are examined to assist the supervisor in performance decision-making.

CSMG 120 OSHA and Site Security
1 credit. 1 hour. (Lecture 1 hour.)
The Occupational Safety and Health Act will be studied and interpreted. The student will learn to recognize and avoid dangerous conditions and understand theft prevention techniques for the construction job site.

CSMG 130 Cost Awareness/Production Control
1 credit. 1 hour. (Lecture 1 hour.)
Students will study conditions that must be met if production is to be under control. Participants will be able to use the Short Interval Production Schedule (SIPS) and will recognize factors that affect both the productivity of their work crews and the workers.

CSMG 140 Beginning Print Reading
2 credits. 2 hours. (Lecture 2 hours.)
Participants will learn print reading for construction including how to use symbols, work drawings, survey plats, electrical plans and all other drawings related to construction, as well as the relationship of specifications to drawings.

CSMG 150 Construction Management Leadership
2 credits. 2 hours. (Lecture 2 hours.)
Students will develop and understanding of leadership and motivation as it relates to the construction trades. Core areas of concentration will be resources, supervisory role, teams and leadership skill development.

CSMG 160 Construction Project Management
2 credits. 2 hours. (Lecture 2 hours.)
Students will explore the techniques used to manage a construction project for which they are responsible and accountable.

CSMG 170 Communication for Construction Management
2 credits. 2 hours. (Lecture 2 hours.)
Students will understand communication as it relates to the construction industry. The importance of good communication skills in the workplace will be the focus of this course.

CSMG 180 General and Specialty Contractor Dynamics
2 credits. 2 hours. (Lecture 2 hours.)
Students will explore all construction systems and the contractual relationships between the general and subcontractors on a construction job-site.

CSMG 205 Intermediate Print Reading
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: CSMG 140.
Participants will learn how to read prints for energy saving structures. Steel-frame structures and reinforced concrete structures. Site plans, oor plans, elevations riser 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 proactively about safety in their daily activities and 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 study the techniques used to plan and organize jobs for which they are responsible and accountable as well as understand the importance of timely and accurate reporting.

CSMG 230 Productivity Improvement
2 credits. 2 hours. (Lecture 2 hours.)
Participants will study productivity improvement as well as external factors and internal factors that in uence productivity. Necessary functions for a productive project will be analyzed.

CSMG 250 Construction Estimating
2 credits. 2 hours. (Lecture 2 hours.)
Participants will learn how to bid on construction projects, including all styles of the bid process and learn follow-up and management techniques.

CSMG 260 Contract Documents
2 credits. 2 hours. (Lecture 2 hours.)
This course will help supervisors effectively use job related documents. Participants will understand contract documents are as important as any piece of equipment on the jobsite.

CSMG 270 Advanced Print Reading
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: CSMG 205.
Participants will learn how to read prints for energy saving, steel-frame and reinforced concrete structures. Other print readings will include site and oor plans, elevations riser diagrams and all other construction details.

◆Criminal Justice

MCC-Blue River	MCC-Longview	MCC-Penn Valley
Gary Hacker	Rick Turner	Karen Curls

MCC-Maple oods W

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 American Corrections
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CRJU 101 This course will introduce students to the history of corrections, inmate characteristics, elements of supervision, classification system, and security procedures.
Students will examine probation and parole issues, contraband control, prisonization, and re-entry back into the community.

CRJU 118 Legal Aspects of Corrections
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CRJU 101 Law and procedures are examined and discussed that focus on prisoner's rights, treatment, and care and custody 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.)
This course examines correctional issues and roles of the community in the reintegration and rehabilitation of offenders. Community-based programs, legislative issues, financial support, community resources and impact of social change on corrections are reviewed.

CRJU 132 Community Relations
3 credits. 3 hours. (Lecture 3 hours.)
This course focuses on the dynamics of police and community relationships. Psychological and sociological aspects of police-community relations from the perspectives of the police and ethnic groups, the debate of unequal justice under the law, and efforts towards partnership are introduced.

CRJU 162 Correctional Psychology
3 credits. 3 hours. (Lecture 3 hours.)
Psychological and Sociological theoretical approaches related to the behavior of criminal justice and mental health clients. Diagnostic approaches used in mental health and juvenile or adult correctional settings. Application of case assessment and evaluation process. Individual, group and family therapy approaches utilized with mental health and criminal justice clients.

CRJU 165 Criminology
3 credits. 3 hours. (Lecture 3 hours.)
The course will introduce students to theories associated with criminal behavior and the manifestation of crime. A historical evolution of crime and punishment is introduced along with concepts, terms, and the criminal justice subsystem.

CRJU 167 Special Topics in Criminal Justice
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Guided readings, discussions, writings and/or field experience(s) in criminal justice. Various topics are offered such as computer crimes and gender injustices. Topics are intended to supplement core courses.

CRJU 168 Juvenile Deliquency
3 credits. 3 hours. (Lecture 3 hours.)
Definitions of delinquent behavior. Theories of causation. Development of the juvenile court. Function of detention, intake, and probation. Community-based and institutional programs. Procedures for processing juveniles and treatment trends.

CRJU 169 Family Violence and Sexual Abuse
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to concepts related to interpersonal violence. Categories of abuse studied are spousal, child, sibling, ritual, elderly, gay and lesbian. The course emphasizes legal, social and psychological aspects of abuse.

CRJU 200 Internship in Criminal Justice
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: The student must complete 15 hours of Criminal Justice including CRJU 101 before taking this course.
This course provides students with opportunities to gain practical work experience under the supervision of professionals with experience in the criminal justice or legal field.

CRJU 201 Criminal Justice Practicum I

3 credits. 3 hours. (Field Studies 3 hours.)
Prerequisite: The student must complete 5 credit hours of Criminal Justice including CRJU 101 before taking this course.
This course provides students with opportunities to gain practical work experience under the supervision of professionals with experience in the criminal or legal field.

CRJU 202 Criminal Justice Practicum II

3 credits. 3 hours. (Field Studies 3 hours.)
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 Investigation 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.)
Prerequisite: CRJU 101.
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.

CRJU 228 Fundamentals of Probation and Parole

3 credits. 3 hours. (Lecture 3 hours.)
Historical development of probation and parole from early correctional procedures through modern approaches. Pre-sentence investigation, conditions of probation, and suspended sentences. Prerelease programs, parole conditions, role of probation, and parole conditions, role of probation, and parole personnel.

CRJU 230 Missouri Criminal Law

3 credits. 3 hours. (Lecture 3 hours.)
This course will study the Revised Statutes of Missouri and relevant Federal Statutes relating to general code provisions, justifications, homicide, assaults, kidnapping, sexual offenses, drug offenses, robbery, arson, burglary, stealing, armed criminal action, offenses against public order.

CRJU 233 Principles of Management in Criminal Justice Systems

3 credits. 3 hours. (Lecture 3 hours.)
Problems of police administration, functional organization, fundamentals of staff and field operation, planning, budget analysis, recruitment, training assignment, and disciplinary methods. Cooperation with other agencies.

CRJU 236 Correctional Administration

3 credits. 3 hours. (Lecture 3 hours.)
Current administrative and management patterns and functions in correctional agencies and institutions. Concepts of staffing classification, training, budgeting, record keeping, and public relations.

CRJU 244 Group and Individual Counseling in Corrections

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CRJU 105.
This course introduces students to basic principles of human behavior and techniques for changing attitudes and behaviors within a group or individual settings. Counseling settings will focus on correctional facilities both traditional and community-based and correctional populations.

CRJU 248 Constitutional Law

3 credits. 3 hours. (Lecture 3 hours.)
U.S. Supreme Court rulings that affect law enforcement. Major constitutional decisions, federal statutes, interstate rules, and cases involving constitutional amendments affecting law enforcement jurisdiction and civil liberties.

CRJU 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 with particular attention directed toward local and national initiatives in alcohol and drug abuse.

CRJU 280 Addiction Counseling with Special Populations

3 credits. 3 hours. (Lecture 3 hours.)
Cultural, racial, age, and gender 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.

CRJU 285 Addiction Client Management

3 credits. 3 hours. (Lecture 3 hours.)
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.

◆Dance

MCC-Longview   *MCC-Penn Valley*

DANC 100 General Dance

2 credits. 4 hours. (Laboratory 4 hours.)
A studio survey of movement principles common to most forms of dance, including but not limited to ballet, modern dance, jazz, and ethnic dance. Designed for the student who is interested in finding out more about these disciplines before taking a specific technique or style.

DANC 111 Modern Dance I

2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: DANC 100 or previous modern dance classes; KCMO Magnet Arts Magnet experience qualifies.
A studio course for beginning students covering basic principles of contemporary modern dance. Students will also learn about the history and vitality of this unique American dance form.

DANC 121 Ballet I

2 credits. 4 hours. (Laboratory 4 hours.)
A studio course for beginning students covering basic principles of contemporary ballet. Students will also learn about the history and variety of this classical dance form.

DANC 122 Ballet II

2 credits. 4 hours. (Laboratory 4 hours.)
A studio course for intermediate students covering intermediate principles of contemporary ballet. Students will also learn about the history and variety of this classical dance form.

◆Dental Assisting

MCC-Penn Valley
Rose Gupta, Hema Udupa

DENA 100 Introduction to Dental Assisting
1 credit. 1 hour. (Lecture 1 hour.)
This course is a pre-requisite for admission to the Dental Assisting Program. Dental terminology, roles of dental assistant, scope of dentistry

DENA 101 Body Structure and Function
2 credits. 2 hours. (Lecture 2 hours.)
Admission to Dental Assisting Program is required. Basic anatomy and physiology for the Dental Assistant.

DENA 102 Head and Neck Anatomy
2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
Prerequisite: Admission to the Dental Assisting Program.
Admission to Dental Assisting Program is required. Utilizes a systems approach to the gross anatomy of the head and neck with emphasis on the maxilla and mandible and oral tissues, neuromuscular and circulatory function, supporting structures and the temporomandibular joint and also study of oral embryology and histology.

DENA 103 Dental Anatomy
2 credits. 4 hours. (Laboratory 4 hours.)
Admission to Dental Assisting Program is required. Introduces to students a detailed study of crown and root morphology of both primary and permanent dentition. Eruption Schedule and Numbering System.

DENA 104 Dental Emergencies and Pharmacology
1 credit. 1 hour. (Lecture 1 hour.)
Admission to Dental Assisting Program is required. An overview of emergencies common to the dental office setting. Students will gain knowledge in emergency drugs, allergic reactions and drug related emergencies. Also emphasized are specific medical conditions related to treatment, management of medical emergencies, pharmacology related to dental.

DENA 105 Dental Materials I
2 credits. 4 hours. (Laboratory 4 hours.)
Admission to Dental Assisting Program is required. Basic knowledge and manipulation of waxes, temporary crowns, custom trays, alginate materials, impression materials, bite registration materials, cements, varnishes, bases and liners.

DENA 108 Oral Microbiology and Infection Control
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Admission to Dental Assisting Program is required. An overview of microbiological aspects of health and disease with emphasis on sterile process and disinfection techniques.

DENA 110 Chairside Assisting I
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Admission to Dental Assisting Program is required. Dental terminology and responsibilities of a dental assistant in the dental operatory to include patient preparation and utilization of rubber dam, matrix, anesthetic, uoride, wedge, amalgam and composite procedure and coronal polishing techniques.

DENA 115 Dental Radiology I
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: DENA 102.
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 Experience I
2 credits. 6 hours. (Clinical 6 hours.)
Prerequisite: Admission to the Dental Assisting Program and completion of CPR for healthcare workers.
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 I
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: DENA 101, 102, 105, 110, 115, and 125.
Practice and preparation for Dental Assisting National Board (DANB).

DENA 205 Dental Materials II
3 credits. 6 hours. (Laboratory 6 hours.)
Prerequisite: DENA 105.
Advanced manipulation of dental cements, amalgam, esthetic restoratives (composites), alginate, gypsum products, sealants and various impressions materials.

DENA 210 Chairside Assisting II
5 credits. 9 hours. (Lecture 1 hour. Laboratory 8 hours.)
Prerequisite: DENA 110.
Specialty area of dentistry to include orthodontics, periodontics, prosthodontics, oral surgery, endodontics, pediatric dentistry and geriatric dentistry. Includes procedures, instruments and current concepts for assisting in these areas.

DENA 215 Dental Radiology II
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: DENA 115.
Radiographic techniques, procedures, and infection control emphasized. Practical experience in exposing, processing and mounting radiographs taken on patients at the University of Missouri-Kansas City School of Dentistry and in private practice offices (general and specialty).

DENA 225 Dental Office Management
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: Enrollment in the Dental Assisting Program.
Principles of business management in the dental office. Control of the appointment book, filing, financial management, insurance forms, supply inventory, and recall systems by conventional and computerized methods. Dental computer applications and use. Hands-on experience in private practice offices and/or clinic DENA 250.

DENA 230 Oral Pathology
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: DENA108 and 110.
An overview of diseases of the human body, including basic cell tissues, with specific emphasis on diseases of the face and mouth.

DENA 250 Clinical Experience 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 Assisting Seminar
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: DENA 125.
Preparation for the Dental Assisting National Board Examination (DANB) and for successful employment. Clarification of prior material by discussion and dialogue between students and instructors. Preparation of personal resume and job application. Demonstrate interview techniques.

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 in 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.

◆Economics

MCC-Blue River	*MCC-Longview*	*MCC-Maple Woods*
	Hossein Bahmaie	Jill Kingsbury
	MCC-Penn Valley	

ECON 110 Introduction to Economics

3 credits. 3 hours. (Lecture 3 hours.)
General education approach to the study of economics. Economics as a description of economic life. The economic problem. Economic systems. The market economy and its operations. That national economy. Fiscal policy. The role of money and banking. Monetary policy. Standard economic theory. Dissenting economic theory.

ECON 210 Macroeconomics

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 40 or 40L or a satisfactory score on the placement test.
A basic examination of the principles of economics that apply to the economic system in the aggregate. Topics include opportunity costs, gains from trade, demand and supply, determination of aggregate output, employment, in ation, and exchange rates, and the role of fiscal and monetary policy in the U.S. and world economy.

ECON 211 Microeconomics

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 40 or 40L or a satisfactory score on the placement test.
A basic examination of the microeconomic behavior of individual consumers, firms, and markets in the domestic and world economy. Topics include opportunity costs, gains from trade, demand and supply, production, market structures, and externalities and public goods.

◆Education

MCC-Blue River	*MCC-Longview*	*MCC-Maple Woods*
	Barbara Eubank	Russell Powlas
	MCC-Penn Valley	
	Carrie Pickerel-Brooks	

EDUC 131 The Paraprofessional Educator

2 credits. 2 hours. (Lecture 2 hours.)
This course will assist students in understanding the career of a paraprofessional educator. Emphasis is placed on the most typical classroom placements for paraprofessionals - special education and ELL classrooms - and the skills required to serve as a support to the lead instructor. The growth, expansion, and new requirements of the career will be detailed. Professionalism in terms of ethics, teamwork, goal sharing, collaboration, and continued career growth will be promoted.

EDUC 160 Literacy Instruction for Paraprofessionals

3 credits. 3 hours. (Lecture 3 hours.)
Prequisite: ENGL 101. This course focuses on helping paraprofessionals work with students on key reading and writing skills. Emphasis is placed on teaching student explicit, systematic approaches to skills based on state standards. Key reading (phonemic awareness, uency, comprehension and vocabulary) and writing elements are addressed. Students will develop a variety of assessment, instructional, and remediation skills to be used in the classroom.

EDUC 162 Math Instruction for Paraprofessionals

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 100 or higher.
This course will assist student in understanding mathematical concepts and relationships commonly needed for paraprofessionals in elementary school programs. A review of basic math concepts and procedures will be provided. The class will then proceed to elaborate on teaching techniques and student learning needs. Emphasis will be placed on State and the National Council of Teachers of Mathematics (NCTM) Standards.

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 Foundations of Education

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101.
This course is designed to examine the historical, philosophical, sociological, political, economic and legal foundations of the American public education system. Students will explore the nature of school environments, design and organization of school curricula, and characteristics of effective schools and instruction in grades P-12. Educational structures, practices and projections for the future will be studied.

EDUC 201 Teaching Profession With Field Experience

3 credits. 32.5 hours. (Lecture 2.5 hours. Field Studies 30 hours.)
Prerequisite: ENGL 101.
This course provides students an opportunity to observe teaching and learning for thirty (30) hours or more in P-12 classrooms. The student is introduced to the requirements for teacher preparation and certification. Students will examine characteristics of effective teaching. The course is designed to assist the student in determining if a career in teaching is an appropriate goal.

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 235 Diversity Issues in Education

3 credits. 3 hours. (Lecture 3 hours.)
This course will survey the major social and psychological processes involved in diversity and human relations, and the way these processes impact teaching, learning, and other human interactions. The course will cover theories of multicultural education, as well as use an experiential model for making the theoretical knowledge relevant in the individual educator's life.

EDUC 238 Classroom Management

3 credits. 3 hours. (Lecture 3 hours.)
The student will develop strategies for successfully managing classroom environments. Focus is on educator as guide/facilitator with a range and variety of choices of management plans. Emphasis will be placed on student recognizing the developmental appropriateness of a management plan for varying classroom settings. Student will be charged with identifying personal philosophy of management, and a theoretical management plan that will be congruent with beliefs and values and is supportive of professional ethics, laws, school policy, student achievement, and human dignity.

EDUC 239 Internship in Paraprofessional Education

3 credits. 90 hours. (Field Studies 3 hours.)
Prerequisite: The student must complete 15 credit hours of Education courses before taking this course.
The student must complete 15 credit hours of Education courses before taking this course. This course provides student with opportunities to gain practical work experience under the supervision of a certified classroom teacher and a school administrator. Student must complete 90 clock hours in a PreK-12 classroom setting.

EDUC 270 Educational Psychology

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
This course is designed to help students relate the application of psychological principles to teaching, learning and assessment, and the education practice in P-12 classrooms. It will focus on the learner and the learning process, teacher characteristics and classroom processes that increase student motivation. Student diversity and appropriate instructional strategies for students with special needs will also be introduced.

EDUC 280 Technology for Teachers

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101.
In this course students will learn how to integrate instructional technology into the P-12 classrooms. Students will study a variety of software program and telecommunication tools. The focus will also be on social, ethical, legal and human issues surrounding the use of technology.

EDUC 285 Education of Exceptional Learners

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EDUC 270.
This survey course is an introduction to exceptional learners and their education in grades P-12. Students will attain knowledge, skills, and dispositions that will enable them to work effectively with exceptional learners in general education or special education.

EDUC 299 Special Topics in Paraprofessional Education

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Guided readings and discussion in Paraprofessional Education. Topics and material will vary by instructor each semester. Specific reading list activities and writing assignments to be determined by instructor. This course is intended to go into more detail and research beyond the material covered in the teacher education and/or paraprofessional educator courses.

◆Emergency Medical Services
MCC-Penn Valley

William Bishop   Michael Peters   Harold Kenyon

EMS 100 Basic Emergency Patient Care

1 credit. 1 hour. (Lecture 1 hour.)
Overview of the Emergency Medical Services system. Current cardiopulmonary resuscitation skills, including adult, child, and infant resuscitation according to American Heart Association standards. Medical, traumatic, and environmental emergencies review. (Successful completion of the course qualifies the student for the Basic Life Support Course Certification.)

EMS 110 First Responder

3 credits. 3 hours. (Lecture 3 hours.)
Overview of the Emergency Medical Services system. Recognizing the mechanisms of injury. Patient assessment and management techniques. Patient packaging techniques for evacuation.

EMS 150 Emergency Medical Technician - 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 and must hold a high school diploma or GED.
Basic life support and emergency care. Signs, symptoms and procedures of field management for emergency medical situation. Clinical observations. Successful completion makes student eligible to take the National Registry of Emergency Medical Technicians examination for EMT-Basic. (State licensure as an EMT-Basic is the responsibility of the student after successful completion of the Nation Registration.)

EMS 200 Introduction to Paramedic Care

4.5 credits. 5 hours. (Lecture 4 hours. Laboratory 1 hour.)
Prerequisite: BIOL 108, or BIOL 109, or BIOL 110 & 210, admission to the Paramedic Program, and Missouri licensed EMT or equivalent from another state.
This course introduces the student to the roles and responsibilities of the Paramedic, as well as the legal and ethical issues encountered. It also includes an orientation to the pathophysiology related to advanced prehospital care. Assessment, management and care of airway and breathing problems.

EMS 206 Paramedic Pharmacology

4.5 credits. 5 hours. (Lecture 4 hours. Laboratory 1 hour.)
Prerequisite: EMS 200.
This course introduces the students to the medications used in the prehospital management of medical and traumatic emergencies, as well as the methods and techniques of administration.

EMS 212 Emergency Cardiology

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Prerequisite: EMS 206.
This course is designed to enable the student to perform assessments and advanced life support interventions for patients suffering from cardiac emergencies. Skills include physical examination, electrocardiographic monitoring, electrical therapy and appropriate medication administration. The student will also receive training through the American Heart Associations Advanced Cardiovascular Life Support (ACLS) course.

EMS 218 Medical Emergencies

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EMS 212.
This course will introduce the student to the assessment and management of cases involving non-traumatic medical emergencies.

EMS 224 Trauma Management
2.5 credits. 3.5 hours. (Lecture 1.5 hours. Laboratory 2 hours.)
Prerequisite: EMS 218.
This course prepares the student for management of trauma victims in the prehospital setting. Students will also complete a Basic Trauma Life Support course.

EMS 230 Care of Women and Children
2.5 credits. 3 hours. (Lecture 2 hours. Laboratory 1 hour.)
Prerequisite: EMS 224.
This course covers womens health issues that the Paramedic may encounter. Additionally, the student will be trained to handle emergency childbirth and to provide emergency care to pediatric patients. The American Heart Association and American Academy of Pediatrics Pediatric Advanced Life Support (PALS) course is offered as well.

EMS 236 Prehospital Care Integration
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: EMS 230.
This course provides the learner with the opportunity to link information learned in proceeding coursework with the realities of patient care in the clinical and field setting. Challenging the student to think critical about patient assessment and to develop scene management and leadership skills.

EMS 254 Paramedic Hospital Clinical
5.5 credits. 26 hours. (Clinical 26 hours.)
Prerequisite: EMS 206.
This course provides the learner with the opportunity to link information learned in preceding coursework with the realities of patient care in the clinical setting. Challenging the student to think critically about patient assessment and to perform the patient assessment and practice skills on the live patient, in a supervised hospital environment.

EMS 258 Paramedic Field Internship
5.5 credits. 26 hours. (Field Studies 26 hours.)
Prerequisite: EMS 230.
This course provides the student with the opportunity to link information learned in preceding coursework with the realities of patient care in the field setting. Challenging the student to think critically about patient assessment and to perform the patient assessment and practice skills on the live patient, in a supervised environment.

◆Engineering
MCC-Business & Technology *MCC-Longview* *MCC-Maple Woods*
Randall Forchee
MCC-Penn Valley
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 Programming for Engineers and Scientists
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATH 120 and MATH 130, or MATH 150.
The C++ programming language and MATLAB will be introduced and used to solve engineering problems and present data graphically.

ENGR 113 Engineering Design Microcomputer Applications
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: MATH 110.
Introduction to software tools (computer aided design drafting, word processing, spreadsheets) with application to professional engineering practice. Principles of engineering design. A semester long group project designed and built by students in an integral part of the course.

ENGR 121 Metallurgy for Engineers
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: CHEM 111.
Introduction to the structure and properties of metals and alloys. Introduction to processes used to modify the structure and properties of metallic materials, including alloying, deformation and heat treating.

ENGR 215 Engineering Statistics and Computation
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATH 190.
An introduction to statistical methods in engineering dealing with basic probability, statistical distribution functions, confidence intervals, significance tests, and sampling. Limited treatment of curve-fitting and time-series analysis. Structured programming in Matlab.

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, exergy (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, moments of inertia, shear and bending moment diagrams.

ENGR 230 Dynamics
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGR 229.
Principles of kinematics, kinetics, and moments of inertia. Engineering applications and vector methods.

ENGR 233 Circuit Analysis I
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: PHYS 221 or concurrent enrollment in PHYS 221.
DC Steady-state Circuit analysis, Node and Mesh analysis, Independent and Dependent Sources, Capacitors and Inductors, Op-Amps, Transient analysis, AC Analysis.

ENGR 240 Mechanics of Materials
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGR 229.
Introduction to the techniques of determining stresses and strains in mechanical and structural components.
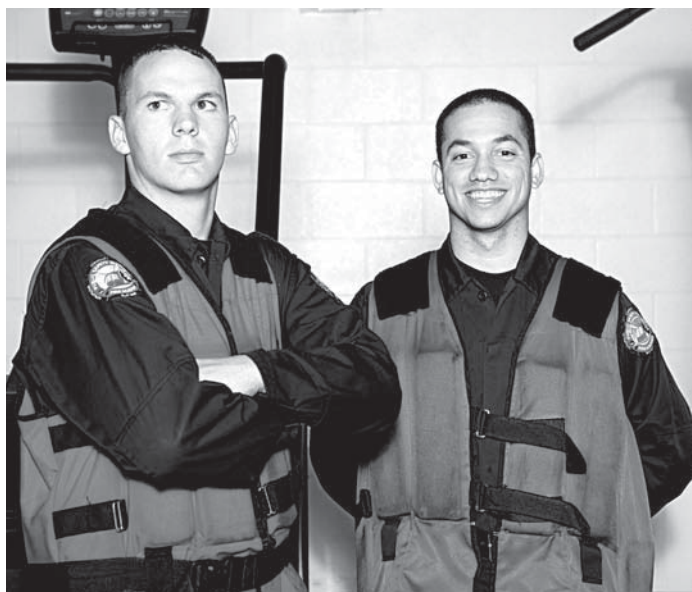
◆Engineering Technology
MCC-Business & Technology

William Allyn   Joseph Roche

ETEC 110 Basic Electronics
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Completion of or concurrent enrollment in MATH 103.
This course is an introductory course for the individual who is moving into an industrial maintenance or related activity. Behavior of electricity, sources of electricity, Ohms' and Watts' laws, electrical power distribution, transformers, electrical safety, electrical measurements and basic components are covered.

ETEC 111 Microcomputer Hardware Repair
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
This course introduces the student to maintenance, upgrading, setup, and expansion of personal computer hardware.
Students will explore microcomputer architecture, functions, and components as well as methods and procedures for
installation, troubleshooting, and modifications of computer systems. Emphasis will be on the use of microcomputer hardware and software used in an industrial setting.

ETEC 118 AC Circuit Analysis
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: ETEC 110 or INTE 110.
This course covers AC circuits, complex numbers, inductance, capacitance, RL and RC circuits, RC time constants and transients, resonance, transformers, relays, and switches.

ETEC 130 Digital Electronics
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Completion of or concurrent enrollment in ETEC 110 or INTE 110.
The course covers basic digital gates, logic circuits, timers, counters, shift registers, ip ops, analog to digital and digital to analog conversions, and the conversions between different number systems. An introduction to the architecture of the microprocessor is also included.

ETEC 152 Engineering Graphics and CADD I
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisites: MATH 40/40L.
Introduction to engineering communications and basic computer aided drafting/design (CADD). Emphasis on technical sketching, orthographic projection, drawing layout, drafting and CADD standards and conventions, dimensioning, sectioning, annotation and basic design principles. Foundation for computer aided drafting/design including file management, basic drawing commands, basic editing commands, layering, blocks and wblocks, dimensioning, polylines, hatching and plotting.

ETEC 153 Descriptive Geometry
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: ETEC 152.
Graphic solutions of spatial relationships between points, lines, angles, planes and solids. Includes mechanical, architectural and civil problems and concepts. Determining true length, angle, visibility, bearing, slope, intersections, parallelism and perpendicularity using CADD and technical sketching.

ETEC 155 Introduction to Residential Architectural Drafting
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152.
Introduction to residential architectural design and drafting. Course includes residential construction materials and methods, building codes, site selection, home styles, foundation plan, oor plan, electrical and plumbing plans, roof plan, elevations and wall sections, window and door schedules, energy efficiency and community considerations. An emphasis will be placed on design. A complete drawing set will be produced using CADD.

ETEC 169 CADD I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Basic computer aided drafting and design (CADD) using a current industry standard CADD software package. Includes file management, basic drawing and editing commands, blocks and wblocks, dimensioning, polylines, hatching, plotting, intermediate drawing and editing commands and CADD standards (layers, text styles and dimension styles).

ETEC 170 CADD I, Alternate
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152.
An introduction to computer aided drafting/design using a selected CADD package. Topics will be based on the CADD package selected.

ETEC 189 ETEC Internship I
1 credit. 5 hours. (Field Studies 1 hour.)
Prerequisite: ETEC 152.
This course is designed to give the student real world experience in an engineering department of an engineering or architectural office. The student will strengthen design techniques as well as the soft skills required of modern industry under the supervision of a mentor.

ETEC 190 ETEC Internship II
2 credits. 10 hours. (Field Studies 2 hours.)
Prerequisite: ETEC 152.
This course is designed to give the student real world experience in the an engineering department of an engineering or architectural office. The student will strengthen design techniques as well as the soft skills required of modern industry under the supervision of a mentor.

ETEC 191 ETEC Internship III
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisites: ETEC 152.
This course is designed to give the student real world experience in an engineering department of an engineering or architectural office. The student will strengthen design techniques as well as the soft skills required of modern industry under the supervision of a mentor.

ETEC 199 Special Projects in ETEC
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ETEC 152.
Independent study in Engineering Technology or related areas under supervision of the faculty member.

ETEC 200 Applied Statics & Mechanics
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: MATH 104 or MATH 130.
Foundation for mechanical and structural design calculations and procedures. Topics include vectors, free body diagrams, force analysis, truss design, column and beam selection, bearing plate design, and bolted connections.

ETEC 210 Introduction to Commercial Architecture
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: ETEC 152 and 155.
Introduction to commercial architecture and structures. Topics include commercial structure types, site considerations, foundation plans, structures, construction materials and methods, cost estimating and environmentally friendly design practices. An emphasis will be placed on building systems and building system planning.

ETEC 211 Building Information Modeling
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152.
This course will introduce the student to the technology of Building Information Modeling. Building design, layout and components will be created. Levels, views detailing, scheduling, elevations and sections will be covered.

ETEC 220 Analog Devices
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: ETEC 118.
This course covers semiconductor devices and their applications. Diodes, rectifiers, power supplies, limiters, clampers, voltage regulators, and transistors will be presented, along with various small and large signal and multistage amplifier circuits. This course also covers field effect transistors, oscillators and trigger devices.

ETEC 230 Microcontroller Architecture
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: ETEC 130.
This course covers the operation and architecture of the basic microcontrollers, programming commands and system design. Also includes an introduction to robotics.

ETEC 240 Design Project
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ETEC 270.
An engineering technology research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses.

ETEC 258 Introduction to Machine Design
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152.
An introduction to machine design with an emphasis on current materials and standard machine parts. Topics include advanced dimensioning, basic tolerancing, gearing, threads and thread notes, welding and weld symbols, bearings, adjustment and the drawing set. Course includes a comprehensive design project with drawing set.

ETEC 262 Technical Illustration
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152.
An introduction to a professional technical illustration and animation software tool. Topics covered are object modeling and editing, lights, shadows, materials, backgrounds, scenes, images and basic animation. A comprehensive final project is included in the course.

ETEC 265 Introduction to Civil Design
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: ETEC 152.
An introduction to civil drafting and design using surveying and engineering data to draw civil engineering plans. Topics included are legal descriptions, plan and profile drawings, topographic mapping, cross-sections, and required calculations. An introduction to a Civil specific CADD package is included.

ETEC 268 Structural Steel Blueprint Reading
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ETEC 152.
Introduction to structural steel and structural steel blueprints. Topics include steel as a material, structural steel shapes, drawing types, connection methods and fabrication methods. The AISC Manual of Steel Construction will be introduced and used in reference to structural members and drawings.

ETEC 269 Computer Aided Design II
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: ETEC 152 or ETEC 169.
Advanced computer aided drafting and design (CADD). Advanced dimensioning and tolerancing techniques, attributes, advanced drawing aids, file management and basic customization. Effective use of model space, paper space and viewports. An introduction to three-dimensional wire frames, surface models, solid models and rendering tools.

ETEC 270 Parametric Modeling
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152 or 169.
An in-depth introduction to three-dimensional parametric modeling. A current release of an industry parametric modeler will be used to produce three-dimensional part files, assemblies, presentations and orthographic production documents. Students will work on individual and group projects to solve simulated industry design problems.

ETEC 271 Parametric Modeling, Alternate
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEc 152 or ETEC 169.
An in-depth introduction to three-dimensional parametric modeling. A current release of an industry parametric modeler will be used to produce three-dimensional part files, assemblies, presentations and orthographic production documents. Students will work on individual and group projects to solve simulated industry design problems.

ETEC 275 Build Project
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ETEC 260.
This is a capstone course, and the student should be in the final semester of the program. The student will work with the instructor to build an electronic project, which will require a demonstration of proficiencies in the assembly, testing and troubleshooting phases in electronics.

◆English

MCC-Blue River	MCC-Longview	MCC-Maple Woods
Theresa Hannon	Zoe Albright	T. Joel Conway
Richard Higgason	Kurt Canow	Mark Lidman
Richard L. Nunez	Anne Dvorak	Michelle Potts
Robyn McGee	Morssie Edgerson	Melissa Renfrow
Emily Morgan	Diana Grahn	David Sharp
David Smith	Terri Lowry	Michael Warren
MCC-Penn Valley	Casey Reid	Stephanie Zerkel-Humbert
Craig Bartholomaus	Dawnielle Robinson-Walker	
William Hodgkinson	Jan Rog	
Christine Howell	Pat McKeown-Sparks	
Anita Leverich	Erik Sullivan	
Larry McCloud		
Lisa Spaulding		
Lane VanHam		

ENGL 28 Basic Writing Skills I
3 credits. 3 hours. (Lecture 3 hours.)
Students will work toward writing clear, correct, and effective sentences and paragraphs; incorporating their use in extended pieces of writing.

ENGL 30 Basic Writing Skills II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 28 or satisfactory score on placement test.
Students will work toward understanding and utilizing the conventions of Standard American English, sentence structure, and writing focused, adequately supported and mechanically sound paragraphs and essays.

ENGL 101 Composition & Reading I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or appropriate placement test score.
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 re ective expression to critical analysis through writing.

ENGL 101R Composition and Reading I - Reentry
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: ENGL 30 or a satisfactory score on the English placement test.
Focus on instruction in composing process that includes exploration of ideas through reading, methods of writing development, and use of writing conventions. Instruction takes students from re ective expression to critical analysis through writing. The reentry course provides a campus orientation, an introduction to campus resources, and strategies for memory, listening, note taking, test preparation, test taking, stress management, and time management.

ENGL 102 Composition & Reading II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101.
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 re ect critical thinking and logical argument.

ENGL 104 News Writing and Reporting I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101.
This course offers instruction and practice in writing and editing copy for college news publications. Students will contribute work for publication. The course also includes analysis and discussion of professional and college newspapers.

ENGL 105 News Writing and Reporting II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 104.
Continued instruction and practice in writing and editing copy for college news publications. Students will contribute work for publication. Introduction to production skills.

ENGL 109 Introduction to the Electronic Library
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
A hands-on exploration of electronic technology that teaches students information-seeking strategies and critical thinking skills needed for information literacy.

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.

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 198 Service-learning in English
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
This is an experiential learning opportunity that links concepts and principles of English to real-world application through community service. Includes 40-hours of on-task service to a community organization, agency, or public service provider per credit hour. The community service placement agency and service assignment will vary, dependent on the speech or drama course topic and learning objectives.

ENGL 201 Creative Writing I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101.
Various types of imaginative writing such as fiction, poetry, play and/or scripts, creative non-fiction.

ENGL 202 Creative Writing II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 203.
Continuation and advanced study of the primary themes found in Creative Writing I, including various types of imaginative writing such as fiction, poetry, play and/or scripts, creative non-fiction. More in-depth analysis of the processes of manuscript preparation and submission.

ENGL 203 Creative Writing III
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 202.
Continuation and advanced study of the primary themes found in Creative Writing II, including various types of imaginative writing such as fiction, poetry, play and/or scripts, creative non-fiction. More in-depth analysis of the processes of manuscript preparation and submission, including the preparation of longer fiction, collections of poetry and specialized scripts.

ENGL 204 Creative Writing IV
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 203.
Continuation and advanced study of the primary themes found in Creative Writing III, including various types of imaginative writing such as fiction, poetry, play and/or scripts, and creative non-fiction. Practice in submitting works for publication, including fiction/longer fiction, poems and/or collections of poetry and specialized scripts.

ENGL 206 News Writing and Reporting III
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 105.
Instruction in advanced news writing and reporting; introduction to news editing. The focus of the course is on editing skills and newsroom leadership.

ENGL 207 News Writing and Reporting IV
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 206.
Instruction in advanced news writing and reporting; introduction to news editing. The focus of the course is on editing skills and newsroom leadership.

ENGL 209 Creative Writing:Screenwriting
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 101.
Instruction and practice of the elements, format, professional development, and marketing of a complete 90-120 page feature length screenplay based on an original idea.

ENGL 210 Creative Writing: Writing Children's Literature
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101.
Writing various types of literature for children from preschool to junior high.

ENGL 214 Introduction to Fiction
3 credits. 3 hours. (Lecture 3 hours.)
Reading, discussion, and analysis of short stories and novels. Interpretation, evaluation, and enjoyment of works within the two literary forms.

ENGL 215 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 216 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 218 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 219 Advanced Screenwriting
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 209.
Review of professional screenwriting standards; revision and marketing of a completed full-length screenplay.

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.

ENGL 230 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 232 Detective Fiction
3 credits. 3 hours. (Lecture 3 hours.)
Representative works of detective fiction from Poe to the present.

ENGL 234 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 240 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 242 The Bible as Literature
3 credits. 3 hours. (Lecture 3 hours.)
Selected passages from Old and New Testaments as illustrations of different types of literature (stories, drama, poetry). Analysis of the literary qualities of the Bible.

ENGL 250 Masterpieces of American Literature
3 credits. 3 hours. (Lecture 3 hours.)
Masterpieces of American literature that represent American culture and themes.

ENGL 254 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 255 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 256 World Masterpieces
3 credits. 3 hours. (Lecture 3 hours.)
World masterpieces of prose, drama, and poetry as embodiments of views of the human condition.

ENGL 260 African-American Literature
3 credits. 3 hours. (Lecture 3 hours.)
Survey of African-American literature from various genres and historical periods. Students will examine the artistic responses of male and female writers to the social, political, and cultural forces that help shape the African-American experience.

ENGL 262 Women's Lives and Autobiography
3 credits. 3 hours. (Lecture 3 hours.)
This course focuses on the literature of women's lives and will explore the historical, political, social and religious contexts in which women live and through which they perceive their worlds.

ENGL 264 U.S. Latino and Latina Literature
3 credits. 3 hours. (Lecture 3 hours.)
This course is a survey of U.S. Latino and Latina literature from various genres and historical periods. The literary contributions from Chicanos and Chicanas, Cuban-Americans and Puerto Rican writers will be included. Students will read and discuss essays, drama, novels, poetry, short stories and ideological discourse while also exploring historical motivators of the literature that have made cultural impacts on the Latina and Latina communities and the American mainstream.

ENGL 265 African Literature
3 credits. 3 hours. (Lecture 3 hours.)
This course is a survey of African literature from various genres and historical periods. Students will read and discuss oral stories, poems, short stories, plays, and novels and examine social, political, and cultural forces that have shaped the African experience.

ENGL 267 North American Indian Literature
3 credits. 3 hours. (Lecture 3 hours.)
This course will examine North American Indian literature and cultures. Attention will be paid to both traditional and contemporary native writings. The course will cover themes of traditional beliefs, identity, and other relevant topics. Genres include poetry, fiction, film, and/or non-fiction prose.

ENGL 268 Women's Literature
3 credits. 3 hours. (Lecture 3 hours.)
Women's Literature focuses on the ideas, experiences, and imagination of women through discussion and analysis of various literary genres written by women. The course will explore the historical, political, and social contexts in which women live and write.

ENGL 270 Special Topics
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Selected topics of current interest. Available to individual students or to small groups through arrangement with an instructor.

ENGL 299 Shakespeare
3 credits. 3 hours. (Lecture 3 hours.)
Study of Shakespeare's life and major works. Consideration of the significance of the playwright and his plays for both Elizabethan and 21st century audiences.

◆English as a Second Language
MCC-Penn Valley   *MCC-Longview*

ESL 2 Novice I: Speaking and Listening
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate ESL placement test score.
The study and practice of speaking and listening at the level of isolated words and formulaic phrases in areas of immediate need. Development of survival level aural/oral skills for beginning ESL students.

ESL 3 Novice I: Reading and Vocabulary
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate ESL placement test score.
The study and practice of survival level reading. Introduction of basic reading skills in English.

ESL 4 Basic Writing
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: Applied Language Institute approval.
The study and practice of survival level writing skills including spelling, capitalization and some punctuation. Basic sentence structure and completion of simple standard forms.

ESL 5 Basic Grammar
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: Applied Language Institute approval.
The study and practice of survival level sentence structures and words. Basic level sentences, questions, directions, and directions, and descriptions that relate to students' immediate surroundings and some life skill areas.

ESL 6 Basic Reading

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: Applied Language Institute approval.
The study and practice of survival level reading English vocabulary context. Basic reading comprehension, and the introduction of dictionary skills.

ESL 7 Basic Speaking/Listening

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: Applied Language Institute approval.
The study and practice of speaking and listening for survival level social functions in English. Production of isolated words and phrases in areas of need. Development of survival level oral/aural skills for beginning ESL students.

ESL 8 Novice 1: Grammar

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate ESL placement test score.
The study of basic sentence structure and words in writing and speaking. Students will study statements, negatives and questions in a variety of contexts.

ESL 9 Novice 1: Composition

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate ESL placement test score.
The study and practice of basic sentence structure and completion of simple standard forms in writing using survival level vocabulary.

ESL 10 ESL Composition I

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: ESL 04.
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.

ESL 11 Grammar I

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: ESL 05.
The study and practical application of some sentence structures and word parts. Simple sentences, questions, directions, and descriptions in the present and past tenses.

ESL 12 ESL Speaking & Listening I

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: ESL 07.
The study and practice of speaking and listening for basic social functions. Practice of basic descriptions and the development of oral/aural skills.

ESL 13 ESL Reading and Vocabulary I

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: ESL 06.
The study and practice of reading with English vocabulary in context. Reading comprehension, identifying the topics of short readings, and using some dictionary skills.

ESL 16 Novice II: Speaking and Listening

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 02 or appropriate ESL placement test score.
The study and practice of speaking and listening for survival level social functions. Development of aural/oral skills for beginning ESL students.

ESL 17 Novice II: Reading and Vocabulary

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 3 or appropriate ESL placement test score.
The study and practice of reading English vocabulary and short narratives in instructional context. Vocabulary is limited to life-skill areas.

ESL 18 Novice II: Grammar

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ESL 008 or appropriate ESL placement test score.
The study and practical application of basic sentence structures including statements, negatives and questions. The study of parts of speech as they relate to level appropriate contexts.

ESL 19 Novice II: Composition

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ESL 009 or appropriate ESL placement test score.
The study and practical application of basic writing skills. The introduction of organizational patterns. The application of context appropriate verb tenses including present simple, present progressive, and past simple.

ESL 20 ESL Composition II

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: ESL 10.
The study and practice of techniques for writing paragraphs in English. Paragraph organization and the improvement of punctuation and mechanical skills in writing.

ESL 21 Grammar II

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: ESL 11.
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.
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.
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, skimminig, scanning, prediction, and inference.

ESL 26 Intermediate I: Speaking and Listening

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 16 or appropriate ESL placement test score.
The study and practice of speaking and listening for basic social functions. Practice and development of aural/oral skills.

ESL 27 Intermediate I: Reading and Vocabulary

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 17 or appropriate ESL placement test score.
The study and practice of narratives and expository texts. Development of vocabulary through formal analysis and prediction.

ESL 28 Intermediate 1: Grammar

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ESL 018 or appropriate ESL placement test score.
The study and practical application of intermediate level verb tenses and related adverbs and adverb phrases. The study and practice of function words including modals and coordinating conjunctions.

ESL 29 Intermediate I: Composition

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ESL 019 or appropriate ESL placement test score.
The study and practical application of writing skills. The introduction of process writing and organizational patterns. The application of context appropriate verb tenses including present simple, present progressive, and past simple, past progressive and simple future.

ESL 30 ESL Composition III

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ESL 20.
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.
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 Speaking & Listening III
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ESL 22.
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.
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 36 Intermediate II: Listening and Speaking
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 26 or appropriate ESL placement test score.
The study and practice of comprehension and production of speech in different environments and social occasions. Sound distinction and production in the context of the sentence. Note-taking techniques and basic presentation skills.

ESL 37 Intermediate II: Reading and Vocabulary
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 27 or appropriate scores on ALI placement test.
The study and practice of reading passages of various rhetorical styles. Improvement of reading speed; development of vocabulary through prediction and inferences.

ESL 38 Intermediate II: Grammar
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 028 or appropriate ESL placement test score.
The study and practical application of complex sentence structures, including some perfect and perfect progressive tenses. Understanding and use of all parts of speech, basic conditionals, and some modals.

ESL 39 Intermediate II: Composition
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 29 or ESL Institute placement test score.
The study and practice of composing multi-paragraph academic narrative essays within the writing process approach. Emphasis on organization and correctly punctuated complex language structures.

ESL 40 ESL Composition IV
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ESL 30.
The study and practice of rhetorical principles in standard English prose. Critical thinking and research skills as well as uency and accuracy in academic writing.

ESL 41 ESL Grammar IV
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ESL 31.
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.
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.
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 46 Advanced I: Speaking and Listening
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 36 or appropriate ESL placement test score.
The study and practice of oral/aural standard English in a variety of environments and social situations. Presentation skills and note-taking techniques related to secondary-level of lecture comprehension.

ESL 47 Advanced I: Reading and Vocabulary
3 credits. 3 hours. (Lecture 3 hours.)
Prerequiste: ESL 37 or appropriate ESL placement test score. The study and practice of reading, and the development of vocabulary, in pre-academic (secondary level) English. Critical thinking and reading skills; and the ability to contextually identify unfamiliar vocabulary in complex readings.

ESL 48 Advanced I: Grammar
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 038 or appropriate ESL placement test score.
The study and practice of grammatical structures in standard English prose. Emphasis on most complex verb structures. Exploration of the relationship between ideas and the construction of sophisticated sentences in academic discourse.

ESL 49 Advanced I: Composition
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 039 or appropriate ESL placement test score.
The study and the practice of rhetorical principles in standard English prose. Critical thinking as well as uency and accuracy in academic writing.

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 56 Advanced II: Speaking and Listening
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 46 or appropriate ESL placement test score.
The study and practice of comprehension and production of standard English in academic discourse. Academic note-taking; post-secondary-level materials focusing on current issues as the basis of exercises and presentations.

ESL 57 Advanced II: Reading and Vocabulary
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 47 or appropriate ESL placement test score.
The study and practice of reading, and the development of vocabulary in academic level English. Variety of college level texts focusing on current issues as the basis of critical analysis. Improvement of reading skills, and the ability to contextually identify unfamiliar vocabulary in complex readings.

ESL 58 Advanced II: Grammar
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 048 or appropriate ESL placement test score.
The study and practice of grammatical structures in standard English prose. Emphasis on the relationship between ideas and the construction of sophisticated sentences in academic discourse.

ESL 59 Advanced II: Composition
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 49 or appropriate ESL placement test score.
The study and the practice of rhetorical principles in standard English prose. Critical thinking and research skills as well as uency and accuracy in academic writing.

ESL 97 English as a Second Language I
3 credits. 3 hours. (Lecture 3 hours.)
English for student who have a low-intermediate level of proficiency and who wish to improve all areas language learning. The study and practice of integrated English skills focusing on reading, writing, structure, and conversation.

ESL 98 English as a Second Language II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 97.
English structure, pronunciation, reading and writing for students who have an intermediate level of proficiency and who wish to improve all areas of language learning.

ESL 99 English as a Second Language III
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ESL 98.
English structure, pronunciation, reading and writing for students who have a high-intermediate level of proficiency and who wish to improve all areas of language learning. Conversation, reading, writing and structure are addressed.

◆Environmental Health and Safety
MCC-Business & Technology
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 (ammability, corrosivity, reactivity, toxicity) of hazardous materials based on the nine DOT hazard classes and EPA's definition of characteristic hazardous waste.

EHSS 111 Introduction to Health and Safety for General Industry
1 credit. 1 hour. (Lecture 1 hour.)
This course provides the participants with an overview of the Occupational Safety and Health Administration (OSHA) standards relevant to general industry. Among the subjects covered in the program are: an introduction to OSHA, fire protection, electrical safety, hazard communication, bloodborne pathogens, walking and working surfaces, personal protective equipment, machine guarding and safety and health programs. Students will receive a 10-hr General Industry Safety and Health Outreach Card.

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.
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 CHEM 102, 105 or 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.)
Prerequisite: EHSS 200.
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.
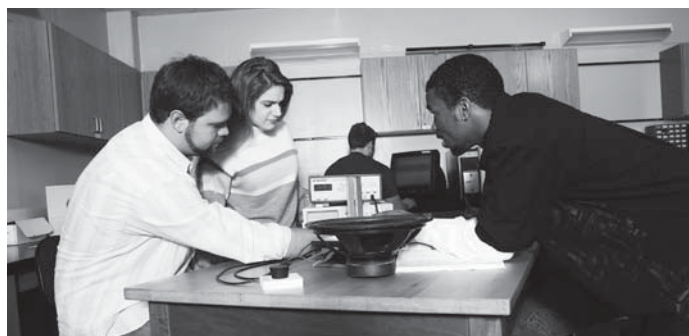
EHSS 217 Concepts of Waste Minimization, Recycling and Pollution Prevention
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 203.
This course is presented to familiarize environmental health and safety students with options available to properly minimize, recycle, or dispose of wastes. Information is presented from the perspective of reducing waste 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.)
Prequisite: EHSS 203. 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 ef uent. 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.

EHSS 230 Waste Management
3 credits. 3 hours. (Lecture 3 hours.)
Intense coverage of EPA's Resource Conservation and Recovery Act (RCRA) including pollution prevention, USTs, treatment options, EPA inspections and hazardous waste manifesting. Special emphasis on hazardous waste determination, accumulation, storage, and related generator issues.

◆Fire Science Technology
MCC-Blue River
Doug Hobbs   Rusty Sullivan

FSTE 101 Introduction to the Fire Service
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Acceptance into the Public Safety Center of Excellence.
This course focuses on the introduction to the fire service. Psychological and sociological aspects of firefighting, community involvement, and ethics will be discussed and applied. The student will also be introduced to basic firefighting equipment and skills.

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 Fire Fighter I
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 183 Incident and Disaster Management
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 unified management systems. It also provides the student with a detailed look at disaster mitigation planning.

FSTE 189 Fire Fighter II
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 ground work 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 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 Interpreting
MCC-Maple Woods

FLIN 100 Introduction to Interpreting
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate proficiency test score.
This course is a general introduction to the field of interpreting in the legal and medical settings. Coursework will focus on the role of the interpreter, cultural competency and ethics, modes of interpretation, and legal issues that affect the profession and organization of a free-lance business.

FLIN 105 Fundamentals of Interpreting
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: FLIN 100 or concurrent enrollment.
This course is the study and practice of the basic theory and techniques of language interpretation. This course will develop students' skills in consecutive and simultaneous interpreting and sight translation. Emphasis is placed on activities that are designed to develop oral/aural skills, memory, basic note-taking techniques, public speaking, and language-switching skills for interpreting in legal and health care settings.

FLIN 110 Medical Interpreting
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: FLIN 105.
Instruction will focus on the terminology of medical conditions, procedures, devices, and courses of treatment in a variety of settings such as: hospitals, clinics, doctor's offices, mental health and psychiatric facilities. Ethical and cultural issues will be discussed in relation to the oral discourse patterns used by health care providers when talking to patients and family members. Additional instruction will center on sight translation, consecutive and simultaneous interpreting in medical settings.

FLIN 115 Legal Interpreting
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: FLIN 105.
This course introduces students to the trial process common to all American courts by examining fundamental courtroom procedures, the hierarchy of courts, the legal process, and the divisions of the legal system of the United States, Missouri, and Kansas. Students will analyze legal and civil documents and focus on the characteristics of legal English: its terminology, its linguistic structures, and its social and psychological functions. Additional instruction will focus on sight translation, consecutive and simultaneous interpreting in legal settings.

FLIN 120 Interpreting Practicum
3 credits. 3 hours. (Field Studies 3 hours.)
Prerequisite: FLIN 110 and FLIN 115.
The student will interpret at a practicum site under the supervision of a mentor.

◆Foreign Language and Literature

MCC-Blue River
Jennifer Rogers

MCC-Longview
Carol Kuznacic
Donald Swanson

MCC-Maple Woods
Mary Ann Blitt
Chad Montuouri

MCC-Penn Valley
Ruth Heath

Arabic

ARAB 101 Elementary Modern Arabic I
4-5 credits. 4-5 hours. (Lecture 4-5 hours.)
A practical beginning course in speaking and understanding modern Arabic. Proper pronunciation, words and structures used in daily conversation . Social conventions and Arabic culture necessary for interpersonal communication with native speakers of contemporary Arabic.

ARAB 102 Elementary Modern Arabic II
4-5 credits. 4-5 hours. (Lecture 4-5 hours.)
Prerequisite: ARAB 101D or ARAB 101E.
A continuation of Elementary Modern Arabic I. Complete basic elements of Arabic grammar, increase vocabulary, gain added facility in speaking and reading Arabic.

Chinese

CHIN 101 Elementary Chinese I
4-5 credits. 4-5 hours. (Lecture 4-5 hours.)
An introduction to Chinese. Course develops basic communication skills: Listening, reading, writing, and speaking. Informal study of the culture of Chinese-speaking countries.

CHIN 102 Elementary Chinese II
4-5 credits. 4-5 hours. (Lecture 4-5 hours.)
A continuation of Elementary Chinese I. Elements of Chinese grammar, increasing vocabulary, and gain added facility in speaking and reading Chinese. Informal study of the culture of Chinese-speaking countries.

French

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.
Grammar essentials. Develop communication skills (listening, reading, writing, and speaking). Informal study of the culture of French-speaking countries.

FREN 203 Intermediate French I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: FREN 102.
Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. French is the language of instruction.

FREN 204 Intermediate French II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: FREN 203.
A continuation of French 203. Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. French is the language of instruction.

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 204 Intermediate German II

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: GERM 203.
Continuation of Germ 203. Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. German is the language of instruction.

Spanish

SPAN 100 Beginning Occupational Spanish

3 credits. 3 hours. (Lecture 3 hours.)
An introduction to Spanish. Course develops basic communication skills specifically tailored to a particular degree or occupation.

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 101or SPAN 111.
Grammar essentials. In addition, course develops communication skills: Listening, reading, writing and speaking. Informal study of the culture of Spanish-speaking countries.

SPAN 107 Spanish Composition & Conversation: Topics in Culture

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPAN 102.
Students will improve their communication skills and knowledge of Spanish-speaking cultures through in-class discussions and written compositions.

SPAN 111 Accelerated Elementary Spanish I

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Prior elementary Spanish at the college level or two years high school Spanish.
An accelerated elementary Spanish course for students who may need to brush up on the basics before continuing onto Elementary Spanish II. Students will enhance communication skills (listening, reading, speaking, and writing) while reviewing Spanish grammar. Informal study of culture of selected Spanish-speaking countries.

SPAN 203 Intermediate Spanish I

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPAN 102.
Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. Spanish is the language of instruction

SPAN 204 Intermediate Spanish II

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPAN 203.
Continuation of SPAN 203. Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. Spanish is the language of instruction.

SPAN 207 Spanish Composition and Conversation

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPAN 203.
Students will improve their communication skills and knowledge of Spanish-speaking cultures through in-class discussions and written compositions.

SPAN 209 Introduction to Hispanic Literature

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: SPAN 204.
An introduction to literature in written Spanish from various genres and historical periods. Selected texts will introduce students to major writers as well as provide insights into the cultural, political and social contexts of Latin America and Spain.

SPAN 212 Spanish Immersion I

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: SPAN 101.
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.

SPAN 216 Spanish Immersion III

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: SPAN 214.
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 218 Spanish Immersion IV

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: SPAN 216.
Students will broaden their language skills while at the same time experience a new culture througha total immersion program in a Spanish-speaking country. Special emphasis will be placed on spokencommunicationwihle expanding listening, reading and writing skills. Students will be tested and placed intot he appropriate level of instruction. All classes are conducted in Spanish by native Spanish speakers.

◆Geography

MCC-Blue River	MCC-Longview	MCC-Maple Woods
Benjamin Wolfe	Carl Priesendorf	
	Victor Meledge-Ade	

GEOG 104 Principles of Physical Geography

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Survey of the characteristics and distribution of the components of the Earth's natural environment, using basic geology, 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 variablity.

GEOG 111 Geography of the Western World
3 credits. 3 hours. (Lecture 3 hours.)
A regional survey of North and South America, Europe, Australia and New Zealand. Emphasis on each region's unique attributes and on 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/Human Geography
3 credits. 3 hours. (Lecture 3 hours.)
Addresses techniques of geographic interpretation, and cultural and political diversity, the relationship to physical environment, 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 114 Introduction to Geography
3 credits. 3 hours. (Lecture 3 hours.)
Presents a dynamic view of the breadth of discipline of geography. Provides a geographic perspective of the interrelationship of earth and atmosphere and their relationship of the earth and atmosphere and their in uence on population, culture, and lifestyle. Explores geographic methods of gathering and analyzing information and modern tools for these functions. Also focuses on applied geography in local and international settings in areas such as marketing, urban planning, political relationships, and natural resource assessment.

GEOG 120 Introduction to Geographic Information Systems
3 credits. 3 hours. (Lecture 3 hours.)
Fundamental concepts of Geographic Information Systems (GIS), elements of GIS, analysis of spatial information, real-world applications, map creation and analysis. Primary objective is to investigate interactive GIS application rather than develop expert users.

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.

GEOG 210 Economic Geography
3 credits. 3 hours. (Lecture 3 hours.)
Overview of economic geography covering topics such as demographics, population processes, economic development, growth of regional global economy, multinational corporations, economic alliances, transportation, urban economics, manufacturing, energy and agriculture.

GEOG 220 GIS Database and Design
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: GEOG 120.
Concepts of Geo-database design and management in Geographic Information Systems (GIS), SQL statements, geographic data types and functions, data entry, techniques of geographic information structure and indexing, querying techniques, searches, and spatial analysis, creation and use of metadata real-world applications.

GEOG 224 Applications in Geographic Informatin Systems
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: GEOG 120, GEOG 220.
Applications in Geographic Information Systems. Data collection, incorporation of local and global data, and analysis of spatial information that can be used to investigate major application areas, national GIS policy.

GEOG 228 Administrative Issues in GIS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: GEOG 120.
Addresses issues unique to a GIS operation such as implementation issues, decision making procedures, strategies for success, legal issues, involvement of management, NCGIA Guidelines, marking within an organization, strategic planning, and industry outlook.

GEOG 230 Geographic Information Systems Internship
1-3 credits. 225-675 hours. (Lecture 0.5 hour. Field Studies 225-675 hours.)
Prerequisites: GEOG 120 and GEOG 220.
Internship in a Geographic Information System facility. Experience real-workplace requirements, complete assigned tasks by hosting facility such as GIS data entry, data retrieval, GPS field work, documentation, or general GIS facility duties. Arranged meetings with instructor includes work ethics, expectations, challenges, evaluation.

◆Geology

MCC-Blue River   *MCC-Longview*   *MCC-Maple Woods*
Benjamin Wolfe   Carl Priesendorf

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
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: GEOL 101.
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
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 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, types, availability, and evaluates intelligent use of geologic resources; suggests techniques for hazard prevention and remediation; addresses current media topics concerning the environment.

GEOL 110 Oceanography
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Ocean as part of Earth's dynamic and ecologic systems. In uence of the ocean on atmosphere, climate, and land processes. Ocean stewardship, problems, and policy.

GEOL 180 Energy and the Environment
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Introduces fundamental concepts of energy generation and environmental impact. Analysis of energy fundamentals, fossil fuel exploration and use, atmospheric pollution, global warming, nuclear energy, alternative energy sources and energy conservation. Optional field trips.

GEOL 185 Solar/Photovoltaic Systems
3 credits. 3 hours. (Lecture 3 hours.)
Solar radiation as applied to photovoltaic technology, photovoltaic system component selection, and introduction to safe design and installation of photovoltaic systems.

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.)
Prerequisite: GEOL 101.
Study of selected locations in the Midwest during a field trip. Location of field trip varies. Apply basic geologic principles and collect rock and mineral samples.

GEOL 215 Geology Field Study
3 credits. 3 hours. (Field Studies 3 hours.)
Prerequisite: GEOL 101.
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.

GEOL 225 Solar/Photovoltaic Systems
3 credits. 4 hours. (Lecture 2 hours, Lab 2 hours.)
Prerequisite: GEOL 185, INTE 142, and either HVAC 109 or INTE 110..
Design, installation and maintenance of grid-tied and stand-alone photovoltaic systems. This course is designed to prepare the student for the NABCEP Entry-Level PV Installer Certification exam.

◆Guided Studies
MCC-Blue er Riv　　　　　　　　*MCC-Longview*
MCC-Maple Woods　　　　　　　*MCC-Penn Valley*

GUID 100 Personal Skills I
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Examination of the transition 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 112 Effective Study Skills
1 credit. 1 hour. (Lecture 1 hour.)
Students taking this course will participate in activities designed to identify their type(s) of intelligence(s), their learning styles(s) and preference(s), and learning strategies to enhance their learning and study skills. Based on their own self-assessment of their learning styles(s), preference(s), and needs, students will examine and learn to use various types of technologies and software programs to enhance their language.

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.)
Examination of sources of personal stress in a changing world. Self-assessment of external and internal stressors and useful coping strategies. Application and evaluation of new coping strategies/ life choices to more effectively manage stress.

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.)
Overview of the job search process. Research techniques for exploring employment opportunities. Identification of personal criteria for job satisfaction. Development of job search strategies including resumes, cover letters and interviewing techniques.

GUID 199 Special Topics in Guided Studies
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Guided readings, discussions, and activities related to college adaptation, resilience, and success. Topics and material will vary by instructor each semester. Specific readings and activities to be determined by instructor.

◆Health Information Technology
MCC-Penn Valley

Kealia Ann Folk　　　　　　　　　　　　　　　Jennifer Scott

HITE 101 Introduction to the Health Information Technology Profession
2 credits. 2 hours. (Lecture 2 hours.)
Orientation to the health information management 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 Health Records
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.

HITE 106 Health Care Statistics
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisite: HITE 102.
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.

HITE 108 Legal Aspects of the Health Information Technology Profession
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: HITE 102.
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.

HITE 109 Directed Practice I
2.5 credits. 5 hours. (Laboratory 2 hours. Field Studies 3 hours.)
Prerequisite: BIOL 108 and HITE102.
Supervised on-the-job training in a medical records department. Supervised discussion of clinical experiences.

HITE 110 Pharmacology
1.5 credits. 2 hours. (Lecture 1 hour. Laboratory 1 hour.)
Prerequisite: BIOL 108 and HITE 103.
Introduction to basic pharmacology with a body systems approach to disease.

HITE 200 Introduction to Classification Systems
1 credit. 1 hour. (Lecture 1 hour.)
Classification systems used to organize clinical data in health care. ICD-9-CM classification system will be discussed.

HITE 201 Quality Management
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisite: HITE 108.
Methods of assessing and improving quality in a health care setting. Concept of continuous quality improvement. Compliance with guidelines of regulatory and accrediting agencies.

HITE 202 Classification Systems, Nomenclatures, Indexes, and Registers I
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: HITE 200.
Study of nomenclatures and classification systems used for coding and indexing diagnoses and procedures with special emphasis on ICD-9-CM.

HITE 203 Directed Practice II
2 credits. 4 hours. (Laboratory 1 hour. Field Studies 3 hours.)
Prerequisite: BIOL 108, HITE 202 and HITE 210 or BIOL 108, and concurrent enrollment in HITE 202 and 210.
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.

HITE 206 Specialized Health Records Systems
2 credits. 2 hours. (Lecture 2 hours.)
Overview of specialized health care systems with an emphasis on record maintenance, requirements of accrediting and regulating agencies and specialized health information registries.

HITE 207 Classification Systems, Nomenclatures, Indexes, and Registers II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: BIOL 108 and HITE 202.
Nomenclatures and classification systems for coding and indexing diagnoses and procedures with emphasis on specialized health care facilities. Impact of DRGs on the coding function.

HITE 208 Directed Practice III
2 credits. 4 hours. (Laboratory 2 hours. Field Studies 2 hours.)
Prerequisite: HITE 203.
Supervised on-the-job instruction about health record systems in specialized health care facilities. Supervised discussion of directed practice experiences.

HITE 210 Classification Systems and Nomenclatures for Ambulatory Care
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: HITE 200 and BIOL 108 or concurrent enrollment in BIOL 108.
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.

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.

HITE 212 Introduction to Medical Insurance & Office Procedures
1.5 credits. 2 hours. (Lecture 1 hour. Laboratory 1 hour.)
Prerequisites: HITE 103, HITE 202, HITE 210, BIOL 108.
An overview of medical office systems and administrative procedures, with emphasis on insurance billing, compliance with regulatory agencies, and technology tools, including medical transcription.

◆Heating, Ventilation and Air Conditioning
MCC-Business & Technology

Richard Decker   Mike Thorne   Jess Harding

HVAC 109 Electricity for HVAC/R Technicians
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
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, 111, and 120 (or take concurrently).
Installation of residential systems; tools, equipment, uniform mechanical code. Troubleshooting and servicing standard efficiency units.

HVAC 136 Residential Heating and Air Cooling II
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: HVAC 135.
Maintenance and trouble analysis of high efficiency residential equipment. Diagnostic analysis of complex electrical troubles. Maintenance of gas air conditioning equipment.

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 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 Sheet Metal Layout and Fabrication
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
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 235 Systems Installation
3 credits. 4 hours. (Lecture 0 hour. Laboratory 2 hours.)
Prerequisites: HVAC 136 and 230.
Installation of residential HVAC systems including building code review, sizing, selection and installation practices.

HVAC 240 Geo-Thermal & Air Source Heat Pumps
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: HVAC 136.
Installation and service of Geo-Thermal and Air Source Heat Pumps. Troubleshooting and maintenance.

HVAC 250 Co-Op Workstudy
3 credits. 7 hours. (Lecture 1 hour. Field Studies 6 hours.)
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.

HVAC 291 Special Topics
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Problem solving related to climate control technology with emphasis on research and/or laboratory projects.

HVAC 292 Special Topics
2 credits. 2 hours. (Lecture 2 hours.)
Problem solving related to climate control technology with emphasis on research and/or laboratory projects.

HVAC 293 Special Topics
3 credits. 3 hours. (Lecture 3 hours.)
Problem solving related to climate control technology with emphasis on research and/or lab projects.

◆History

MCC-Blue River	MCC-Longview	MCC-Maple Woods
Sharon Bagg	Priscilla Jackson-Evans	Crystal Johnson
	Patricia McGovern	William Young
	David Miller	
	Randall Moore	
MCC-Penn Valley	Elliot Schimmel	
Lyle Gibson		
Greg Sanford		

HIST 120 United States History to 1865
3 credits. 3 hours. (Lecture 3 hours.)
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.

HIST 121 United States History since 1865
3 credits. 3 hours. (Lecture 3 hours.)
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.

⊕HIST 130 Women in American History
3 credits. 3 hours. (Lecture 3 hours.)
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.

HIST 133 Foundations of Western Civilization
3 credits. 3 hours. (Lecture 3 hours.)
Survey of Western Civilization through the classical civilizations of Greece and Rome, the Middle Ages to the Renaissance. Brief comparative summaries of Near Eastern and Oriental civilizations. This course will satisfy either Humanities or Social Science AA degree requirements.

HIST 134 Modern Western Civilization
3 credits. 3 hours. (Lecture 3 hours.)
Survey of European history from the renaissance to the present. Emphasis on Renaissance and Reformation, the emergence of the modern state, industrialism, nationalism, and the problems caused by war, revolution and imperialism in the 20th and 21st centuries. Relationship of European civilization to the developments of the non-European world. This course will satisfy either Humanities or Social Science AA degree requirements.

⊕HIST 140 African American History
3 credits. 3 hours. (Lecture 3 hours.)
The historical experience of people of African civilization, to European contact, enslavement and freedom in the New World Diaspora (Latin America, the Caribbean, and North America). The cultural, social, political, and economic dimensions of African American history will be explored, as will the accomplishments and unique perspectives of African Americans.

HIST 145 Survey of English History
3 credits. 3 hours. (Lecture 3 hours.)
Survey of the evolution of England from the middle ages to the present. Emphasis on political, economic, religious, and literary development.

HIST 199 Special Topics in History
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
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.

HIST 202 Material Culture and the American Past
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HIST 120 or 121.
Introduction to the major themes, issues, and methods relevant to the study of material culture. Covers rise of material culture studies with focus on how objects inform the historical record. Readings and discussion address broad questions including: How do museums inform national identity? What do landscapes and buildings reveal about race, class, and gender relations? When is historical preservation a political act and what does it mean to re-enact? Kansas City metropolitan area used as a lens through which to frame these questions.

HIST 203 Introduction to Public History
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Any history course.
Public history is the application of historical methods outside of colleges and universities, people who work in museums, archives, and historical associations practice public history, as can state and federal policy makers. This course examines issues confronting public historians including methods for collecting and presenting history, the relationship between history and memory, and the politics of practicing history in public.

HIST 226 American Frontiers
3 credits. 3 hours. (Lecture 3 hours.)
Survey of the American frontier experience 1500-1890. Exploration and settlement by Spanish, French, English, and Americans. Cultural conicts, collisions and interactions between European peoples, African Americans and native Americans. Examination of the frontier process in Missouri.

◆Human Sciences
MCC-Penn Valley

HUSC 100 Careers in Human Sciences
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or appropriate placement test score, or taken concurrently.
This course offers students an introduction to becoming a professional in the field of human sciences with an emphasis in child growth and development. The course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

HUSC 120 Competency Documentation
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Students must have evidence of completing the 120-clock hour formal training required to receive the Child Development Associate (CDA) credential.
The CDA Competency Documentation Course prepares students for the National Child Development Associate (CDA) examination. Methods of documenting competencies in the eight concept areas required by National CDA Office. The guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals (K&MCC) and the National Association for the Education of Young Children (NAEYC) standards are followed in this course.

HUSC 236 Spec Topics in Human Science
1-3 credits. 1-3 hours. (Independent Study 1-3 hours.)
Guided readings and discussion in Human Sciences. Topics and materials will vary by instructor each semester. Specific reading list activities and writing assignments to be determined by instructor. This course is intended to go into more detail and research beyond the material covered in the human sciences courses.

◆Human Services
MCC-Longview
Bruce Hall

HUMS 100 Introduction to Human Services
3 credits. 3 hours. (Lecture 3 hours.)
This is the introductory course in the field of human services. Students are invited to explore how factors such as poverty, race, gender, mental health, ethnicity, sexual orientation, and disability have affected the ability of individuals and groups to function in society. In addition, students will examine the nature of cross-cultural competence when serving diverse client populations. Course includes examination of strengths-based interventions with diverse client populations facing multiple barriers to physical, psychological, and social well-being.

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 167 Spec Issues in Human Services
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Topics related to the field of social services that explore areas of concern related to agency needs or student preparation needs.

HUMS 168 Introduction to Practicum
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: HUMS 100.
This course is designed to prepare students for 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, Alcoholism and Medications
1 credit. 1 hour. (Lecture 1 hour.)
This course will examine the use and abuse of alcohol and drugs among older people. This includes a focus on the social forces impacting the older adult in society, pertinent demographics, special considerations in diagnosis and treatment, and the proper use of prescription drugs. This course is designed for students and in-service professionals working in the fields of aging, mental health or substance abuse. It is believed that mutual participation will enrich the classroom experience through valuable sharing from the perspective of different service provides.

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. Incorporates 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.)
Case management procedures with alcohol-and other drug-addicted clients. Assessment, planning, evaluation, and case documentation. Competency issues in the 12 core functions within addiction treatment. Case presentation method.

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 that 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 201 Human Services Practicum I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HUMS 168 and co-enrollment in HUMS 203 and Human Services Program 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 3 hours.)
Prerequisite: HUMS 201 and 203, concurrent enrollment in HUMS 204, and Human Services Program Coordinator consent.
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.)
Prerequisite: HUMS 168, and concurrent enrollment in HUMS 201 and Human Services Program Coordinator consent.
Analysis of the practicum learning experience. Discussion of strategies useful in learning to work with different client population. Development of interpersonal skills essential to establishing necessary relationships.

HUMS 204 Colloquia II
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: HUMS 201 and 203, and concurrent enrollment in HUMS 202 and Human Services Program Coordinator consent.
Analysis of the practicum learning experience. Continued development of interpersonal skills. Discussion of community resources, problem solving, agency effectiveness, and counseling skills.

HUMS 210 Basic Counseling Skills and Interpersonal Communication
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HUMS 100.
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 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 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. Particular attention is directed toward local and national initiatives in alcohol and drug abuse.

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 used with addicted clients. Assessment, planning, evaluation, and record keeping employed in treatment addiction treatment. Case presentation techniques. Ethical issues. Case management and recovery.

◆Humanities
MCC-Blue River   *MCC-Longview*
MCC-Maple Woods   *MCC-Penn Valley*

HUMN 103 Introduction to International Studies
3 credits. 3 hours. (Lecture 3 hours.)
This course will prepare students to be citizens of the world through an understanding of the interconnectedness of the human experience and discussion of global issues from many different perspectives. Topics presented will enable students to reﬂect upon how individuals in various cultures past, present and future are united in their humanity.

HUMN 105 Leadership Development
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Honors program enrollment.
Study of leadership principles using examples from classical literature, film, and historical events. Interdisciplinary approach.

HUMN 133 Foundations of Western Civilization
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 feeling of people of the premodern period about themselves, their place in the universe, and the human condition.

HUMN 134 Modern Western Civilization
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 141 Latin American Humanities
3 credits. 3 hours. (Lecture 3 hours.)
This course introduces students to many forms of Latin American culture, past and present, including art, architecture, music, literature, and film. The course includes an overview of geography, indigenous peoples, colonization and nation formation needed to understand cultural practices and in uences.

HUMN 145 Comparative Humanities: Myth Through Time
3 credits. 3 hours. (Lecture 3 hours.)
Study and compare global cultural myths throughout time, including their historical, artistic, cultural, and ideological development, in order to better understand the behavior, ideals, values, and beliefs of diverse groups of people.

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.)
This course examines some of the profound and enduring ideas that have in uenced 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 will vary every semester. Requirement Designation: Honors

HUMN 201 Honors Seminar II
1 credit. 1 hour. (Lecture 1 hour.)
This course examines some of the profound and enduring ideas that have in uenced 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 will vary every semester. Requirement Designation: Honors

HUMN 202 Honors Seminar III
1 credit. 1 hour. (Lecture 1 hour.)
This course examines some of the profound and enduring ideas that have in uenced 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 will vary every semester. Requirement Designation: Honors

HUMN 203 Honors Seminar IV
1 credit. 1 hour. (Lecture 1 hour.)
This course examines some of the profound and enduring ideas that have in uenced 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 will vary every semester. Requirement Designation: Honors

HUMN 204 Honors Seminar V
2 credits. 2 hours. (Lecture 2 hours.)
This course examines some of the profound and enduring ideas that have in uenced 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 will vary every semester. Requirement Designation: Honors

HUMN 205 Honors Seminiar VI
2 credits. 2 hours. (Lecture 2 hours.)
This course examines some of the profound and enduring ideas that have in uenced 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 will vary every semester. Requirement Designation: Honors

HUMN 206 Honors Seminar VII
2 credits. 2 hours. (Lecture 2 hours.)
This course examines some of the profound and enduring ideas that have in uenced 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 will vary every semester. Requirement Designation: Honors

HUMN 207 Honors Seminar VIII
2 credits. 2 hours. (Lecture 2 hours.)
This course examines some of the profound and enduring ideas that have in uenced 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 will vary every semester. Requirement Designation: Honors

◆Industrial Technology
MCC-Business & Technology
Gene Johnson

INTE 110 Industrial Electrical Principles
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: Completion of or concurrent enrollment in MATH 103 and INTE 115.
This course is an introductory course for the individual who is moving into an industrial maintenance or related activity. Behavior of electricity, sources of electricity, Ohms and Watts laws, electrical power distribution, transformers, electrical safety, electrical measurements and basic components are covered.

INTE 115 Electrical Print Reading
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: INTE 110.
This course is designed to teach the student 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.

INTE 120 Industrial Technologies Internship I
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to give the student real world experience in the industrial technologies field. The student will perfect techniques and job responsibilities learned in prior courses under the direction of a mentor.

INTE 122 Welding Layout and Fabrication
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Learning layout skills for welding fabrication of structural steel and piping systems. Topics include: laying out angles with a steel square and piping system components such as bolt holes for anges, two- and three-piece 90-degree turns, header and branch, concentric reducters.

INTE 124 Employment Strategies for Technical Careers
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
This course prepares the student to use strategies for successful career goal setting, job seeking, obtaining, maintaining and terminating employment in technical areas. Topics include conducting a job search, preparing a resume and cover letter, and participating in job interviews.

INTE 131 Special Problems and Projects
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Independent study in Industrial Technologies related areas under the supervision of the faculty member.

INTE 140 Fundamentals of Industrial Maintenance
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
This 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 uid 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: INTE 110.
The course is designed to present the requirements of the National Electric Code. Topics include requirements, codes, wiring requirements, conduit, hazardous locations, overcurrent protection, motor protection, installations and safety.
INTE 150 Fundamentals of Hydraulics
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
An introduction to uid power. Topics include the physics of uid power, safety, hydraulic pumps, actuators, pressure and ow measurement and regulation, basic maintenance, motors, coolers, 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, slings, hooks and ladders.

INTE 167 Welding I SMAW
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Learn basic shielded metal arc welding of at, horizontal, vertical and overhead carbon steel plates and cutting with oxy-fuel equipment. Also covered: basic welding theory included coated electrode specs, welding power sources, polarities, duty cycles, cutting gases, gas cylinders, gas regulators, basic weld joints and weld joint preparation.

INTE 168 Welding II SMAW
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 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: HVAC 109 or INTE 115.
The course is designed to present the fundamentals of electrical motor 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 220 Industrial Technologies Internship II
3 credits. 3 hours. (Lecture 0 hour.)
This course is designed to give the student real world experience in the industrial technologies field. The student will perfect techniques and job responsibilities learned in prior courses under the direction of a mentor.

INTE 225 Industrial Electrical Print Reading
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: INTE 115.
This course introduces the student to industrial prints. The student will become familiar with electrical schematics, wiring diagrams, one-line diagrams and P&IDs (Process & Instrumentation Diagrams). Upon completion of this class, the student will be able to demonstrate the ability to use these prints to maintain, troubleshoot and install electrical systems in the workplace. They will be able to determine safety hazards and proper procedures for guarding against those hazards.

INTE 260 Pipe Fitting Fundamentals
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: HVAC 201.
Fundamentals of commercial and residential plumbing. Modern and historical plumbing materials and methods will be covered. Hardware and fixture use and installations. Drain and pipe installations and repair. Pipe cutting, threading, braising and welding. Drain and pipe cleaning. Sink, drain and heater replacement. General codes.

INTE 270 Instrumentation and Process Controls
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: INTE 225 and INTE 272.
The course is designed to provide the individual with an ability to understand the various control schemas found in industrial settings. The course covers pressure, temperature, level, and ow detection and calculations. Lab activities will include calibration, tuning and installation of various analog and smart equipment used in industry.

INTE 271 Programmable Logic Controller I
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 output methods, programming and troubleshooting techniques using the programmable controller (PLC). I-O methods for dc and ac and analog, ladder programming and analysis, logical functions, timers and counters, forcing and troubleshooting techniques are among the specific topics covered.

INTE 272 Programmable Logic Controller II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequiisites: INTE 115 and 271. This course is designed to provide the individual with the skills needed to study process control, motion control, addressing Input/Outputs and intercommunications. Topics include: advanced instruction sets for applications, analog, stepper, searching, on-line editing, cross referencing and ControlLogix software.

INTE 273 Variable Speed Motors and Drives
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 175 and 271.
The course will cover the theory and application of AC and DC Motors and their uses in industry. Theory and application of the various methods to control the speed of AC and DC electric motors using solid state devices will also be covered including thyristor and transistor controlled circuits, three phase triggered circuits, variable phase, frequency and voltage circuits.

INTE 275 Electric Motor Control II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 175.
Installation and maintenance of electrical control equipment, timing devices, solenoids, limit switches, electrical power distribution, reduced voltage motor starting, overcurrent protection and preventative maintenance are covered.

INTE 276 Electrical Troubleshooting
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 275.
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 analyzing various introduced troubles into control systems. Replacement of components are covered.

INTE 277 Programmable Logic Controller Troubleshooting
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: INTE 115 and 271.
This course is designed to provide the individual the skills needed to troubleshoot and repair Programmable Logic Controllers in the workplace. Topics include: Hardware, searching, documentation, fault routines, Preventative maintenance, wiring and schematic diagrams and communication problems.

◆Land Surveying
MCC-Longview
David Gann

SRVY 135 Elementary Surveying
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATH 105, 130, or 150.
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 137 Subdivision Planning and Layout
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135 and DRAF 152.
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 235 Advanced Surveying
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135.
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 Boundary Control and Legal Principles
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 Evidence and Procedures for Boundary Location
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.

SRVY 240 Analysis of Survey Measurements I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135 and MATH 115.
Introduction to the nature of surveying instruments and their use. Analysis of the effect that instruments and observers have on measurements. Explanation of random error propagation and estimates of uncertainty. Introduction to adjustment of data.

SRVY 242 Analysis of Survey Measurements II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: SRVY 240.
This course is a continuation of analytical skills introduced in SRVY 240, Analysis of Survey Measurements I as they apply to adjustments of horizontal, GPS and level networks. Emphasis will also be placed on Coordinate transformation, advanced curve fitting and blunder detection in survey networks.

SRVY 244 Fundamentals of GPS Surveying
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SRVY 135.
The purpose of this course is to introduce the student and practitioner to the modern practices of satellite surveying with an emphasis on its origins in physical geodesy.

◆Law Enforcement
MCC-Blue River
Butch Roll

LWEN 100 Introduction to Public Safety
2 credits. 2 hours. (Lecture 2 hours.)
Students will be review the history of law enforcement and be introduced to career requirements and opportunities within the law enforcement community.

LWEN 101 Introduction to Law Enforcement
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: LWEN 100.
Philosophical and historical background of law enforcement. Organization, purpose and functions of law enforcement personnel on the local, state and federal levels. The respective roles of personnel in law enforcement, career requirements and opportunities in these fields.

LWEN 111 Law Enforcement Operational Procedures
3 credits. 5 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: LWEN 101.
This course will present to the student the duties, responsibilities, and techniques of modern law enforcement patrol activities. Types of patrol, vehicle stops, field interview, community policing, and procedures for handling various types of calls for service.

LWEN 112 Traffic Control & Investigation
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: LWEN 100.
This course will present 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 the course.

LWEN 114 Law Enforcement Report Writing
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: LWEN 100.
This course will present to the student the methods of writing various types of law enforcement reports. Field interview techniques, interview environment, and the steps used to achieve a successful interview will be presented. Written reports will cover a variety of criminal offenses or incidents, and will require the use of interview skills and investigative efforts in order to gather information necessary to complete a law enforcement report.

LWEN 122 Procedural Law for Law Enforcement
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: LWEN 101.
This course presents 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.

LWEN 143 Defensive Tactics for Law Enforcement
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: LWEN 101.
This course is designed to instruct students in basic physical fitness and defensive tactics for law enforcement.

LWEN 200 Law Enforcement Skills
3 credits. 4 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: LWEN 101.
This course provides students with opportunities to gain skill development in usage of firearms under the supervision of professionals with experience in the law enforcement field.

LWEN 203 Criminal Investigation I for Law Enforcement
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: LWEN 101.
This course will present an introduction to law enforcement criminal investigations. This course presents theory of investigation, procedures at a crime scene, collection and preservation of physical evidence, source of information, questioning of witnesses and suspects, preliminary and follow-up investigation, and case and trial preparation.

LWEN 204 Criminal Investigations II for Law Enforcement
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: LWEN 101 and 203.
This course will present to the student the appropriate methods to be utilized in the investigation of County and Municipal offenses. This course will also give the student practical knowledge to deal with Crisis Intervention.

LWEN 230 Missouri Statutory Law
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: LWEN 101.
This course will present to the student definition and practical application of the Missouri Criminal Statutes. Difference between criminal and civil matters will also be discussed. Students will gain knowledge of juvenile justice procedures.

◆Line Technician
MCC-Business & Technology
Susan Blaser

LINE 104 Pole Climbing Skills
5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)
This course introduces the student to the proper and safe methods of wood pole climbing. The student must master climbing wood pole structures without the use of fall arrest equipment. The student will be taught Pole top rescue methods. Upon completion of this class, the student will be able to demonstrate the ability to safely climb a wooden pole and conduct work practices associated with the electrical utility industry.

LINE 105 Electrical Distribution Systems
3 credits. 4 hours. (Lecture 2 hours, Laboratory 2 hours.)
The student will learn the different methods and types of electrical power distribution systems. Transmission and distribution structures and equipment will be emphasized. The student will learn how the Power Grid is interlocked across multiple utilities.

LINE 106 Safety and Accident Prevention
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
The student will learn the hazards and safe work practices of an electrical line technician. The student will learn CPR, First Aid and OSHA rules and regulations associated with the utility industry.

LINE 210 Pole Framing and Construction Specifications
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: LINE 104 and 106.
This will give the student a working knowledge of the line construction specifications and knowledge of pole framing on the ground and aerial framing. The student will be able to recognize the different types of materials used for the different types of construction by sight and definition. They will also be introduced to the different sizes and types of overhead and underground conductors.

LINE 215 Setting and Replacing Poles
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: LINE 104 and 106.
The student will learn the basic principles in setting and replacing poles. There will be an emphasis on the proper use of cover-up material, both hard shell and rubber goods, vehicle grounding practices, and manual pole setting. The student will gain working knowledge of temporary pole supports, rigging and worksite hazard analysis.

LINE 237 Transformer Theory and Installation
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: INTE 110, and LINE 106 and 210.
The student will gain a thorough knowledge of transformer theory and installation. Single-phase and three-phase configurations with different types of connections will be included. Topics will include: over voltage and over current protection, equipment grounding, cutout protection, proper cover-up techniques, lightning arrestor application and installation, basic troubleshooting practices and current and potential transformers use and safety.

LINE 241 Conductor Installation and Metering
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: LINE 237.
The student will gain extensive knowledge of single and three-phase watt-hour meters; meter locations; and the different types of copper and aluminum conductors. The student will also gain practical experience in the sizing, installation, stringing, sagging, dead-ending, and splicing of service conductors. The student will also be exposed to the construction of meter loops and poles; instrument metering; temporary meter locations; compression sleeves; connectors and tools including strap hoists, chain hoists, sag charts and tables, pulling grips and mechanical jumpers. Also included are disciplines on meter tampering, power theft, proper grounding techniques and safe work practices.

LINE 250 Fusing, Substations and Voltage Regulation
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: LINE 241.
The student will be familiarized with the different types and methods of system coordination, substations, capacitors, voltage regulators and auto-boosters. A working knowledge of oil reclosures, sectionalizers and the application of fuses will also be gained. Practical experience in the grounding, inspection, maintenance and operation of basic substations will be expanded. The student will learn to install and operate single and three-phase pole mount reclosures, gang operated air break and load break switches, and substation fuses and reclosures.

LINE 251 Installation and Troubleshooting Underground Distribution Systems

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: LINE 250.
The student will obtain basic discipline in the methods of working on energized lines with rubber gloves and rubber sleeves from an insulated aerial platform in a safe and efficient manner. Students will be exposed to the care and well-being of soft and hard shell rubber goods and their application. Students will also receive instruction on personal protective equipment, hot-line tools, live-line maintenance and will also review the safe operation of aerial platforms and grounding practices. Additionally, the student will gain working knowledge of URD systems. Students will receive practical experience in the direct burial of primary and secondary cables, installation of 200 and 600 amp elbows, splices, lightening arrestors and overhead terminations. The installation will also be covered. The requirements of shoring and sloping of trenches required by the safe work practices will be used in practical experience. Troubleshooting of primary and secondary cable fault locating, review of backhoe/trencher operation and safe work practices and procedures are also covered.

LINE 252 Advanced Pole Climbing

3 credits. 4 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: LINE 104 and 106.
This course reinforces to the student the proper and safe methods of wood pole climbing. The student must master climbing wood pole structures without the use of fall arrest equipment. The student will be taught pole top rescue methods. Upon completion of this class, the student will be able to demonstrate the ability to safely climb a wooden pole and conduct work practices associated with the electrical utility industry. The student will learn techniques and hazards of tree work in Electrical Utility Management.

◆Manufacturing Technology
MCC-Business & Technology

Gene Giarratano   Penny Tepesch

MATE 100 Introduction to Manufacturing Technology

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
This course is designed to introduce the student to the manufacturing environment. The course will cover the history, setting and future of manufacturing, safety, drawings, measurement, layout, hand tools and fasteners, offhand grinding and sawing machines.

MATE 101 Machining and Tooling I

5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)
Prerequisite: MATE 100.
This course is designed to introduce the student to basic machining techniques utilizing band machines, drill presses, lathes and milling machines.

MATE 102 Machining and Tooling II

5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)
Prerequisites: MATE 100, 101.
This course is designed to introduce the student to advanced techniques in the operation of lathes, milling machines, and grinders as well as metal finishing and heat treating processes.

MATE 103 Machining and Tooling III

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATE 102.
This course is designed to teach the student advanced techniques in the operation of lathes, milling machines, and grinders. The student will be introduced to automated manufacturing, quality control techniques, and electromachining processes.

MATE 104 Machining and Tooling IV

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATE 103 or concurrent enrollment.
This course is designed to teach the student advanced techniques in the operation of lathes, milling machines, and grinders. The student will be introduced to nontraditional machining techniques, cutter grinding, and other machining processes.

MATE 105 Manufacturing Internship I

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 111 Special Problems and Projects

1-3 credits. 1-3 hours. (Independent Study 1-3 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 the Trades
3 credits. 3 hours. (Lecture 3 hours.)
The student will learn to read and interpret blueprints commonly found in the skilled trades. Topics include drawings, drafting procedures, print reading procedures for the skilled trades, and machining specifications. This course is designed for students in the skilled trades and specific focus will be placed on the manufacturing industry.

MATE 116 Geometric Dimensioning and Tolerancing Printreading

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisites: MATE 115.
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 117 Materials, Processes, and Quality

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Individuals seeking employment in manufacturing should be aware of materials that are commonly used in production, the processes involved in transforming those materials into finished products, and the rigorous quality standards required. Student will be introduced to these components through lecture, discussion, demonstration, and hands-on experience.

MATE 130 Machining for Related Occupations

5 credits. 8 hours. (Lecture 2 hours. Laboratory 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. This course is designed for the student pursuing degrees that require a knowledge of machining.

MATE 131 NIMS Level I Credentials Job Planning, Benchwork, Layout and Drill Press

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.
Students receive NIMS Level I Credentials 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. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.
A student receives NIMS Level I Credentials 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. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.
A student receives NIMS Level I Credentials 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. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.
A student receives NIMS Level I Credential 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. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.
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 three areas of extractive, mechanical, and physical metallurgy. Properties of ferrous and nonferrous metals.

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 101 or 130, and MATH 103 or concurrent enrollment.
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 101 or 130, and MATH 103 or concurrent enrollment.
This course is designed to provide training on computer numerical controlled milling centers. The student will process, program, verify and troubleshoot 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: CSOF 100, and MATE 210 or 215.
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 225.
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.

MATE 227 Master Cam III
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATE 226.
This course is designed for the advanced Master Cam user. The student will learn advanced techniques for the lathe and four and five-Axis mill. Advanced topics will include four and five-Axis programming, Solids, IGES files, High Speed Function and Surface Creation.

◆Mass Communications
MCC-Blue River   *MCC-Longview*
MCC-Maple Woods   *MCC-Penn Valley*

MSCM 112 Introduction to Mass Communication
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 consequence 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 114 Radio Production II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MSCM 113.
Advanced study of production of various types of radio programs in the areas of public service, commercial spots, news and sports. Advanced 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. (Field Studies 15 hours.)
Prerequisites: MSCM 200.
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 videotape with practical hands-on experience.

◆Mathematics

MCC-Blue River	MCC-Longview	MCC-Maple Woods
Tristan Londré	John Church	Audrey Battrum
Eric Parsons	Kenneth Eichman	Kimberly Christensen
Rebecca Schuering	Sharon Hamsa	Terry Hobbs
Cheryl Winter	Beth Henkle	Saeeda Irfan
	Le Ann Lotz-Todd	Bob Morgan
	Diane McHugh	Robert Skrukrud
	Jason Pallett	Andrea Vorwark
MCC-Blue River	Kristi Rottinghaus	
Tim Chappell	Suzanne Smith	
Nic LaHue	Janet Wyatt	
Gregory Mitchell		

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 20L 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: MATH 20 or MATH 20L, 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 40L Introductory Co-Laboratory Algebra
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATH 20 or MATH 20L, 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: MATH 20 or 20L, 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 102 Technical and Business Math
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: Math 20/20L or equivalent placement criteria.
Applications of unit conversions, ratios, percents, algebra, geometry to basic electricity, mixture rations, pressure, hydraulics, compression, comparing specifications. Applications of percents in consumer credit and personal finance.

MATH 103 Technical Mathematics I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 40 or MATH 40L or appropriate score on placement exam.
Algebraic expressions, linear equations and systems of linear equations, functions, exponents, graphical analysis, Quadratic equations, factoring common factors and difference of squares, unit conversions, percents, tolerances, clearance, and inference, mean, median, mode.

MATH 103R Technical Mathematics I with Review
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: MATH 20/20L or appropriate score on placement test to MATH 103R.
A review of basic math operations including decimals, fractions, percents, and order of operations. Algebraic expressions, linear equations and systems of linear equations, functions, exponents, graphical analysis, quadratic equations, factoring common factors and difference of squares, unit conversions, percents, and tolerances, clearance, interference, mean, median and mode.

MATH 104 Technical Mathematics II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 103.
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 105 Algebra and Trigonometry for Land Surveyors
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: MATH 40 or equivalent score on placement exam.
Review of order of operations, scientific notation, rounding and significant digits. Review of basic area and volume formulas with applications to more general shapes. Quadratic and linear functions including piecewise definitions. Distance formula, midpoint formula, equations of circles. Map reading, contours and elevation. Classification of angles and triangles. Right triangle trigonometry. Conversions between radians and degrees/minutes/seconds and decimal degrees. Law of sines, law of cosines, arc length, vectors, and bearing. For all topics there will be an emphasis on applications appropriate to the study of land surveying.

MATH 110 Intermediate Algebra
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 40 or 40L, 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 110R Intermediate Algebra with Review
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisites: Satisfactory score on the math placement test.
A combination of the topics in MATH 40 and MATH 110. The study of operations with polynomials, operations with rational expressions, properties of exponents, solution of linear equations and inequalities with applications, solution of absolute value equations and inequalities, solution of quadratic equations with applications, solution of linear systems of equations with applications, rational exponents and radicals, introduction to functions and graphs, and graphing linear equations in two variables.

MATH 115 Statistics
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: 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.

MATH 119 College Mathematics
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 110.
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: 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 120R College Algebra with Review
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: MATH 110 or satisfactory score on the math placement test.
A combination of topics in Intermediate Algebra and College Algebra. A study of various types of equations and inequalities, functions and their graphs, inverse functions, systems of equations, determinants, logarithms and exponential applications.

MATH 130 Trigonometry
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 120, or satisfactory score on the placement test.
Plane geometry is strongly recommended. Angle based trigonometric functions and their inverses, multiple angle formulas, identities, conditional equations, radian measure, arc length, angular velocity, function graphing, logarithms, and tables. Solution of triangles.

MATH 135 Number Systems for Elementary Teachers
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 119 or above.
Designed for elementary school teachers. A constructive development of the real number system beginning with the system of whole numbers; concepts from elementary number theory; applications of quantitative systems to problems in discrete mathematics.

MATH 136 Geometry, Probability, and Statistics for Elementary Teachers
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 119 or higher.
Designed for elementary school teachers. A development from informal geometric concepts to elements of the Euclidean deductive system; groups of congruence transformations, similarity transformations and symmetries; coordinate systems and vectors.

MATH 141 Discrete Structures for Computer Science I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 120 or 150.
Mathematical logic, sets, relations, functions, mathematical induction, Boolean algebra, algebraic structures. The theory introduced will be applied to appropriate areas of computer science.

MATH 150 PreCalculus
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: 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 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.
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 190 Analytic Geometry and Calculus II
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: MATH 180.
A study of the calculus of elementary transcendental functions; integration by parts, by trigonometric substitution, by partial fraction and by miscellaneous substitutions; improper integrals; L' Hospital'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 196 Special Topics I
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Mathematical topics of special interest.

MATH 210 Analytic Geometry and Calculus III
5 credits. 5 hours. (Lecture 5 hours.)
Prerequisite: 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.
Solution and application of ordinary differential equations including the nth 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 223.
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
MCC-Penn Valley

MTRN 101 Medical Transcription I
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: ENGL 101 and CSIS 115.
Introduction to the transcription of medical 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, 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 Terminology for Health Records II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BIOL 108, HITE 103, and MTRN 101.
Advanced study of medical terms including those used in specialties such as radiology, pathology, cardiology, obstetrics, neurology, and surgery.

◆Music

MCC-Blue River
Rebecca Johnson

MCC-Maple Woods
Jim Murray III

MCC-Longview
Cathy Hardy-Parcell

MCC-Penn Valley
Clarence Smith

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. 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 105 Orchestra I
1 credit. 4 hours. (Laboratory 4 hours.)
Open to all students who play violin, viola, cello or bass interested in group performance. Performance of various types of orchestra music in public.

MUSI 106 Orchestra II
1 credit. 4 hours. (Laboratory 4 hours.)
Open to all students who play violin, viola, cello or bass interested in group performance. Performance of various types of orchestra music in public.

MUSI 107 Fundamentals of Music
3 credits. 3 hours. (Lecture 3 hours.)
This course will introduce students to fundamental concepts of music notation and ear training through the use of scales, key signatures, intervals, chords, and chord progressions. This course is designed for the general student and the student preparing for music theory.

MUSI 108 Music Appreciation
3 credits. 3 hours. (Lecture 3 hours.)
This course will introduce the student to the aesthetics of music through the study of musical eras including the Middle Ages through 20th century and music genres through vocal and instrumental mediums.

MUSI 110 Music Theory I
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
This course will introduce students to beginning concepts of music notation and ear training through the use of intervals, scales, triads, seventh chords and their inversions, chord progressions in major and minor keys, and non-harmonic tones including suspensions, appoggiatura, and passing tones. Practical application will include sight-singing, ear training, and keyboard skills.

MUSI 111 Music Theory II
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: MUSI 110.
This course is a continuation of Music Theory I and will introduce students to secondary triads, secondary sevenths, and secondary dominants and all their inversions, non-harmonic tones including suspensions, pedal tones, and added sixths, and 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 is recommended.
A practical approach to keyboard techniques including harmonization, transposition, and sight reading.

MUSI 114 Private Instruction I
1-2 credit. 0.5-1 hour. (Laboratory 2-4 hours.)
Private instruction in strings, 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. 0.5-1 hour. (Laboratory 2-4 hours.)
Prerequisite: MUSI 114.
Private instruction in strings, 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 in uencing 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 120 Class Voice I
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Fundamentals of sight singing in major and minor keys. Fundamentals of correct voice production, breathing, and breath control. Elementary vocal literature in English. Development of stage presence and poise.

MUSI 123 Class Piano II
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: MUSI 112.
Development of increased facility at the piano keyboard through mastery of elementary exercises in harmonization of melodies, sightreading, and transposition.

MUSI 125 Class Guitar I
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Open to all students interested in learning proper fundamentals of playing guitar, including improvisation.

MUSI 126 Class Guitar II
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: MUSI 125.
Open to all students interested in further development of playing guitar, including improvisation.

MUSI 127 Class Piano III
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: MUSI 123 with a minimum grade of C.
Melodic harmonization, sight-reading, and transposition. Performance of piano literature of various periods.

MUSI 140 Class Voice II
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: MUSI 120.
Advanced sight singing in major and minor keys. Develop independence necessary for private voice instruction. Elementary Italian art songs and more difficult vocal repertoire in English.

MUSI 150 Midi Music Production on the Computer
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: One of the following: MUSI 107, 112, 114.
A study of the applications of MIDI music and computer-based music MIDI recording, arranging, and composition. The students will work with computers and MIDI keyboards and will use sequencing/editing software.

🌐MUSI 160 Music of the World's Cultures

3 credits. 3 hours. (Lecture 3 hours.)
This course will be an investigation of music of a variety of cultures, focusing on musical style, aesthetic viewpoints of differing cultures and the function in which music fulfills these diverse societies. Within this course, students will study the connection between music and religion, drama, gender, ethnicity and dance.

MUSI 201 Advanced Music Theory III

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: MUSI 111.
This course is a continuation of Music Theory II and will introduce students to chromatically altered chords including diminished 7ths and augmented 6ths, modulation to all keys, analysis of Greek modes, and analysis of 19th century harmonic techniques. Opportunity for original compositions. Practical application in sight-singing, dictation, and keyboard skills.

MUSI 202 Advanced Music Theory IV

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: MUSI 201.
This course is a continuation of Music Theory III and will introduce students to chromatic alterations of secondary chords, transposition, and analysis of 20th century harmonic techniques. Opportunity for original work and practical application in sight-singing, dictation, and keyboarding skills.

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.
Melodic harmonization, sight-reading, 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.)
Open to all students who play violin, viola, cello or bass interested in group performance. Performance of various types of orchestra music in public.

MUSI 208 Orchestra IV

1 credit. 4 hours. (Laboratory 4 hours.)
Open to all students who play violin, viola, cello or bass interested in group performance. Performance of various types of orchestra music in public.

MUSI 211 Mixed Chorus III

1 credit. 3 hours. (Laboratory 3 hours.)
Open to all students interested in group singing. Performance of various types of chorale music in public.

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. 0.5-1 hour. (Laboratory 2-4 hours.)
Prerequisite: MUSI 115.
Private instruction in strings, 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. 0.5-1 hour. (Laboratory 2-4 hours.)
Prerequisite: MUSI 214.
Private instruction in strings, 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.

◆Occupational Therapy Assistant
MCC-Penn Valley

Theresa Chop   Amber Jenkins

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 I

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: Formal admission to the Occupational Therapy Assistant program. Basic therapeutic interventions, techniques, applications and legislation pertinent to OT practice. Learn OT's role in promoting health and wellness.

OTHA 116 Level I Fieldwork I

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisite: Formal admission to the Occupational Therapy Assistant program. Introduction to the role, policies, and procedures of fieldwork. Directed experience in a specified community setting.

OTHA 118 Assistive Technology

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: BIOL 109, EMTP 102, and OTHA 100, 102, 103, 106, and 116. Hands-on introduction to high tech assistive technology and augmentative communication.

OTHA 120 Pediatrics

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BIOL 109, EMPT 102, and OTHA 100, 102, 103, 106 and 116. Occupational therapy practice as it relates to individuals from birth to early adolescence. Study of normal growth and development.

OTHA 121 Level I Fieldwork II

0.5 credit. 1 hour. (Clinical 1 hour.)
Prerequisite: BIOL 109, EMPT 102, and OTHA 100, 102, 103, 106, and 116; concurrent enrollment in OTHA 120.
Directed experience in a specified community setting.

OTHA 130 Analysis of Physical Performance

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: BIOL 109, EMPT 102, and OTHA 100, 102, 103, 106, and 116. Analysis and evaluation of the components of physical performance and their relationship to functional activities.

OTHA 154 Applied Neurology

2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: BIOL 109 or BIOL 110 Human Anatomy, and BIOL 210 and admission to OTHA or PTHA program.
Foundations of neuroscience for practice as a rehabilitation professional. Anatomy and function of the nervous system. Correlation of clinical problems with pathology of the nervous system. Cross-listed with PTHA 154.

OTHA 173 Special Topics
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Concurrent enrollment in PTA or OTA programs or completion of an Associate's or advanced degree in physical therapy or occupational therapy.
A study of advanced topics relevant to the current practice of rehabilitation. Cross-listed as PTHA 173.

OTHA 201 Mental Health
2.5 credits. 3 hours. (Lecture 2 hours. Laboratory 1 hour.)
Prerequisite: OTHA 118, 120, 121, 130 and 154.
Occupational therapy assessment and treatment techniques in the mental health setting.

OTHA 202 Physical Dysfunction
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: OTHA 118, 120, 121, 130 and 154.
Occupational therapy assessment and treatment used with the physically and cognitively challenged population.

OTHA 203 Gerontology
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: OTHA 118, 120, 121, 130 and 154.
Concepts and process of aging. The role of occupational therapy with the elderly.

OTHA 208 Therapeutic Interventions II
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: OTHA 118, 120, 121, 130 and 154.
Advanced therapeutic interventions and techniques used to enhance functional ability and independence in daily life tasks and occupations.

OTHA 212 Level I Fieldwork III
2 credits. 4 hours. (Clinical 4 hours.)
Prerequisite: OTHA 118, 120, 121, 130 and 154.
Directed experience in specified community settings.

OTHA 217 Fieldwork Seminar
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: OTHA 118, 120, 121, 130 and 154.
Preparation for full-time clinical practice, the national certification process, state licensure, and future employment.

OTHA 222 Level II Fieldwork
12 credits. 40 hours. (Field Studies 40 hours.)
Prerequisite: OTHA 201, 202, 203, 208, 212, and 217.
Directed clinical experience in different practice areas of occupational therapy.

◆Paralegal

MCC-Penn Valley
Gordon Wells, Jr.

PARA 100 Introduction to Paralegal Practice
3 credits. 3 hours. (Lecture 3 hours.)
Students are introduced to the development of paralegal professional and the responsibilities of the paralegal. Introduction to career requirements, opportunities and responsibilities are presented. Systems approaches to law office management which include billing practices, timekeeping and law office library systems are reviewed. Students will examine the philosophical and historical background of the law and its organizational structure and purpose.

PARA 126 Criminal Law and Procedures
3 credits. 3 hours. (Lecture 3 hours.)
The student will be introduced to criminal law, classification and analysis of crimes and criminal acts; 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 and the preservation and protection of life and property.

PARA 173 Contracts
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
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.)
Prerequisite: PARA 100.
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.)
Prerequisite: PARA 100.
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 181 Property
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
Introduction to the fundamentals of real and personal property, ownership interests, zoning easement, leins and bailments.

PARA 185 Ethics for the Paralegal
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
The 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. This course will help the paralegal student delineate clearly between the tasks in which a paralegal can legally do and those tasks which must be done by or under the supervision of an attorney.

PARA 199 Special Topics in Legal Studies
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Prerequisite: PARA 100.
The open topic format of this course provides students opportunities to study, analyze, and discuss selected topics of law or current issues related to paralegals or the legal profession. Instruction will vary by topic and may include lecture, guided readings, discussions, research, writing, and/or field experiences. Repeatable for different topics. No more than six credits of special topics courses may be applied toward elective and/or paralegal program degree requirements.

PARA 224 Criminal Evidence
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
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.)
Prerequisite: PARA 100.
Students will examine the United States Constitution and Amendments with special attention to governmental powers, limitations on those powers, commerce, and the rights guaranteed to individuals by the 4th, 5th, 6th, 8th, and 14th Amendments.

PARA 278 Employment Law
3 credits. 3 hours. (Lecture 3 hours.)
The student will examine the dynamic relationship between employer and employee, management and labor, and the laws and regulations, which govern this relationship.

PARA 279 Family Law
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
Responsibilities and techniques in family relationships, legal problems in the family, and husband-wife and parent-child responsibilities.

PARA 283 Wills, Trusts and Probate
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
Construction of wills, trusts, and the administration of a probate estate.

PARA 284 Intellectual Property
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
Introduction to patent, trademark, and copyright with special attention to recent technology advances in medicine, aerospace, and computer science.

PARA 285 Media Law
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
Students will study free speech theory and its common law background, methods of first amendment analysis, history and the significance of the press clause, prior restraints, government regulations of media, protecting the rights to a fair trial, and civil liability for harms caused by the media.

PARA 290 Internship in Paralegal Practice
3 credits. 10 hours. (Field Studies 10 hours.)
Prerequisite: 15 credit hours of Paralegal courses before taking this course.
This course provides student with opportunities to gain practical work experience under the supervision of an attorney or person with experience in the criminal or legal field.

PARA 292 Litigation
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
Introduces 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 100.
Introduction to the practice of bankruptcy law. Overview of bankruptcy code, rules, official forms, bankruptcy cases, and secondary authority.

PARA 299 Special Topics in Legal Studies
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Prerequisite: PARA 100.
The open topic format of this course provides students opportunities to study, analyze, and discuss selected topics of law or current issues related to paralegals or the legal profession. Instruction will vary by topic and may include lecture, guided readings, discussions, research, writing, and/or field experiences. Repeatable for different topics. No more than six credits of special topics courses may be applied toward elective and/or paralegal program degree requirements.

◆ Philsophy

MCC-Blue River
Dennis Lowden

MCC-Longview
Michael Connelly
Douglas Washer

MCC-Maple Woods

MCC-Penn Valley

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 in uence 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.)
This course is an introduction to some of the great philosophical tradition in the world, both Western and non-Western. It compares and contrasts different cultures from Africa, Latin America, the Middle East, the Orient, Native America, and Europe, and their respective and distinctive attempts to discern meaning and order from human existence. Foundations of knowledge and reality, conceptions of God and the afterlife, and ethical theories are among the considered topics. Special distinctions between Western and non-Western philosophical methods will be emphasized.

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 a 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.

PHIL 205 Professional Ethics
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to introduce the student to the discipline of ethics and several philosophical questions and problems found within it. It will include an examination of the dominant classical and contemporary theories of ethics and decision-making models. The applied ethics component of the course will focus on professional issues in business, technology, health care, law, journalism, academia, and other workplace settings.

◆Physical Education

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.)
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, exibility, 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 108.
A continuation of PHED 107 and 108.

PHED 110 Physical Fitness IV
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 109.
A continuation of PHED 107, 108, and 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.
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 126 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 127 Lifetime Fitness II
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: PHED 126 and successful completion of preliminary health screening or permission of personal physician.
Second in a series of cardiovascular and muscular development fitness programs designed around the aerobic circuit. The course expands on concepts introduced in PHED 126. A variety of individual aerobic exercise equipment will be incorporated into the student's total program.

PHED 128 Lifetime Fitness III
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: PHED 127 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 129 Lifetime Fitness IV
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: PHED 128 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 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 135 Fencing I

1 credit. 2 hours. (Laboratory 2 hours.)

Basic skills, rules, history, and etiquette of foil fencing. Practice of techniques and strategies.

PHED 136 Fencing II

1 credit. 2 hours. (Laboratory 2 hours.)

Prerequisite: PHED 135.

Advanced techniques of foil fencing.

PHED 137 Tennis I

1 credit. 2 hours. (Laboratory 2 hours.)

Skills, rules, and practice in the 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.

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.

Intermediate techniques in the art of karate.

PHED 146 Karate III

1 credit. 2 hours. (Laboratory 2 hours.)

Prerequisite: PHED 145.

Further development of intermediate techniques in the art of karate.

PHED 147 Karate IV

1 credit. 2 hours. (Laboratory 2 hours.)

Prerequisite: PHED 146.

Advanced techniques in the art of karate.

PHED 154 Principles of Group Exercise Instruction

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

To teach individuals the methods and priciples necessary to safely and effectively lead a group fitness (aerobic's) class. Students will be prepared to successfully complete professional certification by the course's end. Class will include choreography, proper body mechanics, form and technique, the FITT principle, target heart rate, rate of percieved exertion, prevention of injury and a variety of fitness activities.

PHED 155 Care and Prevention of Athletic Injuries

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Athletic training procedures for prevention of injury. Recognition and treatment of athletic injuries.

PHED 156 Principles of Strength Training

2 credits. 2 hours. (Lecture 2 hours.)

Principle of strength training is designed for the student enrolled in the Exercise Science program that intends to work in the field of health & wellness in order to teach strength training and for the person that would like to become personal trainer certified.

PHED 157 Principles of Health

3 credits. 3 hours. (Lecture 3 hours.)

Principles of healthful living. Physical, emotional, and social health. Contemporary health problems.

PHED 158 First Aid/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.

PHED 159 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 and PHED 165.

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 and PHED 166.

Participation in all phases of a varsity sport.

PHED 173 Wrestling I

1 credit. 2 hours. (Laboratory 2 hours.)

Wrestling (free style) to develop body control and techniques as well as to develop self-confidence, Physical fitness, and protective skills.

PHED 174 Wrestling II

1 credit. 2 hours. (Laboratory 2 hours.)

Prerequisites: PHED 173.

Advanced wrestling (free style) to develop body control and techniques as well as to develop self-confidence, Physical fitness, and protective skills.

PHED 178 Scuba Diving

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

Scuba Diving is a course that develops the basic knowledge and skills needed to safely enjoy recreational diving. Successful completion of this course will prepare the student for Open Water Certification Training dives through the Professional Association of Diving Instructors (PADI) or the National Association of Underwater Instructors (NAUI).

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.

◆Physical Therapist Assistant
MCC-Penn Valley

Gwen Robertson   Pam Stockman

PTHA 151 Introduction to Physical Therapy
2 credits. 2 hours. (Lecture 2 hours.)
Introduction to the education and roles of the physical therapist and physical therapist assistant as members of the health care team. Overview of physical therapy practice, terms and current issues. Effective interaction with others related to implementation of the physical therapy plan of care.

PTHA 152 Physical Therapy Fundamentals I
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: Formal acceptance into the program.
Basic patient care skills utilized by the physical therapist assistant in carrying out the plan of care established by the physical therapist. Theory and application of basic treatment modalities used in physical therapy, including indications and contraindications. Field trips.

PTHA 153 Kinesiology
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: BIOL 109 and PTHA 152 and PTHA 160.
Discussion of anatomy and function of the musculoskeletal system. Analysis of various activities. Application of data collection techniques to monitor effectiveness of physical therapy interventions as outlined in the plan of care established by the supervising physical therapist.

PTHA 154 Applied Neurology
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: BIOL 109 or BIOL 110 Human Anatomy, and BIOL 210 and admission to OTHA or PTHA program.
Foundations of neuroscience for practice as a rehabilitation professional. Anatomy and function of the nervous system. Correlation of clinical problems with pathology of the nervous system. Cross-listed with OTHA 154.

PTHA 155 Rehabilitation
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: PTHA 162.
Introduction to the underlying theory, principles, and application of interventions involved in physical rehabilitation. Field trips as required.

PTHA 158 Therapeutic Exercise
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: PTHA 162.
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 in carrying out the plan of care as established by the supervising physical therapist. Field trips as required.

PTHA 159 Orthopedic Pathology
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: BIOL 109 and PTHA 152 and PTHA 160.
Orthopedic pathologies commonly seen in physical therapy practice: diagnostic tests, signs and symptoms, physiologic factors and common interventions associated with the physical therapy plan of care.

PTHA 160 Medical Diseases
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: Formal acceptance into the program.
Medical diseases commonly seen in physical therapy practice; diagnostic tests, signs and symptoms, physiologic factors, and common interventions associated with the physical therapy plan of care.

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.
Introduction to the theory and practical application of documentation, patient care skills, and selected modalities, including indications and contraindications.

PTHA 162 Clinical Experience I
2 credits. 5 hours. (Clinical 5 hours.)
Prerequisite: PTHA 153, 154, 159, and 161 and EMTP 102.
Supervised clinical experience in the practical application of techniques and procedures covered in all previous PTHA courses. Assisting physical therapists 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.
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 and 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 in treatment of patients in a variety of clinical settings..

PTHA 171 Clinical Seminar
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: PTHA 162.
This course contains information on current professional issues and values, administrative policies and procedures, and related clinical topics associated with the practice of physical therapy. Service learning projects required.

PTHA 172 Clinical Experience III
12 credits. 40 hours. (Clinical 40 hours.)
Prerequisite: Completion of all other required courses in the PTHA program.
Practical application of principles learned in the prior didactic semester. Experience rotating internships in selected clinical sites under the supervision of a physical therapist.

PTHA 173 Special Topics

2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Concurrent enrollment in PTA or OTA programs or completion of an Associate of advanced degree in physical therapy or occupational therapy.
This course presents specialized topics in physical therapy and the administration of health care.

◆Physics

MCC-Blue River *MCC-Longview*
D.J. Box
Anne Nienhueser
Deanna Poudel

MCC-Maple Woods *MCC-Penn Valley*
Cynthia Sexton-Proctor John Hawkins

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 104 Foundations of Physical Science
5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Fundamental principles and concepts of classical and modern physics, astronomy, chemistry and earth science, and their relationships.

PHYS 106 General Astronomy

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
A survey of astronomy with emphasis on the scientific method, observation, tools of observation, and the models, physical principles, and processes that help describe and predict astronomical phenomena.

PHYS 112 Technical Physics

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)
Prerequisite: MATH 104.
Principles of mechanics, thermodynamics, sound, electricity, magnetism, light, and nuclear physics with emphasis on applications to technology.

PHYS 130 General Physics I

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: MATH 130.
Algebraic and trigonometric introduction to the principles of mechanics, heat, and sound with an emphasis on problem solving and applications in technical and health careers.

PHYS 131 General Physics II

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: PHYS 130.
Algebraic and trigonometric introduction to the principles of electricity and magnetism, light and geometrical optics, and atomic physics with an emphasis on problem solving and applications in technical and health careers.

PHYS 220 Engineering Physics I

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: Enrollment in or completion of MATH 190.
Calculus-based introduction to the principles of mechanics, heat, and sound with an emphasis on problem solving and applications in engineering and science careers.

PHYS 221 Engineering Physics II

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: PHYS 220 and enrollment in or completion of MATH 210.
Calculus-based introduction to the principles of electricity and magnestism, light and geometrical optics, and modern physics with an emphasis on problem solving and applications in engineering and science careers.

◆Political Science

MCC-Lonview *MCC-Maple Woods* *MCC-Penn Valley*
John Shively Perri Lampe Deborah Scott

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 function 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.)
Surveys the theory of politics and government in America at the State and Local levels with special attention to Missouri. Includes US, Missouri constitution.

POLS 138 Practicum in Public Administration

1-6 credits. 1-5 hours. (Field Studies 1-6 hours.)
Prerequisite: Completion of POLS 135, 136, or 137 with a minimum grade of B. Field work in a public agency/legislative office in an entry-level position to obtain exposure to public service. The credit for this course will vary depending upon the hours spent working for the agency and agreement between instructor and student.

POLS 153 The Missouri Constitution

1 credit. 1 hour. (Lecture 1 hour.)
Directed study of the Missouri Constitution. This course fulfills the state constitution requirement.

POLS 234 Introduction to International Relations

3 credits. 3 hours. (Lecture 3 hours.)
This course acquaints students with the core concepts, processes, issues, and analytical tools of international relations. The course details the actors in international relations, how foreign policy is made, and the role of power. The course examines past, contemporary, and future problems in the international system, including military con ict, economics, demography, and the environment. Upon completion of this course, students should have a strong basic understanding of international relations.

POLS 248 Constitutional Law and Politics

3 credits. 3 hours. (Lecture 3 hours.)
Examination of the Constitution and its evolution through studying the cases and procedures of the Supreme Court in the context of the American political process. This course emphasizes the process of judicial decision making and the politics behind Constitutional decisions.

◆Practical Nursing
MCC-Penn Valley

Mary Basara   Cora Franklin   Diane Graftenine-Beedle
Sharon Graves   Sherry Kinney   Betty Reynolds
Stephanie Roehm   Maureen Wiederholt

PNUR 100 Personal and Vocational Concepts
1 credit. 2 hours. (Lecture 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 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.
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 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.
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, PNUR 102 or equivalent, PNUR 103, and PNUR 104.
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 re ect 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, PNUR 102, PNUR 103, PNUR 104, and PNUR 110 Pharmacology.
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 intergrated 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.)
Prerequisite: 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 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.
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.

◆Professional Nursing
MCC-Penn Valley

Pamela Anthony   Roger Bidwell   Tammie Greathouse
Lee Heath   Shareen Khani   Karen Komoroski
Catherine McClendon   Amy Parrish   Kimberly Ries
Maria Santander   Rosemary Schocklee-Fusaro   Nancy Spangler
Shelli Stuf ebeam-Ely   Tammie Willis   Patricia Winberg
Ruth Yunker

RNUR 115 Professional Transition
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: Admission to LPN-Bridge 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: Admission to the nursing program; completion of or concurrent enrollment in PSYC 243.
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, individualized nursing care according to legal/ethical guidelines.

RNUR 131 Essential Nursing Concepts

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Admission to nursing program; completion of or concurrent enrollment in PSYC 243.

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: Admission to nursing program; completion of RNUR 131, RNUR 126, PSYC 243; completion of or concurrent enrollment in 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 Neonates

4 credits. 8 hours. (Lecture 2 hours. Clinical 6 hours.)

Prerequisite: Admission to nursing program; completion of RNUR 131, RNUR 126, PSYC 243; completion of or concurrent enrollment in BIOL 208.

This is a sixteen-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 place upon providing 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 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 cultural diverse family.

RNUR 141 Adult Nursing I

3 credits. 3 hours. (Lecture 3 hours.)

Prerequisite: Admission to nursing program; completion of RNUR 131, RNUR 126, PSYC 243; completion of or concurrent enrollment in BIOL 208.

Adult Nursing I is the first of three medical-surgical 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: Admission to nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 234, RNUR 238, BIOL 208.

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: Admission to nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, BIOL 208; or admission to the LPN-Bridge program.

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: Admission to the nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, BIOL 208; or admission to the LPN-Bridge program.

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.)

Prerequisite: Admission to the nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, RNUR 234, RNUR 238, BIOL 208.

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 if incorporated in theory and clinical practice.
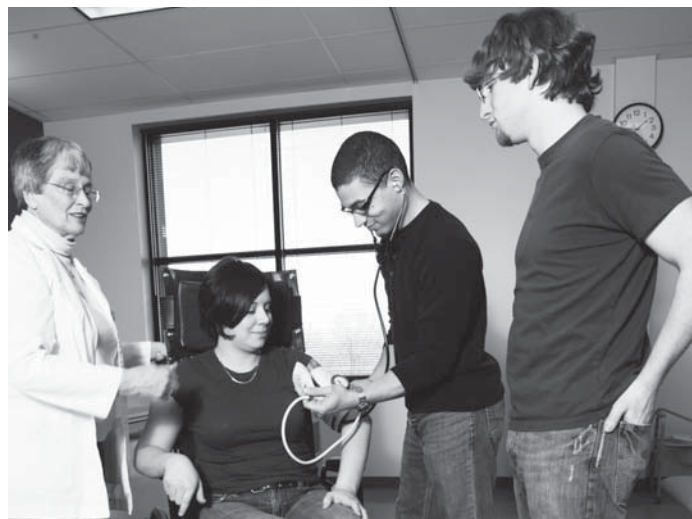
◆Psychology

MCC-Blue River   *MCC-Longview*
Kimberly Glackin   Angela Bahner
Susan Benoit   Matthew Westra
MCC-Maple Woods   *MCC-Penn Valley*
Julia Bishop   Monica Gimenez
Robert Williams   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 143 Psychology of the African-American Experience
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
Psychological principles as they apply to the development, behavior, and experience of the African-American from colonization through Reconstruction to the present. Special considerations will be given to the impact of racism.

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 in uences, stress, communication, relationships, and mental health.

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.
Psychological theories of crime and delinquency. Diagnostic approaches used in juvenile and adult correctional settings. Psychopathology. Classification procedures. Individual and group counseling techniques in mental health.

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 220 Psychology of Prejudice
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
This course offers an analysis of psychological theory and research as mechanism for understanding privilege, prejudice, and discrimination. The class will explore meanings of difference and prejudice based on race/ethnicity, gender, class, religion, physical ability, age, and sexual orientation. Themes include cultural values and characteristics of diverse groups, development and causes of social perception, reasons for persistence and maintenance of stereotypes and prejudice, and ways to change or reduce group stereotypes and prejudice.

PSYC 230 Death and Dying
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
This course offers a survey of the historical and contemporary issues related to death and dying. It explores cultural, ethnic, individual, social, and ethical views regarding end of life practices. Additionally, the course provides students with basic skills for understanding the psychological and developmental aspects of death and living.

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 in uencing individuals in social situations. Attitude formation, prejudice, aggression, interpersonal communication, leadership, and persuasion.

PSYC 270 Social Psychology of Aging
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PSYC 140.
Social and psychological problems of older persons in contemporary society. Personality change. Environmental conditions and the aging process in late life.

◆Radiologic Technology
MCC-Penn Valley

Judith Taylor   Kimberly Thebeau-Siercks

RATE 150 Introduction to Radiologic Technology
2 credits. 2 hours. (Lecture 2 hours.)
Introduction to the profession of radiologic technology, including the duties of the radiologic technologist in the health care environment.

RATE 160 Survey of Radiologic Technology
6 credits. 10.2 hours. (Lecture 4.2 hours. Clinical 6 hours.)
Prerequisite: 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.
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.
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 experience.
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 concurrent enrollment in RATE 165 and 173.
Anatomy, positioning and image evaluation of the digestive and urinary system, upper and lower limbs.

RATE 173 Clinical Practice I
3 credits. 16 hours. (Clinical 16 hours.)
Prerequisite: RATE 160 concurrent enrollment in RATE 165 and 172.
Performance of patient examination 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: Completion of: RATE 160, 171, 172, and 173.
Quality control of radiographic images. Technique charts, calibration of equipment, standard exposure systems, and factors used for conversion of techniques for variables in the exposure system. Special techniques used in producing radiographic images.

RATE 175 Clinical Practice II
4 credits. 24 hours. (Clinical 24 hours.)
Prerequisite: RATE 165, 172, and 173 and 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, 173 and concurrent enrollment in

RATE 162 and 175.
Anatomy, positioning, and image evaluation of the pelvis, bony thorax, vertebral column, cranium, and facial bones.

RATE 178 Clinical Practice III
4 credits. 20 hours. (Clinical 20 hours.)
Prerequisites: RATE 175 and 176.
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 concurrent enrollment in RATE 282.
Human disease processes and their relationship to patient examination in the radiology department. Radioraphic pathology and imaging modalities.

RATE 279 Radiographic Positioning III
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: RATE 176 and 178 and concurrent enrollment in RATE 280, 281, and 285.
Anatomy, positioning and image evaluation of the biliary system, breasts, and temporal bone; procedural adaptations for pediatric and trauma patients and mobile radiographic procedures. Advanced image evaluation of routine radiographs.

RATE 280 Clinical Practice IV
4 credits. 24 hours. (Clinical 24 hours.)
Prerequisite: RATE 162, 176, 178 and concurrent enrollment in RATE 279, 281, and 285.
Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

RATE 281 Radiation Physics
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisite: RATE 162 and 171.
Application of fundamental physics principles relating to energy, electricity, and magnetism and their relevance to the study of x-ray equipment.

RATE 282 Clinical Practice V
4 credits. 24 hours. (Clinical 24 hours.)
Prerequisite: RATE 279, 280, 281, 285 and 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 174, 279 and 280.
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 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.

◆Reading

MCC-Blue River
Mary Simpson

MCC-Longview
Patricia Illing
Ronald Taylor

MCC-Maple Woods
Debra McCarty

MCC-Penn Valley
Vicki Raine
Patricia Vargas

READ 10 Foundations for Academic Reading I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement scores.
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.
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 13 Linguistic Comprehension I (Companion for READ 10)
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Placement based on testing.
Development of fundamental comprehension of printed material applicable to the college environment through auditory and visual input. Instruction in main ideas and supporting details, word recognition, structural analysis, and vocabulary development.

READ 14 Reading - Vocabulary
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Vocabulary development through word analysis and context clues. Credit for courses numbered under 100 is not applicable to any degree or certificate.

READ 15 Phonology I
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Diagnostic testing.
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 16 Phonology I
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Diagnostic testing.
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 17 Phonology I
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Diagnostic testing.
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.
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: 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: 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: 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.)
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. Laboratory 2 hours.)
Prerequisite: Appropriate placement scores.
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. Laboratory 2 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 10/30.
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 (Companion for READ 31)
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 13/33.
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 100 College Reading
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Appropriate placement scores or the successful completion of Read 11/31.
Enhancement of ability to interact independently with printed material at the college level. College level vocabulary and reading comprehension, exibility 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.
Purpose and methods of speed reading. Guided practice in surveying, scanning, skimming, and developing exibility 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.
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.
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.)
Trains trainers in multi-sensory concepts, approaches, and instructional methods for improving students' reading and spelling. Phonology of the English language, development of phonemic awareness and phonetic analysis abilities, and Socratic questioning techniques.

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.

◆Sign Language Interpreting
MCC-Maple Woods
Michele Clapp

SIGN 101 American Sign Language I
3 credits. 3 hours. (Lecture 3 hours.)
An introductory course in American Sign Language designed to develop basic expressive and receptive communication skills by introducing culturally appropriate signed concepts related to the immediate environment. Students will engage in common communicative events and interactions to acquire a basic working vocabulary and grammar. Cultural awareness and appropriateness is introduced to develop appropriate linguistic/cultural behaviors and awareness of and respect for deaf culture. American Sign Language is the language of instruction.

SIGN 102 American Sign Language II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SIGN 101.
The second American Sign Language course in the sequence designed to further develop communication skills by examining grammatical features of American Sign Language. Students will develop vocabulary and conversational skills by progressing from common, concrete communicative events and interactions to language usage expressing abstract ideas. Emphasis is on the comprehension and production of increasingly complex linguistic structure focusing on dialogues and conversational expressions. Cultural awareness and appropriateness will also be further examined and applied. American Sign Language is the language of instruction.

🌐SIGN 103 Deaf Culture
3 credits. 3 hours. (Lecture 3 hours.)
A course designed to provide students with an understanding of American Deaf culture and the factors that contribute to defining the Deaf Community as a distinct cultural minority, focusing on an awareness and understanding of cultural diversity and preservation of language. Students will examine cultural identity, group norms, rules of social interaction, values, and traditions held by members who are deaf. Societal attitudes regarding deafness and issues such as cultural oppression and language power by the majority culture will be discussed, as well as the contributions of folklore, literature, plays and works of art made by persons who are deaf to the larger American culture and to their own community organizations. The impact of modern technology, emerging issues, trends and advocacy within the Deaf Community are presented.

SIGN 104 Introduction to Interpreting
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to introduce students to the field of sign language interpreting as an occupation and provide students with a working knowledge of the profession of interpreting. Coursework will focus on the roles and responsibilities of the interpreter, the code of professional conduct, certification criteria, various modes of interpreting, legal issues that affect the profession, and career opportunities.

SIGN 110 American Sign Language III
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Acceptance into the Sign Language Interpreting Program or American Sign Language Certificate Program.
The third American Sign Language course in the sequence designed to continue the development of American Sign Language skills through vocabulary development, application of grammatical features, and further development of conversational skills by learning how to narrate, describe, compare and comment. These skills will be applied to develop   uent conversational skills and grammatically correct interactions. Integration of cultural and linguistic skills ranging from informal to formal communication events will be emphasized. American Sign Language is the language of instruction.

SIGN 112 Fingerspelling
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Acceptance into the Sign Language Interpreting Program or American Sign Language Certificate Program.
A course designed to develop expressive and receptive fingerspelling skills. Emphasis will be on whole-word and phrase recognition, as well as on reading fingerspelling embedded in signed sentences. Expressive skills will focus on attainment of normal speed, clarity, and   uency. Extensive interaction and drills will enhance receptive and expressive skills.

SIGN 113 Cognitive Processing
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: Acceptance into the Sign Language Interpreting Program.
This course uses a process-oriented approach for applying the essential cognitive strategies to interpretation. These strategies include abstracting, summarizing, paraphrasing, and restructuring a message while retaining the meaning in American Sign Language and English. The course serves as a transition from language learning to beginning interpretation skills.

SIGN 115 Building Translation Skills
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: Acceptance into the Sign Language Interpreting Program.
This course will provide the student with techniques and strategies applicable to the process of translation. Students will translate small units of discourse within delayed time frames designed to increase language proficiency, comprehension, and production abilities. These techniques will serve as the foundation that students will apply to the interpreting process throughout the program.

SIGN 118 Sign-to-Voice I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ENGL 101, SPDR 100 or SPDR 102, and SIGN 102 with a minimum grade of B.
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 in ection, diction, breathing, and pronunciation. Extensive use of videotapes provide students in-class practice.

SIGN 120 American Sign Language IV: Specialized Vocabulary
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SIGN 110.
A course designed to develop the skills and vocabulary in specialized settings such as medical, mental health, religious, legal, educational, counseling, business and technical fields. The emphasis is on acquisition of specific terminology, concepts, and protocol in each area. American Sign Language is the language of instruction.

SIGN 122 Linguistics of American Sign Language
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SIGN 110.
A course designed to focus on the research of linguistic inquiry such as phonology, morphology, syntax, semantics and use of language. Students will learn the fundamental concepts of linguistics and its application to the study of American Sign Language. Students also will compare and contrast basic similarities and differences between American Sign Language and English with a goal to develop critical thinking about the structure of American Sign Language.

SIGN 125 Consecutive Interpreting

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: SIGN 110, 112, 113 and 115.
Students will learn how to interpret small units of discourse within delayed time frames. This course will examine process time, rephrasing and restructuring, note-taking, prediction and expansion techniques. The course will begin with sentential source materials and transition into full discourse materials.

SIGN 128 Sign-to-Voice II

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: SIGN 110 - 118 inclusive.
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.

SIGN 210 American Sign Language III

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: SIGN 110 - 128 inclusive.
A course for continued development of expressive and receptive American Sign Language skills. Continued emphasis on aspects of American Sign Language for increasing uency in using the language. Students will increase their ability to discuss a variety of topics in the target language.

SIGN 212 C.A.S.E. I

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: SIGN 110 - 128 inclusive.
A course of study 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.

SIGN 215 Simultaneous Interpreting I

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: SIGN 120, 122, and 125.
An introductory course designed to serve as a bridge from consecutive interpreting to the process of simultaneous interpreting. It is the first of two courses in sequence in which students will work on comprehension of the source language and reformulation into the target language. Emphasis will be on the process of interpreting and developing uency, speed, and accuracy.

SIGN 217 Practicum

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: SIGN 120, 122, and 125.
The student will explore the field of interpreting through field observation and class discussion.

SIGN 218 Sign-to-Voice III

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: SIGN 110 - 128 inclusive.
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.

SIGN 219 Sign Systems and Special Populations

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: SIGN 120, 122, and 125. This course is designed to expose students to a variety of signed English systems and special populations they may encounter in the field, such as Signing Exact English II, Sign Supported Speech, Cued Speech, Rochester Method, and working with individuals who are Deaf-Blind. Students will learn the rules governing the selection of signs and the rationale for sign language systems in educational and community settings.

SIGN 220 American Sign Language IV

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: SIGN 110 - 128 inclusive and SIGN 210.
A course to further develop conversational skills with the emphasis on native uency in receptive and expressive modes. Continued vocabulary development to enhance the ability to converse on a variety of topics and levels is a priority.

SIGN 222 C.A.S.E. II

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: SIGN 110 - 128 inclusive and SIGN 212.
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.

SIGN 222 Transliteration

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: SIGN 210, 215, and 219.
A course designed to study and apply the principles and techniques involved in transliteration. Students will develop skills in restructuring, mouthing, and using ASL features while practicing the art of transliteration.

SIGN 225 Simultaneous Interpreting II

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: SIGN 215.
This second course in the sequence is designed to build on requisite skills and knowledge, and is a continuation of the simultaneous interpretation process between American Sign Language and English. It includes application of process skills, contrastive American Sign Language-English linguistics, contrastive cultural analysis, and teaming skills. Students will practice skills and will process tasks of increased complexity with unplanned and planned language samples, such as dialogues, monologues, interviews, and lectures from a variety of interpreting settings.

SIGN 228 Sign-to-Voice IV

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: SIGN 110 - 128 inclusive.
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. Work will continue on diction and vocal in ection to appropriately represent signed material.

SIGN 230 Internship

3 credits. 3 hours. (Lecture 1 hour. Independent Study 2 hours.)
Prerequisite: SIGN 215, 217, and 219.
Students will have the opportunity to interpret at a site under the direct supervision of a mentor. The internship provides field experience within a variety of settings and situations in which students are given increasing responsibility as interpreters. The internship is designed to provide students with the opportunity to synthesize practical and academic experiences gained during the program.

SIGN 236 Directed Study in Sign Language Interpreter Training II

1 credit. 1 hour. (Independent Study 1 hour.)
A exible 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

MCC-Blue River   *MCC-Longview*
MCC-Maple Woods   *MCC-Penn Valley*

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 studies of various ethnic cultures and societies with focus on the cultural, social, economic, and political organization. Comparison of such societies to the dominant American culture. Potential points of agreement and conflict between the dominant American culture and some of the other cultures of the world.

◆Sociology

MCC-Blue River   *MCC-Longview*
Sharon Hogan   Tammie May
MCC-Maple Woods   *MCC-Penn Valley*
Jessica Halperin   dorether Welch

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 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 African-American Family
3 credits. 3 hours. (Lecture 3 hours.)
The Sociology of the African-American Family considers the historical and modern day African-American family in the United States. Emphasis is placed on the influence of the context of their initial immigration to the U.S. as well as on a variety of ongoing historical, social, political, and economic factors that ultimately influenced the African-American family's quality of life in such areas as, for example, social welfare, access to housing, education, legal rights, and employment.

SOCI 165 Criminology
3 credits. 3 hours. (Lecture 3 hours.)
This course will introduce students to theories associated with criminal behavior and the manifestations of crime. A historical evolution of crime and punishment is introduced along with concepts, terms, and the criminal justice subsystem.

SOCI 168 Juvenile Delinquency
3 credits. 3 hours. (Lecture 3 hours.)
Definitions delinquent behavior. Theories of causation. Development of the juvenile court. Function of detention, intake, and probation. Community-based and institutional programs. Procedures for processing juveniles and treatment trends.

SOCI 169 Family Violence and Sexual Abuse
3 credits. 3 hours. (Lecture 3 hours.)
Introduction to concepts related to interpersonal violence. Categories of abuse studied are spousal, child, sibling, ritual, elderly, gay and lesbian. The course emphasizes legal, social and psychological aspects of abuse.

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.

SOCI 199 Special Topics in Sociology
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Guided readings, discussions, writing and/or field experience(s) in Sociology. Topics and material will be determined by the instructor.

🌐SOCI 210 Native Americans in Contemporary Society
3 credits. 3 hours. (Lecture 3 hours.)
Focuses on socioeconomic factors impacting Native Americans in modern society and social construction of Native identity, with particular emphasis on the struggle to maintain and direct changes in the tribal communities in such areas as education, family structures, tribal governments, and religion.

SOCI 220 Marriage and Family Living
3 credits. 3 hours. (Lecture 3 hours.)
This course will introduce students to the study of family living in the United States. Attention will be given to the research methods and theoretical framework for understanding family from a sociological perspective. Consideration will also be given to the diversity of family in contemporary society.

◆Speech and Drama

MCC-Blue River   *MCC-Longview*
Dee Mathison   William Cue
Anne Mahoney   Kathryne Kiser
                                          Joyce Kuhn

MCC-Maple Woods   *MCC-Penn Valley*
Ayanna Bridges   Deborah Craig-Claar
Lynette Jachowicz   F. Kim Wilcox
Thomas Daniel Wright

SPDR 100 Fundamentals of Speech
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or satisfactory score on placement test.
Introduction to the theory and practice of public speaking with a focus on the skills related to effective speech preparation and delivery.
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 Communication
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 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 topics in interpersonal communication, which may include small group dynamics and interviewing. Practical application of speaking and listening skills.

SPDR 103 Interpersonal Communication
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 106 Theater Appreciation
3 credits. 3 hours. (Lecture 3 hours.)
Theater Application is an overview of theater from the playgoer's perspective. The course will include a discussion of theatre as a composite art form, investigate theatre practices that relate to audiences, and examine the function of the playwright, actor, director, designer, and others in relationship to the creation of a theatrical production.

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 play 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. 4.5 hours. (Lecture 1.5 hours. Laboratory 3 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.)
This course is an introduction to children's theatre and the various forms of children's theatre based not only on theatrical styles but age levels as well. This class is 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 I
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.
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.)
Theater Practicum is the practical examination of the performance and production of plays. Different areas will be examined with each course, such as acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

SPDR 123 Theater Practicum
1 credit. 1 hour. (Laboratory 1 hour.)
Theater Practicum is the practical examination of the performance and production of plays. Different areas will be examined with each course, such as acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

SPDR 124 Theater Practicum
1 credit. 1 hour. (Laboratory 1 hour.)
Theater Practicum is the practical examination of the performance and production of plays. Different areas will be examined with each course, such as 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. (Laboratory 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/Theater/Debate
1 credit. 1 hour. (Independent Study 1 hour.)
Prerequisite: SPDR 100.
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. Student 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/Theater/Debate
2 credits. 2 hours. (Independent Study 2 hours.)
Prerequisite: SPDR 100.
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. Student 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/Theater/Debate
3 credits. 3 hours. (Independent Study 3 hours.)
Prerequisite: SPDR 100.
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. Student 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 133 Intercultural Communications
3 credits. 3 hours. (Lecture 3 hours.)
Students will examine, analyze and discuss how culture (race/ethnicity, gender, etc) and cultural variables (perception, values, beliefs, attitudes, etc) impact communication. Ways of achieving cultural communication competence and reducing con ict will be discusses.

SPDR 140 Acting II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPDR 120.
A continuation and advanced study of the skills taught in SPDR 120 Acting, including various acting exercises and in-depth scene work. More in-depth analysis of the acting process through actual scene work performance from full length plays.

SPDR 228 African Film
3 credits. 3 hours. (Lecture 3 hours.)
A general introduction to contemporary African culture and history through the medium of movies by African filmmakers. Themes include the legacies of colonialism, identity formation, globalization, and the changing sex roles in modern Africa.

◆ Surgical Technology
MCC-Penn Valley

Shirley Musick   Roger Massey

STNU 100 Introduction to Surgical Technology
2 credits. 4 hours. (Lecture 2 hours.)
Prerequisites: BIOL 108, 150, and acceptance into the program.
Explores historical aspects of surgery, healthcare facilities and organizations, including the roles, duties, and responsibilities of surgical team members. Ethical, legal and moral issues in health care and surgery are addressed with an emphasis on effective communication skills and the impact of transcultural psychosocial outcomes for clients in the surgical setting. Also includes organization and physical layout of the operating room suite.

STNU 102 Introduction to Fundamentals I
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: BIOL 108, 150, and acceptance into the program.
Applied principles of medical and surgical asepsis in the operating room. Focused on preparation and maintenance to the sterile field, identification, care and handling of instruments, suture, supplies, and equipment. Emphasis is on basic skills of the Surgical Technologist in preparation for and during the operative procedure.

STNU 103 Introduction to Fundamentals II
6 credits. 9 hours. (Lecture 3 hours. Laboratory 5 hours. Clinical 1 hour.)
Prerequisites: STNU 100, 102, and 106.
Duties of the surgical technologist that include maintaining a safe client environment and emphasizes the role of the surgical technologist in the first scrub role. Common surgical techniques and procedures are introduced.

STNU 105 Pharmacology for the Surgical Technologist
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: STNU 100, 102, and 106.
Metric, apothecary, household and linear systems of measurement. Anesthetic agents and stages of anesthesia are introduced. Emphasis on the use and preparation of drugs and solutions commonly used during operative procedures.

STNU 106 Microbiology for the Surgical Technologist
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: BIOL 108, BIOL 150, and acceptance to the program.
A study of microorganisms, including the structure, function and pathogenicity, with emphasis on the infectious process, sterilization, disinfection, environmental sanitation, treatment and the immune response

STNU 109 Surgical Procedures I
8 credits. 16 hours. (Lecture 4 hours. Clinical 12 hours.)
Prerequisites: STNU 103.
Diagnosis, pathology and surgical sequence of general surgery, minimally invasive surgery, gynecological and genitourinary surgeries with discussion of post-operative care and complications.

STNU 110 Surgical Procedures II
8 credits. 16 hours. (Lecture 4 hours. Clinical 12 hours.)
Prerequisite: STNU 109.
Pathology and surgical sequence of surgical specialties, including preoperative care and client outcomes for: Ophthalmology, otorhinolaryngology, Head and Neck surgery, Plastic/Reconstructive/Burn, Orthopedics.

STNU 111 Career Development for the Surgical Technologist
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: STNU 110.
This course emphasizes skills in developing employability. Included is an exploration of the advanced practice role as a first assistant in the hospital operating room setting as well as other areas of employment. The process of becoming certified and requirements for maintaining certification are explored.

STNU 114 Surgical Procedures III
8 credits. 16 hours. (Lecture 4 hours. Clinical 12 hours.)
Prerequisite: STNU 110.
Pathology and surgical sequence to include post-operative care and complications in: Neuro-, Thoracic, Cardiac, Peripheral Vascular, Pediatric, Geriatric, and Trauma surgery.

◆ Veterinary Technology
MCC-Maple Woods
Christopher Morrow

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, receptionists 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 108 Clinical Mathematics for Veterinary Technicians
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Admissions into the Veterinary Technician Program.
Vocabulary. Metric and apothecary conversions. Drug and dosage calculations. Preparation of solutions based on percents, ratios and drugs. Infusion ow rates and constant rate infusion.

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 uid 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.

VETT 210 Veterinary Hospital Technology II

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: VETT 200.
Introduction of anesthetics, surgical assisting, bandaging, casting, blood transfusions, surgical preparations, and post-operative care. Administration of parenteral uid 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, and 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 Preceptorship

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

Jacqueline I. Snyder, Chancellor
Administrative Center
  A.A., Kansas City Kansas Community College
  B.S. Ed., Kansas State University–Emporia
  M.S., University of Kansas
  Ed. D., University of Kansas

Mark S. James, Vice Chancellor of Administrative Services
  MCC- Administrative Center
  B.S., University of Central Missouri
  M..S., Joint Military Intelligence College

Paul D. Long, Vice Chancellor, Educational Services
  Administrative Center
  B.A., University of Missouri–Kansas City
  M.A., University of Kentucky

Tuesday Stanley, Vice Chancellor, Student Development and Enrollment Services
  Administrative Center
  B.A., Purdue University
  M.B.A., Lehigh University
  Ed.D., University of Pennsylvania

Bernard Franklin, President
  MCC-Penn Valley
  B.S., Kansas State University
  M.S., University of South Alabama
  Ph.D., Kansas State University

Deborah Goodall, Interim President
  MCC-Business & Technology
  B.S., University of Colorado
  M.S., Central Missouri State University

Fred L. Grogan, President
  MCC-Longview
  B.A., Bates College
  M.A., Arizona State University
  Ph.D., University of Missouri–Columbia

Merna S. Saliman, President
  MCC-Maple Woods
  A.A., Arapahoe Community College
  B.A., Loretto Heights College
  M.A., University of Northern Colorado
  Ed.D., University of Northern Colorado

Joseph Seabrooks, President
  MCC-Blue River
  B.A., University of Missouri–Kansas City
  M.A., University of Missouri–Kansas City
  Ph.D., University of Missouri–Kansas City

Administration

Marvin R. Aaron, Associate Dean of Student Development and Support Services
  MCC-Longview
  B.A., Wayland University
  M.A., Eastern New Mexico University
  Ed.S., Eastern New Mexico University
  Ph. D., University of Missouri–Kansas City

Mary Abraham, Interim Director, Research and Planning
  Administrative Center
  B.A., University of Kerala, Kerala, India
  M.R.E., Nazarene Theological Seminary
  M.B.A., Baker University

Stanley R. Abrahamson, Director, Automotive Technology
  MCC-Longview
  B.S., Pittsburg State University
  M.S., Pittsburg State University

Shelli R. Allen, Dean of Development and Enrollment
  MCC-Maple Woods
  B.A., Truman State University
  M.A., University of Iowa

Patricia Amick, Director of Management Advisory Services
  Administrative Center
  B.S., Iowa State University
  B.S., Iowa State University

Vincent Anch, Director, MCC-Foundation
  Administrative Center
  B.A., University of Missouri–Kansas City

Gail Barham, Senior Project Associate
  Administrative Center
  A.A., Longview
  B.A., University of Missouri–Kansas City
  M.S., Kansas State University

Lynn Barron, Associate Dean
  MCC-Maple Woods
  B.S., Missouri Western State College
  M.Ed., William Woods University

Carolyn Baskett, Associate Vice Chancellor, Human Resources
  Administrative Center
  B.S., Alabama A & M University
  M.A., Ottawa University

Brian C. Bechtel, Associate Dean
  MCC-Maple Woods
  B.S., University of Nebraska–Lincoln
  M.A., University of Missouri–Kansas City

Margaret Boyd, Director, Workforce Development
  MCC-Administrative Center
  B.S., University of Arkansas
  M.S., University of Central Arkansas

Domenick R. Brouillette, Associate Director, Public Safety
  Administrative Center
  B.S., Central Missouri State University

Carolyn S. Brown, District Director, Risk Management & Board Relations
  Administrative Center
  A.A.S., Metropolitan Community College
  B.S., Park University

Jon L. Burke, Dean, Student Development
  MCC-Blue River
  B.A., Armstrong Atlantic State University
  M.S., Florida State University
  Ed.D., University of Georgia

Mark A. Burns, Director,Finance & Business Services
  MCC-Business & Technology
  B.S., Central Missouri State University

Christine Smith Butler, District Director, Resource Development
  Administrative Center
  B.A., University of Colorado, Boulder
  M.S., University of Missouri–Columbia

Cynthia A. Butler, District Director, Student Financial Aid
  Administrative Center
  A.A., Penn Valley
  B.S., Avila College

Cheryl Carpenter-Davis, Dean of Instruction
  MCC-Blue River
  A.A., Cerritos College
  B.A., MidAmerica Nazarene College
  M.Ed., MidAmerica Nazarene College
  Ed.D., University of Missouri–Columbia

Janet Cline, Dean of Student Development & Support Services
  MCC-Longview
  B.A., Avila College
  M.A., University of Missouri–Kansas City

Charles W. Croston, Grant Director, Making It In Kansas City
  MCC-Business & Technology
  B.B.A., University of Missouri–Kansas City
  M.B.A., University of Missouri–Kansas City

Rebecca R. Curtis, Resource Center Coordinator, Francis Child Development Institute
  MCC-Penn Valley
  B.S., University of Kansas
  M.S., University of Kansas

Karen Dexter, Associate Dean of Instruction
  MCC-Longview
  B.S., Kansas State University
  M.S., Kansas State University

M. Albert Dimmitt, Jr., Dean of Instruction
  MCC-Penn Valley
  B.A., Southwestern College
  M.S., Kansas State University
  Ed.D., University of Missouri–Kansas City

Charles E. Dube, Associate Dean
  MCC-Maple Woods
  B.S., New Mexico State University
  M.B.A., Kansas State University
  M.S.Ed., Kansas State University

Joseph Fiedler, District Associate Director, Financial Planning
  Administrative Center
  B.S., Alma College

Stan D. Fields, Director, Business Development
  MCC-Administrative Center
  B.S., Park University
  M.S.,University of Central Missouri

Tracy D. Harris-Hall, Associate Dean
  MCC-Penn Valley
  B.A., University of Missouri-St. Louis
  M.A., Wichita State University

Leo J. Hirner, District Director, Distance Education
  MCC-Penn Valley
  B.S., University of Missouri–Kansas City
  M.S., University of Missouri–Kansas City
  Ph.D., University of Missouri–Columbia

Gerald Kitzi, Director, Francis Child Development Institute
  MCC-Penn Valley
  B.S., Missouri Valley College
  M. Ed., University of Missouri
  M.B.A., Rockhurst University

Elizabeth Lindquist, Dean of Instruction
  MCC-Longview
  B.A., University of Kansas
  M.Phil., University of Kansas
  Ph.D., University of Kansas

Teresa A. Loney, District Director, Tech Prep.
  MCC-Business & Technology
  B.A., University of Missouri–Kansas City
  M.A., University of Missouri–Kansas City

Laura L. Loyacono, Director, Project Lead the Way
  Administrative Center
  B.A., Stephens College
  M.P.A., University of Kansas

Mindy McCallum, Dean of Instruction
  MCC-Maple Woods
  B.A., University of Missouri–Kansas City
  M.S., University of Kansas
  Ed.D., University of Kansas

Sandra McIlnay, Director, Health Sciences
  MCC-Penn Valley
  B.S., University of Kansas
  M.S.Ed., University of Kansas

Darrel Meyer, District Director, Facility Services
  Administrative Center
  B.S., Kansas State University
  M.P.M., Keller Graduate School

Todd D. Mick, Director, Center for Realizing
 Entrepreneurial Action, Training and Education (CREATE)
  MCC-Penn Valley
   B.A., University of Iowa
   M.Ed., University of Iowa
   P.h.D., University of Missouri-Kansas City

Dorothy Miller, District Director, Purchasing
 Administrative Center
   B.S., Southeast Missouri State University
   M.S., Arkansas State University

Monica Mingucci, Director, Applied Language Institute
 MCC-Penn Valley
   A.A., Faculdades Alcantara Machado
   M.A., Central Missouri State University
   Ph.D., University of Missouri – Kansas City

Elizabeth N. Minis, Dean of Student Services
 MCC-Penn Valley
   B.S., Emporia State University
   M.S., Emporia State University
   Ed.D., University of Missouri–Columbia

Mark Murtha, District Director, Applications Development
 Administrative Center
   A.A., MCC-Maple Woods
   A.C.S., MCC-Maple Woods
   B.A., University of Missouri–Kansas City
   M.A., University of Missouri–Kansas City

Linda D. Nelson, Director, Teaching and Learning Support
 MCC-Longview
   B.A., Southwest Missouri State University
   M.A., University of Missouri-Kansas City

Carroll O'Neal, Acting Associate Dean of Student Services
 MCC-Penn Valley
   B.A., University of Missouri–Kansas City
   M.P.A., Park College

Frances A. Padow, District Director, Educational Services
 Administrative Center
   B.S., Saint Mary College
   M.A., Saint Mary College

Juan M. Rangel, Jr., Director, Workforce Development
 Administrative Center
   B.S., Northwest Missouri State University
   M.S., Kansas State University

John Ream, Assoc. Dean, Student Development
 MCC-Business & Technology
   B.S., Southern Nazarene University
   M.Div., Nazarene Theological Seminary
   M.A., University of Missouri–Kansas City
   Ed.S., University of Missouri–Kansas City

Gary Sage, Executive Director, Economic & Resource
 Development
  MCC-Administrative Center
   B.A., University of Missouri–Kansas City
   M.P.A., University of Missouri–Kansas City

Gary Schieber, District Director, Computer Services
 Administrative Center
   B.S., University of Missouri

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

Mary Truex, Associate District Director, Human Resources
 Administrative Center
   B.A., University of Northern Iowa

Thomas M. Vansaghi, Associate Vice Chancellor of
 College and Community Relations
  Administrative Center
   B.S., Northwest Missouri State University
   M.P.A., University of Missouri–Columbia
   P.h.D., University of Missouri–Kansas City

Thomas A. Walker, Jr., Dean of Administrative Affairs
 MCC-Penn Valley
   B.A., University of North Carolina
   M.P.A., University of Memphis

Reinhard Weglarz, District Director, Management and
 Auxiliary Services
  Administrative Center
   B.S., Benedictine College
   M.B.A., University of Missouri–Kansas City

Thomas A. Wheeler, Dean of Instruction
 Business & Technology
   A.A.S., Longview Community College
   B.S., Kansas State University
   M.S., Pittsburg State University

Susan Wilson, District Director, Student Development
 Administrative Center
   B.S., Emporia State University
   Ed.D., University of Missouri–Columbia

Jane M. Zeitner, District Director, Educational Programs
 Administrative Center
   B.S., Brigham Young University
   M.S., Avila College

Faculty

Zoe L. Albright, English
 MCC-Longview
   A.A., Cottey College
   B.S., University of Idaho
   B.A., University of Idaho
   M.A., University of London

Toni Y. Alexander, Project Success
 MCC-Penn Valley
   B.S., University of Kansas
   M.B.A., Baker University

William Allyn, Engineering Technology
 MCC-Business & Technology
   B.S., Central Missouri State University
   M.S.Ed., University of Central Missouri

Pamela Jo Anthony, Nursing
 MCC-Penn Valley
   R.N., Research Medical Center
   B.S.N., University of Missouri–Kansas City
   M.S.N., University of Missouri–Kansas City

John D. Arnold, Automotive
 MCC-Longview
   A.S.E., Master Automobile Technician
   G.M., Master Technician

Sharon Bagg, History
 MCC-Blue River
        Chair, Natural and Social Sciences
   B.M.E., Emporia State University
   M.A., University of Missouri–Kansas City
   Ph.D., University of Missouri–Kansas City

Hossein Bahmaie, Economics
 MCC-Longview
   B.S., University of Missouri–Kansas City
   M.A., University of Missouri–Kansas City

Angela D. Bahner, Psychology
 MCC-Longview
   B.A., Lindenwood University
   M.A., University of Missouri–Kansas City
   Ph.D., University of Missouri–Kansas City

Candice K. Baldwin, Librarian
 MCC-Longview
   B.A., Oklahoma College of Liberal Arts
   M.S., University of Illinois–Urbana-Champaign

Craig Bartholomaus, English
 MCC-Penn Valley
   B.A., University of Illinois
   M.A., The Ohio State University
   Ph.D., University of Colorado

Mary D. Basara, Practical Nursing
 MCC-Penn Valley
   A.A.S., Palm Beach Community College
   B.S., Fitchburg State College
   M.S., Nursing, University of Massachusetts

Audrey V. Battrum, Mathematics
 MCC-Maple Woods
   B.S., University of Arkansas, Pine Bluff
   M.S., Emporia State University

Linda F. Bell, Child Development
 MCC-Penn Valley
   B.S., University of Arkansas, Pine Bluff
   M.S., Emporia State University

David C. Belt, Biology
 MCC-Penn Valley
   B.S., Missouri Western College
   M.A., Southwest Missouri State University
   M.D., St. Paul School of Theology
   Ph.D., St. Paul School of Theology

Susan S. Benoit, Psychology
 MCC-Longview
   B.A., California State University
   M.S., Tennessee State University
   Ph.D., Tennessee State University

Joan E. Bergstrom, ABLE Director
 MCC-Longview
   B.S., Lincoln University
   M.Ed., University of Missouri
   Ed.D., University of Missouri

Roger Bidwell, Practical Nursing
 MCC-Penn Valley
   B.S.N., St. Lukes College of Nursing
   M.S.N., University of Kansas

Julia Bishop, Psychology
 MCC-Maple Woods
   B.A., University of Nebraska
   M.A., University of Nebraska
   Ph.D., University of Nebraska

William Bishop, EMT/Paramedic
 MCC-Penn Valley
   Paramedic License, Missouri
   EMS Instructor License, Missouri

Mahmoud A. Bishr, Biology
 MCC-Penn Valley
   B.S., Cairo University
   M.S., Northwestern State University
   Ph.D., Texas Woman's University

Susan Blaser, Industrial Technology
 MCC-Business & Technology
   Journeyman Lineman

Mary Ann Blitt, Foreign Language
 MCC-Maple Woods
   B.A., University of Colorado–Colorado Springs
   M.A., Colorado State University

Gretchen Blythe, Counselor
 MCC-Longview
   B.A., Ottawa University
   M.S., Drake University

Mary Susanne Boatright, Librarian
 MCC-Blue River
   B.A., University of Texas
   M.L.S., University of Texas

Lisa K. Bonneau, Biology
 MCC-Blue River
   B.S., Missouri State University
   M.S., Missouri State University
   Ph.D., Oklahoma State University

Mehdi Borhan, Biology
 MCC-Blue River
   B.A., University of Kansas
   M.A., University of Kansas

Nelson F. Borys, Chemistry
 MCC-Maple Woods
   B.S., University of Illinois
   M.S., University of Wyoming
   Ph.D., University of Georgia

Todd I. Bowdish, Biology
 MCC-Penn Valley
   B.S., Northeast Missouri State University
   Ph.D., University of South Florida

D.J. Box, Physics
 MCC-Longview
   B.S., University of Kansas
   M.S., University of Illinois

Arthur M. Brady Jr., Human Patient Simulation, Laboratory Coordinator
  MCC-Penn Valley
    A.A., MCC-Penn Valley
    B.A., University of Missouri-Columbia

Kathleen R. Brandt, Foreign Language
  MCC-Penn Valley
    B.A., Stephens College-Columbia Mo.
    M.A., University of Michigan

Rebecca A. Breit, Library and Learning Resource
  MCC-Business & Technology
    B.A., University of California-Riverside
    M.Ed., University of Missouri-Kansas City

Ayanna L. Bridges, Speech
  MCC-Maple Woods
    B.A., University of Missouri-Kansas City
    M.A., University of Missouri-Kansas City
    M.A., University of Missouri-Kansas City
    Ph.D., University of Kansas

Lynn M. Canaday, Business
  MCC-Blue River
    B.S., Columbia College
    M.S., Friends University

Kurt Canow, English
  MCC-Longview
    B.A., Doane College
    M.A., Rice University
    M.A., Southern Illinois University

Linda Carter, Librarian
  MCC-Maple Woods
    B.A., Missouri Western State College
    M.A., University of Missouri–Columbia

Sharon H. Carter, Health Careers Coordinator
  MCC-Penn Valley
    B.S., University of Wisconsin-Madison
    M.S., University of Kansas-Lawrence

Cindy L. Castillon, Counselor
  MCC-Maple Woods
    A.A., Crowder Community College
    B.S., Southwest Missouri State University
    M.S., Southwest Missouri State University

Sybil Chandler, Environmental, Health and Safety
  MCC-Business & Technology
    B.S., Louisiana State University
    M.S., University of Southern Mississippi

Tim Chappell, Mathematics
  MCC-Penn Valley
    M.S., Pittsburg State University

Brian Chasteen, Counselor
  MCC-Penn Valley
    A.B., William Jewell College
    M.S., Emporia State
    Ed.D., University of Missouri-Columbia

Kimberly Christensen, Mathematics
  MCC-Maple Woods
    B.A., Aurora University
    M.S., Northern Illinois University
    M.S., Northern Illinois University

Theresa Chop, Occupational Therapy Assistant
  MCC-Penn Valley
    B.S., University of Kansas
    M.S., University of Kansas

John Church, Mathematics
  MCC-Longview
    B.A., University of Chicago
    M.A., University of Texas–Austin

Michele L. Clapp, Sign Language
  MCC-Maple Woods
    A.S., St. Petersburg Junior College
    B.S., University of Florida
    M.A., Gallaudet University

Michael J. Connelly, Philosophy
  MCC-Longview
    B.A., Salisbury State University
    M.A., University of Delaware

Paula K. Cooley, Learning Assistance Center
  MCC-Maple Woods
    B.A., University of Missouri-Kansas City
    M.A., University of Missouri-Kansas City

Barbara Cooke, Counselor
  MCC-Maple Woods
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Timothy J. Conway, English
  MCC-Maple Woods
    B.S., Auburn University
    M.A., Auburn University

Gene F. Cota, Biology
          Chair, Life Sciences
  MCC-Penn Valley
    A.A., Johnson County Community College
    B.A., Emporia State University
    M.S., Emporia State University

Deborah Craig-Claar, Speech
  MCC-Penn Valley
    B.A., University of Redlands
    M.F.A., Northwestern University
    Ph.D., University of Missouri–Kansas City

William Cue, Speech
  MCC-Longview
    B.A., Iowa State University
    B.B.A., Iowa State University
    M.A., Central Michigan University

Karen E. Curls, Criminal Justice
  MCC-Penn Valley
          Chair, Social Sciences
    A.A., MCC-Penn Valley
    B.S., Park College
    M.A., Central Missouri State University
    Ed.S., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

Paul D. Damminga, Automotive
  MCC-Longview
    B.S., Ferris State University

Terrence Davin, Biology
  MCC-Penn Valley
    B.S., Pennsylvania State University
    M.S., Frostburg State University

Richard Decker, Heating/Ventilation and Air Conditioning
  MCC-Business & Technology

Theodore M. Dinges, Business
  MCC-Longview
    B.B.A., Washburn University
    J.D., Washburn University

Paramjit (Rani) K. Duggal, Biology
  MCC-Maple Woods
    B.S., Rajasthan University, India
    M.S., Ms University, India
    M.S., Bowling Green State University

Edward Durant, Computer Science/ Information Systems
  MCC-Penn Valley
    B.A., Westminster College
    M.B.A., University of Missouri–Kansas City

Joyce Anne Dvorak, English
  MCC-Longview
    B.S., Northern Illinois University
    M.A., Northern Illinois University
    Ph.D., Northern Illinois University

Melissa Eaton, Anthropology
  MCC-Longview
    B.A., University of Missouri-Columbia
    M.F.A., University of Missouri-Columbia

Morssie L. Edgerson, English
  MCC-Longview
    B.S., Lincoln University
    M.A., University of Missouri–Kansas City

Kenneth R. Eichman, Mathematics
  MCC-Longview
    B.S., Fort Hays State University
    M.A., Fort Hays State University

Diane M. Enkelmann, Business
  MCC-Penn Valley
    B.A., Benedictine College
    M.A., University of Missouri–Columbia
    M.B.A., University of Missouri–Columbia

Barbara Eubank, Education
  MCC-Longview
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

William Fairbanks, Automotive
          Chair, Technology and Business
  MCC-Longview
    B.S.Ed., Pittsburg State University

Sheryl Farnan, Apparel & Textiles
  MCC-Penn Valley
    B.S., University of Missouri-Columbia
    M.B.A., Rockhurst University
    Ph.D., Iowa State University

Eugene J. Fenster, Biology
  MCC-Longview
    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

Wendy Firven Smith, Counseling
  MCC-Longview
    B.A., Southern University
    M.S., Minnesota State University

Connie Flick-Hruska, Counselor
  MCC-Longview
    B.S., Slippery Rock University
    M.Ed., University of Missouri–Columbia

Kealia A. Folck, Heath Information Technology
  MCC-Penn Valley
    B.S., Texas Woman's University

Randall Forchee, Engineering
  MCC-Longview
    B.S., University of Missouri–Rolla
    M.S., University of Missouri–Rolla

Cora E. Franklin, Nursing
  MCC-Penn Valley
    B.S., University of Missouri–Kansas City

Jennie Frederick, Art
  MCC-Maple Woods
    B.F.A., Kansas City Art Institute
    M.F.A., Indiana State University

Moira R. Frey, Chemistry
  MCC-Longview
    B.S., University of Wyoming
    M.S., University of Washington

David Gann, Land Surveying
  MCC-Longview
    B.S., University of Wyoming
    M.S., University of Washington

Gene Giarratano, Manufacturing Technology
  MCC-Business & Technology
    A.A.S., Longview Community College

Lyle E. Gibson, History
  MCC-Penn Valley
    B.A., University of Arkansas
    M.A., University of Missouri-Kansas City

Monica Giminez, Psychology
  MCC-Penn Valley
    B.A., University of Kansas
    M.S., University of Kansas
    Ph.D., University of Missouri-Kansas City

Kimberly Glackin, Psychology
  MCC-Blue River
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Patricia Goodwin, Director, Able Program
  MCC-Penn Valley
    B.S., University of Minnesota
    M.A., University of Missouri–Kansas City

Zola Gordy, Retention Coordinator
  MCC-Penn Valley
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Dianne Grafentine-Beedle, Nursing
  MCC-Penn Valley
    A.S.N., Neosho County Community College
    B.S.N., Pittsburg State University

Diana J. Grahn, English
  MCC-Longview
              Chair, Humanities
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri-Kansas City

Sharon L. Graves, Practical Nursing
  MCC-Penn Valley
    B.S.N., Central Missouri State University
    M.S.N., Bishop Clarkson College

Tammy L. Greathouse, Nursing
  MCC-Penn Valley
    B.S., University of Arkansas
    M.S., University of Missouri-Kansas City

Saroj A. Gupta, Dental Assisting
  MCC-Penn Valley
    B.S., Karnataka University

Gary L. Hacker, Criminal Justice
  MCC-Blue River
    B.A., Mid-America Nazarene University

Bruce T. Hall, Human Services
  MCC-Longview
    B.A., California State University
    M.S.W. University of Missouri-Kansas City
    Ph.D., The Claremont Graduate School

Jessica R. Halperin, Sociology
  MCC-Maple Woods
    B.S., Emporia State University
    M.A., University of Missouri- Kansas City

Sharon Hamsa, Mathematics
  MCC-Longview
    B.A., Benedictine College
    M.A., St. Louis University
    M.A., Notre Dame University

Theresa Hannon, English
  MCC-Blue River
    B.A., Indiana University
    M.F.A., Arizona State University

Shari Harden, Biology
  MCC-Blue River
    B.A., University of Northern Colorado
    M.S., Utah State University

Jess Harding, Heating/ Ventilation and Air Conditioning
  MCC-Business & Technology
    A.A.S., Penn Valley

Cathy K. Hardy-Parcell, Music
  MCC-Longview
    B.M.E., Wheaton College
    M.M., University of Missouri–Kansas City

Nancy E. Harrington, Biology
  MCC-Penn Valley
    B.A., San Francisco State University
    M.A., San Francisco State University

John Hawkins, Physics
  MCC-Penn Valley
    B.S., University of Missouri–Columbia
    M.S., University of Missouri–Columbia

Lee A. Heath, Nursing
  MCC-Penn Valley
    A.A.S., Purdue University
    B.S., Purdue University
    M.S., University of Rochester

Ruth E. Heath, Foreign Language
  MCC-Penn Valley
    B.A., Houghton College
    M.A., Bowling Green University
    M.A., Middlebury College
    Ph. D., Indiana University

Beth Henkle, Mathematics
  MCC-Longview
    B.S., Emporia State University
    M.A., Emporia State University

Cinthia A. Herbert, Computer Science/Information Systems
  MCC-Longview
    B.S., Southwest Missouri State University
    M.S., University of Phoenix

Richard Higgason, English
  MCC-Blue River
              Chair, Humanities
    B.S., University of Missouri–Columbia
    M.A., University of Missouri–Kansas City
    Ph.D., Indiana University of Pennsylvania

William Hodgkinson, English
  MCC-Penn Valley
    B.S., Central Michigan University
    M.A., Central Michigan University

Douglas Hobbs, Fire Science
  MCC-Blue River
    A.A.S., Metropolitan Community College

Terry Hobbs, Mathematics
  MCC-Maple Woods
    B.S., Harding University
    M.S., University of Mississippi

Sharon E. Hogan, Sociology
  MCC-Blue River
    B.S., Central Missouri State University
    B.S.E., Central Missouri State University
    M.A., Central Missouri State University
    Ph. D., University of Missouri–Kansas City

Victorie J. Hollwell, Counselor
  MCC-Penn Valley
    B.S., Central Missouri State University
    M.S., Kansas State University
    Ed.S., University of Missouri–Kansas City

Christine M. Howell, English
  MCC-Penn Valley
    B.A., Missouri Southern State University
    M.A., University of York

Barbara J. Hurst, Mathematics
  MCC-Penn Valley
    B.A., Washburn University
    M.A., University of Kansas

Patricia P. Illing, Reading
  MCC-Longview
    B.S.Ed, University of Missouri-Columbia
    M.S., University of Kansas

Saeeda Irfan, Mathematics
  MCC-Maple Woods
    B.A., University of Northern Colorado
    M.A., University of Kansas

Lynette M. Jachowicz, Speech
  MCC-Maple Woods
    B.A., University of Northern Colorado
    M.A., University of Kansas

Priscilla Jackson-Evans, History
  MCC-Longview
    A.A., St. Joseph Junior College
    B.A., University of Missouri–Columbia
    M.A., University of Missouri–Columbia

Julianne Jacques, Counselor
  MCC-Penn Valley
    B.S., University of Florida
    M.Ed., University of Maryland

Amber L. Jenkins, Occupational Therapy
  MCC-Penn Valley
    B.S., University of Kansas
    M.L.S., Fort Hays State University

Dennis J. Jirkovsky, Computer Science/Information Systems
  MCC-Longview
    A.A.S., MCC-Maple Woods
    B.S., Missouri Western College
    M.B.A., Rockhurst College

Crystal L. Johnson, History
  MCC-Maple Woods
    B.A., University of Wisconsin-Madison
    M.A., University of Kansas

Douglas E. Johnson, Industrial Technology
  MCC-Business & Technology
    B.S., Park College

Gary H. Johnson, Computer Science/Information Systems
  MCC-Longview
    A.S., Metropolitan Junior College–Kansas City
    B.S./B.A., Avila College
    M.B.A., Avila College

Rebecca L. Johnson, Music
  MCC-Blue River
    A.A., McCook Community College
    B.A., University of Northern Colorado
    M.M., University of Nebraska

Monica Johnston, Business/Professional Development Coordinator
  MCC-Penn Valley
    B.S., University of Kansas
    M.B.A., Keller Graduate School of Management

Rachel Jones, Counselor
  MCC-Business & Technology
    B.S., Missouri Western State University
    M.S., University of Central Missouri

Dan Justice, Engineering
  MCC-Penn Valley
    B.S., University of Missouri–Rolla
    M.S., University of Texas
    Ph.D., University of Texas

Maureen Kennedy, Counselor
  MCC-Penn Valley
    B.A., Fontbonne College, St. Louis, Mo
    M.Ed., University of Missouri–Columbia

Harold Kenyon, EMT–Paramedic
  MCC-Penn Valley
    A.A.S., MCC-Penn Valley

Randy Kidd, Business
  MCC-Longview
    B.S., University of Kansas
    M.B.A., Central Missouri State University

Jill S. Kingsbury, Economics
  MCC-Maple Woods
    B.A., University of Missouri-Columbia
    M.A., University of Missouri-Columbia
    Juris Docorate, University of Missouri-School of Law-Columbia

Sherry Kinney, Nursing
  MCC-Penn Valley
    B.S.N., Webster University

Kathryne Kiser, Speech Communication
  MCC-Longview
    B.A., University of Kansas
    M.A., University of Kansas

Karen S. Komoroski, Nursing
  MCC-Penn Valley
              Chair, Nursing
    B.S.N., Graceland College
    M.N., University of Kansas
    Ed.S., University of Missouri–Kansas City
    Ph.D., University of Kansas

Keet Kopecky, Biology
  MCC-Longview
    B.S., University of Missouri–Kansas City
    M.S., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Michael Korklan, Librarian
  MCC-Penn Valley
    B.Ed., University of Missouri–Columbia
    M.A., University of Missouri–Columbia

Joyce S. Kuhn, Speech and Theater
  MCC-Longview
    B.A., Northern Colorado University
    M.A., Northern Colorado University

Carol Jean Kuznacic, Spanish
  MCC-Longview
    A.A., University of Wisconsin–Sheboygan
    B.A., University of Wisconsin–Green Bay
    M.A., Pennsylvania State University

Nic Lahue, Mathematics
  MCC-Penn Valley
      Chair, 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
  MCC-Maple Woods
    B.A., William Woods College
    M.S., University of Missouri–Columbia

Anita Leverich, English
  MCC-Penn Valley
    B.A., Kansas State University
    M.A., Kansas State University
    M.F.A., University of Montana

Steven W. Lewis, Biology
  MCC-Penn Valley
    B.A., University of Kansas
    B.S., University of Kansas
    M.A., University of Missouri–Kansas City

Mark Lidman, English
  MCC-Maple Woods
    B.A., University of Virginia
    M.A., Purdue University
    Ph.D., University of Missouri–Columbia

Brian C. Lightfoot, Computer Science/Information Systems
  MCC-Business & Technology
    B.S., University of Rolla

D. Kim Lindaberry, Art
  MCC-Longview
    B.F.A., Kansas City Art Institute
    M.F.A., Georgia State University

William G. Loftin, Biology
  MCC-Longview
    B.S., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Tristan Londré, Mathematics
  MCC-Blue River
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

Leann L. Lotz-Todd, Mathematics
  MCC-Longview
    B.A., William Jewell College
    M.A., University of Missouri–Kansas City

J. Dennis Lowden, Philosophy
  MCC-Blue River
    B.A., Excelsior College/University of The State of New
      York
    M.A., University of Kansas

Terri Lowry, English
  MCC-Longview
    B.A., University of Missouri–Kansas City
    M.F.A., University of Montana–Missoula

Kimberly A. Luken, Accounting
  MCC-Maple Woods
    A.A., Muscatine Commuity College
    B.A., University of Northern Iowa
    M.A., University of Iowa

Jerry Macke, Computer Science
  MCC-Penn Valley
    B.A., St. Thomas College

Anne Mahoney, Speech & Drama
  MCC-Blue River
    B.A., University of Arkansas
    M.A., University of Kansas

Kimball V. Marsh, Manufacturing Technology
  MCC-Business & Technology
    B.A., Cameron University
    M.A., University of Kansas

Douglas Martin, Chemistry
  MCC-Penn Valley
    B.S., Clarkson College of Technology
    M.S., Clarkson College of Technology
    Ph.D., Clarkson College of Technology

Todd C. Martin, Biology
  MCC-Blue River
    B.S., Kansas State University
    Ph.D., University of Minnesota–Twin Cities

Roger Massey, Surgical Technology Instructor
  MCC-Penn Valley
    A.A., Naval School of Health Sciences

Deanna Mathison, Speech
  MCC-Blue River
    B.A., Auburn University- Auburn
    M.A., Auburn University-Auburn

Pamela G. Matthiesen, Computer Science/Information
  Systems
  MCC-Maple Woods
    B.S., Central Missouri State University

J. Burke Maxted, Counselor
  MCC-Longview
    B.A., University of Missouri–Kansas City
    M.S., Central Missouri State University

Gloria Maxwell, Librarian
  MCC-Penn Valley
    B.A., Central Missouri State University
    M.A., Central Missouri State University
    M.L.S., Emporia State University

Gary D. May, Computer Science/Information Systems
  MCC-Maple Woods
    B.S., School of The Ozarks, Missouri
    M.S., Central Missouri State University
    M.S., Webster University

Tammie B. May, Sociology
  MCC-Longview
    B.S., Sterling College
    M.A., Central Missouri State University

Debra Lewis McCarty, Reading
  MCC-Maple Woods
    B.S., Northwest Missouri State University
    M.A., University of Missouri–Kansas City

Frank E. McCarty, Computer Science
  MCC-Business & Technology
    B.S., University of Missouri
    M.Ed., University of Missouri

Catherine McClendon, Nursing
  MCC-Penn Valley
    B.S., Pittsburg State University

Larry M. McCloud, English
  MCC-Penn Valley
    B.A., Iowa State University
    M.L.A., Baker University

Gary F. McDaniel, Automotive
  MCC-Longview
    A.S., Missouri Western State College
    B.S., Northwest Missouri State University
    M.S., Central Missouri State University

Robyn McGee, English
  MCC-Blue River
    B.A., University of Central Oklahoma
    M.A., University of Central Oklahoma

Patricia McGovern, History
  MCC-Longview
    B.S., Arkansas State University
    M.S., Arkansas State University

James McGraw, Counselor
  MCC-Longview
    B.S., University of Iowa
    M.A., University of Iowa
    Ed.D., University of Northern Colorado

Murvell V. McMurry, Counselor
  MCC-Penn Valley
    B.S., Lincoln University
    M.Ed., Iowa State University

Zack K. McNeil, Business
  MCC-Longview
    B.B.A., Mount Mercy College
    M.B.A., Penn State University

Diane C. McHugh, Mathematics
  MCC-Longview
    B.S., University of Missouri–Columbia
    M.S., University of Missouri–Columbia

Victor Meledge-Ade, Geography/GIS
  MCC-Longview
    A.S., Colorado Technical University
    B.S., Colorado Technical University
    M.S., South Dakota State University

David C. Miller, History
  MCC-Longview
    A.A., Hutchinson Community College
    B.A., University of California At Riverside
    M.A., University of Kansas
    Ph.D., University of Kansas

Donald Miller, Chemistry
  MCC-Blue River
    B.A., Taylor University
    M.S., Purdue University

Margaret A. Miller, Reference Librarian
  MCC-Longview
    B.A., Bethany College
    M.A., University of Kansas
    M.S., Emporia State University

Brian Mitchell, Biology
  MCC-Longview
    B.S., Illinois State University
    M.S., Illinois State University
    Ph.D., University of Missouri–Columbia

Gregory A. Mitchell, Mathematics
  MCC-Penn Valley
    B.S., University of Missouri–Rolla
    M.S., University of Missouri–Columbia

James R. Moes, Business
  MCC-Maple Woods
    B.A., Coe College-Cedar Rapids
    M.S., St. Ambrose University
    M.B.A., St. Ambrose University

Mary Elizabeth Moley, Art
  MCC-Penn Valley
    B.A., University of Missouri–Kansas City
    M.A., University of Kansas

Chad P. Montuori, Foreign Language
  MCC-Maple Woods
    B.A., University of New Mexico
    M.A., University of Missouri–Columbia

R. Randall Moore, History
  MCC-Longview
    B.A., Virginia Wesleyan College
    M.A., University of Richmond
    Ph.D., University of South Carolina

Emily Morgan, English
  MCC-Blue River
    B.A., North Carolina State University
    M.A., Appalachian State University

William P. Morgan, Mathematics
  MCC-Maple Woods
    B.S., Missouri State University
    M.S., University of Arkansas

Christopher C. Morrow, Veterinary Technology
  MCC-Maple Woods
    D.V.M., University of Missouri-Columbia

Shirley C. Musick, Surgical Technology
  MCC-Penn Valley
    Surgical Technology Certificate

Patricia L. Munn, Biology
  MCC-Longview
    B.S., University of Missouri–Columbia
    M.S., University of Missouri–Columbia

James J. Murray III, Music
  MCC-Maple Woods
    B.S., William Jewell College
    M.M., University of Denver

Kennedy Musamali, Upward Bound Coordinator
  MCC-Blue River
    B.A., Punjab University
    M.S.C., Avila University
    M.B.A., Avila University

Melissa J. Napper, Computer Science/Information
Systems
  MCC-Blue River
    A.A., MCC-Longview
    B.S., Park College
    M.Ed., University of Missouri-Columbia

Anne E. Nienhueser, Physics
  MCC-Longview
    B.S., University of Missouri–Columbia
    M.S., University of Missouri–Kansas City

Mary Northrup, Librarian
  MCC-Maple Woods
    B.A., St. Norbert College
    M.L.S., University of Wisconsin–Milwaukee

Richard L. Nunez, English
  MCC-Blue River
    B.A., Southern Illinois University
    M.A., New Mexico State University
    M.F.A., University of Montana

John R. O'Connell, Physical Education
  MCC-Longview
    B.A., Fort Lewis College, Colorado
    M.A., Adams State College, Colorado

Jason R. Pallett, Mathematics
  MCC-Longview
    B.S., University of Tulsa
    M.S., University of Tulsa

Amy D. Parrish, Nursing
  MCC-Penn Valley
    A.S., Community College of Allegheny County
    N.D., Methodist Hospital School
    B.S., University of Memphis

Eric S. Parsons, Mathematics
  MCC-Blue River
    B.S., University of Missouri-Columbia
    B.A., University of Missouri-Columbia
    M.S., University of Missouri-Columbia
    M.A., University of Missouri-Columbia

David A. Patience, Automotive
  MCC-Longview
    B.A.S., Sienna Heights University

Rory Perrodin, Automotive
  MCC-Longview
    A.A.S., Dodge City Community College
    B.S., Pittsburg State University
    M.S.VTE., Pittsburg State University

Michael Peters, EMT–Paramedic
  MCC-Penn Valley
    B.S., Quincy College

Carrie L. Pickerel-Brooks, Education
  MCC-Penn Valley
        Chair, CDCG, Education, Human Sciences
    B.S., Northwest Missouri State University
    M. Ed., University of Hawaii
    Ed. D., University of Houston

Michelle A. Potts, English
  MCC-Maple Woods
        Chair, Communications
    B.A., Park College
    M.A., University of Missouri–Kansas City

Deanna Poudel, Physics
  MCC-Longview
    B.A., Grinnell College
    M.S.M., Iowa State University
    Ph.D., Iowa State University

Russell T. Powlas, Education
  MCC-Maple Woods
    B.S., University of Kansas
    M.S., University of Kansas

Carl Priesendorf, Geology/Geography
  MCC-Longview
    A.A., State Fair Community College
    B.S., Central Missouri State University
    M.S., University of Missouri–Columbia

Vicki D. Raine, Reading
  MCC-Penn Valley
        Chair, Humanities
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Larry A. Reichard, Biology
  MCC-Maple Woods
    A.S., Delta College
    B.S., Central Michigan University
    M.S., Michigan State University
    Ed.D., West Virginia University

Stephen L. Reinbold, Biology
  MCC-Longview
        Chair, Natural Sciences
    B.S., Eastern Illinois University
    M.S., Eastern Illinois University
    Ph.D., Illinois State University

Mary Casey Reid, English
  MCC-Longview
    B.A., Missouri State University
    M.A., Missouri State University

Melissa K. Renfrow, English
  MCC-Maple Woods
    B.A., University of Missouri–Columbia
    M.A., University of Colorado–Denver
    Ph. D., University of Kansas

Betty Reynolds, Practical Nursing
  MCC-Penn Valley
    Diploma, Mathers School of Nursing/Southern Baptist
      Hospital
    B.S.N., University of Mobile
    M.S.N., University of South Alabama

Karen Sue Richards, Computer Science/Information
Systems
  MCC-Maple Woods
    B.S., Calvary Bible College, Kansas City, Missouri
    B.S., St. Mary College, Leavenworth, Kansas
    M.S., Central Missouri State University

Kimberly R. Ries, Nursing
  MCC-Penn Valley
    B.S., Pittsburg State University
    M.N., Webster University

Jared Rinck, Librarian
  MCC-Blue River
    B.S., Central Missouri State University
    M.A., Central Missouri State University
    M.A., University of Missouri- Columbia

Gwendolyn K. Robertson, Physical Therapist Assistant
  MCC-Penn Valley
    B.S., University of Kansas
    M.A., University of Missouri–Kansas City

Clayton Robinson Jr., Counselor
  MCC-Maple Woods
    B.S., Emporia State University
    M.A., Webster University

Deah D. Robinson, Counselor
  MCC-Longview
    B.S., Kansas State University
    M.S., Kansas State University

Dawnielle Robinson-Walker, English
  MCC-Longview
    B.A., University of Missouri–Columbia
    M.A., Kansas State University

Joseph F. Roche, Engineering Technology
  MCC-Business & Technology
    B.S., Missouri Western State College
    M.S.Ed., Park University

Stephanie F. Roehm, Practical Nursing
  MCC-Penn Valley
    B.S., MidAmerica Nazarene University

Jan S. Rog, English
  MCC-Longview
    B.A., Rockhurst University
    M.A., Arizona State University

Jennifer Rogers, Spanish
  MCC-Blue River
    B.A., University of Missouri–Columbia
    M.A., University of Missouri–Columbia

Colvert L. Roll, Criminal Justice
  MCC-Blue River
    B.S., Southwest Missouri State University
    M.Admin of Justice., Wichita State University

Jan A. Rosenblum, Counselor, Educational Opportunity
Center
  MCC-Penn Valley
    B.A., College of Emporia, Kansas
    M.S., Emporia State University

Kristi K. Rottinghaus, Mathematics
  MCC-Longview
    A.A., Barton County Community College
    B.S., Fort Hays State University
    M.A., University of Missouri–Kansas City

Gregory Sanford, History
  MCC-Penn Valley
    B.A., Iowa State University
    M.A., Iowa State University

Maria E. Santander, Nursing
  MCC-Penn Valley
    B.S.N., University of Missouri-Columbia
    M.S.N., University of Missouri-Kansas City

Barbara Schaefer, Counselor
  MCC-Blue River
    B.S., Southeast Missouri State University
    M.A., Southeast Missouri State University

Edward W. Schauffler, Automotive
  MCC-Longview
    A.A., MCC-Longview
    B.S., Central Missouri State University

Elliott Schimmel, History
  MCC-Longview
        Chair, Social Sciences
    B.A., Fairleigh Dickinson University
    M.A., Syracuse University
    Ph.D., Florida State University

Rebecca E. Schuering, Mathematics
  MCC-Blue River
    B.S., Central Missouri State University
    M.S., Central Missouri State University

Deborah A. Scott, Political Science
  MCC-Penn Valley
    B.A., Columbia College-Columbia Mo.
    M.A., American University-Washington D.C.

Jennifer Scott, Health Information Technology
  MCC-Penn Valley
    B.S., University of Kansas

Dachia Scroggins, Counselor
  MCC-Penn Valley
    B.S., Wichita State University
    M.Ed., Wichita State University
    M.S., Avila University

Cynthia Sexton Proctor, Physics
  MCC-Maple Woods
    B.A., Hendrix College
    M.S., University of Arkansas

David Sharp, English
  MCC-Maple Woods
    B.A., University of Missouri–Columbia
    M.A., University of Missouri–Columbia

Leah Shelton, Access Counselor
  MCC-Blue River
    B.A., William Jewell
    M.A., University of Missouri–Kansas City

John F. Shively, Political Science
  MCC-Longview
    B.A., University of Missouri-Kansas City
    M.A., University of Missouri-Kansas City

Rosemary Shocklee-Fusaro, Nursing
  MCC-Penn Valley
    B.S.N., Avila College
    M.Ed., University of Missouri–Kansas City
    M.S.N., University of Missouri–Kansas City

Mary A. Simpson, Reading
  MCC-Blue River
    B.A., Claflin College
    M.A., Florida A & M University

Cebra Sims, Psychology
  MCC-Penn Valley
    B.S., University of Kansas
    M.A., University of Kansas
    M.A., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

DeAnna Skedel, Art
  MCC-Blue River
    B.F.A., University of Akron
    M.F.A., Art Institute of Chicago

Bob Skrukrud, Mathematics
  MCC-Maple Woods
    B.S., Winona State University
    M.S., Truman State University

Clarence Smith, Music
  MCC-Penn Valley
    B.Ed., Central Methodist College
    M.Ed., Lesley University

David Smith, English
  MCC-Blue River
    B.A., Old Dominion University
    M.A., Old Dominion University
    Ph.D., University of North Carolina–Chapel Hill

James Smith, Art
  MCC-Longview
    B.F.A., Kansas City Art Institute
    M.A., M.F.A., University of Iowa

Paul E. Smith, Biology
  MCC-Maple Woods
    B.A., University of Missouri–Columbia
    D.V.M., University of Missouri–Columbia

Robert E. Smith, Chemistry
  MCC-Longview
    B.S., Brigham Young University
    Ph.D., Brigham Young University

Robert J. Smith, Counselor, Educational Opportunity
  Center
  MCC-Penn Valley
    M.A., University of Missouri–Kansas City

Suzanne M. Smith, Mathematics
  MCC-Longview
    B.S., Phillips University
    M.S., Kansas State University

Kenneth L. Snell, Biology
  MCC- Maple Woods
    B.S., University of Missouri–Kansas City
    M.S., Central Missouri State University

Cammila R. Snow, Biology
  MCC- Maple Woods
    B.S., Missouri State University
    M.S., Missouri State University

Nancy M. Spangler, Nursing
  MCC-Penn Valley
    B.S., Central Missouri State University
    M.S., University of Missouri-Kansas City

Patricia McKeown Sparks, English
  MCC-Longview
    B.A., University of Missouri-Kansas City
    M.A., University of Missouri-Kansas City

Lisa Spaulding, English
  MCC-Penn Valley
    B.A., Westminster College
    M.A., University of Nebraska–Lincoln
    Ph. D., University of Nebraska–Lincoln

Connie Spies, Counselor
  MCC-Penn Valley
    B.S., Missouri Western State College
    M.S., University of Wisconsin/Stout

Pamela B. Stockman, Physical Therapist Assistant
  MCC-Penn Valley
    B.S., St. Louis University
    M.S., University of Kansas

Shelli J. Stufflebeam-Ely, Nursing
  MCC-Penn Valley
    B.S., Midland Lutheran College
    M.S., University of Missouri-Kansas City

J. Michael Sturgeon, Computer Science/Information
  Systems
  MCC-Penn Valley
    B.S., Missouri Western State College

Eric Sullivan, English
  MCC-Longview
    B.A., University of Michigan
    M.A., The California State University

Russel D. Sullivan, Fire Science
  MCC-Blue River
    Missouri State Certification
    Class A police officer

Mary Svoboda-Chollet, Child Growth and Development
  MCC-Penn Valley
    B.S., University of Nebraska-Lincoln
    M.S., University of Kansas

Donald S. Swanson, Foreign Language
  MCC-Longview
    A.A., Skagit Valley College
    B.A., Western Washington University
    M.A., Washington State University
    M.A., Bowling Green State University

Michael E. Sweetland, Chemistry
  MCC-Penn Valley
    B.S., Saint Norbert College
    M.S., University of Pittsburg

Judith E. Taylor, Radiologic Technology
  MCC-Penn Valley
    B.H.S., University of Missouri–Columbia
    M.Ed., University of Missouri–Columbia

Ronald L. Taylor, Reading
  MCC-Longview
    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
  MCC-Business & Technology
      Chair, Technology
    A.A., MCC-Longview
    B.S., Central Missouri State University
    M.S., Central Missouri State University

Kimberly Thebeau-Siercks, Radiologic Technology
  MCC-Penn Valley
    B.S., Avila College
    M.S., Kansas State University

Michael R. Thorne, Heating, Ventilation, & Air Conditioning
  MCC-Business & Technology
    Certificate in Heating and Refrigeration

Bernadette E. Torres, Art
  MCC-Penn Valley
    B.F.A., Kansas City Art Institute
    M.F.A., University of Miami

Darlene Town, Art
  MCC-Penn Valley
    B.F.A., Central Missouri State University
    M.A., Central Missouri State University

Rickey H. Turner, Criminal Justice
  MCC-Longview
    B.A., University of Nebraska
    M.A., University of South Carolina

Leta H. Tyhurst, Learning Center
  MCC-Longview
    B.S., University of Missouri–Columbia
    M.S., University of Missouri–Columbia

Handady H. Udupa, Dental Assisting
  MCC-Penn Valley
    B.D.S., Bangalore University-Bangalore, India

Richard A. Urdiales, English
  MCC-Blue River
    B.A., University of Akron
    M.A., University of Wyoming
    M.A., University of Missouri

Patricia A. Vargas, Reading
  MCC-Penn Valley
    A.A., Metropolitan Junior College
    B.A., Avila University
    M.A., University of Missouri–Kansas City

Lane VanHam, English
  MCC-Penn Valley
    B.A., University of Missouri-Columbia
    M.A., University of Arizona
    Ph.D., University of Arizona

Andrea L. Vorwark, Mathematics
  MCC-Maple Woods
    B.A., William Jewell College
    M.S., University of Missouri–Rolla

Michael Warren, English
  MCC-Maple Woods
    B.A., University of Kansas
    M.F.A., University of Montana
    M.A., University of Central Missouri

W. Douglas Washer, Philosophy
  MCC-Longview
    B.A., Southwest Missouri State University
    M.A., University of Missouri–Columbia

Janet L. Weaver, Outreach Counselor
  MCC-Maple Woods
    B.A., University of Missouri–Kansas City
    M.Ed., University of Missouri–Columbia

dorether Welch, Sociology
  MCC-Penn Valley
    B.S., Avila College
    M.S., Central Missouri State University
    M.A., Webster University
    M.S., University of Kansas
    Ph.D., University of Missouri–Kansas City

Gordon E. Wells Jr., Paralegal
  MCC-Penn Valley
    B.S., University of Kansas
    J.D., University of Kansas

Matthew R. Westra, Psychology
  MCC-Longview
    A.A., Golden West College
    B.A., California State University–Fullerton
    M.S., California State University–Los Angeles

Maureen Wiederholt, Practical Nursing
  MCC-Penn Valley
    B.S.N., Webster University

F. Kim Wilcox, Speech
  MCC-Penn Valley
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

Robert H. Williams, Psychology
  MCC-Maple Woods
    A.A., MCC-Maple Woods
    B.A., William Jewell College
    M.A., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

Tammie L. Willis, Nursing
  MCC-Penn Valley
    B.A., Washing University
    B.S.N., University of Kansas
    M.S.N., University of Kansas

Jeffrey C. Wilt, Counselor
  MCC-Blue River
    B.A., University of North Carolina–Chapel Hill
    M.S., University of North Carolina–Greensboro

Patricia A. Winberg, Nursing
  MCC-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
  MCC-Blue River
        *Chair, Business Technology, Mathematics
            and Public Safety*
    A.A., Metropolitan Community College
    B.A., Avila College
    M.S., Central Missouri State University

Thomas M. Wirtz, Counselor
  MCC-Longview
    B.S., Missouri State University
    M.A., University of Missouri

Benjamin Wolfe, Geology/Geography
  MCC-Blue River
    B.S., University of Nebraska–Lincoln
    M.S., University of Alaska–Fairbanks

William S. Worley, History
  MCC-Blue River
    B.A., Kansas State University
    M.A., Colgate Rochester Divinity School
    Ph.D., University of Kansas

Thomas Daniel Wright, Speech & Drama
  MCC-Maple Woods
    B.A., Arkansas State University
    M.A., Arkansas State University

Janet K. Wyatt, Mathematics
  MCC-Longview
        Chair, Math and Engineering
    B.S., University of Arkansas
    M.A., University of Arkansas

Dempsey A. Yearry, Computer Science/Information
 Systems
  MCC-Maple Woods
    B.S., Devry Institute of Technology

William Young, History
  MCC-Maple Woods
        Chair, Social Science/Business
    B.A., Iowa State University
    M.A., Iowa State University

Ruth Yunker, Nursing
  MCC-Penn Valley
    B.S.N., University of Kansas
    M.Ed., University of Missouri–Kansas City
    M.S.N., University of Missouri–Kansas City.

Stephanie Zerkel-Humbert, English
  MCC-Maple Woods
    B.S.E., University of Arkansas At Little Rock
    M.A., University of Arkansas At Little Rock

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.

Joseph H. Anway (1973-1998), Business
  MCC-Longview
    A.A., Graceland College
    B.S., Central Missouri State University
    M.A., Central Missouri State University
    Spec. In Bus.Adm., Central Missouri State University

Bruce Appel (1989-2006), Outreach Counselor
  MCC-Longview
    M.A., University of Missouri–Kansas City
    Ed.S., University of Missouri–Kansas City

Rita K. Austin (1969-1986), Foreign Language
  MCC-Longview
    A.B., New York State College For Teachers
    A.M., University of Kansas

Harold E. Baggerly (1964-1995), Engineering
  MCC-Longview
    B.S., University of Kansas
    M.S., University of Kansas

Melanie A. Bailey (1973-2005), Director, Educational
 Opportunity Center
    Administrative Center
    B.S., University of Kansas–Lawrence
    M.Ed., Howard University–Washington, D.C.
    Ed.S., University of Missouri–Kansas City

John W. Banks (1969-1986), Office Systems
  MCC-Maple Woods
    B.S., Central Missouri State University
    M.A., University of Northern Iowa

Nancy J. Banks (1990-2000), Nursing
  MCC-Penn Valley
    B.S., In Ed., Southwest Missouri State University
    B.S.N., Avila College
    M.S.N., Kansas University

Edith Bartholomew (1957-1985), English
  MCC-Penn Valley
    A.B., Wheaton College
    A.M., Northwestern University

Edward Beasley (1968-1993), History
  MCC-Penn Valley
    B.A., Lincoln University
    M.A., Emporia State University
    Ph.D., University of Missouri–Kansas City

Pamela Beers (1994-2004), Practical Nursing
  MCC-Penn Valley–Pioneer Campus
    Diploma, Providence Hospital School of Nursing
    B.S., St. Mary College

James Q. Beisel (1973-2004), Business
  MCC-Longview
    B.S., Kansas State University, Agriculture
    B.S., Kansas State University, Business Administration
    M.B.A., University of Kansas

Michael E. Benson (1972-1997), Criminal Justice
  MCC-Penn Valley
    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
  MCC-Penn Valley
    B.S.C., University of North Dakota At Grand Forks
    M.B.A., Central Missouri State University

John Berchman (1969-1987), Director of Culture
  MCC-Administration Center
    B.S., West Virginia Wesleyan College
    M.F.A., Sarah Lawrence College
    P.h.D., Middlebury College

Lewis E. Berg (1957-1986), Mathematics
  MCC-Maple Woods
    A.B., De Pauw University
    M.A., Syracuse University

Patricia A. Berge Langsdorf (1971-2004), Office Systems
  MCC-Maple Woods
    A.B., University of Kentucky
    M.A., University of Missouri–Kansas City

Dale R. Biagi (1965-1998), Geology & Geography
  MCC-Longview
    A.A., Kaskaskia College
    B.S., Illinois State University
    M.S., Illinois State University

Jack Bitzenburg (1986-2004), President
  MCC-Business & Technology
    B.S., Central Missouri State University
    M.S., Central Missouri State University

Sarah F. Bivins (1972-2001), Human Sciences
  MCC-Penn Valley
    B.S., Tuskegee Institute
    M.S., University of Wisconsin

Aldine Blankenship (1951-1979), Office Systems
  MCC-Penn Valley
    A.A., Northeast Junior College
    A.B., University of Northern Colorado
    M.A., University of Northern Colorado

Sheryl L. Blasco (1966-1994), Data Processing
  MCC-Penn Valley
    B.S., Emporia State University
    M.P.A., California State University

Ann E. Boehm (1983-1989), Psychology
  MCC-Penn Valley
    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 II
 Project
  MCC-Penn Valley
    B.A., St. Augustine's College
    M.A., North Carolina Central University

Stephen Brainard (1970-1998), President
  MCC-Maple Woods
    B.S., State University of New York
    M.S., Syracuse University
    Ph.D., University of Missouri–Columbia

Loree D. Breed (1970-1986), English
  MCC-Longview
    B.A., Avila College
    M.A., University of Missouri–Kansas City
    M.Ph., University of Kansas

Ronald L. Brink (1969-1998), Speech and Theater
  MCC-Maple Woods
        Chair, Communications
    B.A., Missouri Valley College
    M.A., University of Denver
    Ph.D., University of Missouri–Kansas City

Beverlye J. Brown (1988-2008), Associate Vice Chancellor
 and Assistant to the Chancellor
    Administrative Center
    B.S., Birmingham–Southern College
    M.A., University of Alabama
    Ed. D., University of Missouri–Columbia

Joan Nance Brown (1964-1994), Mathematics
  MCC-Longview
    B.S., Harding College
    M.A., University of Kansas

Suzanne Brown (1984–1994), Health Information
 Technology
  MCC-Penn Valley
    B.S., Texas Woman's University
    M.S., Texas Woman's University

Robert S. Buchanan (1971-1993), English
  MCC-Maple Woods
    A.B., University of Missouri–Columbia
    M.A., University of Missouri–Columbia

George A. Bunch (1956-1989), Social Science
  MCC-Penn Valley
    B.S., Northwest Missouri State University
    M.S., University of Kansas

Walter M. Burks (1970-1981), Social Science
MCC-Maple Woods
  A.B., Rockhurst College
  A.M., University of Missouri–Kansas City
  Ph.D., University of Missouri–Kansas City

Wilma J. Burnett (1973-1997), Office Systems
MCC-Penn Valley
  B.S., Southwest Missouri State University
  M.S., Central Missouri State University

Aaron C. Butler (1974-1982), Business
MCC-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
MCC-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
MCC-Penn Valley
  A.B., University of Indiana
  A.M., University of Chicago
  Ph.D., Michigan State University

Patrick R. Capranica (1965-1995), Social Science
MCC-Longview
  B.S., Pittsburg State University
  M.S., Pittsburg State University

Kenneth M. Carter (1975-1992), Automotive Technology, Heavy Equipment
MCC-Longview
  A.A.S., MCC-Longview

Clydia A. Case (1971-2002), Counselor
MCC-Blue River
  B.A., Eastern Kentucky University
  M.Ed., Xavier University
  Ph.D., University of Missouri–Kansas City

Vernon L. Case (1967-1993), Data Processing
MCC-Penn Valley
  B.A., William Jewell College
  M.B.A., University of Missouri–Kansas City

Gregory A. Christy (1981-1992), Drafting
MCC-Longview
  B.S., Central Missouri State University
  M.S., Central Missouri State University

Lynda W. Clark (1989-2005), Business
MCC-Maple Woods
  B.S., Central State University, Oklahoma
  M.Ed., Central State University, Oklahoma
  Ph.D., University of Oklahoma

Susan W. Clark (1985-2004), Reading
MCC-Longview
  B.S.Ed., University of Delaware
  M.Ed., University of Delaware
  Ph. D., University of Missouri–Kansas City

John P. Coleman (1969-1988), Art
MCC-Longview
  B.F.A., Kansas City Art Institute
  M.F.A., Kansas City Art Institute

Frank Dean Cone (1993-2003), Education
MCC-Maple Woods
  B.S.Ed., Missouri Valley College
  M.Ed.Spec., Central Missouri State University
  Ed.D., University of Missouri-Columbia

Omar G. Conrad (1965-1995), Geology
MCC-Maple Woods
  B.S., University of Kansas
  M.S., University of Kansas
  M.A., Dallas Theological Seminary

Harvey J. Cooke (1968-1995), Business
MCC-Penn Valley
          Chair, Business
  B.S., Emporia State University
  M.S., Emporia State University

William Patrick Coyne (1970-2000), Automotive Technology
MCC-Longview
  B.S., Pittsburg State University
  M.S., Pittsburg State University

Linda F. Crabtree (1983-2005), District Director, Professional Development and Instructional Support
Administrative Center
  B.S., University of Missouri–Kansas City
  M.S., Central Missouri State University
  Ed.D., University of Missouri–Columbia

Betty L. Craft (1975-2000), Office Systems
MCC-Longview
  B.B.A., Washburn University of Topeka

William David Crim (1964-1991), Mathematics
MCC-Penn Valley
  B.S.E.E., University of Missouri–Columbia
  M.S., New Mexico Highlands University
  M.S.E.E., University Missouri–Columbia

Bruce D. Culley (1971-2008), Business
MCC-Maple Woods
  B.S., University of Kansas
  M.S., University of Kansas

Darlene Cummings-Hill (1972-1995), Nursing
MCC-Penn Valley
  R.N., General Hospital and Medical Center
  B.S.N., University of Kansas
  M.A., University of Missouri–Kansas City
  M.S.N., University of Missouri–Kansas City

Desmond U. Daniels (1969-1998), Music, Physical Fitness
MCC-Maple Woods
  B.A., Huston Tillotson College
  M.Mus.Ed., University of Kansas
  Ed.D., Nova University

Orville L. Darby (1956-1982), Economics
MCC-Longview
  B.A., Wichita State University
  M.A., University of Colorado

Donald H. Day (1974-1986), Electronics
MCC-Maple Woods
  B.S.E.E., Finlay Engineering College

Thomas E. Dewey (1969-2000), Counselor
MCC-Penn Valley
  B.S., Pittsburg State University
  M.S., Pittsburg State University

Richard Diklich (1972-2002), Automotive Technology
MCC-Longview
  B.S., Pittsburg State University

M. Albert Dimmit Sr. (1990-2000), History
MCC-Penn Valley
  B.S., Kansas State University
  M.A., Kansas University
  Ph.D., Kansas University

Marilyn Donatello (1982-2006), Dean of Student Services
MCC-Maple Woods
  B.S., University of Tennessee–Chattanooga
  M.A., University of South Florida

Donald S. Doucette (1994-2008), Vice Chancellor, Education and Technology
Administrative Center
  B.A., Cornell University
  M.A., Arizona State University
  Ph.D., Arizona State University

Lawrence Downs (1969-1986), Architecture
MCC-Longview
  B.Arch., Washington University
  M.A., University of Missouri–Kansas City

Perry A. Doyle Jr. (1966-1998), Physics
MCC-Maple Woods
  A.B., William Jewell College
  M.S., University of Missouri–Rolla

Richard W. Drumm (1983-1999), District Director Human Services and Risk Management
Administrative Center
  B.A., Long Island University
  M.A., New York University

Martha J. Eagle (1989-2004), Mathematics
MCC-Blue River
  A.B., William Jewell College
  M.A., Central Missouri State University

James Early (1973-2003), Biology
MCC-Penn Valley
  B.S., Southwest Missouri State University
  M.A., Southwest Missouri State University

Margaret Easter (1993-2007), Computer Science/ Information Systems
MCC-Penn Valley
  B.S., Missouri Western State College
  M.S., University of Missouri–Kansas City

Sylvia L. Edwards (1987-2006), English
MCC-Longview
  B.A., Hastings College
  M.A., Fort Hays State University

Mattie J. Eley (1973-2002), Practical Nursing
MCC-Penn Valley/Pioneer
  R.N., General Hospital and Medical Center
  B.S.N., University of Kansas
  M.Ed., University of Missouri–Columbia
  M.S.N., Bishop Clarkson College of Nursing and Health Sciences

Price Ellis (1969-1995), History
MCC-Penn Valley
  B.S., Central Missouri State University
  M.S., Central Missouri State University

John K. Enenbach (1969-1995), Criminal Justice
MCC-Penn Valley
  B.A., Wichita State University
  J.D., University of Missouri–Kansas City

William J. Engel Jr. (1969-1995), Business
MCC-Longview
  B.S., Rockhurst College
  M.B.A., University of Missouri–Kansas City
  Ed.D., Nova University

Mary Lou Eubank (1980-2000), Computer Science/ Information Systems
MCC-Longview
  A.A., MCC-Longview
  B.S.B.A., Central Missouri State University

James D. Everett (1995-2005), District Director, Technical Education
MCC-Business & Technology
  A.A.S., MCC-Maple Woods
  B.A., MidAmerica Nazarene
  M.Ed., MidAmerica Nazarene
  Ed.D., University of Missouri–Columbia

Luis M. Flores, Jr.(1973-2001), Psychology
MCC-Longview
  A.B., University of The Philippines
  M.S., Kansas State University

Edwin Matthew Flynn (1961-1995), Speech and Theater
MCC-Penn Valley
  A.B., University of Missouri–Columbia
  A.M., University of Missouri–Columbia

Judith Flynn, (1974-2006), Reading
MCC-Penn Valley
  A.A., Metropolitan Community College
  B.A., University of Missouri–Kansas City
  M.A., University of Missouri–Kansas City

Ellen P. Forrest (1971-2000), Associate Vice Chancellor and Assistant to the Chancellor
Administrative Center
  B.A., Marymount Manhattan College
  M.A., Fordham University

William L. Foster (1987-1999), Associate Director, Occupational and Continuing Education
MCC-Administrative Center
B.S.E., University of Arkansas
M.Ed., University of Arkansas

Thomas R. Garrett (1966-1989), Counselor
MCC-Longview
A.S., Flat River Junior College
B.S., University of Missouri–Columbia
M.Ed., University of Missouri–Columbia

John M. Gazda (1957-1993), English
MCC-Penn Valley
B.A., University of Kansas
M.A., University of Kansas
Ph.D., University of Kansas

W. Andrew Geoghegan Jr. (1973-2003), Psychology
MCC-Longview
B.A., College of William and Mary
M.A., University of Missouri–Kansas City

Gary F. Gibson (1968-1992), Business
MCC-Maple Woods
B.S.B.A., University of Missouri–Columbia
M.Ed., University of Missouri–Columbia

Wayne E. Giles (1983-2005), Chancellor
Administrative Center
B.S., Southern Illinois University
M.S., Southern Illinois University
Ph.D., St. Louis University

Kenneth W. Gillespie (1971-1998), District Director, Physical Plant
Administrative Center
B.S., Central Missouri State University
M.S., Central Missouri State University

Louis E. Gillham (1965-1993), Counselor
MCC-Maple Woods
B.S., Southwest Missouri State University
M.S., Central Missouri State University

Carole R. Gilmore (1990-2008), Foreign Language
MCC-Penn Valley
B.A., University of Missouri–Columbia
M.A., University of Missouri–Columbia

Florence W. Goldman (1976-1986), Reading
MCC-Longview
B.S.Ed., Temple University
M.Ed., University of Illinois
Ph.D., University of Missouri–Kansas City

Marvin Goldstein (1962-1999), Mathematics
MCC-Longview
B.S., University of Oklahoma
M.A., University of Oklahoma

Charles M. Gosselin (1970-1998), Associate Dean of Instructional Technology
MCC-Penn Valley
B.S., Rockhurst College
M.S., University of Missouri–Kansas City

Ronald E. Greathouse (1969-2000), Vice Chancellor, Administrative Services
Administrative Center
B.S., Pittsburg State University
M.S., Pittsburg State University

Cheryl S. Grosser (1989-2005), English
MCC-Blue River
Chair, Humanities
B.A., University of Illinois
M.A., University of Illinois
M.Phil., University of Kansas

Radhey Gupta (1974-2003), Mathematics
MCC-Longview
B.Sc., Agra University
M.Sc., Agra University
M.S., Ohio State University
Ph.D., Ohio State University

Martha Haehl (1987-2008), Mathematics
MCC-Penn Valley
B.S., Wayland College
M.A., University of Kansas

Richard L. Hair (1973-2000), Sociology
MCC-Longview
B.S., Rockhurst College
M.A., University of Notre Dame
M.Ed., Xavier University

Dorothy Hamilton (1973-1986), Nursing
MCC-Penn Valley
B.A., Point Loma Nazarene College
M.A., Point Loma Nazarene College

Cecil N. Hammonds (1959-1996), District Director, Management Systems
Administrative Center
B.S., University of Missouri–Kansas City
M.S., University of Kansas
Ph.D., Louisiana State University

Barbara M. Hankins (1971-1997), Art
MCC-Longview
B.F.A., University of Kansas
M.F.A., University of Kansas
Ed.D., Nova University

Paul Harding, (1989-2005), Heating/Air Conditioning
MCC-Business & Technology
A.A.S., MCC-Business and Technology

Lillian Harrington (1972-1988), Speech and English
MCC-Penn Valley
A.B., Benedictine College
M.A., Catholic University of America

Kenneth G. Hartman (1993-2005), Political Science
MCC-Longview
B.A., Wake Forest University
M.A., University of Texas At Austin

Elbert C. Heath (1972-1999), Physics
MCC-Penn Valley
A.A., Graceland College
B.S., Central Missouri State University
M.S., University of Missouri–Rolla

Charles F. Henry (1984-1994), District Director, High Technology Training Resource Center
Administrative Center
B.S., Northeast Missouri State University
M.A., Central Missouri State University

Joan Henson (1996-2008), Mathematics
MCC-Penn Valley
B.A., Molloy Catholic College For Women
M.S., Adelphi University

John F. Herbst (1966-1988), Dean of Instructional Support Services
MCC-Penn Valley
A.B., Benedictine College
M.L.S., Case Western Reserve University

David E. Herron (1965-1992), Mathematics
MCC-Longview
B.S., Central Missouri State University
M.A., Central Missouri State University

Donald J. Herzog (1971-2000), English
MCC-Longview
B.S., Wisconsin State University At Lacrosse
M.A., Kansas State University
Ed.D., University of Kansas

Karen Herzog (1971-1999), Dean of Instruction
MCC-Penn Valley
B.S.L., Ozark Christian College
M.A., Kansas State University
Ph.D., University of Kansas

Juanan Hill (1992-2008), Applied Language
MCC-Penn Valley
M.A., University of Kansas

Julia Hill (1975-1992), Recruitment Coordinator
MCC-Penn Valley
B.S., Lincoln University
M.S., University of Southern California
Ed.D., Nova University

Thomas J. Hillenbrand (1988-2002), English
MCC-Longvew
A.B., Loyola University of Chicago
M.A., Loyola University of Chicago

E. Jay Hilty Jr. (1963-1992), Philosophy
MCC-Maple Woods
B.Mus., University of Colorado
M.A., University of Colorado
M.Phil., University of Kansas
Ph.D., University of Kansas

Joyce S. Hilty (1986-1993), Data Processing
MCC-Maple Woods
A.A.S., MCC-Maple Woods
M.A., University of Colorado
M.Mus., University of Colorado

Jimmie Holiman (1996-2008), Criminal Justice
MCC-Blue River, Police Academy
A.A., MCC-Longview
B.A., Park University
M.S., Central Missouri State University

Robert J. Holman (1982-2004), Business
MCC-Blue River
Chair, Business, Technology and Public Safety
B.S., Central Missouri State University
M.A., Central Missouri State University

Sarah A. Hopkins (1972-1998), Director of MCC-PACE, Program For Adult College Education
MCC-Longview
B.S. In Ed., Central Missouri State University
M.A., Central Missouri State University
Ph.D., University of Kansas

Dennis Hronek (1973-2000), Associate Dean of Occupational /Continuing Education
MCC-Blue River
A.S., Hutchinson Junior College
B.S., University of Missouri–Columbia
M.A., University of Missouri–Kansas City

Ruth M. Hulse (1966-1983), Nursing
MCC-Penn Valley
A.A., Moberly Junior College
R.N., Kansas City General Hospital and Medical Center
B.A., University of Missouri–Kansas City
M.A., University of Missouri-Kansas City

Robert W. Jensen (1982-2004), District Director, Financial Services
Administrative Center
B.S., University of Kansas
M.S., University of Missouri–Kansas City

Mary Ellen Jenison (1989-2006), Director, Able Program
MCC-Longview
A.A., MCC-Longview
B.A., Avila College
M.A., University of Missouri–Kansas City

Ashley L. Johnson (1975-1989), Assistant to the President
MCC-Maple Woods
B.A., Valparaiso University
M.S., Indiana University

Elbert B. Johnson (1982-1993), Economics
MCC-Longview
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City
Ph.D., University of Iowa

Jane B. Jones (1966-1984), Biology
MCC-Penn Valley
A.A., Junior College of Kansas City
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

John A. Kaczynski (1966-2001), Dean of Instruction
MCC-Longview
A.S., Flint Community College
A.B., University of Michigan–Flint
M.S., University of Arizona
Ph.D., University of Missouri-Kansas City

James E. Karasiewicz (1979-2005), English
MCC-Maple Woods
Chair, Communications Division
B.A., State University College of New York, Buffalo
M.A., State University College of New York, Brockport
Ph.D., Kansas State University

Michael K. Keele (1973-2003), District Director, Marketing Services
  Administrative Center
    B.S., Central Missouri State University
    M.A., Webster University

Leon H. Keens (1964-1995), English, History
  MCC-Maple Woods
    B.A., University of Kansas
    M.A., University of Kansas
    M.A., University of Missouri–Kansas City

Kennard D. Kelly (1969-1989), Criminal Justice
  MCC-Maple Woods
    B.A., Kansas Wesleyan University
    J.D., University of Nebraska

Margaret S. Kelly (1969-1996), Computer Science/ Information Systems
  MCC-Longview
    B.S., Kansas State University
    M.B.A., University of Missouri–Kansas City

Patricia A. Kemner (1970-1990), Biology
  MCC-Longview
    B.A., University of Missouri–Columbia
    M.S., University of Missouri–Kansas City

Richard Kimberly (1990-2003), Business
  MCC-Blue River
    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

Harry A. King (1973-1980), Social Science
  MCC-Maple Woods
    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
  MCC-Penn Valley
              Chair, Social Science
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

Carl H. Koenig (1980-2002), Computer Science/ Information Systems
  MCC-Maple Woods
    B.S.Ed., Wayne State University
    M.S.Ed., University of Kansas
    Ph.D., University of Kansas

Irene G. Korotev (1973-1999), Librarian
  MCC-Maple Woods
    B.A., North Texas State University
    M.A., University of Missouri–Columbia

Herbert F. Kramer (1956-1991), Mathematics
  MCC-Longview
    B.S., University of Missouri–Columbia
    M.S., University of Missouri–Columbia

Joann Krekel (1973-1994), Media Specialist
  MCC-Penn Valley
    A.A., MCC-Penn Valley
    B.A., Baker University
    M.S., Central Missouri State University

Virginia Kruse (1959-1979), Foreign Language
  MCC-Penn Valley
    A.B., University of Kansas
    A.M., University of Kansas

Marilyn S. Lander (1973-1993), Nursing
  MCC-Penn Valley
    R.N., Tuskeggee Institute
    B.S.N., Avila College
    M.A., University of Missouri–Kansas City

Sandra L. Landuyt (1990-2008), Biology
  MCC-Penn Valley
    B.A., University of Missouri–Kansas City
    B.S., University of Missouri–Kansas City
    M.S., University of Missouri–Kansas City
    M.A., Loyola University–New Orleans
    Ph.D., University of Missouri–Columbia

Mary A. Lee (1990-2004), English
  MCC-Longview
    B.A., Clarke College, Iowa
    M.A., Bradley University, Illinois

Russel G. Lee (1954-1983), Mathematics
  MCC-Longview
    B.S., University of Missouri–Columbia
    M.S., University of Missouri–Columbia

John E. Leheney (1970-1991), Counseling
  MCC-Maple Woods
    B.S., Central Missouri State University
    M.Ed., University of Missouri–Columbia

Aldo W. Leker (1971-1997), President
  MCC-Longview
    B.S., Southwest Missouri State University
    M.B.A., University of Missouri–Kansas City

Cheryl Smith Lewkowsky (1973-2004), Mathematics
  MCC-Maple Woods
    A.B., William Jewell College
    M.S., Kansas State University

Orlyn O. Lockard (1966-1989), Drafting and Design, Engineering Technology
  MCC-Longview
    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
  MCC-Penn Valley
    B.S., Central Missouri State University
    M.S., University of Kansas

Wanda F. Lord (1962-1985), Office Systems
  MCC-Penn Valley
    B.S., University of Missouri–Columbia
    M.A., University of Missouri–Kansas City

Patricia A. Lorenz (1971-2000), Biology
  MCC-Penn Valley
              Chair, Life Sciences
    A.A.S., MCC-Penn Valley
    B.S., St. Louis University
    Ph.D., University of Kansas

L. Doone Loughery (1972-1991), Office Systems and Careers
  MCC-Maple Woods
    B.S.Ed., Northeast Missouri State University
    M.A.Bus.Ed., Northeast Missouri State University

Forrest G. Lowe (1959-1993), Physics
  MCC-Longview
    B.S., Northwest Missouri State University
    M.S., Texas Christian University
    Ed.D., Nova University

Robert Lowe (1971-1999), District Director, Computer Services
  Administrative Center
    B.S., Pittsburg State University

Opzerine D. Madison (1981-2003), Nursing
  MCC-Penn Valley
    A.A., MCC-Penn Valley
    R.N., General Hospital and Medical Center
    B.S.N., Avila College
    M.A., Central Michigan University

Carole J. Maltby (1975-2005), Veterinary Technology
  MCC-Maple Woods
    B.S., University of Missouri–Kansas City
    D.V.M., University of Missouri–Columbia

William J. Mann (1977-1993), Chancellor
  Administrative Center
    B.S., Northern Illinois University
    M.S., Northern Illinois University
    Ed.D., Northern Illinois University

Carder H. Manning Jr. (1969-1995), Music
  MCC-Penn Valley
    A.A., Junior College of Kansas City
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Daniel L. Mark, (1990-2008)Biology
  MCC-Maple Woods
    B.A., Drake University
    M.A., Drake University
    Ph.D., University of Illinois

José Martinez (1989-2000), Aviation Maintenance Technology
  MCC-Maple Woods
    B.S., Central Missouri State University

Stephanie J. Masquelier (1976-2004), Business
  MCC-Longview
    B.S., Virginia Commonwealth University
    M.Ed., Virginia Commonwealth 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
  MCC-Blue River
    B.A., Baylor University
    M.S.Ed., Baylor University
    Ph.D., University of Missouri–Columbia

Thomas L. McClure (1969-1999), Psychology
  MCC-Maple Woods
    B.S., Purdue University
    M.A., Ball State University

Michele McGeeney (1994-2008), Reading
  MCC-Maple Woods
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Flin C. McGhee (1966-2000), Chemistry
  MCC-Penn Valley
              Chair, Physical Science
    B.S., University of Houston
    M.S., Texas A & M University
    Ph.D., University of Kansas

Fern Meek (1969-1992), Librarian
  MCC-Longview
    B.S., University of Kansas
    M.L.S., Emporia State University

Barbara Mehnert (1971-1997), Counselor
  MCC-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

Linda Spotts Michael (1981-2005), Business
  MCC-Maple Woods
    B.S., Central Missouri State University
    M.B.A., Central Missouri State University

Connie Migliazzo, (1997-2007)Librarian
  MCC-Blue River
    B.S., University of Missouri–Columbia
    M.L.S., University of Missouri–Columbia

Lauren F. Miller (1972-1997), Philosophy
  MCC-Longview
              Chair, Social Science
    B.A., Antioch College
    M.A., University of Pittsburg

Marjorie A. Miller (1971-2004), Office Systems
  MCC-Longview
    B. S., Pittsburg State University
    M.S., Central Michigan University

Michael E. Miller (1964-1997), English
  MCC-Longview
            Chair, Humanities
    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
  MCC-Longview
    A.B., University of Cincinnati
    M.Ed., Xavier University
    M.A., Xavier University

Gerald N. Moore (1971-1997), Electronics
  MCC-Maple Woods
    Diploma, Devry Institute of Technology
    A.A., Metropolitan Community College
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

Robert L. Morris (1969-2006), Art
  MCC-Penn Valley
    B.F.A.E., Kansas City Art Institute
    M.F.A., University of Kansas

Thomas F. Morris (1965-1996), English
  MCC-Longview
    B.A., University of Kansas
    M.S., University of Kansas

Elna B. Morrow (1981-1994), Counselor
  MCC-Longview
    B.A., Alabama State University
    M.S., University of Nebraska–Omaha

Verle D. Muhrer (1971-2004), Philosophy
  MCC-Penn Valley
    B.A., University of Missouri–Columbia
    M.A., University of Missouri–Columbia

Stewart E. Nelson (1963-1999), History
  MCC-Maple Woods
    A.B., Park College
    M.A., University of Kansas

Hilda Ogilvie (1994-2003), Nursing
  MCC-Penn Valley
    B.S.N., University of Kansas
    M.S.N., University of Missouri–Kansas City

Leon P. Ogilvie (1970-2000), Social Science
  MCC-Maple Woods
            Chair, 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

Jerome L. Ommen (1971-1993), Counselor
  MCC-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
  MCC-Blue River
    B.S., Molloy College
    M.A., Hofstra University
    M.A., University of Missouri–Kansas City

Rebecca M. Owens (1974-2002), Fashion and Human
  Sciences
  MCC-Penn Valley
        Chair Business and Human Sciences
    B.S., Northwest Missouri State University
    M.Ed., University of Missouri–Columbia

Clifford Naysmith (1964-2001), Sociology
  MCC-Maple Woods
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City

Michael L. Palmer (1982-2006), Business
  MCC-Maple Woods
    B.S., Kansas State University
    M.B.A., Rockhurst College

Carolyn A. Parks (1994-2008), Surgical Technology
  MCC-Penn Valley
    A.D.N., Illinois Central College
    B.A.N., University of Illinois–Springfield

Thomas S. Pennington (1990-2005), Computer
  ScienceInformation Systems
  MCC-Longview
            Chair, Business
    B.S., University of Missouri–Columbia
    M.Ed., University of Missouri–Columbia

Lee Roy Pitts (1972-1997), Biology
  MCC-Penn Valley
    B.S., Pittsburg State University
    M.S., Pittsburg State University

Mary Jo Podrebarac (1982-1995), Chemistry
  MCC-Penn Valley
    B.A., Avila College
    M.A., University of Kansas

James L. Pratt (1970-2000), Computer ScienceInformation
  Systems
  MCC-Longview
            Chair, 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

Judith A. Pratt (1982-2006), Counselor
  MCC-Longview
    B.S., Southeast Missouri State University
    M.A., Southeast Missouri State University

Norman C. Preston (1972-1983), Mechanical Technology
  MCC-Penn Valley
    B.S., Northwest Missouri State University
    M.S., University of Arkansas

A. Rae Price (1966-1992), English
  MCC-Penn Valley
    B.S., Northwestern University
    M.A., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

Carroll S. Price (1969-1992), Criminal Justice
  MCC-Penn Valley
    B.S., University of Missouri–Columbia
    M.Ed., University of Missouri–Columbia
    Ed.D., University of California–Los Angeles

Virginia Ragan, Geology/Geography (1995-2006)
  MCC-Maple Woods
    A.A., MCC-Maple Woods
    B.S., University of Missouri–Kansas City
    M.S., University of Missouri–Kansas City
    Ph. D., University of Missouri–Kansas City

Donald L. Raymond (1969-1983), Geology
  MCC-Maple Woods
    B.S., University of Missouri–Columbia
    M.A., University of Missouri–Kansas City

J. Michael Raynor (1987-2006), English
  MCC-Longview
    A.A., Junior College of Kansas City
    B.A., University of Nebraska–Omaha
    Ph.D., University of Florence, Italy

Harold Reese (1939-1974), English
  MCC-Longview
    B.A., Dakota Wesleyan University
    M.A., Northwestern University

Barbara Reinwald (1969-2008), Senior Project Associate,
  Metrosoft
  Administrative Center
    A.A., MCC-Maple Woods
    B.S., Park College
    M.P.A., University of Missouri-Kansas City

Burton W. Richardson (1985-1993), Electronics
  MCC-Longview
    B.S., North Carolina State University

Robert D. Richey (1983-1993), Dean of Instructional
  Services
  MCC-Maple Woods
    B.S.Ed., Illinois State University
    M.A., University of Illinois

Robert D. Richmond (1965-1995), English
  MCC-Penn Valley
    B.S., Central Missouri State University
    M.S., University of Missouri–Kansas City

Juanita L. Ross (1975-2005), Office Systems
  MCC-Maple Woods
    B.S., Bishop College
    M.S., Central Missouri State University

Ronald G. Rowland (1965-1997), Chemistry
  MCC-Maple Woods
    B.S., Kansas State University
    M.S., Kansas State University

David E. Sachen (1969-1997), German, Mathematics
  MCC-Maple Woods
    B.S., Rockhurst College
    M.A., University of Kansas

James H. Sampson (1963-1983), Director of Personnel
  Administrative Center
    A.B., William Jewell College
    A.M., University of Wyoming

Albert W. Sandring (1990-1995), Drafting
  MCC-Longview
    B.S.M.E., Kansas State University
    M.B.A., University of Missouri–Columbia

Margaret P. Sandring (1985-1995), Office Systems
  MCC-Longview
    B.S., Central Methodist College
    M.S., Central Missouri State University

Eugene Schieber(1990-2003), Dean of Technical
  Education
  MCC-Maple Woods/MCC-Business & Technology
    B.S., Northwest Missouri State
    M.A., Northwest Missouri State
    Ed.Spec., University of Missouri–Kansas City

Beverly J. Schwaab (1980-1989), Librarian
  MCC-Longview
    A.A., Junior College of Kansas City
    B.A., Baker University
    M.S., Central Missouri State University

Jean Bartz Scurlock (1957-1986), Chemistry
  MCC-Longview
    A.B., University of Kansas
    A.M., Smith College

Corrine E. Shaw (1994-2003), Practical Nursing
  MCC-Penn Valley
    A.D.N., Kansas City Kansas Community College
    B.S.N., MidAmerica Nazarene College

M. Catherine Sheely (1990-2007), English
  MCC-Penn Valley
    B.A., Aquinas College, Michigan
    M.L.A., Baker University

Larry E. Sherwood (1971-1996), Mathematics
  MCC-Penn Valley
    B.S., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City
    Ph.D., University of Missouri–Kansas City

Charles E. Shields (1967-1995), District Director,
  Purchasing & Auxiliary Services
  Administrative Center
    A.A., North Central Missouri College
    B.S., University of Missouri–Columbia

James A. Shimel (1980-2006), Manufacturing Technology
  MCC-Business & Technology
    B.S., Finlay Engineering College

Thomas H. Sicking (1968-1994), English, Journalism
  MCC-Penn Valley
    B.A., University of Missouri–Kansas City
    M.A., University of Missouri–Kansas City
    Ed.D., Nova University

Dorothy L. Simmons (1981-1991), Nursing
  MCC-Penn Valley
    R.N., General Hospital and Medical Center
    B.S.N., Avila College

Sue M. Sinton (1973-1992), Nursing
MCC-Penn Valley
R.N., St. Joseph Hospital School of Nursing
B.A., University of Missouri–Kansas City
M.A., University of Chicago

Robert A. Slater (1969-1998), English
MCC-Maple Woods
B.S., Northeast Missouri State University
M.F.A., University of Iowa

Shirley Fieth Smith (1969-1991), Office Systems
MCC-Longview
B.S., Central Missouri State University
M.A., Central Missouri State University

Theda Y. Sorenson (1987-1994), Counseling
MCC-Longview
A.A., Hutchinson Community College
B.A., Sterling College
M.A., Fort Hays State University

Helen Y. Speed (1974-2007), Child Growth and
Development
MCC-Penn Valley
B.S., University of Arkansas At Pine Bluff
M.A., University of Missouri–Kansas City

Phyllip P. Standlea (1971-1996), District Director,
Instructional Services & Professional Development
Administrative Center
B.S., Northwest Missouri State University
M.S., Emporia State University
Ph.D., University of Missouri–Columbia

Evelyn R. Staatz (1969-1996), Librarian
MCC-Longview
B.S., University of Missouri–Columbia
M.A., University of Missouri–Columbia

Sally Steinback (1964-1986), Political Science
MCC-Penn Valley
B.A., Beloit College
M.P.A., Syracuse University
J.D., University of Missouri–Kansas City

Bill Still (1974-1998), Machine Tool Technology
MCC-Maple Woods/MCC-Business & Technology
B.S., Central Missouri State University

John G. Stockmyer (1961-2005), History
MCC-Maple Woods
B.S., Kansas State University
M.S., Kansas State University

Mary M. Sturdivant (1992-2005), Access Resource
Educator
MCC-Longview

Suzana Swager (1985-1997), Basic Skills
MCC-Blue River
B.A., Southwest Baptist College
M.S., Central Missouri State University

Nancy M. Taylor (1983-1993), Business and Office
Reentry
MCC-Longview
A.A., MCC-Longview
B.S., Avila College
M.Ed., Central Missouri State University

G. Dale Thomas (1987-2001), Dean of Instruction
MCC-Blue River
B.S.Ed., Central Missouri State University
M.S., Emporia State University
D.A., Idaho State University

Claude W. Thomson (1971-1995), Management
MCC-Longview
B.S., Central Missouri State University
M.S., Central Missouri State University

Nancy Thomson (1990-2004), Education
MCC-Penn Valley
Chair, Child Growth and Development
Education
B.A., Barat College, Illinois
M.A., College of Holy Names, California
Ph.D., University of Kansas

Paul Thomson Jr. (1971-1999), President
MCC-Blue River
B.S., Missouri Valley College
M.S., Southern Illinois University
Ph.D., Southern Illinois University

George E. Thornton (1970-1997), Automotive Technology
MCC-Longview
A.A.S., MCC-Longview
B.S.E., Central Missouri State University
M.S., Central Missouri State University

Alana Timora (1982-2005), Counselor
MCC-Maple Woods
B.S., University of Southern Colorado
M.A., University of Missouri–Kansas City

James Tjaden (1988-2008), Travel and Tourism
MCC-Maple Woods
Chair, Math, Science and Computing
B.A., Macalester College
M.A., University of Iowa
Ed.S., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

Helen M. Turner (1969-1993), Art
MCC-Maple Woods
B.A., University of Arkansas
M.Sec.Ed., University of Arkansas

Allan H. Tunis, Vice Chancellor (1999-2009),
Administrative Services
Administrative Center
B.S., Wayne State University
M.S., Wayne State University
Ed.S., University of Missouri–Kansas City

Charles Van Middlesworth (1993-2007), Research,
Evaluation, and Assessment
MCC-Administrative Center
B.A., Northwestern State College
M.A., Eastern New Mexico
Ed.D., University of Kansas

Dora Walsh (1994-1999), Practical Nursing
MCC-Penn Valley
R.N., Hammersmith, England
S.C.M., Midwifery, London, England
B.S.N., Graceland College

Helen G. Weaver (1960-1984), Psychology
MCC-Penn Valley
B.A., University of Missouri–Columbia
M.S., University of Pennsylvania

James K. Weaver (1984-2006), Business
MCC-Longview
A.B., Drury College
M.B.A., Drury College

Karen E. West (1995-2005), Associate Dean
MCC-Penn Valley
A.A., El Camino College
B.A., California State University
M.A., Pacific School of Religion
Ed.D., University of Missouri–Columbia

Charles H. Wheat (1970-1997), Aviation Maintenance
Technology
MCC-Maple Woods
A.A.S., Oklahoma State University
B.S., Oklahoma State University
M.S., Pittsburg State University

Beverly D. Whitaker (1983-1994), Learning Center/
Reading
MCC-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
MCC-Penn Valley
Chair, Nursing
B.S.N., University of Kansas
M.A., University of Missouri–Kansas City

James P. Whitworth (1965-1991), Counseling
MCC-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

Jeanné C. Willerth (1985-2004), Computer Science/
Information Systems
MCC-Longview
B.A., Wayne State College
M.S., University of Missouri–Columbia
M.S.D., University of Kansas

F. Ula Williams (1993-2005), Sign Language Interpreting
MCC-Maple Woods
B.S., Emporia State University
M.S., University of Kansas

Malcolm T. Wilson (1983-2006), President
MCC-Blue River
B.A., Kentucky State University
M.A., Murray State University

Dorothy M. Wright (1955-1995), Office Systems
MCC-Penn Valley
A.A., MCC-Penn Valley
B.S., Central Missouri State University
M.A., University of Iowa
Ed.D., Nova University

Christine A. Yannitelli (1972-2004), Counselor
MCC-Maple Woods
B.A., Michigan State University
M.Ed., University of Missouri–Columbia
M.A., University of Missouri–Kansas City

Virginia D. Yates (1968-1984), Reading
MCC-Penn Valley
B.S., Pittsburg State University
M.A., University of Missouri–Kansas City

Denise Zortman (1993-2007), Librarian
MCC-Penn Valley
B.A., Adams State College
M.A., University of Denver

Glossary 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 Higher Learning Commission of the North Central Association of Colleges and Schools. Various programs in the District are accredited by specialized accrediting agencies. (See page 23.)

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.

AFFILIATE AGREEMENTS. Metropolitan Community College (MCC) has established affiliate agreements with Johnson County Community College and Kansas City Kansas Community College (referred to as Affiliate Colleges) in career fields not currently offered by MCC. These agreements allow MCC students who are in-district and Missouri residents to enroll in selected career programs offered at these institutions and pay MCC's tuition rates.

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

ASSOCIATE IN APPLIED SCIENCE. The Associate in Applied Science degree prepares students for various career and technical programs.

ASSOCIATE IN ARTS. 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 42 hours of general education courses, as well as enough electives to reach the required 62 credit hours.

ASSOCIATE IN ARTS TEACHING. The Associate in Arts Teaching (AAT) degree prepares students to transfer to a four-year college or university offering education degrees in childhood, elementary, middle, and secondary education.

ASSOCIATE IN COMPUTER SCIENCE. The Associate in Computer Science (ACS) degree is a 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 and Information Systems that prepares students for immediate employment.

ASSOCIATE IN ENGINEERING. The Associate in Engineering degree is a program that prepares students to transfer to a four-year college or university offering a Bachelor of Science degree in Engineering or Surveying and Mapping.

ASSOCIATE IN SCIENCE. The Associate in Science degree program prepares students to transfer to a four-year college or university to major in either biology or chemistry.

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 District Regulation.)

BUSINESS & LEARNING SOLUTIONS. MCC Business & Learning Solutions serves businesses and community organizations by offering education, contract training, consulting services, and innovative business solutions. In addition to the programs and services offered across the district, each campus provides a variety of continuing education programs. Additionally, each campus provides community programming.

CAREER AND TECHNICAL 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.

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

CAREER AND TECHNICAL PROGRAMS. MCC offers nearly 70 programs that prepare students for a wide variety of occupations. You have the option of earning an associate in applied science degree or certificate or completing individual courses to build specific job-related skills.

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 12 to 20 credits hours and result in the awarding of a certificate of completion.

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. A course requirement that is taken at the same time with 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. A credit hour represents 750 minutes of lecture time or at least 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 a 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. A sequence of related courses.

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 36.)

DEVELOPMENTAL COURSE. A basic skills course numbered below 100 in the college catalog which carries college credit but does not count toward requirements for graduation.

DIRECTORY INFORMATION. According to federal law, the college may for a valid reason release without the student's consent what it calls directory information: the student's name, address, telephone listing, electronic mail address, photograph, date and place of birth, major field of study, dates of attendance, grade level, enrollment status (e.g., full-time or part-time), participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards received, and the most recent educational agency or institution attended. According to Public Law 93-380, the Family Educational 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. An alternative option to classroom. Students attend courses using either local cable television or via the Internet instead of coming to a campus location. For more information visit the Distance Education web site at http://distance.mcckc.edu.

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.

EDUCATIONAL PLAN. An educational plan is all coursework that, in the professional judgment of MCC's academic advisors and counselors, contributes to, enhances, or facilitates the pursuit of a student's academic or career goals. Students are strongly encouraged to meet with academic advisors or counselors during pursuit of their educational plan to help ensure its timely completion, and to determine that degree requirements are fulfilled.

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

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. General Educational Development (high school equivalency).

GENERAL EDUCATION. A common core of courses required of all students that provides for the acquisition of core skills and knowledge necessary in a literate citizenry.

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.

Grade		Scholarship Points Per Credit Hour
A		4
B		3
C		2
D		1
F		0
W	(withdrawal)	0
S	(satisfactory)	0
U	(unsatisfactory)	0
P	(passing)	0
Au	(audit)	0

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

	Credit Hours	Grade	Scholarship Points
BIOL 101	5	A	20
ENGL 101	3	C	6
HIST 120	3	B	9
MATH 120	3	D	3
TOTAL	14		38

38 divided by 14 = 2.7
(For a complete discussion of grading practices and grade-point averages, see page 15.)

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 re ect academic achievement, rather it is given for athletic accomplishments, contribution to the college, or because of financial need.

HOME SCHOOLING. 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 15.)

HUMAN DIVERSITY COURSES. A designated Human Diversity course exposes students to content intended to help them learn about behavior generated and re ected by the ideals, values and beliefs of diverse groups of people. Students will examine the sources of emotions, community, commonality and con ict associated with diversity and will gain cognitive awareness of their own perspectives as they relate to other groups and to other societies in the world. These courses will allow students to develop a deeper aware-ness and a greather understanding of issues related to race, ethnicity, gender, religion, sexual orientation, and political ideology within their own society or other societies.

HYBRID. Courses in which some portion of classroom instruction is replaced with online activities. These courses require classroom attendance on campus.

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 RESIDENT. A foreign national who is in the United States on an approved student visa status.

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.

KC REACHE. MCC belongs to KC REACHE, an alliance of Kansas City area colleges and universities. KC REACHE colleges provide awareness of distance learning degree programs and student services tailored for distance students. KC REACHE reciprocal agreements exist for library, career, and testing services. Visit www.kcreache.org to find out how you can take advantage of these, and other privileges.

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.

LEARNING COMMUNITIES. MCC linked or coordi-nated general education courses are called Learning Communities and are taught by a team of faculty members. The integration of disciplines within a Com-munity helps focus your education, build motivation, and give added meaning to your college experience. What's more students are able to study and interact with a small group of peers. The Community will include lecture, small group work, and integrated reading and writing assignments. Note: A student may not withdraw from any course within a learning community.

LEARNING ENHANCEMENTS. Learning Enhancement courses are proven ways to make your education more effective. There are three kinds of these courses: Writing Intensive, Learning Communities, and Human Diversity. These courses are also a General Education requirement for the Associate in Arts degree. A student must successfully complete a Writing Intensive course and either a Learning Community or a designated Human Diversity course.

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 MCC-Blue River, MCC-Longview, MCC-Maple Woods, MCC-Penn Valley, and MCC-Business & Technology. The District's legal name is the Junior College District of Metropolitan Kansas City, Missouri.

METROLINK. This is the web-based system that allows you to access your personal and academic information and perform a variety of other transactions over the Internet.

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

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.

ONLINE COURSES. Online courses are accessible through the Internet using MCC's Blackboard learning system. Students will perform most, or all, of their course activities using a range of online tools, though some instructors do require a limited number of on-campus visits for testing or laboratory assignments.

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.

PORTAL. The launch page for all of your MCC Web-based applications, which includes Blackboard, Metrolink and a variety of other programs. This system requires users to enter only one user ID and password for all of their MCC related Web applications.

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

PREREQUISITE. This is a course that must be completed with a minimum grade of C (or higher if indicated) before a student can begin a subsequent course. Prerequisites are indicated in the course description. All students must meet the prerequisite of any course in which they wish to enroll. In some cases, prerequisites are the previous course(s) in a sequence. In other cases, they may be a demonstration of a prerequisite skill. Students who believe that they have met prerequisites by their academic work at a college or university must provide evidence of meeting the prerequisite prior to enrolling in the course.

PROGRAM FOR ADULT COLLEGE EDUCATION (MCC-PACE). This district-wide evening, weekend, online program is designed for working students interested in pursuing a certificate or degree in 6 semesters or less. This is accomplished by offering a variety of instructional delivery options and exible course scheduling options.

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

READING 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 STATUS. 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 ACADEMIC PROGRESS. Students must maintain a certain grade point average and progress toward degree or certificate completion in order to continue enrollment.

All Federal financial aid recipients and some other scholarship recipients must meet specific standards for satisfactory academic progress. Students are advised to become familiar with the requirements of their scholarships and to seek assistance from the campus financial aid office or to refer to the Financial Aid Handbook at www.mcckc.edu.

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.

SERVICE LEARNING. Program which allows students to earn academic credit in selected courses in exchange for meaningful and productive community service.

STANDARD OF STUDENT CONDUCT. This is a code of behavior required of students enrolled at MCC. (See page 17.)

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.

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.

TRANSCRIPT. This is a copy of a student's academic record listing courses taken, grades earned, and honors and degrees received. A student can request that copies bearing the District's seal be sent to educational institutions and other agencies. Transcripts given to students usually lack the official seal.

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 either an Associate in Arts or an Associate in Applied Science degree.

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.

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Metropolitan Community College

NO ONE LIKE YOU. NO COLLEGE LIKE US.®