2014-2015
www.mcckc.edu
metropolitan community college
COURSE CATALOG

Metropolitan Community College Catalog 2014-2015

MCC Information

All Roads Lead to MCC	5
MCC Mission	6
MCC History	7
Scholarships	8
Admission Information	9
Financial Information	13
Academic Information	14
Student Services	17
General Information	20
Continuing, Business and Community Education Programs	23
Graduation Requirements	25
Transfer Degree Programs	26
Career & Technical Degree and Certificate Programs	35

CURRENT CATALOG: 2014-2015

Published at the beginning of the academic year, the catalog contains the necessary information for you to plan your degree and career at Metropolitan Community College.

This is the governing catalog for new students entering Metropolitan Community College in the 2014-15 academic year and for any Metropolitan Community College student returning in the 2014-15 academic year whose governing catalog has expired. Metropolitan Community College reserves the right to make changes in the regulations and offerings announced in this catalog as circumstances require. Information about these changes is available from members of the counseling and advising staff at any of the five campuses.

Metropolitan Community College is accredited by the Higher Learning Accreditation (HLC). HLC is an independent corporation and one of two commission members of the North Central Association of Colleges and Schools (NCA), which is one of six regional institutional accreditors in the United States. The Higher Learning Commission accredits degree-granting post-secondary educational institutions in the North Central region.

Contact the Higher Learning Commission at 230 South LaSalle Street,
Suite 7-500, Chicago, Illinois 60604-1411.
Phone: 800.621.7440 / 312.263.0456.
Fax: 312.263.7462. info@hlcommission.org

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

Letter from the Chancellor

Mark James
Chancellor

Welcome to Metropolitan Community College! Thank you for choosing us. Whether you are fresh out of high school, are coming to us from a 4-year university, or have been in the workforce and are now looking for new skills, we are here to help you achieve your educational goals.

If you're looking to earn an associate's degree, MCC has 87 of them to choose from. If you're looking to earn a certificate in a technical career, you can pick from over 60 career certificate programs. As a transfer institution, we have over 400 articulation agreements with colleges and universities throughout the nation who will grant you credit towards a baccalaureate degree for classes taken at MCC. Whatever your objective, we want to help you accomplish it.

The following is a list of student services at MCC that are here to support you. I really encourage you to take advantage of all we have to offer:

- **Advisors** can help you figure out what classes to take to earn your degree
- **Counselors** can help you determine your career path
- **Faculty** are not only here to teach you inside the classroom but can also provide instructional support during weekly office hours
- The **Learning Center** offers one-on-one tutoring and supplemental instruction to help you better understand subjects, classes or concepts that are challenging to you
- The **Financial Aid** office can help you wade through all of the options of ways to help pay for school
- The **Re-entry Office** can help you deal with unique challenges if you have been away from school awhile and want some help re-adjusting to classroom learning
- The **Campus Life & Leadership** office has plenty of opportunities for you to get involved, to get connected, and to find your support network on campus. Student ambassadors, clubs, debate team, Skills USA, Phi Beta Kappa, and men and women's sports are but a few of the many student activities awaiting you
- The **Disability Support Services Office** provides support if you're dealing with emotional, physical or learning challenges
- **Student Employment Services** can help you with your job search when you're ready to start (or continue) your career

MCC is one college with five campuses conveniently located throughout the metropolitan area. Taking classes near home, near work, or even on-line has never been easier. I truly hope that you will take advantage of these great services while you're at MCC so we can support you on your journey towards college completion.

Mark S. James
Chancellor

The Board of Trustees

From left to right: (standing) Christopher Whiting, Robert Martin, Richard Charles Tolbert, Trent Skaggs, (seated) Mariann Tow and David Disney.

The Officers of the District

Mark James
Chancellor

Tuesday Stanley
Vice Chancellor,
Administrative Services
and Student Development

Paul Long
Vice Chancellor,
Academic Affairs
and Technology

Michael Banks
President,
MCC-Blue River

Hasan Naima
President,
MCC-Business &
Technology

Kirk Nooks
President,
MCC-Longview

Utpal Goswami
President,
MCC-Maple Woods

Joseph Seabrooks
President,
MCC-Penn Valley

All Roads Lead to MCC

No matter where people live in the greater Kansas City metropolitan area, they're just minutes away from one of the five Metropolitan Community 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.

MCC INFORMATION CENTER
(816) 604-1000

ADMINISTRATIVE CENTER
Telephone (816) 604-1000
Fax (816) 759-1158
3200 Broadway
Kansas City, Missouri 64111-2429

MCC-BLUE RIVER
Telephone (816) 604-1000
Fax (816) 220-6511
20301 East 78 Highway
Independence, Missouri 64057-2052

MCC-BUSINESS & TECHNOLOGY
Telephone (816) 604-1000
Fax (816) 482-5256
1775 Universal Avenue
Kansas City, Missouri 64120-2429

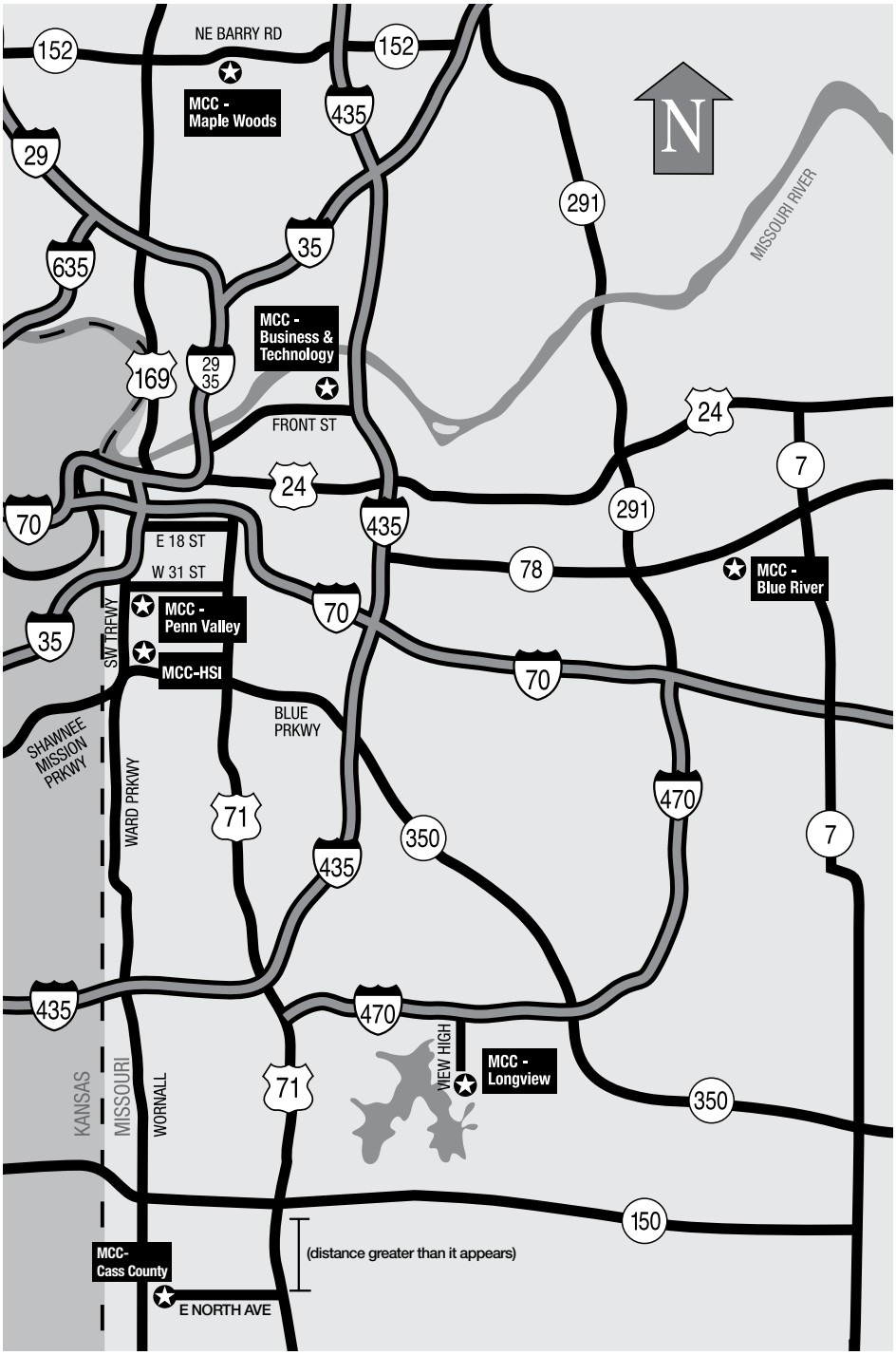
MCC-CASS COUNTY
Telephone (816) 604-1000
Fax (816) 672-2025
Belton High School Freshman Center
801 West North Avenue
Belton, Missouri 64012

MCC-LONGVIEW
Telephone (816) 604-1000
Fax (816) 672-2025
500 SW Longview Road
Lee's Summit, Missouri 64081-2105

MCC-MAPLE WOODS
Telephone (816) 604-1000
Fax (816) 437-3049
2601 NE Barry Road
Kansas City, Missouri 64156-1299

MCC-PENN VALLEY
Telephone (816) 604-1000
Fax (816) 759-4161
3201 Southwest Trafficway
Kansas City, Missouri 64111-2764

MCC-PENN VALLEY
HEALTH SCIENCE INSTITUTE
Telephone (816) 604-1000
3444 Broadway
Kansas City, Missouri 64111-2764



Academic Calendar

see www.mcckc.edu for up-to-date caldendar & events

MCC Mission

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 19,000 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 one of the first two-year colleges in the United States to award the associate 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 Districts 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 at a location near I-435 and Front Street. Several expansions later, this facility became MCC's fifth campus, the Business & Technology Campus.

In 2005, the five Metropolitan Community Colleges became one: Metropolitan Community College (no "s") with five campuses.

MCC-Blue River

MCC-Blue River is MCC's fastest growing campus. It 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 is home to a long list of technical programs that puts MCC at the cutting edge of today's technical world. Campus features include the Fab Lab, a state-of-the-art facility where students can design prototypes and produce them on 3-D printers.

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 includes an exceptional Recreational Center and a nationally prominent automotive technology program.

MCC-Maple Woods

MCC-Maple Woods in the Northland gets its name from a nearby stand of sugar maple trees. The campus includes an outstanding veterinary technology program, and a Human Services Center, which provides housing for area human services agencies as well as the campus's child care and fitness center. The 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. South of the main campus buildings is the Health Science Institute, a state-of-the-art facility that holds more than a dozen health care programs and unique simulation suites.

MCC Foundation-Alumni Association

The MCC Foundation-Alumni Association (MCC Foundation) is a 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, and community and future students.

Scholarship funds raised by the Foundation help students who have the desire for a college education, but not the means. All students deserve the chance to better their lives through education. Students may view general information about scholarships and apply at www.mcckc.edu/scholarship. For the district, the Foundation administers over 250 scholarships and endowments, sponsors alumni and donor recognition events, and leads fundraising campaigns. Our Board of Directors participates in planning and volunteering programs as well as maintaining relationships with the greater community. The Foundation is committed to forming partnerships that make Metropolitan Community College the first choice for higher education in Kansas City.

In addition the MCC Foundation:
- Provides funds for special campus projects such as libraries, classrooms, technology, and student support programs.
- Supports the enhancement and construction of new facilities.
- Supports educational programs to increase student success.

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 ways to make a gift to the Metropolitan Community College Foundation:

- Make an online gift
To give online by credit card, please visit www.mcckc.edu/donate.

-Make a gift by phone
Call 816.604.1195 to talk to a member of the MCC Foundation.

-Make a gift by check or money order
Make the donation payable to:
Metropolitan Community College Foundation
3200 Broadway
Kansas City, MO 64111

-Make a pledge
To have a form mailed or electronically mailed to you, call 816.601.1195

-Payroll Deduction
If you are a faculty or staff member and would like to contribute via payroll deduction, please complete the Foundation Pledge form found on the MCC infoexchange under forms/foundation.

All gifts are administered in compliance with IRS regulations. 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 816.604.1195 or visit www.mcckc.edu/foundation.

Scholarships

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

1. **Plan ahead.** Most scholarships are reviewed in the spring for the fall 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. **Complete the application.** Apply for MCC scholarships online at www.mcckc.edu/scholarshipsearch. After submitting your application, you must check your myMCCKC Student Center Scholarship Application Status page to see if any additional steps must be taken. 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 as many scholarships as you like however, the MCC 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. You may complete your FAFSA online at www.fafsa.gov. When completing the form, use MCC's school code 002484 to speed processing.
3. **Submit the supporting documentation.** Complete all the necessary application steps and submit necessary documentation by the priority application deadline of April 1. Meeting all the requirements of a scholarship does not automatically qualify you to receive a scholarship. A committee at each campus awards the scholarships. You must have a minimum 2.0 G.P.A. to be considered for any scholarships, unless a higher G.P.A. is noted.
4. **Ask Questions.** If you have questions, contact our MCC Information Center at (816) 604-1000.

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. MCC will reopen the review process if funds are still available. Please contact your campus financial aid office for additional information.

Apply online: **http://mcckc.edu/Scholarships**

Admission Information

Eligibility

Students who want to enroll in Metropolitan Community College have several avenues that lead to admission: a high school diploma, a high school equivalency test (HiSet)/GED 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 HiSet/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.

Catalog

The catalog is in effect for the term a student is admitted to the college and is assigned as the student's "catalog of record". Students will follow the program requirements specified in their catalog of record to progress toward graduation. Students who later change to a new major or change from non-degree-seeking status to a declared major will follow the catalog in effect at the time of the change. Students who are continuously enrolled at MCC will maintain their catalog of record. Students who miss four consecutive full semesters (excluding summer) will follow the catalog in effect at the time of re-entry.

Students may select a more current catalog as their catalog of record and would then follow the program requirements specified in that catalog. Students may not combine program requirements from multiple catalogs. It is highly recommended that students speak to an advisor for further information.

College Orientation (COLL 100)

COLL 100 is a one credit hour course designed to help students adjust to the MCC community, develop a better understanding of the learning process, and acquire essential academic survival skills. The course should be completed during students' first enrolled semester. Starting in Fall 2012, any first-time student at MCC with fewer than 12 credit hours completed after high school with at least a 2.0 GPA will take the class, except students

- who are visiting students from another institution, or
- who have already successfully completed an orientation class at another institution.

ESL students who test below a 77 on the reading portion of the ESL Compass test will not take the class until they have successfully progressd to intermediate-level ESL classes.

College Admission

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

1. Complete the online MCC Application for Admission at www.mcckc.edu. Once MCC processes your application you are admitted to the college. Some MCC programs have special requirements.
2. Request that the appropriate transcripts be sent to the MCC Student Data Center, 3200 Broadway, Kansas City, Missouri 64111. Once received, transcripts will be processed and evaluated.
   a. First-time college students should ask the high school they last attended to send a transcript to the above address.
   b. Students who have taken the HiSet/GED test given by the Missouri State Department of Elementary and Secondary Education should have their scores sent to the above address.
   c. Students who are transferring from another college or university should submit a transcript from each school attended to above address.
   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, official transcripts must be submitted and it is also important to 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. The student will receive an electronic communication or a letter confirming admission and notifying each student how to enroll in classes.

Admission of High School Students

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

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.
- 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. For more information about enrollment requirements, program curriculum and class scheduling, call (816) 604-1000.

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 high school equivalency 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.
- It is the policy of Metropolitan Community College that all non-native speakers of English take the ESL Compass Test. This test is only offered at the campuses. Students will be placed at the appropriate level of instruction based on their results.
- 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 (Non Resident). A person who lives in the United States, but not in the state of Missouri, or 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.

Students in the Military

MCC is a Service Members 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. 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.

As part of the SOC agreement, MCC will limit academic residency to twenty-five percent or less of the degree requirement for all degrees for active-duty servicemembers and their adult family members (spouse and college-age children). In addition, there are no "final year" or "final semester" residency requirements for active-duty servicemembers and their family members. Academic residency can be completed at any time while active-duty servicemembers and their family members are enrolled. Reservist and National Guardsmen on active-duty are covered in the same manner.

For more information, call Matt Vandenberg at MCC at (816) 604-1561.

Financial 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 for paying all college charges. If your financial aid award, scholarship or payment from an external source becomes unavailable or is insufficient to pay charges, 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 designated refund period.

Any outstanding charges will result in a financial hold on your account. Financial holds will require that you pay your outstanding balance in order to re-enroll, receive a diploma and/or transcript. MCC will begin immediate collection efforts that may include placing your account with the Missouri income tax intercept program and/or an outside collection agency. You will be responsible for all collection costs assessed by the outside collection agency.

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 including unreturned rental books. For example, students must pay for unreturned library books. If payment is not made, a hold will be put on the students account and 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

Metropolitan Community College offers a payment plan to provide students the option of paying tuition and fees in installments over the course of the term. Students can sign up for the payment plan any time prior to the first installment due date by paying only a non-refundable fee and by identifying a preferred payment method for the automatic payments—either a payment card or bank account. Students who sign up for the plan after the first installment due date are required to pay the sign-up fee plus the first installment amount.

The payment plan divides the total balance owed by the student into equal installments and schedules the appropriate number of automatic payments, depending on the plan option chosen. The system recalculates payment plans daily to account for changes in enrollment (added or dropped classes), financial aid adjustments, or payments from the last 24 hours. Any student whose plan was updated that day receives an email notification of the new plan amounts.

On each installment due date, payments are automatically processed against the student-designated payment method (card or bank account). Students are assessed a late fee if their automatic payment fails and their installment remains unpaid.

Payment plans are available for the fall, spring, and summer terms. The number of plan installment options will vary by term.

Delinquent Accounts

Students who become delinquent on their account will receive ebills, paper statements, letters and calls informing them that they must pay their debt by a certain date or they will be turned over to outside collections. Transcripts, diplomas and/or enrollment are immediately restricted until the balance is paid in full. Budget friendly customized plans are available through Delinquent Accounts.

Placing with collections includes reporting the balance to the State of MO income tax intercept program and/or an outside collection agency. Students are responsible for all collections costs incurred at the collection agency.

Returned Checks

Checks returned insufficient funds by the banks are deposited a second time. If the check is returned again, your account is placed on restriction and is charged the amount of the check plus a $25 fee. Students on restriction cannot enroll or receive grades or transcripts. You also lose check-writing privileges at MCC for one year. Any returned check not paid may involve outside collection actions.

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 debt the student owes to MCC.

Students receiving financial aid refunds should go online to myMCCKC 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 the MCC Information Center at (816) 604-1000.

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 Information

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 first 60% of the term (except during the 100% refund period) where there is no official withdrawal noted on the transcript) or who has been doing satisfactory work and was withdrawn during the last 40% 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.

Au 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 online at

myMCCKC

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.

Note: Financial aid is not available for audited classes.

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 records office before the end of the first quarter of the class.

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

The best way to improve your GPA is to retake a class for which you received a "D" or an "F". The grade remains on your transcript, but the last one you earn is the one counted in your GPA. You may also retake a class that was transferred from another institution, as long as the course is evaluated as an exact match. Other colleges may have different policies. There may be limits on the number of times you 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 grants, scholarships, loans and/or aid. Access MCC's SAP Policy online at www.mcckc.edu/SAP

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 average 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

You may be able to have poor grades excluded from calculation of current academic progress at MCC if they were earned at least five years ago. Other colleges 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

MCC 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. MCC charges no fee for providing transcripts requested.

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 (Transfer Credit)

Transcripts from all previously attended colleges and universities must be submitted to the Student Data Center at 3200 Broadway, Kansas City, Missouri 64111. Any foreign transcripts must be translated and evaluated by an outside service, such as Educational Credential Evaluators, Inc. (www.ece.org). MCC accepts credit in transfer from regionally accredited institutions of recognized standing, both public and private. Transfer work will not be evaluated and posted until MCC has received official transcripts directly from the transferring school or in a sealed envelope. All courses taken at other colleges and universities become part of the student's permanent record. However, only courses equivalent to those in the student's MCC program will be applied toward an MCC degree or certificate. While the MCC GPA is used for a MCC degree or certificate, the transfer GPA will appear on the MCC transcript as a transfer GPA and included in the combined GPA. Note: Transfer work may impact financial aid eligibility.

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.

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 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.

Dropping a Course

Students may drop a class through their myMCCKCstudent center or by visiting with an advisor. Dropping a class after the 100% refund period will result in a grade of "W" on the transcript. During the last 40% of a class, students will receive a grade for their academic progress. Student who stop attending class during this time period could fall below satisfactory academic standards and therefore receive a failing grade.

To get a full refund, you need to make the drop decision early. Refunds are based on the date you officially drop a class, as in this schedule. Talk with an advisor before you drop. Dropping courses could affect your health insurance, financial aid, scholarships or A+ eligibility.

Withdrawal from College

To withdraw from all classes before the end of the semester, complete a drop/add form, which is available at a campus advising, counseling or development center. We can also mail you the form. Return the completed form to the admissions/ records office as soon as possible because the date it is processed becomes the official date of withdrawal on your permanent record. That date may determine your semester grades. (For example, if the date falls during the last quarter of the semester and you are doing unsatisfactory work, you'll get an "F".) Also if you receive federal or state financial aid, you may be asked to repay funds.

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 60 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 60 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. 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 online, or from the office of the dean of student development.

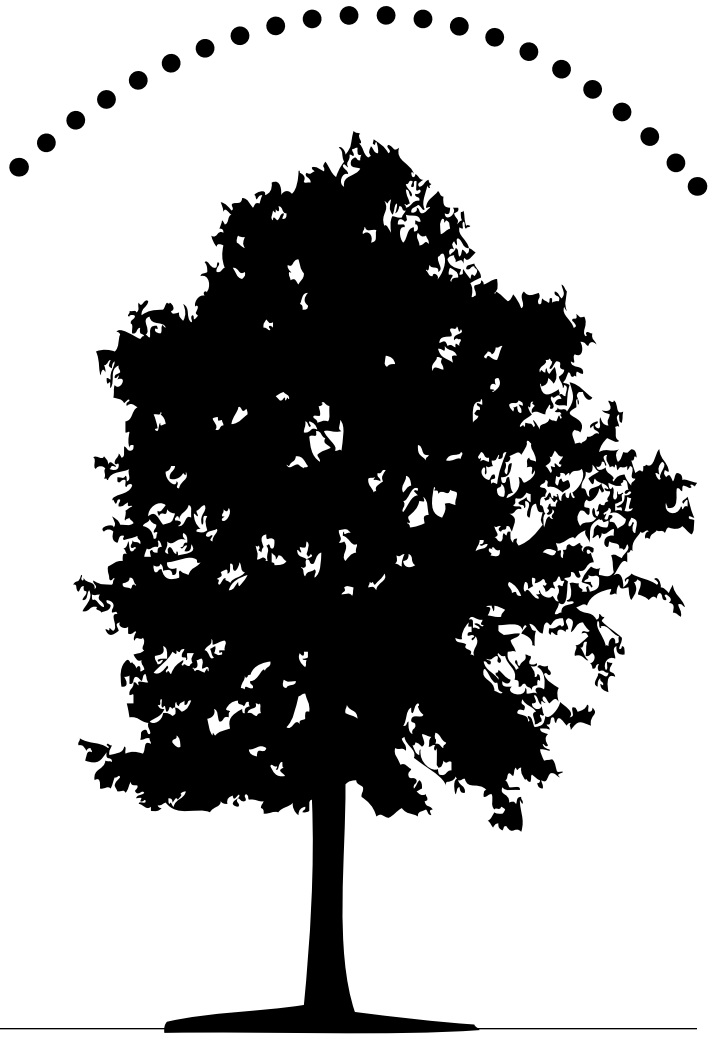
Student Disciplinary Procedure

A student who is charged with misconduct which requires disciplinary action will be required to meet with the appropriate dean. The student may request a hearing by 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.

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 them to meet regularly with their counselors or advisors to further discuss their educational progress and future plans. Inventories that help students assess their skills, interests, values and personality style for career planning purposes are available through the counseling or development center.

Support Services

Parking

A parking sticker is required to park on campus. Obtain a free sticker at the campus Public Safety Office or at an information desk on the campus.

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 on new textbooks to cover the costs of operating the bookstores. A full-time student should expect to pay $300-$700 per semester for textbooks. At the end of each semester, the bookstores hold a textbook buyback where texts being used for the next semester may be purchased from the student for approximately 50% of the new text price.

In an effort to control the rapidly rising costs of textbooks, MCC has implemented a textbook rental program for selected classes using a tiered pricing structure. Students may rent a book, use it for the semester and return it in resalable condition to the bookstore before the posted deadline. Check with each store to see which classes have rental textbooks available.

For more information regarding MCC's bookstores and their policies, go to **www.bookstores.mcckc.edu**

College Libraries

Metropolitan Community College (MCC) libraries provide a variety of resources and services to assist students in their research needs. More than 40 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.

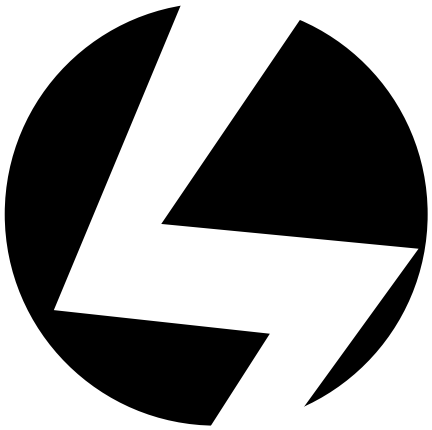
More information is available at the MCC Library website, which is located at http://mcckc.edu/library. Individual campus libraries can also be accessed through this site. Reference assistance is also available online through "Reference Librarian Chat."

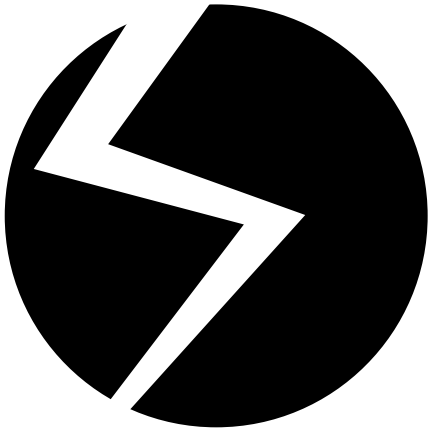
Computer Lab Services

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. A copy of the student e-mail policy is available at **www.mcckc.edu.**





Disability Services

Each MCC campus is served by a Disability Support Services (DSS) office that provides assistance for eligible students who have a documented disability as defined by the Americans with Disabilities Act. This may include, but is not limited to, students with learning disabilities, attention deficit disorder, physical impairments, hearing or vision loss, psychiatric diagnosis, and brain injuries. All services provided by the MCC DSS Offices are individualized based on each student's documentation and specific needs. Please make requests for support services as early as possible as some accommodations require extended periods of time to obtain. For more information, or to make an appointment, call:

MCC-Blue River	(816) 604-6651
MCC-Business & Technology	(816) 604-3192
MCC-Longview	(816) 604-2254
MCC-Maple Woods	(816) 604-3192
MCC-Penn Valley	(816) 604-4293

For relay calls, dial 711.

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

ABLE Program

The ABLE program (Academic Bridges to Learning Effectiveness), offered at Longview, provides a more intensive level of services for students with Learning Disabilities (LD), Traumatic Brain Injuries (TBI), autism spectrum disorders (ASD) and other neurological diagnoses to help students make the transition into college. 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 (816) 604-2053.

Visit the ABLE website at

www.mcckc.edu/able

Learning Centers/ Sucess Centers

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

Other services include listening and note-taking, reducing test anxiety, test-taking strategies and research paper pointers. All 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) 604-6770
MCC-Longview	(816) 604-2665
MCC-Maple Woods	(816) 604-3309

www.mcckc.edu/tutoring

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) 604-6568
MCC-Business & Technology	(816) 604-5210
MCC-Longview	(816) 604-2265
MCC-Maple Woods	(816) 604-3095
MCC-Penn Valley	(816) 604-4089

Project Success

Project Success is a (TRiO) Student Support Services (S.S.S.) Program funded by the U.S. Department of Education. It gives a select number of MCC - Penn Valley students the academic support, counseling, transfer assistance, and cultural enrichment they may need in order to complete a college degree - all without cost to any of the Project Success participants.

- Project Success (TRIO) S.S.S. helps low income, first generation, and disabled students who are seeking Bachelor's degrees.
- Members of the program are active in their campus community through other organizations like Phi Theta Kappa and Student Ambassadors and hold leadership positions within these clubs and organizations.
- The majority of the program's members transfer to local colleges and universities where they obtain their Bachelor's degrees.
- Project Success members go on to live rewarding lives in various professions including, but not limited to, nursing, business, education, and social work.

www.mcckc.edu/pennvalley/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

The MCC campuses have fitness centers. 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.For more information call:

MCC-Longview	(816) 604-2400
MCC-Maple Woods	(816) 604-3555
MCC-Penn Valley	(816) 604-4222

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.; 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.

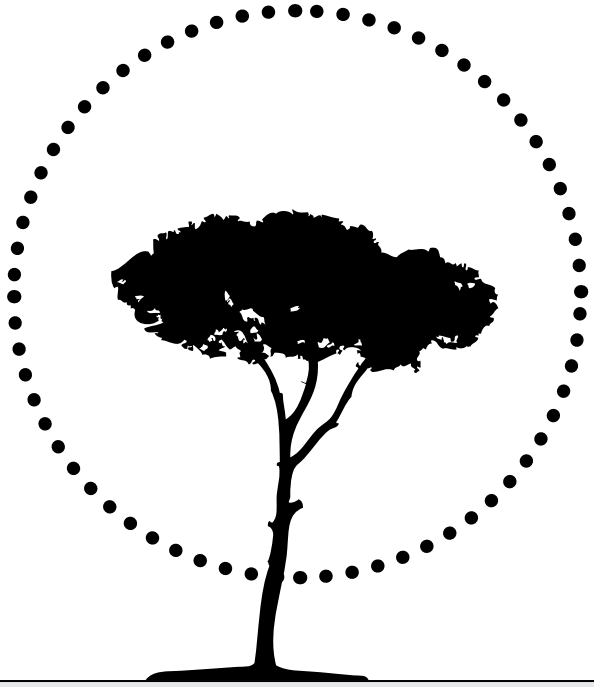
Educational Opportunity Center (EOC)

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 or advisor call (816) 604-4400.

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.



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.

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.

Mark S. James
Chancellor

Nondiscrimination

This public "NOTICE of NON-DISCRIMINATION" is required by several federal laws and regulations including those implementing Title VI, Title VII, Title IX, Americans with Disabilities Act, Section 504 and the Age Discrimination Act. This notice serves to inform all members of the Metropolitan Community College faculty, staff, student body and guests, that Metropolitan Community College prohibits discrimination 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. Following are the applicable federal and state Civil Rights laws that prohibit discrimination:

Title I of the Americans with Disabilities Act of 1990 prohibits employment discrimination against qualified individuals with disabilities by employers with 15 or more employees. The
U.S. Equal Employment Opportunity Commission and the Office for Civil Rights are the agencies assigned to enforce Title I of the ADA.

Title II of the Americans with Disabilities Act of 1990 prohibits disability discrimination by public entities, including public colleges and universities whether or not they receive federal financial assistance. The Office for Civil Rights (U.S. Department of Education) is the law enforcement agency charged with enforcing Title II of the ADA.

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in any program or activity receiving federal financial assistance. Programs and activities that receive federal financial assistance from the United States Department of Education are covered by Title VI. The Office for Civil Rights (U.S. Department of Education) is the law enforcement agency charged with enforcing Title VI.

Title VII of the Civil Rights Act of 1964 protects individuals against unlawful employment practices based on their race, color, sex, and national origin. The Civil Rights Act of 1991 significantly extended plaintiffs' rights under Title VII. The U.S. Equal Employment Opportunity Commission is the law enforcement agency charged with enforcing Title VII.

Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs or activities and extends to employment and admission to institutions that receive federal financial assistance. The Office for Civil Rights (U.S. Department of Education) is the law enforcement agency charged with enforcing Title IX.

Age Discrimination Act of 1975 protects people from discrimination based on age in programs or activities receiving federal financial assistance. The U.S. Equal Employment Opportunity Commission is the law enforcement agency charged with enforcing the ADA of 1975.

Age Discrimination in Employment Act of 1967 protects individuals who are 40 years of age or older. The U.S. Equal Employment Opportunity Commission is the law enforcement agency charged with enforcing the ADEA.

Civil Rights Act of 1991 provides monetary damages in cases of intentional employment discrimination. The U.S. Equal Employment Opportunity Commission is the law enforcement agency charged with enforcing the CRA of 1991.

Equal Pay Act of 1963 protects men and women who perform substantially equal work in the same establishment from sex-based wage discrimination. The U.S. Equal Employment Opportunity Commission is the law enforcement agency charged with enforcing the EPA.

Section 504 of the Rehabilitation Act of 1973 protects people from discrimination in admission, employment, treatment, or access based on disability in programs or activities receiving federal financial assistance. The Office for Civil Rights (U.S. Department of Education) is the law enforcement agency charged with enforcing Section 504.

Executive Order 11246 requires certain government contractors to engage in affirmative action and to not discriminate based on race, sex, or national origin. The Office of Federal Contract Compliance Programs (U.S. Department of Labor) is the agency charged with enforcing EO 11246 and ensuring that federal contractors are in compliance.

COLLEGE NONDISCRIMINATION STATEMENT:
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.

Federal citations:
The regulations implementing Title VI, Title IX, Section 504, the Age Discrimination Act, and Title VII contain requirements for recipients to issue notices of nondiscrimination. 34 C.F.R. Sections 100.6(d), 106.9, 104.8, 110.25, 41 C.F.R. Sections 60-1.42(a), respectively. The Title II regulation also contains a notice requirement that applies to all units of government, whether or not they receive federal aid. (See 28 C.F.R. Section 35.106.)

MCC is an equal-opportunity employer.

Inquiries concerning MCC's compliance may be addressed to the following persons:

MCC District
Kathy Walter-Mack, Chief of Staff,
Associate Vice Chancellor of Human Resources,
3200 Broadway, Kansas City, Missouri 64111-2429;
telephone (816) 604-1587

MCC-Blue River
Jon Burke, Dean of Student Development,
20301 E. 78 Highway, Independence, Missouri 64057-2053;
telephone (816) 604-6620

MCC-Business & Technology
Karen Moore, Dean of Student Services,
1775 Universal Avenue, Kansas City, Missouri 64120-1318;
telephone (816) 604-5229

MCC-Longview
Karen Goos, Dean of Student Development,
500 SW Longview Road, Lee's Summit, Missouri 64081-2015;
telephone (816) 604-2326

MCC-Maple Woods
Shelli Allen, Dean of Student Development,
2601 NE Barry Road, Kansas City, Missouri 64156-1299;
telephone (816) 604-3175

MCC-Penn Valley
Yvette Sweeney, Dean of Student Services,
3201 Southwest Trafficway, Kansas City, Missouri 64111-2764;
telephone (816) 604-4114

Inquiries may also be addressed to the
Director, Office for Civil Rights,
Department of Education,
8930 Ward Parkway, Suite 2037
Kansas City, MO 64114
telephone (816) 268-0550

Tobacco-Free

Metropolitan Community College is committed to providing a safe and healthy environment for all students, employees, contractors, and visitors. As a result of this commitment, the use, advertising, or sponsorship of tobacco and tobacco substitute products, excluding cessation products, on all campus premises, leased property, and college-owned vehicles is prohibited, with no exceptions. This policy applies to all students, employees, tenants, subtenants, contractors, and visitors. For additional information on Tobacco-Free MCC go to http://mcckc.edu/tobaccofree

Right to Know

MCC complies with the provisions of "The Crime Awareness and Campus Security Act of 1990." A provision of this act requires higher education instiitiutions to provide students an annual report that contains occurences of criminal offenses and arrests on campus and adjacent public property. This report is available at www.mcckc.edu/crimereport.html website. For a printed copy, please call (816) 604-1436 or stop by the campus public safety offices.

Student Consumer Information

The Higher Education Opportunity Act of 2008 (HEOA) requires that postsecondary institutions participating in federal student aid programs make a variety of disclosures to students. Many of these disclosures are listed in this catalog on the following pages:

	Page
Satisfactory Progress	15
Accreditation	2
Admissions Policies	9
Cost of Attendance	13
Course Load	16
Financial Assistance	13
Refund Policy	13

Additional required student consumer information can be found on the MCC website at http://www.mcckc.edu/StudentConsumerInfo.

You may request information from the
MCC Information Center at (816) 604-1000.

Americans with Disabilities Act

Metropolitan Community College complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act which prohibit discrimination in admission or access to its programs based on disability. Each MCC campus has an Disability Support Services Office that provides special services for students with documented disabilities. Arrangements can be made for aids and adjustments to help ensure equal access to programs and services. The campus Disability Support Services Office also has information regarding the existence and location of services, activities, and facilities that are accessible to and usable by persons with disabilities.

Inquiries may be addressed to:

MCC-Blue River
Disability Support Services Coordinator,
20301 E. 78 Highway,
Independence, Missouri, 64057-2023;
Telephone: (816) 604-6651

MCC-Business & Technology
Disability Support Services Coordinator,
2601 NE Barry Road,
Kansas City, Missouri, 64156-1200
Telephone: (816) 604-3192

MCC-Longview
Disability Support Services Coordinator,
500 SW Longview Road,
Lee's Summit, Missouri, 64081-2015;
Telephone: (816) 604-2254

MCC-Maple Woods
Disability Support Services Coordinator,
2601 NE Barry Road,
Kansas City, Missouri, 64156-1200
Telephone: (816) 604-3192

MCC-Penn Valley
Disability Support Services Coordinator,
3201 Southwest Trafficway,
Kansas City, Missouri, 64111-2764:
Telephone: (816) 604-4293

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 contact the college counseling department or the dean of students office listed on page 21.

Student Rights Under the Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records.

They are:

1. The right to inspect and review the student's education records within 45 days of the day the College receives a request for access. Students should submit to the Dean of Students or the Office of the Registrar/Enrollment Manager ("College Official") a written request that identifies the record(s) they wish to inspect. The College Official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the College Official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or in violation of the student's right to privacy. Students desiring an amendment to their education record should write the College Official responsible for maintaining the record, clearly identify the part of the record they want changed, and specify why it is inaccurate, misleading, or in violation of the student's privacy.

3. The right to a hearing regarding the request for an amendment of the student's education records. If the College decides not to amend the record as requested by the student, the College must notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

4. The right to prevent the College's disclosure of the student's personally identifiable information from the student's education records in most circumstances. The College must obtain the written consent of a student before disclosing that student's personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. Where required, a student's consent must specify the records to be disclosed, the purpose of the disclosure, and the party or class of parties to whom disclosure may be made. FERPA contains the following exceptions allowing a College to disclose a student's personally identifiable information:

a) Disclosure to school officials with legitimate educational interests is permitted without a student's written consent. A school official is a person employed by the College in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College has contracted institutional services or functions that the College would otherwise use employees to perform (such as an attorney, auditor, or collection agent); 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 responsibility. A school official must be under the direct control of the institution with respect to the use and maintenance of information from education records.

b) Disclosures to parents are permitted in three situations. First, disclosure of a student's personally identifiable information to parents is permitted absent a student's written consent in the event of a health or safety emergency. The College may disclose education records in an emergency if the College determines that there is an articulable and significant threat to the health or safety of the student or other individuals. Second, disclosure of a student's personally identifiable information is permitted to parents of the student if the student is a dependent pursuant to Section 152 of the Internal Revenue Code of 1986 and notice is given to the student that a parent has requested such information. Third, disclosure of a student's personally identifiable information to parents is permitted without the student's written consent if the student is under 21 and has violated a law or College rule or policy governing alcohol or controlled substance consumption.

5. The right to opt out of the disclosure of directory information. Pursuant to FERPA, the College has classified certain personally identifiable information as directory information. Metropolitan Community College defines directory information as the student's name, address, telephone number, e-mail address, photos, date of birth, place of birth, class, major field of study, dates of attendance, full time/part time status, degrees, honors, and awards received, participation in officially recognized activities and sports, physical traits of athletes, and the most recent previous educational institution attended by the student. Students who wish to restrict the release of directory information must submit the appropriate form to the Office of the Registrar/Enrollment Manager during the first week of each academic term. This form can be found on the College's website, at the Dean of Students' Office or at the Office of the Registrar/ Enrollment Manager. Upon receipt of such request the Office of the Registrar/Enrollment Manager will designate that the student's directory information is confidential and not to be released outside the College except to individuals, institutions, agencies and organizations authorized in the Act. The College will honor all requests to withhold any of the categories of directory information listed above but cannot assume any responsibility to contact the student for subsequent permission to release information. Nondisclosure will be enforced until the information is subsequently released by the student. A student may not, however, opt-out of disclosure of the student's name, institutional e-mail address, or electronic identifier in the student's classroom. Regardless of the effect on the student, the College assumes no liability for honoring the request of the student to restrict the disclosure of directory information.

6. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Metropolitan Community College to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5920

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.

Workforce Development & Business Services

Short-Term Training for Jobs

MCC is committed to training and developing Kansas City's workforce. Our programs provide job-ready training – whether you are looking to start in a new career or further your skills in your chosen field. We offer convenient, short term schedules throughout the year, along with online options. MCC focuses on the technical and personal skills that employers want. Our instructors come from industry, providing relevant training that will prepare you for future employment. Here are some highlighted programs (check our website for more information):

We offer:

Healthcare

- Central Services/Sterile Processing
- Certified Nurse Assistant (CNA)
- Certified Medication Technician (CMT)
- Level I Medication Aide
- Pharmacy Technician
- Phlebotomist

Information Technology

- Comp TIA Strata
- Comp TIA A+
- Comp TIA Net+
- Customer Contact Skills
- Microsoft Office

OSHA Training Center

All current OSHA Safety Training classes
Environmental Health and Safety classes
Career Certifications:

- CSHO – Certified Safety & Health Official
- SHEP – Safety, Health and Environmental Professional
- SSH - Specialist in Safety & Health

Technical Skills

- Electronic Assembly
- IPC Soldering
- Machining
- Welding

Transportation & Logistics

- CDL-A Truck Driver Training
- CDL-B Truck Driver Training
- Warehouse & Logistics

Customized Training Classes

For over 25 years, Metropolitan Community College has served Kansas City's workforce needs by directly working with companies to provide customized training programs and consulting services. For the past three years the Institute for Workforce Innovation has been ranked in the Top 25 of Area Consulting Firms by the Kansas City Business Journal. We are committed to helping companies improve performance in all areas – people, processes, workplace environment – to maximize your company's productivity and ROI. Our performance consultants are experts in their fields, bringing real-world value and relevancy to both front-line workers and executives alike. The Institute will customize a solution to meet your company's needs with a variety of delivery options available, including on-site training, online courses or training in any of MCC's state of the art technical labs. Training and consulting services include but are not limited to:

- Employee Knowledge and Skills Assessment
- Employee and Team Training
- Database Solutions
- Human Resources
- Learning Management
- Quality Management, including ISO and Lean
- OSHA Training and Safety Management
- Technical Skills, including CNC, Welding, Soldering

Missouri State Funding

MCC has partnered with the Missouri Division of Workforce Development to assist companies in applying for state training funds to offer programs designed to meet a company's specific needs. These programs are designed to facilitate training and financially assist employers which are expanding their workforce, locating a new facility in the State of Missouri or relocating a company to Missouri. The training available is as diverse as the companies served. MCC has assisted companies from the following industry sectors to obtain these state funds: healthcare, animal health, manufacturing, energy and green technology, information technology and transportation and logistics. Whether your company is new, expanding or retraining, we have a program that can increase your return on investment and provide you with a skilled workforce.

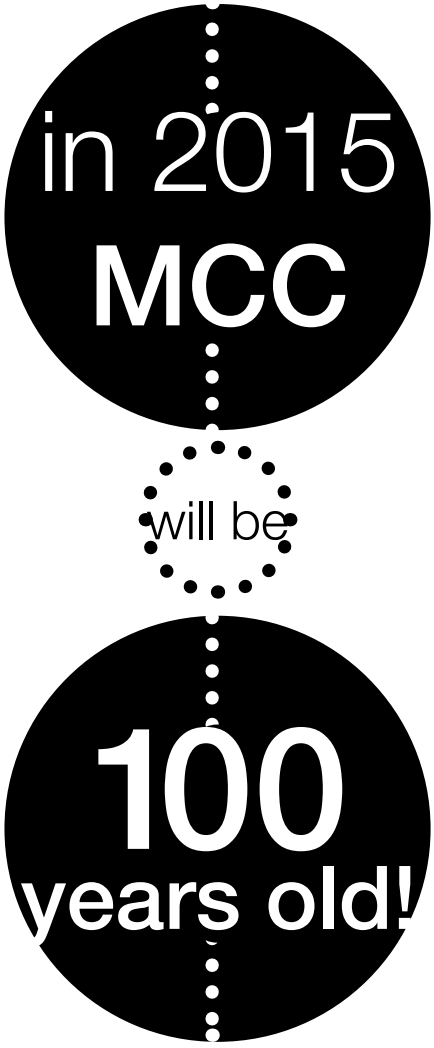
Community Education

MCC-Blue River
(816) 604-6518; mcckc.edu/brcommed
- Driver's education
- Certified Physical Agility Testing for Fire
- Continuing Education Units

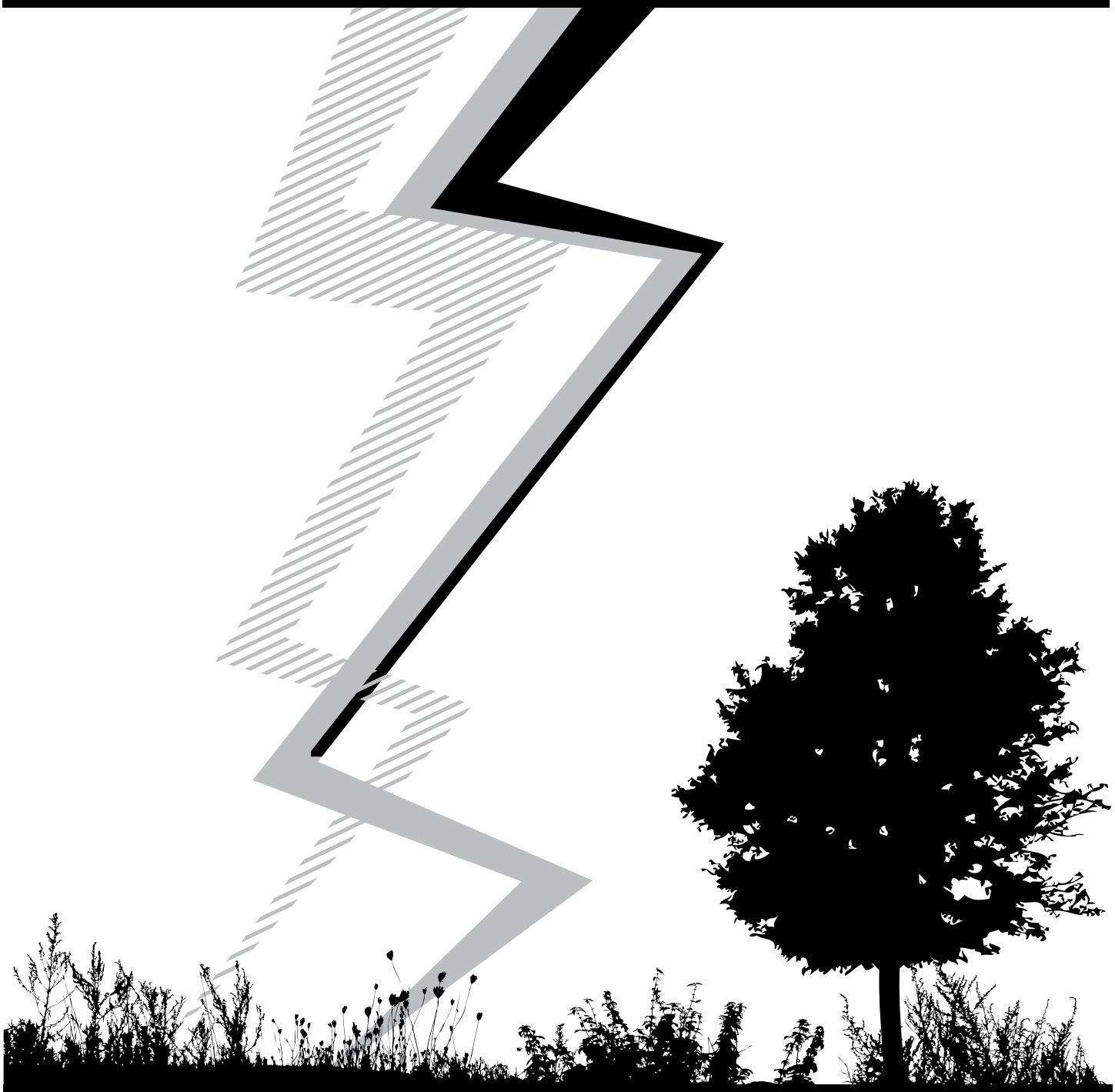
MCC-Longview
(816) 604-2030; mcckc.edu/lvcommed
- ACED (classes for adults with developmental disabilities)
- Adult leisure classes
    - o Personal interest
    - o Foreign language
    - o Computer/technology
    - o Health/fitness
- ed2go online classes
- Flights of Fancy kite festival
- Reading Horizons (one-on-one reading tutoring)

MCC-Maple Woods
(816) 604-3011; mcckc.ed/mwcommed
- College Experience for Adults with Developmental Disabilities
- Ed2Go online classes
- Free Introductory Computer Classes
- Kansas City Storytelling Celebration
- Motorcycle safety training and repair maintenance
- Professional development

Community Education:
Leisure and Lifelong Learning
MCC Community Education offers lifelong learning opportunities for the enrichment, education and enjoyment of our neighbors.



GRADUATION REQUIREMENTS



transfer degree programs 26

career & technical degrees and
certificate programs 35

Transfer Degree Programs

Degrees

Metropolitan Community College awards 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 successfully complete at least 60 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 60 credits are required -- 42 of them in general education courses and the rest 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

Purpose Statement: The Metropolitan Community College Associate in Arts degree provides a well-rounded educational foundation that prepares students to select appropriate majors/career paths, helps them transfer and successfully complete baccalaureate degrees.

Associate in Arts Degree

General Education Requirements		Credits	Semester Taken	Prerequisites
Communications:				
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
COMM 100	Fundamentals of Speech ***or***	3		ENGL 30/90 or appropriate placement test score
COMM 102	Fundamentals of Human Communication			ENGL 30/90 or appropriate placement test score
Mathematics:				
MATH 120	College Algebra or higher	3-5		MATH 110 or satisfactory score on the math placement test
American Institutions: ***(Choose one of the following)***				
HIST 120	United States History to 1865	3		
HIST 121	United States History since 1865			
POLS 136	Introduction to American National Politics			
POLS 137	Introduction to State and Local Politics			
If the student has not completed one course which is the equivalent to one of the above courses at a Missouri institution of higher education, the student must satisfy the Missouri Constitution requirement by completing POLS 153.				
Sciences: ***(2 courses, 1 with lab, click the link to see the list of courses)***		7-10		See course section of the catalog for individual course prerequisites.
Western Civilization: ***(Choose one of the following)***				
HIST 133	Foundations of Western Civilization	3		
HIST 134	Modern Western Civilization			
Social Sciences: ***(Choose one of the following)***				
PSYC 140	General Psychology	3		
SOCI 160	Sociology			
ECON 210	Macroeconomics			MATH 40 or 40L or satisfactory score on placement test
ECON 211	Microeconomics			MATH 40 or 40L or satisfactory score on placement test
ANTH 100	General Anthropology			
ANTH 110	Cultural Anthropology			
Humanities: ***(Choose one of the following)***				
ENGL 218	Introduction to Literature	3		
ENGL 220	British Literature to 1750			
ENGL 221	British Literature 1750 - Present			
ENGL 222	American Literature to 1860			
ENGL 223	American Literature 1860 - Present			
ENGL 268	Women's Literature			
PHIL 100	Introduction to Philosophy			
PHIL 200	Logic			
PHIL 203	Ethics			
Humanities Appreciation: ***(Choose one of the following)***				
ART 108	Survey of Art	3		
ART 150	History of Art I			
ART 151	History of Art II			
MUSI 108	Music Appreciation			
THEA 106	Theater Appreciation			
Common Core Electives (click the link for the list of the Missouri Transfer Library)				
The number of elective hours will vary for students to meet the 42 hour core		3-8		
Total General Education Courses		42		
General Degree Requirements				
Global Diversity (click the link to see the list of courses)		3		
COLL 100	First Year Seminar	1		
CSIS 115	Technology Fundamentals and Applications or higher or test out	3		
Electives: Advising Track (click the link for advising track recommendations)				
Advising Tracks are lists of suggested courses designed to help students successfully transfer to a major area of study. These tracks are not guaranteed to transfer. Students should consult with both MCC advisors and receiving institutions.				
The number of electives in an Advising Track will vary.				
Total Credit Hours Required		**60**		

- All courses must be at least 100 level or higher
- Courses can only be used once to meet degree requirements
- Students who are waived from CSIS 115 or COLL 100 will have additional elective hours
- Students earn a General Education Certificate by completing the Core 42. These hours are accepted at most Missouri public institutions of higher education as meeting the general education requirements.

The Associate in Arts Teaching Degree

The Associates in Arts in Teaching (AAT) 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 MoGEA, and earn a minimum 2.75 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

COLL 100 First Year Seminar	1		
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 30/90 or appropriate placement test score
ENGL 102	3		ENGL 101
COMM 100 or COMM 102	3		ENGL 30/90 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		
COMM 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, PHYS, or PHSC (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		
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 MoGEA exam.* (EDUC 285 Education of Exceptional Learners can be used as an elective.)	8		
Total Credit Hours Required	**63**		

- All courses must be at least 100 level or higher
- Courses can only be used once to meet degree requirements
- Students must achieve a minimum GPA of 2.75
- Students must achieve minimum scores on each section of the MoGEA
- We recognize that four-year transfer institutions may have additional requirements including higher GPA, higher MoGEA 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

COLL 100 First Year Seminar	1		
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 30/90 or appropriate placement test score
ENGL 102	3		ENGL 101
COMM 100 or COMM 102	3		ENGL 30/90 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			
COMM 103, 104, 106, 110, 112, 114, 128, 133			
HIST/HUMN 133 or 134			
Natural Sciences (one lab course)			
BIOL, CHEM, GEOG, GEOL, 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			

A.C.S. Computer Science (cont)

Specific Program Requirements - Choose an Emphasis			
Computer Science Emphasis			100100-100103 Revised 6/2013 (Summer 2013)
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			100100-100104 Revised 12/2004 (Fall 2005)
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	**63**		

The Associate in Engineering Degree

Associate in Engineering
Engineering ..... 65-71 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 Missouri University of Science and Technology. 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.

Associate in Engineering

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
HIST 120 HIST 121	United States History to 1865 ***or*** United States History Since 1865	3		
ECON 210 POLS 135 POLS 136 POLS 137	Macroeconomics ***or*** Introduction to Political Science ***or*** Introduction to American National Politics ***or*** Introduction to State and Local Politics	3		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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 CSIS 123	Programming for Engineers and Scientists* ***or*** Programming Fundamentals	3		MATH 120 and 130 or MATH 150 (ENGR 104) MATH 40/40L or appropriate placement test score (CSIS 123)
ENGR 113 ETEC 152	Engineering Design & Microcomputer Applications** ***or*** Engineering Graphics & CADD I	3-5		MATH 110 (ENGR 113) MATH 40/40L (ETEC 152)
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 seven courses: CHEM 221 CHEM 222 ENGR 215 ENGR 223 ENGR 230 ENGR 233 ENGR 240	 Organic Chemistry I Organic Chemistry II Engineering Statistics and Computation Thermodynamics and Heat Transfer Dynamics Circuit Analysis I Mechanics of Materials	6-10		 CHEM 112 (CHEM 221) CHEM 221 (CHEM 222) MATH 190 (ENGR 215) 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		**65-71**		

*Students may substitute BIOL 101, CHEM 112, or SRVY 135 for ENGR 104.
** Students may substitute BIOL 101 or CHEM 112 for ENGR 113.

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, the general education requirements listed below and the specialized education requirements for either Biology or Chemistry.

A.S. Biology

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
Two of the following: HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	 United States History to 1865 United States History Since 1865 Introduction to Political Science Introduction to American National Politics Introduction to State and Local Politics	6		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Humanitites 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 CHEM 222 ***or*** PHYS 130 PHYS 131	Organic Chemistry I ***and*** Organic Chemistry II General Physics I ***and*** General Physics II	10		CHEM 112 (CHEM 221) CHEM 221 (CHEM 222) MATH 130 (PHYS 130) PHYS 130 (PHYS 131)
MATH 115 MATH 120 ***or*** MATH 180	Statistics ***and*** College Algebra 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		**63-66**		

A.S. Chemistry

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
HIST 120 HIST 121 ***or*** *Two of the following:* POLS 135 POLS 136 POLS 137	United States History to 1865 ***and*** United States History Since 1865 Introduction to Political Science Introduction to American National Politics Introduction to State and Local Politics	6		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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		**65**		

General Education

General Education Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
Communications:				
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
COMM 100	Fundamentals of Speech ***or***	3		ENGL 30/90 or appropriate placement test score
COMM 102	Fundamentals of Human Communication			ENGL 30/90 or appropriate placement test score
Mathematics:				
MATH 120	College Algebra or higher	3-5		MATH 110 or satisfactory score on the math placement test
American Institutions: ***(Choose one of the following)***				
HIST 120	United States History to 1865	3		
HIST 121	United States History since 1865			
POLS 136	Introduction to American National Politics			
POLS 137	Introduction to State and Local Politics			
If the student has not completed one course which is the equivalent to one of the above courses at a Missouri institution of higher education, the student must satisfy the Missouri Constitution requirement by completing POLS 153.				
Sciences: ***(2 courses, 1 with lab, click the link to see the list of courses)***		7-10		See course section of the catalog for individual course prerequisites.
Western Civilization: ***(Choose one of the following)***				
HIST 133	Foundations of Western Civilization	3		
HIST 134	Modern Western Civilization			
Social Sciences: ***(Choose one of the following)***				
PSYC 140	General Psychology	3		
SOCI 160	Sociology			
ECON 210	Macroeconomics			MATH 40 or 40L or satisfactory score on placement test
ECON 211	Microeconomics			MATH 40 or 40L or satisfactory score on placement test
ANTH 100	General Anthropology			
ANTH 110	Cultural Anthropology			
Humanities Appreciation: ***(Choose one of the following)***				
ART 108	Survey of Art	3		
ART 150	History of Art I			
ART 151	History of Art II			
MUSI 108	Music Appreciation			
THEA 106	Theater Appreciation			
Common Core Electives (click the link for the list of the Missouri Transfer Library)				
The number of elective hours will vary for students to meet the 42 hour core		3-8		
Total General Education Courses		42		

International Studies

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

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.

International Studies Certificate

COLL 100 First Year Seminar	1		
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 220, ENGL 221, ENGL 254, ENGL 255, ENGL 256, 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, GEOG 111, GEOG 112, GEOG 113, POLS 234, SOSC 171	3		
One Foreign Language course 100 or above	3-5		
One of the following:			
ENGL 260, ENGL 264, ENGL 265, HIST 140, MUSI 116, SOCI 164, SOCI 210, COMM 228	3		
One elective from the following:			
BIOL 238, BIOL 239, COMM 233 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	**25-29**		

Career & Technical Degrees & Certificates

Certificates

In addition to two-year associate degrees, Metropolitan Community College awards certificates to students who complete certain short-term career and technical programs. Some of the same certificates can only be completed at certain campuses.

Associate in Applied Science Degree

MCC also awards Associate in Applied Science degrees. Some of the degrees can only be completed at certain campuses.

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. 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 ENGL 101 or 102 or COMM 100 or 102 AND the 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.

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 call (816) 604-1000.

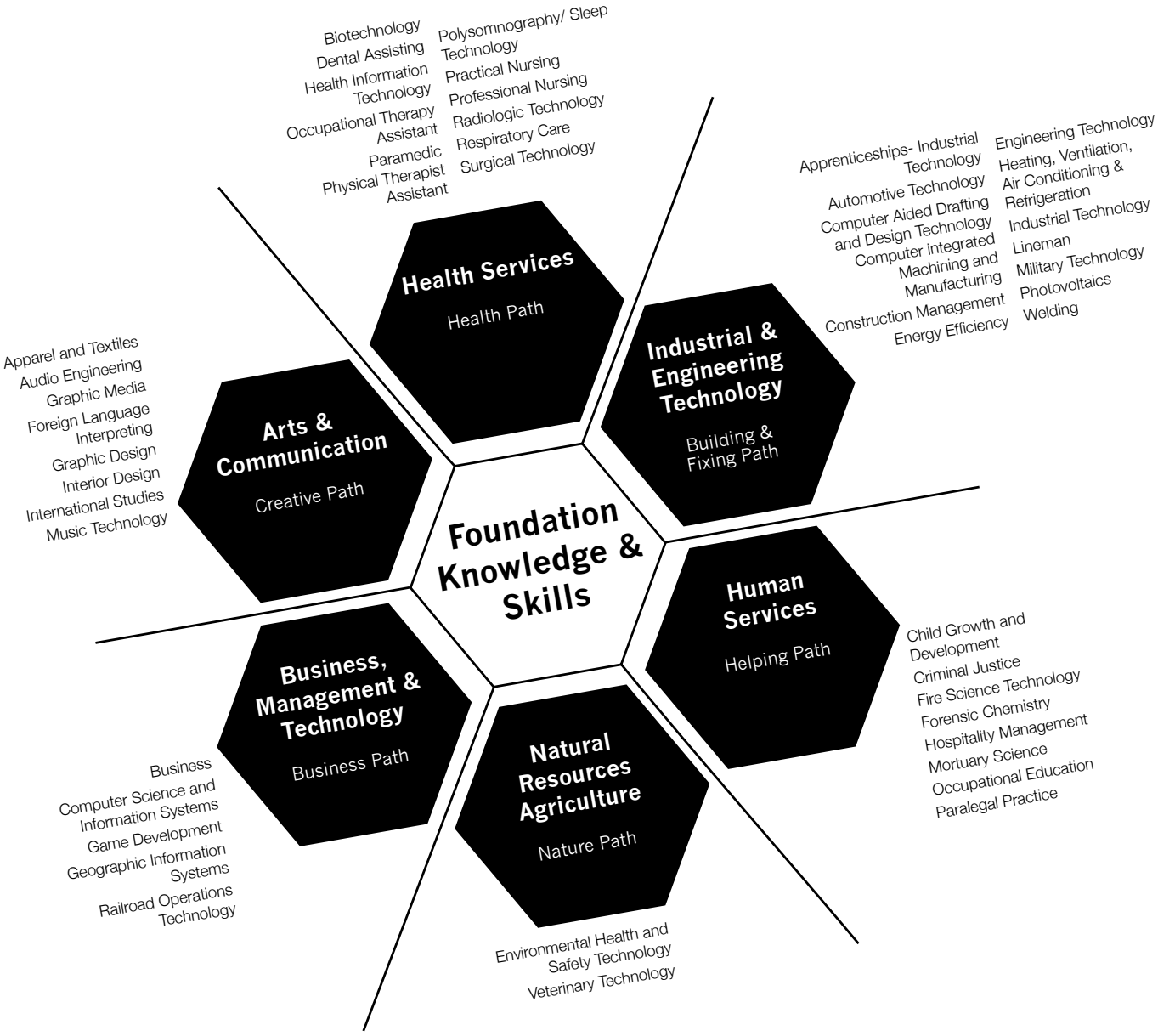
In addition to institutional accreditation, many programs have individiual accreditations. Please check program websites for additional information.

Program Eligibility

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 program websites and further information is available from academic advisors or counselors.

Program	College	Application Information
Dental Assisting	MCC-Penn Valley	www.mcckc.edu/dentalassisting
Line Technician	MCC-Business & Technology	www.mcckc.edu/linetech
Fire Academy	MCC-Blue River	www.mcckc.edu/fireacademy
Ford Automotive Student Service Educational	MCC-Longview	www.mcckc.edu/automotive
General Motors Automotive Service Educational	MCC-Longview	www.mcckc.edu/automotive
Health Information Technology	MCC-Penn Valley	www.mcckc.edu/healthtech
Occupational Therapy Assistant	MCC-Penn Valley	www.mcckc.edu/occupationaltherapy
Paramedic	MCC-Penn Valley	www.mcckc.edu/emt
Physical Therapist Assistant	MCC-Penn Valley	www.mcckc.edu/physicaltherapy
Police Academy	MCC-Blue River	www.mcckc.edu/policescience
Practical Nursing	MCC-Penn Valley	www.mcckc.edu/pvnursing
Professional Nursing	MCC-Penn Valley	www.mcckc.edu/pvnursing
Radiologic Technology	MCC-Penn Valley	www.mcckc.edu/ radiology
Respiratory Care	MCC-Penn Valley/ JCCC	www.mcckc.edu/respiratorycare
Surgical Technology	MCC-Penn Valley	www.mcckc.edu/surgicaltech
Veterinary Technology	MCC-Maple Woods	www.mcckc.edu/veterinary

Career Clusters



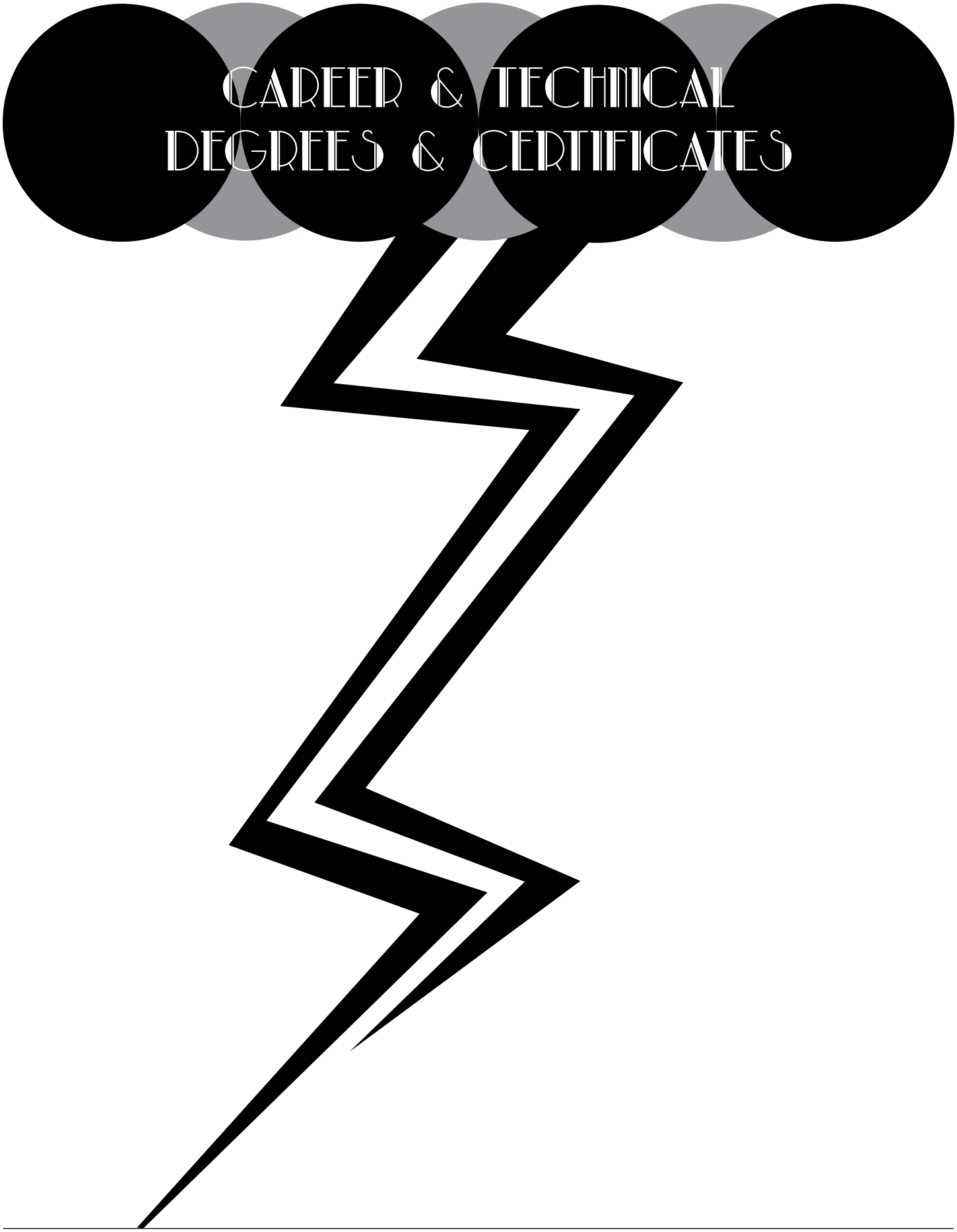
Career Paths

Missouri has identified six Career Paths as a way to help you become aware of and explore careers in a logical and meaningful way. Career Paths are a good starting point for your career exploration.

Career Clusters

Within the six Career Paths are 16 Career Clusters to further help with career exploration and career planning.

CAREER & TECHNICAL DEGREES & CERTIFICATES



Apparel and Textiles

Offered at MCC-Penn Valley

A.A.S. Apparel and Textiles-
Design and Product Development ..... 66-67 Credits
A.A.S. Apparel and Textiles-
Merchandising and Marketing..... 66-67 Credits
Merchandising Entrepreneurship Certificate
.....31 Credits
Product Development and Design Certificate
.....31 Credits

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

Two certificates are also offered.

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

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score.
HIST 120 HIST 121	United States History to 1865 ***or*** United States History since 1865	3		
MATH 100	Mathematics for Business or higher	3		MATH 20 or 20L or appropriate placement test score.
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score.
Any Art History course.		3		
ART 110	Drawing I	3		
Specific Program Requirements *Courses offered at MCC-Penn Valley*				
APTX 130	Fashion Illustration I and Technical Drawing	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 118	Costume History-Ancient Mesopotamia Through the Nineteenth Century	3		
APTX 119	Advertising and Promotion for Merchandising Environments	3		
APTX 211	Pattern Design-Flat Pattern	3		
APTX 212	Textiles	3		
APTX 215	Pattern Design-Draping	3		
APTX 217	20th Century Costume History	3		APTX 118
APTX 220	Merchandising I	3		APTX 100, and MATH 100 or higher
APTX 221	Merchandising II	3		
APTX 225	Pattern Design-CAD	3		
APTX 250	Computer Aided Fashion Illustration and Technical Drawing	3		APTX 130
APTX 275	Portfolio Presentation	3		APTX 211, APTX 215
Total Credit Hours Required		**66-67**		
APTX 40 This course is recommended for those students who have no sewing experience.	Fundamentals of Apparel Construction	0-1		

Apparel and Textiles

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

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score.
HIST 120 HIST 121	United States History to 1865 ***or*** United States History since 1865	3		
MATH 100	Mathematics for Business or higher	3		MATH 20 or 20L or appropriate placement test score
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score.
Any Art History course.		3		
ECON 210	Macroeconomics	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		
BSAD 120	Organizational Behavior	3		
Choose one: BSAD 109 BSAD 219 ECON 211	 Principles of Supervision ***or*** Entrepreneurship or Microeconomics*	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 Apparel Construction	3		
APTX 118	Costume History - Ancient Mesopotamia Through the Nineteeth Century	3		
APTX 119	Advertising & Promotion for Merchandising Environments	3		
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 higher
APTX 221	Merchandising II	3		
Total Credit Hours Required		**66-67**		
APTX 40 This course is recommended for those students who have no sewing experience.	Fundamentals of Apparel Construction	0-1		
*Transfer to University of Missouri: ECON 211				

Apparel and Textiles

Merchandising Entrepreneurship Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 101	Accounting Principles I	3		
BSAD 205	Marketing	3		
BSAD 219	Entrepreneurship	3		
APTX 100	Introduction to Apparel Studies	3		
APTX 111	Aesthetics and Design for Apparel and Textiles	3		
APTX 119	Visual Merchandising	3		
APTX 212	Textiles	3		
APTX 218	Merchandising Field Experience	3		APTX 119, 220 & 221
APTX 220	Merchandising I	3		APTX 100, MATH 100 or above
Elective: choose from list of courses below: BSAD 109 BSAD 120 BSAD 204	 Principles of Supervision Organizational Behavior Business Management	3		
Total Credit Hours Required		**31**		

Product Development and Design Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
APTX 130	Fashion Illustration and Technical Drawing	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 Apparel Construction	3		
APTX 211	Pattern Design - Flat Pattern	3		
APTX 212	Textiles	3		
APTX 215	Pattern Design - Draping	3		
APTX 225	Pattern Design - CAD	3		
APTX 275	Portfolio Presentation	3		APTX 211, 215
Total Credit Hours Required		**31**		

Audio Engineering

Offered at Kansas City Kansas Community College
Coordinated at MCC

A.A.S. Audio Engineering ..... 62-65 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 30/90 or appropriate placement test score
ENGL 102 ENGL 215	Composition and Reading II or Technical Writing	3		ENGL 101
COMM 100 COMM 103	Speech or Interpersonal Communications	3		ENGL 101
PSYC 140 SOCI 160	General Psychology ***or*** Sociology	3		
MATH 120	College Algebra or higher	3		MATH 110 or appropriate placement test
MUSI 108	Music Appreciation	3		
Specific Program Requirements *Must be taken at Kansas City Kansas Community College*				
HUDV 100/101	Strategies for Excellence/Lifelong Learning	1-2		
AUDIO 108	Electronic Circuit Fundamentals	3		
AUDIO 115	Circuit Analysis 1	3		
AUDIO 110	Music Technology 1	3		
AUDIO 130	Music Business	3		
AUDIO 150	Live Sound Reinforcement 1	1		
AUDIO 151	Live Sound Reinforcement 2	1		
AUDIO 170	Lighting & Staging	3		
AUDIO 230	Multimedia Production	3		
AUDIO 250	Audio Recording 1	3		
AUDIO 255	Audio Engineering Critical Listening	1		
AUDIO 260	Audio Recording 2	3		
AUDIO 270	Audio Recording 3	3		
AUDIO 280	Audio Engineering Portfolio 1	1		
AUDIO 281	Audio Engineering Portfolio 2	1		
AUDIO 210 AUDIO 240 AUDIO 258	Music Technology 2 ***or*** Sound Editing & Synthesis ***or*** Applied Audio for Media	3		
Music Requirements				
AUDIO 101 MUSC 111	Audio Engineering Music Skills (at KCKCC) or Music Theory 1 (at MCC or KCKCC)	4		
AUDIO 103	Audio Engineering Keyboard Skills (at KCKCC) or Piano Class (at MCC or KCKCC) or Applied Piano (at MCC or KCKCC)			
Natural and Physical Science Requirements				
NSAC 130 PHYS 101	Introductory Physics (at KCKCC) or Introductory Physics (at MCC)	3-5		
Total Credit Hours Required		**62-65**		

Automotive Technology

Offered at MCC-Longview

A.A.S. Automotive Technology
Collision Repair Technology ..... 73 Credits
Ford/ASSET ..... 78-84 Credits
General Motors/ASEP ..... 78-84 Credits
Industrial Mechanic ..... 63-65 Credits
Mechanical ..... 68-74 Credits

Certificates
Automotive Service, Maintenance and Light Repair ..... 16-20 Credits
Automotive Technology ..... 50 Credits
Collision Repair Technology ..... 44 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.

The *Mechanical Option* prepares students to work in dealerships, service centers, or independent repair facilities. 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 ASSET Option*. (Note: These 2 programs have special admission requirements.)

The Automotive Technology Department also offers three certificate programs.

A.A.S. Automotive Collision Repair Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 215 ENGL 102	Technical Writing ***or*** Composition and Reading II	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 100	Mathematics for Business	3		MATH 20 or 20L or appropriate placement test score
PHYS 104 PHYS 101	Foundations of Physical Science ***or*** Introductory Physics	5		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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		
AUTO 100	Intro to Automotive Services	2		
AUTO 166	Automotive Electrical Systems	6		AUTO 100 or concurrent enrollment
AUTO 171	Automotive Chassis Systems	6		AUTO 100 or concurrent enrollment
AUTO 264	Automotive Air Conditioning	4		AUTO 100 and 166
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
Total Credit Hours Required		**73**		
The *Collision Repair Technology Option*, which includes courses offered by participating articulation agreement schools, prepares students to work as collision repair technicians.				

Automotive Technology

A.A.S. Ford/ASSET emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 & 110), HIST, HUMN, COMM, 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		
Ford/ASSET				
AUTO 100	Introduction to Automotive Service	2		
AUTO 105	Cooperative Work Experience I	1		Be enrolled in the Ford emphasis area, maintain a 2.0 GPA, and be approved by by a sponsoring dealer
AUTO 106	Cooperative Work Experience II	1		Be enrolled in the Ford emphasis area, maintain a 2.0 GPA, and be approved by by a sponsoring dealer
AUTO 107	Cooperative Work Experience III	1		Be enrolled in the Ford emphasis area, maintain a 2.0 GPA, and be approved by by a sponsoring dealer
AUTO 108	Cooperative Work Experience IV	1		Be enrolled in the Ford emphasis area, maintain a 2.0 GPA, and be approved by by a sponsoring dealer
AUTO 150	Automotive Engine Repair	6		AUTO 100 or concurrent enrollment
AUTO 166	Automotive Electrical Systems	6		AUTO 100 or concurrent enrollment
AUTO 171	Automotive Chassis Systems	6		AUTO 100 or concurrent enrollment
AUTO 174	Manual Drivetrain & Axles	4		AUTO 100 or concurrent enrollment
AUTO 260	Advanced Diagnosis	6		Be a student in good standing in the Ford ASSET program
AUTO 264	Automotive Air Conditioning	4		AUTO 100 and 166
AUTO 272	Automatic Transmissions and Transaxles	6		AUTO 100, 166 and one of the following: AUTO 150, 171, 174, 276, 279, 280
AUTO 276	Automotive Engine Performance	6		AUTO 100, 150 and 166 and concurrent enrollment or completion of AUTO 279
AUTO 279	Automotive Electronic Systems	6		AUTO 100 and 166
AUTO 280	Diagnosis and Repair	4		AUTO 100, 150, 166, 171, 174, 264 and 272 and concurrent enrollment or completion of AUTO 276 and 279.
Total Credit Hours Required		**78-84**		

Automotive Technology

Offered at MCC-Longview

A.A.S. GM/ASEP emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 & 110), HIST, HUMN, COMM, 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		
GM/ASEP				
AUTO 100	Introduction to Automotive Service	2		
AUTO 105	Cooperative Work Experience I	1		Be enrolled in the GM emphais area, maintain a 2.0 GPA and be approved by sponsoring dealer.
AUTO 106	Cooperative Work Experience II	1		Be enrolled in the GM emphais area, maintain a 2.0 GPA and be approved by sponsoring dealer.
AUTO 107	Cooperative Work Experience III	1		Be enrolled in the GM emphais area, maintain a 2.0 GPA and be approved by sponsoring dealer.
AUTO 108	Cooperative Work Experience IV	1		Be enrolled in the GM emphais area, maintain a 2.0 GPA and be approved by sponsoring dealer.
AUTO 150	Automotive Engine Repair	6		AUTO 100 or concurrent enrollment
AUTO 166	Automotive Electrical Systems	6		AUTO 100 or concurrent enrollment
AUTO 171	Automotive Chassis Systems	6		AUTO 100 or concurrent enrollment
AUTO 174	Manual Drivetrain and Axles	4		AUTO 100 or concurrent enrollment
AUTO 260	Advanced Diagnosis	6		Be a student in good standing in the General Motors ASEP program
AUTO 264	Automotive Air Conditioning	4		AUTO 100 and 166
AUTO 272	Automatic Transmissions and Transaxles	6		AUTO 100, 166 and one of the following: AUTO 150, 171, 174, 276, 279, 280
AUTO 276	Automotive Engine Performance	6		AUTO 100, 150, 166 and concurrent enrollment or completion of AUTO 279
AUTO 279	Automotive Electronic Systems	6		AUTO 100 and 166
AUTO 280	Diagnosis and Repair	4		AUTO 100, 150, 166, 171, 174, 264 and 272 Concurrent or completion of AUTO 276 and 279
Total Credit Hours Required		**78-84**		

Automotive Technology

Offered at MCC-Longview

A.A.S. Automotive Industrial Mechanic Emphasis

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
SPAN 100	Beginning Occupational Spanish	3		
Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, SPAN 101, GEOG, (except 104 & 110), HIST, HUMN, COMM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI		3-5		
Any course(s) numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110) GEOL, MATH, PHYS		3		
Minimum Total General Education Credit Hours		18-20		
Specific Program Requirements				
Autmotive Industrial Mechanical				
CSIS 100	Digital Literacy	2		
WELD 100	Introduction to Welding/Cutting Processes	1		
AUTO 150	Automotive Power Plants	6		AUTO 100 or concurrent enrollment
AUTO 166	Automotive Electrical Systems	6		AUTO 100 or concurrent enrollment
AUTO 170	Automotive Braking Systems	4		AUTO 100 or concurrent enrollment
AUTO 172	Automotive Suspension and Steering	4		
AUTO 174	Manual Drivetrain and Axle	4		concurrent enrollment or completion of AUTO 100
AUTO 279	Automotive Electronic Systems	6		AUTO 100 and 166
AUTO 160 Diagnosis and Repair or AUTO 176 Emission & Fuel Control System or AUTO 250 Diesel Diagnosis and Repair or AUTO 264 Air Conditioning or AUTO 272 Automatic Transmission and Transaxles		4-6		AUTO 150, 166, and 176 AUTO 150 and 166 AUTO 150 and 166
Mechanic Apprenticeship *(Credit by Certification)		8		
Total Credit Hours Required		**63-65**		

* Federally approved Mechanic apprenticeship program that contains a minimum of 144 clock hours of classroom and instruction and 2000 clock hours of on-the-job training. Transcribed upon the completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

Automotive Technology

Offered at MCC-Longview

A.A.S. Automotive Technology Mechanical Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 & 110), HIST, HUMN, COMM, 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	200201			
AUTO 100	Introduction to Automotive Service	2		
AUTO 150	Automotive Engine Repair	6		AUTO 100 or concurrent enrollment
AUTO 166	Automotive Electrical Systems	6		AUTO 100 or concurrent enrollment
AUTO 171	Automotive Chassis Systems	6		AUTO 100 or concurrent enrollment
AUTO 174	Manual Drivetrains and Axles	4		AUTO 100 or concurrent enrollment
AUTO 264	Automotive Air Conditioning	4		AUTO 100 and 166
AUTO 272	Automatic Transmissions and Transaxles	6		AUTO 100, 166 and one of the following: AUTO 150, 171, 174, 276, 279, 280.
AUTO 276	Automotive Engine Performance	6		AUTO 100, 150, and 166 and concurrent enrollment or completion of AUTO 279
AUTO 279	Automotive Electronic Systems	6		AUTO 100 and 166
AUTO 280	Diagnosis and Repair	4		AUTO 100, 150, 166, 174, 264, and 272. Concurrent enrollment or completion of AUTO 276 and 279
Total Credit Hours Required		**68-74**		

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

Automotive Service, Maintenance and Light Repair Certificate

Specific Program Requirements				
AUTO 100	Introduction to Automotive Service	2		
AUTO 117	Automotive Service Maintenance and Light Repair	6		AUTO 100 or concurrent enrollment
AUTO 171	Automotive Chassis Systems	6		AUTO 100 or concurrent enrollment
Any other course numbered 100 or above. Note: Students desiring to become Honda Express Tech Certified must take AUTO 201		2-6		
Total Credit Hours Required		**16-20**		

Automotive Technology

Automotive Technology Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
AUTO 100	Introduction to Automotive Service	2		
AUTO 150	Automotive Engine Repair	6		AUTO 100 or concurrent enrollment
AUTO 166	Automotive Electrical Systems	6		AUTO 100 or concurrent enrollment
AUTO 171	Automotive Chassis Systems	6		AUTO 100 or concurrent enrollment
AUTO 174	Maunual Drivetrain and Axles	4		AUTO 100 and 166
AUTO 264	Automotive Air Conditioning	4		AUTO 100 and 166
AUTO 272	Automatic Transmissions and Transaxles	6		AUTO 100, 166, and one of the following: AUTO 150, 171, 174, 276, 279, 280.
AUTO 276	Automotive Engine Performance	6		AUTO 100, 150 and 166 and concurrent enrollment or completion of AUTO 279.
AUTO 279	Automotive Electronic Systems	6		AUTO 100 and 166
AUTO 280	Diagnosis and Repair	4		AUTO 100, 150, 166, 171, 174, 264, and 272. Concurrent enrollment or completion of AUTO 276 and 279.
Total Credit Hours Required		**50**		

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 100	Introduction to Automotive Service	2		
AUTO 166	Automotive Electrical Systems	6		AUTO 100 or concurrent enrollment
AUTO 171	Automotive Chassis Systems	6		AUTO 100 or concurrent enrollment
AUTO 264	Automotive Air Conditioning	4		AUTO 100 and 166
Total Credit Hours Required		**44**		

Biotechnology

Offered at Johnson County Community College
Coordinated at MCC

A.S. Biotechnology ..... 76-80 Credits
A.A.S. Biotechnology ..... 69-71 Credits
Biotechnology Certificate ..... 35-41 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 30/90 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
HIST 133	Foundation in Western Civilization	3		
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		
COMM 100	Fundamentals of Speech	3		See Courses section of this catalog for individual course prerequisites.
HUMN	Electives	3		
ECON/Social Science Electives		3		
PHED	Elective	1		
BIOL 214	Principles of Genetics	4		BIOL 101 or BIOL 104 or BIOL 106
Must be taken at Johnson County Community College				
BIOL 135	Principles of Cell & Molecular Biology*	4		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.
BIOL 150	Biology of Organisms*	5		
BIOT 160	Introduction to Biotechnology*	2		
BIOT 165	Laboratory Safety*	1		
BIOT 230	Microbiology for Biotechnology	5		
BIOT 260	Biotechnology Methods*	5		
BIOT 265	Biotechnology Internship (Optional)*	4		
Total Credit Hours Required		**76-80**		

**Prerequisite/corequisite required ~meets Cultural Diversity Requirement - Optional courses do not qualify for in-state tuition rates as part of MCC/JCCCC requirement*

Humanities Electives that will transfer from MCC to JCCC:
ART 108, ART 150, ART 151, ART 159, ENGL 214, ENGL 216, ENGL 218, ENGL 220, ENGL 221, ENGL 222, ENGL 223, ENGL 234, ENGL 240, ENGL 250, ENGL 254, ENGL 255, ENGL 256, ENGL 268, FREN 203, FREN 204, GERM 204, SPAN 203, SPAN 204, HIST 120, HIST 121, HIST 134, HIST 140, HIST 150, HUMN 103, HUMN 133, HUMN 134, HUMN 140, HUMN 145, MUSI 108, MUSI 160, PHIL 100, PHIL 101, PHIL 200, PHIL 201, PHIL 203, THEA 106, THEA 114, COMM 128.

Social Science and Economics Electives that will transfer from MCC to JCCC:
ANTH 100, ANTH 110, ANTH 120, ECON 110, ECON 210, ECON 211, GEOG 111, GEOG 112, POLS 135, POLS 136, POLS 137, POLS 234, PSYC 140, SOCI 160, SOCI 163, SOCI 170, SOCI 220

Health, Physical Education & Recreation Electives that will transfer from MCC to JCCC:
DANC 100, DANC 111, DANC 121, DANC 122, EMS 100, PHED 105, PHED 106, PHED 107, PHED108, 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 141, PHED 142, PHED 143, PHED 144, PHED 145, PHED 146, PHED 147, PHED 151, PHED 157, PHED 158, PHED 159, PHED 165, PHED 166, PHED 167, PHED 168, PHED 173, PHED 174, PHED 178, PHED 179, PHED 180

Biotechnology

A.A.S. Biotechnology

Specific Program Requirements *Must be taken at one of the MCC Campuses*		Credits	Semester Taken	Prerequisites
BIOL 109	Anatomy & Physiology	6		BIOL 100 or CHEM 105
CHEM 105 *Note: CHEM 105 must be taken before BIOL 135, BIOT 160 and BIOT 165*	Introductory Chemistry for Health Sciences	5		
BIOL 214	Principles of Genetics	4		BIOL 101 or BIOL 104 or BIOL 106
CHEM 205	Organic Chemistry	5		CHEM 105 or CHEM 111
CSIS 115	Technology Fundamentals and 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 or 40L
HUMN	Humanities Elective	3		See Courses section of this catalog for individual course prerequisites.
ECON/Social Sciences/Economics Elective		3		
PHED	Physical Education Elective	1		
Must be taken at Johnson County Community College				
BIOL 135	Principles of Cell & Molecular Biology*	4		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.
BIOL 145	Human Anatomy and Physiology Dissection*	1		
BIOT 160	Introduction to Biotechnology*	2		
BIOT 165	Laboratory Safety*	1		
BIOT 260	Biotechnology Methods*	5		
BIOT 265	Biotechnology Internship*	4		
BIOT 230	Microbiology (JCCC)*	3		
PHYS 133	Applied Physics*	5		
Total Credit Hours Required		**69-71**		

Humanities Electives that will transfer from MCC to JCCC:
ART 108, ART 150, ART 151, ART 159, ENGL 214, ENGL 216, ENGL 218, ENGL 220, ENGL 221, ENGL 222, ENGL 223, ENGL 234, ENGL 240, ENGL 250, ENGL 254, ENGL 255, ENGL 256, ENGL 268, FREN 203, FREN 204, GERM 204, SPAN 203, SPAN 204, HIST 120, HIST 121, HIST 134, HIST 140, HIST150, HUMN 103, HUMN 133, HUMN 134, HUMN 140, HUMN 145, MUSI 108, MUSI 160, PHIL 100, PHIL 101, PHIL 200, PHIL 201, PHIL 203, THEA 106, THEA 114, COMM 128
Health, Physical Education & Recreation Electives that will transfer from MCC to JCCC:
DANC 100, DANC 111, DANC 121, DANC 122, EMS 100, PHED 105, PHED 106, PHED 107, PHED108, 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 141, PHED 142, PHED 143, PHED 144, PHED 145, PHED 146, PHED 147, PHED 151, PHED 157, PHED 158, PHED 159, PHED 165, PHED 166, PHED 167, PHED 168, PHED 173, PHED 174, PHED 178, PHED 179, PHED 180
Social Science and Economics Electives that will transfer from MCC to JCCC:
ANTH 100, ANTH 110, ANTH 120, ECON 110, ECON 210, ECON 211, GEOG 111, GEOG 112, POLS 135, POLS 136, POLS 137, POLS 234, PSYC 140, SOCI 160, SOCI 163, SOCI 170, SOCI 220

**Prerequisite/corequisite required*

Biotechnology Certificate

Specific Program Requirements *Must be taken at one of the MCC Campuses*		Credits	Semester Taken	Prerequisites
CHEM 105 *Note: CHEM 105 must be taken before BIOL 135, BIOT 160 and BIOT 165*	Introductory Chemistry for Health Sciences	5		
CHEM 205	Organic Chemistry	5		CHEM 105 or CHEM 111
MATH 103	Technical Mathematics I (or higher)	3-5		MATH 40 or 40L
Must be taken at Johnson County Community College				
BIOL 135	Principles of Cell & Molecular Biology*	4		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.
BIOT 160	Introduction to Biotechnology*	2		
BIOT 165	Laboratory Safety*	1		
BIOT 230	Microbiology* (JCCC)	5		
BIOT 260	Biotechnology Methods*	5		
PHYS 133	Applied Physics*	5		
BIOT 265	Biotechnology Internship (Optional)*	4		
Total Credit Hours Required		**35-41**		

**Prerequisite/corequisite required*

Business

Offered at all Campuses

A.A.S. Business
- Accounting ..... 65 Credits
- Logistics Management ..... 65 Credits
- Management ..... 65 Credits
- Office Management ..... 65 Credits

This program offers an Associate in Applied Science degree with emphasis areas in accounting, logistics management, management and office management.

A.A.S. Business Accounting Emphasis

COLL 100	First Year Seminar	1		
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 30/90 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 100 MATH 110	Mathematics for Business ***or*** Intermediate Algebra or higher	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
PSYC 140 SOCI 160	General Psychology ***or*** Sociology	3		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements				
BSAD 101	Accounting Principles I	3		
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appropriate placement test score
BSAD 254 BSAD 255 BSAD 270	Business Law I ***or*** Business Law II ***or*** Legal Environment of Business	3		
CSIS 115	Tecnology Fundamentals and Applications	3		
Electives	Any course numbered 100 or above	6		
Specific Emphasis Requirements				
Accounting				
BSAD 102	Accounting Principles II	3		BSAD 101
BSAD 153	Accounting Information Systems	3		BSAD 101
BSAD 154	Managerial Accounting	3		BSAD 101
BSAD 155	Accounting Using Spreadsheet	3		BSAD 101
BSAD 202	Intermediate Accounting I	3		BSAD 102
BSAD 252	Individual Income Tax	3		BSAD 101
BSAD 290	Business Capstone	1		
BSAD Electives		3		
Total Credit Hours Required		**65**		

Business

A.A.S. Business Logistics Management Emphasis

COLL 100	First Year Seminar	1		
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 30/90 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 100 MATH 110	Mathematics for Business ***or*** Intermediate Algebra or higher	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
PSYC 140 SOCI 160	General Psychology ***or*** Sociology	3		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements				
BSAD 101	Accounting Principles I	3		
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appropriate placement test score
BSAD 254 BSAD 255 BSAD 270	Business Law I ***or*** Business Law II ***or*** Legal Environment of Business	3		
CSIS 115	Tecnology Fundamentals and Applications	3		
Electives	Any course numbered 100 or above	6		
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 290	Business Capstone	1		
BSAD Electives		9		
Total Credit Hours Required		**65**		

Business

A.A.S. Business Management Emphasis

COLL 100	First Year Seminar	1		
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 30/90 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 100 MATH 110	Mathematics for Business ***or*** Intermediate Algebra or higher	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
PSYC 140 SOCI 160	General Psychology ***or*** Sociology	3		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements				
BSAD 101	Accounting Principles I	3		
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appropriate placement test score
BSAD 254 BSAD 255 BSAD 270	Business Law I ***or*** Business Law II ***or*** Legal Environment of Business	3		
CSIS 115	Tecnology Fundamentals and Applications	3		
Electives	Any course numbered 100 or above	6		
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 290	Business Capstone	1		
BSAD Electives		6		
Total Credit Hours Required		**65**		

Business

A.A.S. Business Office Management Emphasis

COLL 100	First Year Seminar	1		
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 30/90 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 100 MATH 110	Mathematics for Business ***or*** Intermediate Algebra or higher	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
PSYC 140 SOCI 160	General Psychology ***or*** Sociology	3		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements				
BSAD 101	Accounting Principles I	3		
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appropriate placement test score
BSAD 254 BSAD 255 BSAD 270	Business Law I ***or*** Business Law II ***or*** Legal Environment of Business	3		
CSIS 115	Tecnology Fundamentals and Applications	3		
Electives	Any course numbered 100 or above	6		
Office Management				
BSAD 103	Business English	3		ENGL 30/90 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 290	Business Capstone	1		
BSAD Electives		3		
Total Credit Hours Required		**65**		

Child Growth and Development

Offered at MCC-Penn Valley

A.A.S. CDCG ..... 66-68 Credits
Child Growth & Development
Certificate .....31 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, paying the MDHSS fee and mailing the complete form. 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.

For more information, go to **www.mcckc.edu/cdcg**

A.A.S. Child Growth & Development

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 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 and GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA.		3-5		
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH, PHSC, PHYS		3-5		
Total General Education Requirements		**18**		
Specific Emphasis Requirements				
CDCG 101	Fundamentals of Early Care and Education	3		ENGL 30/90 or appropriate placement test score, or concurrent enrollment
CDCG 110	Child Health, Safety and Nutrition	3		ENGL 30/90 or appropriate placement test score
CDCG 113	Child Growth and Development I	3		CDCG 101, ENGL 30/90 or appropriate placement test score
CDCG 128	Curriculum in Early Childhood Education	3		CDCG 113
CDCG 132	Learning Environment I	3		ENGL 30/90 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 30/90 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 30/90 or appropriate placement test score
CDCG 270	Portfolio Design	2		Final semester in AAS program
HUSC 100	Careers in Human Sciences	3		ENGL 30/90 or appropriate placement test score, or concurrent enrollment
Total Credit Hours Required		**66-68**		

Child Growth and Development

Child Growth and Development Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
COMM 100 COMM 102	Fundamentals of Speech or Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
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		**31**		

Computer Aided Drafting & Design Technology

Offered at MCC-Business &Technology

A.A.S. Computer Aided Drafting & Design Technology .....69-70 Credits
Computer Aided Drafting & Design Certificate.....17-19 Credits

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 30/90 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 (MATH 120) MATH 120 (MATH 130) MATH 110 or appropriate placement test score (MATH 150)
PHYS 130	General Physics I	5		MATH 130 (PHYS 130)
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements				
ENGR 101	Introduction to the Profession	1		
EHSS 111 EHSS 112	Introduction to Health & Safety for General Industry or Introduction to Health & Safety for Construction	1		
ETEC 152	Engineering Graphics and CADD I	5		MATH 40/40L
ETEC 153	Descriptive Geometry	3		ETEC 152
ETEC 170	CADD I, Microstation	3		ETEC 152
ETEC 200	Applied Statics & Mechanics	3		MATH 104 or 130
ETEC 210	Introduction to Commercial Architecture	3		ETEC 152
ETEC 211	Building Information Modeling, Revit	3		ETEC 210 or concurrent enrollment
ETEC 258	Introduction to Mechanical Design	3		ETEC 152
ETEC 265	Introduction to Civil Design	3		ETEC 152
ETEC 268	Intro to Structural Design	3		ETEC 152
ETEC 269	CADD II	4		ETEC 152 or 169
ETEC 270	Parametric Modeling, Inventor	3		ETEC 152 or concurrent enrollment
ETEC 271	Parametric Modeling, Solidworks	3		ETEC 152 or concurrent enrollment
ETEC 272 ETEC 273	Advanced Parametric Modeling, Inventor **or** Advanced Parametric Modeling, Solidworks	3		ETEC 270 ETEC 271
ETEC 290 ETEC 295	Internship in Engineering Technolgy ***or*** Capstone Project in Engineering Technology	3		ETEC 152 (ETEC 290) ETEC 152, 269, 270, or 271 (ETEC 295)
Total Credit Hours Required		**69-70**		

Computer Aided Drafting and Design Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
ENGR 101	Intro to the Profession	1		
ETEC 152 ETEC 169	Engineering Graphics and CADD I or CADD I	3-5		MATH 40/40L or appropriate placement test score
ETEC 269	CADD II	4		ETEC 152 or 169
Choose 3 courses from the following: ETEC 170 ETEC 211 ETEC 270 ETEC 271 ETEC 272 ETEC 273	 CADD I, Microstation Building Information Modeling, Revit Parametric Model, Inventor Parametric Modeling, Solidworks Advanced Parametric Modeling, Inventor Advanced Parametric Modeling, Protoyping Solidworks	9		ETEC 152 ETEC 210 or concurrent enrollment ETEC 152 or concurrent enrollment ETEC 152 or concurrent enrollment ETEC 270 ETEC 271
Total Credit Hours Required		**17-19**		

Computer Integrated Machining & Manufacturing

Offered at MCC-Business & Technology

A.A.S. Computer Integrated Machining & Manufacturing .....60-64 Credits

Lathe Certificate .....19-20 Credits
Mill Certificate .....19-20 Credits
Advanced CIMM Certificate .....37-40 Credits

Advanced Computer Integrated Machining and Manufacturing certificate use manual lathes, manual mills and computer numerical control (CNC) equipment to manufacture precision metal parts.

This program, designed by MCC-BT's Precision Machining Consortium industry partners, begins with an intensive, one-semester certificate that prepares students to begin a career in manufacturing and machining.

CIMM Machining & Manufacturing

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement 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		
Choose one of the following Math options: **Option #1** MATH 103R MATH 103 MATH 120 MATH 120R MATH 104 MATH 130 **Option #2** MATH 150	 Technical Mathematics I w/ Review ***or*** Technical Mathematics I ***or*** College Algebra ***or*** College Algebra w/ Review ***and*** Technical Mathematics II ***or*** Trigonometry PreCalculus or higher	5-7		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement 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		
Special Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 124	Employment Strategies for Technical Careers	2		
CIMM 100	Introduction to Machining & Manufacturing	3		
CIMM 105	Introduction to Blueprint Reading	1		
CIMM 110	Manual Lathe	3		CIMM 100 or concurrent enrollment
CIMM 115	Manual Mill	3		CIMM 100 or concurrent enrollment
CIMM 121	CNC Lathe Operation Fundamentals	4		CIMM 100 or concurrent enrollment
CIMM 122	CNC Mill Operation Fundamentals	4		CIMM 115 or concurrent enrollment
CIMM 150 CIMM 160	Lathe Co-Op or Advanced Lathe Operations	3-4		CSIS 100, INTE 124, CIMM 100/105/121 or concurrent enrollment (CIMM 150) CIMM 122 or concurrent enrollment (CIMM 160)
CIMM 151 CIMM 161	Mill Co-Op or Advanced Mill Operations	3-4		CSIS 100, INTE 124, CIMM 100/105/122 or concurrent enrollment (CIMM 151) CIMM 122 or concurrent enrollment (CIMM 161)
CIMM 155	Grinding Operations	2		CIMM 100, 105, 110 and 115
CIMM 200	Advanced Machining	3		CIMM 150 and 151 or CIMM 160 and 161
CIMM 225	MasterCam I	3		CSIS 100, CIMM 121 or 122
CIMM 290	Capstone Project	2		CIMM 155 and 200
Choose 3 of the following: CIMM 231 CIMM 232 CIMM 233 CIMM 234 CIMM 235 CIMM 236 CIMM 237 CIMM 238	 Capstone Job Planning, Benchwork & Layout Capstone Milling Capstone Chucking Capstone Turning Capstone Surface Grinding Capstone CNC Milling Capstone CNC Turning Capstone Drill Press	3		 CIMM 100 and 105 (CIMM 231) CIMM 100, 105 and 115 (CIMM 232) CIMM 100, 105 and 110 (CIMM 233) CIMM 100, 105 and 110 (CIMM 234) CIMM 100, 105 and 115 (CIMM 235) CIMM 100, 105 and 122 (CIMM 236) CIMM 100, 105 and 121 (CIMM 237) CIMM 100 and 105 (CIMM 238)
Total Credit Hours Required		**60-64**		CIMM 100, 105 and 121 (CIMM 237)

Computer Integrated Machining & Manufacturing

Offered at MCC-Business & Technology

Lathe Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CIMM 100	Introduction to Machining & Manufacturing	3		
CIMM 105	Introduction to Blueprint Reading	1		
CIMM 110	Manual Lathe Operations	3		CIMM 100 on current enrollment
CIMM 121	CNC Lathe Operation Fundamentals	3		CIMM 110 and CIMM 120 or concurrent enrollment
CIMM 150 CIMM 160	Lathe Internship & Co-Op or Advanced Lathe Operations	3-4		CIMM 100/105, 110, COLL 100, CSIS 100, INTE 124, or concurrent enrollment (CIMM 150) CIMM 121 or concurrent enrollment (CIMM 160)
CSIS 100	Digital Literacy	2		
INTE 124	Employment Strategies for Technical Careers	2		
Total Credit Hours Required		**19-20**		

Mill Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CIMM 100	Introduction to Machining & Manufacturing	3		
CIMM 105	Introduction to Blueprint Reading	1		
CIMM 115	Manual Mill	3		CIMM 100
CIMM 122	CNC Mill Operation Fundamentals	4		CIMM 120
CIMM 151 CIMM 161	Mill Internship & Co-Op ***or*** Advanced Mill Operation	3-4		COLL 100, CSIS 100, INTE 124, CIMM 100/105/122 or concurrent enrollment
CSIS 100	Digital Literacy	2		
INTE 124	Employment Strategies for Technical Careers	2		
Total Credit Hours Required		**19-20**		

Computer Integrated Machining & Manufacturing

Advanced Computer Integrated Maching & Manufacturing Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CIMM 100	Introduction to Machining & Manufacturing	3		
CIMM 105	Introduction to Blueprint Reading	1		
CIMM 110	Manual Lathe Operation	3		CIMM 100 with a C or better or concurrent enrollment
CIMM 115	Manual Mill	3		CIMM 100 with a C or better or concurrent enrollment
CIMM 121	CNC Lathe Operation Fundamentals	4		CIMM 110 or concurrent enrollement
CIMM 122	CNC Mill Operation Fundamentals	4		CIMM 120
CIMM 150 CIMM 160	Lathe Internship & Co-Op ***or*** Advanced Lathe Operations	3-4		COLL 100, CSIS 100, INTE 124, CIMM 100/105/110/121, or concurrent enrollment and a GPA of 2.0 or higher in the prerequisite classes (CIMM 150) CIMM 121 or concurrent enrollment (CIMM 160)
CIMM 151 CIMM 161	Mill Internship & Co-Op ***or*** Advanced Mill Operations	3-4		COLL 100, CSIS 100, INTE 124, CIMM 100/105/115/122, or concurrent enrollment and a GPA of 2.0 or higher in the prerequisite classes (CIMM 151) CIMM 122 or concurrent enrollment (CIMM 161)
CIMM 155	Grinding Operations	2		CIMM 100, 105, 110 & 115
CIMM 200	Advanced Machining	3		CIMM 150 & 151 or CIMM 160 & 161
CSIS 100	Digital Literacy	2		
INTE 124	Employment Strategies for Technical Careers	2		
MATH 103 MATH 103R	Technical Math I ***or*** Technical Math I w/ Review	3-4		MATH 40 or MATH 40L or an appropriate score on the placement exam (MATH 103) MATH 20 or MATH 20L or appropriate score on placement test (MATH 103R)
Total Credit Hours Required		**37-40**		

Computer Science & Information Systems

Offered at all campuses

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 ..... 65-71 Credits
CISCO ..... 65-71 Credits
Cyber Security ..... 69-73 Credits
Software Development ..... 64-70 Credits
Systems Administration & Engineering ..... 64-70 Credits
Web Technologies ..... 64-70 Credits

Certificates

CCNA and CCNP..... 29 Credits
CCNA and Security..... 24 Credits
CCNA and Technology..... 32 Credits
Cisco Academy..... 17 Credits
Software Development ..... 37 Credits
Systems Administration & Engineering ..... 37 Credits
Web Technologies ..... 37 Credits

* Some programs are only offered at one campus. Please see an advisor for more information.

A.A.S. Computer Science and Information Systems: CCNP

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition & Reading I	3		ENGL 30/90 or appropriate placement score
HIST 120	United States History to 1865 ***or***	3		
HIST 121	United States History Since 1865			
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 ***or*** higher Mathematics course	3		MATH 40/40L or appropriate placement score
COMM 100 COMM 102	Fundamentals of Speech or Fundamentals of Human Communications	3		ENGL 30/90 or appropriate placement score
Any course numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 & 10 and GIS courses), HIST, HUMN, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-6		
Any course numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH 120 or above, PHYS		3-6		
Total General Education Requirements		**18**		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120	Organizational Behavior	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appropriate placement score
CSIS 110	Technology & Information Management	3		
CSIS 115	Technology Fundamentals and Applications	3		
Emphasis Area				
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 112	Network Fundamentals CCNA Exploration I	4		CSIS 110 or CSIS 115
CSIS 113	Routing Protocols and Concepts CCNA Exploration II	4		CSIS 112
CSIS 212	LAN Switching and Wireless CCNA Exploration III	4		CSIS 113
CSIS 213	Accessing the WAN CCNA Exploration IV	4		CSIS 212
CSIS 216	Implementing Cisco IP Routing CCNP I	4		CSIS 213
CSIS 217	Implementing IP Switching CCNP II	4		CSIS 213
CSIS 218	Maintaining and Troubleshooting IP Networks: CCNP III	4		CSIS 216 and 217
CSIS 290	Field Competencies and Employment Strategies	3		Instructor approval
Total Credit Hours Required		**65-71**		

Computer Science & Information Systems

A.A.S. Computer Science and Information Systems- Cisco

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition & Reading I	3		ENGL 30/90 or appropriate placement 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 ***or***	3		MATH 40/40L or appropriate placement score
higher Mathematics course				
COMM 100	Fundamentals of Speech or	3		ENGL 30/90 or appropriate placement score
COMM 102	Fundamentals of Human Communications			
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-6		
Any course numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH 120 or above, PHYS		3-6		
Total General Education Requirements		**18**		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120	Organizational Behavior	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appropriate placement score
CSIS 110	Technology & Information Management	3		
CSIS 115	Technology Fundamentals and Applications	3		
Emphasis Area				
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 112	Network Fundamentals CCNA Exploration I	4		CSIS 110 or CSIS 115
CSIS 113	Routing Protocols and Concepts CCNA Exploration II	4		CSIS 112
CSIS 129	Introduction to E-Commerce	3		CSIS 110
CSIS 152	Linux Operating System	3		CSIS 110
CSIS 170	Principles of Information Assurance	3		CSIS 110
CSIS 172	LAN Windows Server	3		CSIS 110
CSIS 212	LAN Switching and Wireless CCNA Exploration III	4		CSIS 113
CSIS 213	Accessing the WAN CCNA Exploration IV	4		CSIS 212
CSIS 290	Field Competencies and Employment Strategies	3		Instructor approval
Total Credit Hours Required		**65-71**		

Computer Science & Information Systems

A.A.S. Computer Science and Information Systems: Cyber Security

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition & Reading I	3		ENGL 30/90 or appropriate placement score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	United States History to 1865 ***or*** United States History Since 1865 Introduction to Political Science ***or*** Introduction to American National Politics ***or*** Introduction to State and Local Politics	3		
MATH 141	Discrete Structures for Computer Science I	3		MATH 120 or 150
COMM 100 COMM 102	Fundamentals of Speech or Fundamentals of Human Communications	3		ENGL 30/90 or appropriate placement 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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Any course numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH 120 or above, PHYS		3-5		
Total General Education Requirements		**19-23**		
Specific Program Requirements				
CSIS 110	Technology and Information Management	3		
Specific Emphasis Requirements		Credits	Semester Taken	Prerequisites
CSIS 111 Microcomputer Hardware Concepts		3		CSIS 110
CSIS 112 Network Fundamentals		4		CSIS 110 or CSIS 115
CSIS 113 Routing Protocols and Concepts		4		CSIS 112
CSIS 123 Programming Fundamentals		3		MATH 40/40R or appropriate placement score
CSIS 151 Microcomputer Operating Systems Concepts		3		CSIS 110
CSIS 152 Linux Operating System		3		CSIS 110
CSIS 170 Principles of Information Assurance		3		CSIS 110
CSIS 172 LAN Windows Server		3		CSIS 112 or CSIS 161 and CSIS 151 or CSIS 152
CSIS 174 Technologies Used on Local Area Networks		3		CSIS 172
CSIS 175 Service and Support of Local Area Networks		3		CSIS 172
CSIS 208 Secure E-Commerce		3		CSIS 112
CSIS 182 Enterprise Security Management		3		CSIS 170
CSIS 272 Network Security		3		CSIS 113
CSIS 285 Digital Forensics		3		CSIS 272
CSIS 290 Field Competencies and Employment Strategies		3		Approval of instructor required.
Total Credit Hours Required		**69-73**		

Computer Science & Information Systems

A.A.S. Computer Science and Information Systems: Software Development

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition & Reading I	3		ENGL 30/90 or appropriate placement score
HIST 120 HIST 121	United States History to 1865 ***or*** United States History Since 1865	3		
POLS 135 POLS 136 POLS 137	Introduction to Political Science ***or*** Introduction to American National Politics ***or*** Introduction to State and Local Politics			
MATH 110	Intermediate Algebra ***or*** higher Mathematics course	3		MATH 40/40L or appropriate placement score
COMM 100 COMM 102	Fundamentals of Speech or Fundamentals of Human Communications	3		ENGL 30/90 or appropriate placement 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, COMM		3-6		
Any course numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH 120 or above, PHYS		3-6		
Total General Education Requirements		**18**		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120	Organizational Behavior	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appropriate placement score
CSIS 110	Technology & Information Management	3		
CSIS 115	Technology Fundamentals and Applications	3		
Emphasis Area				
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement score (CSIS 123)
CSIS 223	Object-Oriented Programming	3		CSIS 123 and MATH 110
CSIS 128	Web Development	3		CSIS 110 or 115
CSIS 228	Advanced Web Development	3		CSIS 128
CSIS 141 MATH 141	Discrete Structures Comp. Science I ***or*** Discrete Structures Comp. Science I	3		MATH 120 or 150
CSIS 143	Database Design and Management	3		CSIS 110 or 115
CSIS 152	Linux Operating System	3		CSIS 110
CSIS 161	Networking Fundamentals	3		CSIS 110
CSIS 170	Principles of Information Assurance	3		CSIS 110
CSIS 279	Web Database Programming	3		CSIS 123, 128, and 143
CSIS 290	Field Competencies and Employment Strategies	3		Instructor approval
Total Credit Hours Required		**64-70**		

Computer Science & Information Systems

A.A.S. Computer Science and Information Systems: Systems Administration & Engineering

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition & Reading I	3		ENGL 30/90 or appropriate placement score
HIST 120 HIST 121	United States History to 1865 ***or*** United States History Since 1865	3		
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 ***or*** higher Mathematics course	3		MATH 40/40L or appropriate placement score
COMM 100 COMM 102	Fundamentals of Speech or Fundamentals of Human Communications	3		ENGL 30/90 or appropriate placement 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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-6		
Any course numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH 120 or above, PHYS		3-6		
Total General Education Requirements		**18**		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120	Organizational Behavior	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appropriate placement test score
CSIS 110	Technology & Information Management	3		
CSIS 115	Technology Fundamentals and Applications	3		
Emphasis Area				
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 143	Database Design and Management	3		CSIS 110 or CSIS 115
CSIS 151	Microcomputer Operating Systems Concepts	3		CSIS 110
CSIS 152	Linux Operating System	3		CSIS 110
CSIS 161	Networking Fundamentals	3		CSIS 110
CSIS 170	Principles of Information Assurance	3		CSIS 110
CSIS 172	LAN Windows Server	3		CSIS 112 or 161 and CSIS 151
CSIS 174	Technologies Used on Local Area Networks	3		CSIS 172
CSIS 175	Service and Support of Local Area Networks	3		CSIS 172
CSIS 178	Internetworking with TCP/IP	3		CSIS 172
CSIS 290	Field Competencies and Employment Strategies	3		Instructor approval
Total Credit Hours Required		**64-70**		

Computer Science & Information Systems

A.A.S. Computer Science and Information Systems: Web Technologies

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition & Reading I	3		ENGL 30/90 or appropriate placement score
HIST 120 HIST 121	United States History to 1865 ***or*** United States History Since 1865	3		
POLS 135 POLS 136 POLS 137	Introduction to Political Science ***or*** Introduction to American National Politics ***or*** Introduction to State and Local Politics			
MATH 110	Intermediate Algebra ***or*** higher Mathematics course	3		MATH 40/40L or appropriate placement score
COMM 100 COMM 102	Fundamentals of Speech or Fundamentals of Human Communications	3		ENGL 30/90 or appropriate placement 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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-6		
Any course numbered 100 or above from the following disciplines: BIOL, CHEM, GEOG (104 & 110), GEOL, MATH 120 or above, PHYS		3-6		
Total General Education Requirements		**18**		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120	Organizational Behavior	3		
BSAD 221	Business Communications	3		ENGL 30/90 or appopriate placement score
CSIS 110	Technology & Information Management	3		
CSIS 115	Technology Fundamentals and Applications	3		
Emphasis Area				
GDES 110	Computers in Design I	3		
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement score
CSIS 223	Object-Oriented Programming	3		CSIS 123
CSIS 128	Web Development	3		CSIS 110 or 115
CSIS 228	Advanced Web Development	3		CSIS 128
CSIS 143	Database Design and Management	3		CSIS 110 or 115
CSIS 161	Networking Fundamentals	3		CSIS 110
CSIS 162	Introduction to Digital Media	3		CSIS 110 or 115
CSIS 262	Advanced Digital Media and Development	3		CSIS 162
CSIS 279	Web Database Programming	3		CSIS 123, 128, and 143
CSIS 290	Field Competencies and Employment Strategies	3		Instructor approval
Total Credit Hours Required		**64-70**		

Computer Science & Information Systems

CSIS CCNA and CCNP Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 112	Network Fundamentals CCNA Exploration I	4		CSIS 110 or CSIS 115
CSIS 113	Routing Protocols and Concepts CCNA Exploration II	4		CSIS 112
CSIS 212	LAN Switching and Wireless CCNA Exploration III	4		CSIS 113
CSIS 213	Accessing the WAN CCNA Exploration IV	4		CSIS 212
CSIS 216	Implementing Cisco IP Routing: CCNP I	4		CSIS 213
CSIS 217	Implementing IP Switching CCNP II	4		CSIS 213
CSIS 218	Maintaining and Troubleshooting IP Networks CCNP III	4		CSIS 216 and 217
Total Credit Hours Required		**29**		

CSIS CCNA and Security Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 112	Network Fundamentals CCNA Exploration I	4		CSIS 110 or CSIS 115
CSIS 113	Routing Protocols and Concepts CCNA Exploration II	4		CSIS 112
CSIS 170	Principles of Information Assurance	3		CSIS 110
CSIS 212	LAN Switching and Wireless CCNA Exploration III	4		CSIS 113
CSIS 213	Accessing the WAN CCNA Exploration IV	4		CSIS 212
CSIS 272	Network Security	4		CSIS 113
Total Credit Hours Required		**24**		

CSIS CCNA and Technology Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 120 BSAD 221	Organizational Behavior ***or*** Business Communications	3		ENGL 30/90 or appropriate placement score
CSIS 110 CSIS 115	Technology and Information Management ***or*** Tecnology Fundamentals and Applications	3		
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 112	Network Fundamentals CCNA Exploration I	4		CSIS 110 or CSIS 115
CSIS 113	Routing Protocols and Concepts CCNA Exploration II	4		CSIS 112
CSIS 152	Linux Operating System	3		CSIS 110
CSIS 170	Principles of Information Assurance	3		CSIS 110
CSIS 212	LAN Switching and Wireless CCNA Exploration III	4		CSIS 113
CSIS 213	Accessing the WAN CCNA Exploration IV	4		CSIS 212
Total Credit Hours Required		**32**		

CSIS Cisco Academy Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 112	Network Fundamentals CCNA Exploration I	4		CSIS 110 or CSIS 115
CSIS 113	Routing Protocols and Concepts CCNA Exploration II	4		CSIS 112
CSIS 212	LAN Switching and Wireless CCNA Exploration III	4		CSIS 113
CSIS 213	Accessing the WAN CCNA Exploration IV	4		CSIS 212
Total Credit Hours Required		**17**		

Computer Science & Information Systems

CSIS Software Development Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology and Information Management	3		
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement score
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123
CSIS 128	Web Development	3		CSIS 110 or CSIS 115
CSIS 228	Advanced Web Development	3		CSIS 128
CSIS 141 MATH 141	Discrete Structures Comp Science I ***or*** Discrete Structures Comp Science I	3		MATH 120 or MATH 150
CSIS 143	Database Design and Management	3		CSIS 110 or CSIS 115
CSIS 152	Linux Operating System	3		CSIS 110
CSIS 161	Networking Fundamentals	3		CSIS 110
CSIS 170	Principles of Information Assurance	3		CSIS 110
CSIS 279	Web Database Programming	3		CSIS 123, 128, and 143
CSIS 290	Field Competencies and Employment Strategies	3		Instructor approval
Total Credit Hours Required		**37**		

CSIS Systems Administration & Engineering Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology and Information Management	3		
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 143	Database Design and Management	3		CSIS 110 or CSIS 115
CSIS 151	Micocomputer Operating Systems Concepts	3		CSIS 110
CSIS 152	Linux Operating System	3		CSIS 110
CSIS 161	Networking Fundamentals	3		CSIS 110
CSIS 170	Principles of Information Assurance	3		CSIS 110
CSIS 172	LAN Windows Server	3		CSIS 110
CSIS 174	Technologies Used on Local Area Networks	3		CSIS 172
CSIS 175	Service and Support of Local Area Networks	3		CSIS 172
CSIS 178	Internetworking with TCP/IP	3		CSIS 172
CSIS 290	Field Competencies and Employment Strategies	3		Instructor approval
Total Credit Hours Required		**37**		

CSIS Web Technologies Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
GDES 110	Computers in Design I	3		
CSIS 110	Technology and Information Management	3		
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement score
CSIS 128	Web Development	3		CSIS 110 or CSIS 115
CSIS 143	Database Design and Management	3		CSIS 110 or CSIS 115
CSIS 161	Networking Fundamentals	3		CSIS 110
CSIS 162	Introduction to Digital Media	3		CSIS 110 or CSIS 115
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123
CSIS 228	Advanced Web Development	3		CSIS 128
CSIS 262	Advanced Digital Media Design and Development	3		CSIS 162
CSIS 279	Web Database Programming	3		CSIS 123, 128, and 143
CSIS 290	Field Competencies and Employment Strategies	3		Instructor approval
Total Credit Hours Required		**37**		

Construction Management

Offered at MCC-Business & Technology

This Associate in Applied Science degree is intended to qualify individuals for entry-level careers in the residential or commercial construction industry, in management or support roles. Construction specialty (CSMG) classes are held in the evening at the Builders' Association Education and Training Center, 105 W. 12th Avenue. North Kansas City, Missouri.

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

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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 100 MATH 110	Mathematics for Business ***or*** Intermediate Algebra	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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 BSAD 101	Introduction to Accounting ***or*** Accounting Principles I	3		
BSAD 109 BSAD 120	Principles of Supervision ***or*** Organizational Behavior	3		
BSAD 127 BSAD 128 *Select three of the following four CSMG courses:* CSMG 150 CSMG 160 CSMG 170 CSMG 180	Management Internship I ***and*** Management Internship II ***or*** Construction Management Leadership Construction Project Management Communications for the Construction Trades General and Specialty Contractor Dynamics	6		
BSAD 219 BSAD 204	Entrepreneurship ***or*** Business Management	3		
BSAD 153 CSIS 115 CSIS	Accounting Information Systems ***or*** Tecnology Fundamentals and Applications ***or*** Any Programming Language Course	3		BSAD 101 (BSAD 153)
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		
BSAD 254 BSAD 255 BSAD 270	Business Law I ***or*** Business Law II ***or*** Legal Environment of Business	3		
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		**64**		

Construction Trades Apprenticeship Program

Offered at MCC-Business & Technology

These degree completion programs grant college credit by certification for certain federally approved apprenticeship programs. An eligible apprenticeship must contain a minimum 450 clock hours of classroom instruction and a program-specific number of clock hours of on-the-job training. Thirty to forty-two hours of MCC credit leading toward an AAS in Industrial Technology will be awarded upon completion of 15 hours of MCC coursework and receipt of a certificate and/or journeyman card for the appropriate craft.

A.A.S. Industrial Technologies

Bricklayer..... 64-66 Credits
Construction Carpentry..... 64-66 Credits
Construction Cement Masons ..... 64-66 Credits
Construction Driver & Logistics ..... 63-67 Credits
Construction Ironwork..... 64-66 Credits
Construction Laborer..... 64-66 Credits
Floor Layer ..... 64-66 Credits
Glaziers ..... 64-66 Credits
Inside Wiring
3 -Year program..... 64-66 Credits
5 -Year program..... 67-68 Credits
Painter ..... 64-66 Credits
Plumbing..... 64-66 Credits

Bricklayer Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, COMM/THEA		3-5		
Total General Education Requirements		**18**		

Specific Program Requirements				
Bricklayer				
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health & Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Bricklaying Apprenticeship (Credit by Certification*)		29		
Total Credit Hours		**64-66**		

***** 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.

Construction Trades Apprenticeship Program

Construction Carpentry Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total Credit Hours		**18**		

Specific Program Requirements				
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
Carpentry Apprenticeship (Credit by Certification*)		29		
General Electives		6		
Total Credit Hours		**64-66**		

***** 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 Trades Apprenticeship Program

Construction Cement Masons Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**18**		

Specific Program Requirements				
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		
Cement Masons Apprenticeship (Credit by Certification*)		29		
General Electives		9		CSIS 100 or CSIS 115 or higher
Total Credit Hours		**64-66**		

***** 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 Trades Apprenticeship Program

A.A.S. Indus. Construction Driver & Logistics

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I ***or*** Technical Mathematics I w/ review ***or*** College Algebra ***or*** College Algebra w/ review ***and*** Technical Mathematics II ***or*** Trigonometry PreCalculus or higher	5-8		MATH 20/20L or appropriate score on placement test (MATH 103R) 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 110 or satisfactory score on the math placement test (MATH 150)
SPAN 100 SPAN 101	Beginning Occupational Spanish ***or*** Elementary Spanish I	3-5		
Total General Education Requirements		**18**		
Specific Program Requirements				
EHSS 111	Introduction to Health and Safety for General Industry	1		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115
CSIS 110	Technology and Information Management	3		
CSIS 115	Technology Fundamentals and Applications or higher	3		
INTE 151	Industrial Rigging	3		
BSAD 109	Principles of Supervision	3		
BSAD 210	Logistics Management	3		
BSAD 211	Operations Management	3		
BSAD 212	Transportation and Operations and Management	3		
BSAD 213	Warehouse and Distribution Centers	3		
BSAD 219	Entrepreneurship	8		
Warehouse Worker Apprenticeship*		8		
Electives as necessary to meet the minimum credit hours to complete the degree.				
Total Credit Hours Required		**63-67**		

*Federally approved Warehouse Worker apprenticeship program that contains a minimum of 144 clock hours of classroom and instruction and 2000 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.

Construction Trades Apprenticeship Program

Construction Ironworker Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		**Credits**	**Semester Taken**	**Prerequisites**
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**18**		

Specific Program Requirements				
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Ironworking Apprenticeship (Credit by Certification*)		29		
Total Credit Hours		**64-66**		

***** 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 Trades Apprenticeship Program

Construction Laborer Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirememt		**18**		

Specific Program Requirements				
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Construction Laborer Apprenticeship (Credit by Certification*)		29		
Total Credit Hours		**64-66**		

***** 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.

Construction Trades Apprenticeship Program

Floor Layer Apprenticeship

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**18**		

Specific Program Requirements				
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
Floor Layer Apprenticeship (Credit by Certification*)		29		
General Electives		6		
Total Credit Hours		**64-66**		

***** Federally approved floor layer 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 Trades Apprenticeship Program

Glaziers Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**18**		

Specific Program Requirements				
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Glazier Apprenticeship (Credit by Certification*)		29		
Total Credit Hours		**64-66**		

***** Federally approved glazier 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 Trades Apprenticeship Program

Inside Wiring- 3 Year Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		**Credits**	**Semester Taken**	**Prerequisites**
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 orappropriate 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		18		

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
INTE 107	Industrial Electrical Safety	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Electrical Apprenticeship		29		
Total Credit Hours		**64-66**		

* 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.

Construction Trades Apprenticeship Program

Inside Wiring- 5 Year Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		**Credits**	**Semester Taken**	**Prerequisites**
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		18		

Specific Program Requirements		**Credits**	**Semester Taken**	**Prerequisites**
CSIS 100 CSOS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
INTE 107	Industrial Electircal Safety	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
Electrical Apprenticeship		42		
Total Credit Hours		**67-68**		

* 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.

Construction Trades Apprenticeship Program

Painter Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		**Credits**	**Semester Taken**	**Prerequisites**
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		18		
Specific Program Requirements		**Credits**	**Semester Taken**	**Prerequisites**
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy ***or*** Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Painter Apprenticeship (Credit by Certification*)		29		
Total Credit Hours		**64-66**		

* 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.

Construction Trades Apprenticeship Program

Plumbing Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		18		

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health & Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Plumber Apprenticeship (Credit by Certification*)		29		
Total Credit Hours		**64-66**		

* 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.

Criminal Justice

Offered at MCC-Blue River and MCC-Penn Valley

A.A.S. Criminal Justice Adult Corrections Emphasis ..... 67-69 Credits
A.A.S. Criminal Justice Juvenile Services Emphasis ..... 67-69 Credits
A.A.S. Criminal Justice Police Science ..... 64-68 Credits
Police Science Certificate-600 Program.....37 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. Penn Valley offers the Adult Corrections and Juvenile Services emphasis areas.

A.A.S. Criminal Justice Adult Corrections Emphasis

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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 CRJU 230	Criminal Law I ***or*** Missouri Criminal Law	3		
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 CRJU 236	Principles of Management in Criminal Justice Systems ***or*** Correctional Administration	3		
Electives: Any course(s) numbered 100 or above from the following disciplines: CRJU, Foreign Language, HUMS, PSYC, SOCI		9		
Total Credit Hours Required		**67-69**		

Criminal Justice

A.A.S. Criminal Justice Juvenile Services Emphasis

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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 CRJU 230	Criminal Law I ***or*** Missouri Criminal Law	3		
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		**67-69**		

Criminal Justice

A.A.S. Criminal Justice - Police Science

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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 100	Mathematics for Business or higher numbered course	3		MATH 20/20L or appropriate placement test score
PSYC 140 SOCI 160	General Psychology ***or*** Sociology	3		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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 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	4		LWEN 101
LWEN 200	Law Enforcement Skills	5		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				
Choose three courses 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		**64-68**		

Police Science Certificate - 600 Program

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
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	4		LWEN 101
LWEN 200	Law Enforcement Skills	5		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		**37**		

Dental Assisting

Offered at MCC-Penn Valley

A.A.S. Dental Assisting.....70-76 Credits
Dental Assisting Certificate .....53 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.
For more information, go to **www.mcckc.edu/dentalassisting**

A.A.S. Dental Assisting

COLL 100	First Year Seminar	1		
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: ALHT 108, BIOL 100, 104, 106, 109, or 110.
BIOL 100 CHEM 105	Cell Biology ***or*** Introductory Chemistry	3-5		
ENGL 101	Composition and Reading I	3		ENGL 30/90, 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements				
EMS 100	Basic Emergency Care	1		
DENA 100	Introduction to Dental Assisting	1		
DENA 101	Body Structure and Function	2		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 102	Head and Neck Anatomy	2		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 103	Dental Anatomy	2		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 104	Dental Emergencies and Pharmacology	1		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 105	Dental Materials I	2.5		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 108	Oral Microbiology & Infection Control	1.5		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 110	Chairside Assisting I	5		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 115	Dental Radiology I	4		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 125	Clinical Experience I	2		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 205	Dental Materials II	3		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 210	Chairside Assisting II	5		DENA 108, 110, 115, 125, 205
DENA 215	Dental Radiology II	2		DENA 108, 110, 115, 125, 205
DENA 225	Dental Office Management	2		DENA 108, 110, 115, 125, 205
DENA 230	Oral Pathology	1		DENA 108, 110, 115, 125, 205
DENA 250	Clinical Experience II	4		DENA 108, 110, 115, 125, 205
DENA 260	Dental Assisting Seminar	2		DENA 108, 110, 115, 125, 205
Total Credit Hours Required		**70-76**		

Dental Assisting

Dental Assisting Certificate

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
PSYC 140	General Psychology	3		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements				
EMS 100	Basic Emergency Care	1		
DENA 100	Introduction to Dental Assisting	1		
DENA 101	Body Structure and Function	2		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 102	Head and Neck Anatomy	2		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 103	Dental Anatomy	2		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 104	Dental Emergencies and Pharmacology	1		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 105	Dental Materials I	2.5		Formal Admission to the Dental Assisting program, DENA 100, ENGL 101
DENA 108	Oral Microbiology & Infection Control	1.5		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 110	Chairside Assisting I	5		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 115	Dental Radiology I	4		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 125	Clinical Experience I	2		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 205	Dental Materials II	3		DENA 101, 102, 103, 104, 105, and EMS 100
DENA 210	Chairside Assisting II	5		DENA 108, 110, 115, 125, 205
DENA 215	Dental Radiology II	2		DENA 108, 110, 115, 125, 205
DENA 225	Dental Office Management	2		DENA 108, 110, 115, 125, 205
DENA 230	Oral Pathology	1		DENA 108, 110, 115, 125, 205
DENA 250	Clinical Experience II	4		DENA 108, 110, 115, 125, 205
DENA 260	Dental Assisting Seminar	2		DENA 108, 110, 115, 125, 205
Total Credit Hours Required		**53**		

Engineering Technology

Offered MCC-Business & Technology

A.A.S. Engineering Technology
- Architecture ..... 65-66 Credits
- Civil ..... 64 Credits
- Computer & Electronics ..... 64-66 Credits
- Construction Management ..... 65-66 Credits
- Mechanical/Manufacturing Tech ..... 68-70 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 and construction management. 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.

A.A.S. Engineering Technology: Architecture Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	U.S. History to 1865 ***or*** U.S. 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 satisfactory placement test score
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
Specific Program Requirements				
ENGR 101	Introduction to the Profession	1		
EHSS 111 EHSS 112	Intro to Health & Safety for General Industry or Intro to Health & Safety for Construction	1		
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	Applied Statics & Mechanics	3		MATH 104 or 130
ETEC 268	Introduction to Structural Steel Design	3		ETEC 152
ETEC 269	CADD II	4		ETEC 152 or 169
PHYS 130	General Physics	5		MATH 130 or appropriate placement test score.
ETEC 170	CADD I, Microstation	3		ETEC 152
ETEC 210	Introduction to Commercial Architecture	3		ETEC 152 and 155
ETEC 211	Building Information Modeling, Revit	3		ETEC 220
ETEC 265	Introduction to Civil Design	3		ETEC 152
ETEC 290 ETEC 295	Internship in Engineering Technology or Capstone Project in Engineering Technology	3		
SRVY 135	Elementary Surveying	3		MATH 130 or 150
Total Credit Hours Required		**65-66**		

Engineering Technology

A.A.S. Engineering Technology: Civil Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	U.S. History to 1865 ***or*** U.S. History since 1865 ***or*** Introduction to Political Science ***or*** Introduction to American National Politics ***or*** Introduction to State and Local Politics	3		
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
Specific Program Requirements for: Civil & Mechanical/Manufacturing g & Architecture				
ENGR 101	Introduction to the Profession	1		
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
PHYS 130	General Physics	5		MATH 130 or appropriate placement test score.
Specific Emphasis Requirements Civil				
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
Total Credit Hours Required		**64**		

Engineering Technology

A.A.S. Engineering Technology: Computer & Electronics Emphasis

General Education Requirements (Computer & Electronics)		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	U.S. History to 1865 ***or*** U.S. 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 satisfactory placement test score
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
Specific Program Requirements				
ENGR 101	Introduction to the Profession	1		
CHEM 111 PHYS 130 PHYS 220	General College Chemistry I ***or*** General Physics I ***or*** Engineering Physics I	5		MATH 120 or satisfactory score on placement test (CHEM 111) MATH 130 Enrollment in or completion of MATH 190
CSIS 123	Programming Fundamentals	3		MATH 40/40L or placement test
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123
EHSS 111 EHSS 112	Intro to Health & Safety for General Industry ***or*** Intro to Health & Safety for Construction	1		
ETEC 152	Engineering Graphics & CADD I	5		MATH 40/40L
ETEC 118	AC Circuit Analysis	4		ETEC 110 or ETEC 110
ETEC 130	Digital Electronics	4		ETEC 110 or ETEC 110
ETEC 220	Analog Devices	4		ETEC 118
ETEC 230	Microcontroller Architecture	4		ETEC 130
ETEC 240 ETEC 275	Design Project or Build Project	3		ETEC 270 ETEC 220
ETEC 290 ETEC 295	Internship in Engineering Technology or Capstone Project in Engineering Technology	3		
INTE 110	Industrial Electrical Principle	4		
Electives- choose one: CSIS or INTE		3-4		
Total Credit Hours Required		**64-66**		

Engineering Technology

A.A.S. Engineering Technology: Construction Management

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
HIST 120 HIST 121	United States History to 1865 or United States History since 1865	3		
MATH 120 MATH 130 MATH 150	College Algebra and Trigonometry or PreCalculus	5-6		MATH 110 or satisfactory placement test score
PSYC 140	General Psychology	3		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate test score
PHYS 101	Introductory Physics	5		
Specific Program Requirements				
BSAD 101	Accounting Principles I	3		
BSAD 254 BSAD 270	Business Law or Legal Environment of Business	3		
CSIS 115	Technology Fundamentals and Applications	3		
ECON 210	Macroeconomics	3		MATH 40 or 40L or satisfactory placement test score
ENGR 101	Introduction to the Profession	1		
ETEC 152	Engineering Graphics & CADD I	5		MATH 40 or 40L
ETEC 155	Introduction to Residental Architecture	3		ETEC 152
ETEC 200	Applied Statics and Mechanics	3		MATH 104 or MATH 130
ETEC 210	Introduction to Commercial Architecture	3		ETEC 152 and 155
ETEC 211	Building Information Modeling	3		ETEC 152
SRVY 135	Elementary Surveying	3		MATH 130 or 150
Specific Major Requirements (offered at UCM Summit)				
CMGT 1300	Introduction to Construction Management	2		
CMGT 2325	Project Cost Estimating	3		CMGT 2310 or GRAP 1110
CMGT 3320	Principles of Construction Management (online)	3		
CMGT 3330	Building Codes & Code Administration (online)	3		CMGT 2310, or consent of instructor
Total Credit Hours Required		**65-66**		

Engineering Technology

A.A.S. Engineering Technology: Mechanical/Manufacturing Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137	U.S. History to 1865 ***or*** U.S. History since 1865 ***or*** Introduction to Political Science ***or*** Introduction to American National Politics ***or*** Introduction to State and Local Politics	3		
MATH 130 MATH 150	Trigonometry ***or*** PreCalculus	3 5		MATH 120 or satisfactory score or placement test MATH 110 or satisfactory score or placement test
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
Specific Program Requirements for: Civil & Mechanical/Maufacturing & Architecture				
ENGR 101	Introduction to the Profession	1		
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	Applied Statics & Mechanics	3		MATH 104 or 130
ETEC 268	Structural Steel Blueprint Reading	3		ETEC 152
ETEC 269	CADD II	4		ETEC 152 or 169
PHYS 130 PHYS 220	General Physics or Engineering Physics	5		MATH 130 or appropriate placement test score. Enrollment in or completion of MATH 190
Specific Emphasis Requirements Mechanical/Manufacturing				
ETEC 258	Introduction to Machine Design	3		ETEC 152
ETEC 270 ETEC 271	Parametric Modeling ***or*** Parametric Modeling, Alternate	3		ETEC 152 or 169
MATE 116	Geometric Dimensioning and Tolerancing Printreading	2		MATE 115
MATE 130	Machining for Related Occupations	5		
MATE 210 MATE 215	Computerized Numerical Control - Lathe ***or*** Computer Numerical Control - Mill	3		MATE 101 or 130. MATH 103 or concurrent enrollment. MATE 101 or 130. MATH 103 or concurrent enrollment.
MATE 225	Master Cam I	3		CSIS 110, MATE 210 and 215
Total Credit Hours Required		**68-70**		

Environmental Health & Safety Technology

Offered at MCC-Business &Technology

A.A.S. Environmental ..... 66-69 Credits
A.A.S. Health & Safety ..... 66-69 Credits
A.A.S. Envir. Health & Safety Tech. ..... 66-69 Credits

Certificates

Envir. Health & Safety Tech ..... 34 Credits
Environmental Specialist ..... 31 Credits
Health & Safety Management..... 28 Credits
Health & Safety Specialist ..... 31 Credits

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

A.A.S. EHSS Environmental

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
Choose one of the following:				
BIOL 101	General Biology ***or***			BIOL 100 or CHEM 105 (BIOL 109)
BIOL 102	Environmental Science ***or***			
ALHT 108	Introductory Anatomy and Physiology ***or***	5-6		
BIOL 109	Anatomy and Physiology ***or***			
GEOL 103	Environmental Geology ***or***			
PHYS 101	Physics			
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score (
ENGL 215	Technical Writing	3		ENGL 101
CHEM 105	Introductory Chemistry ***or***	5		MATH 20 or two units of high school algebra and
CHEM 111	General College Chemistry I			CHEM 107 or high school chemistry (CHEM 111)
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			
BSAD 120	Organizational Development ***or***	3		
BSAD 221	Business Communications			
MATH 103R	Technical Math I ***or***			
MATH 103	Technical Mathematics ***or***	3-5		MATH 40/40L (MATH 103)
MATH 120	College Algebra ***or***			
MATH 120R	College Algebra w/ Review			
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
General Education Requirements		**28-31**		
Core Program Requirements		**22**		
EHSS 101	Hazardous Waste Operations & Emergency Response (HAZWOPER)	3		
EHSS 110	Properties and Hazards of Hazardous Materials	3		
EHSS 200	Safety and Health Regulations and Standards	3		
EHSS 201	EHS Laboratory	1		EHSS 101
EHSS 202	Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 101
EHSS 290	EHS Program Capstone	3		EHSS 204
EHSS 275	Analytical Applications for EHS	3		MATH 130 or higher
Environmental Emphasis				
Choose three of the following:				
EHSS 217	Concepts of Sustainability Recycling and Pollution Prevention			EHSS 101 (EHSS 217)
EHSS 220	Air Quality Management ***or***	9		EHSS 203 (EHSS 220)
EHSS 225	Water Quality Management ***or***			EHSS 203 (EHSS 225)
EHSS 230	Waste Management			EHSS 203 (EHSS 230)
Total Credit Hours Required		**66-69**		

Environmental Health & Safety Technology

A.A.S. EHSS Health and Safety

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
Choose one of the following:				
BIOL 101	General Biology ***or***			BIOL 100 or CHEM 105 (BIOL 109)
BIOL 102	Environmental Science ***or***			
ALHT 108	Introductory Anatomy and Physiology ***or***	5-6		
BIOL 109	Anatomy and Physiology ***or***			
GEOL 103	Environmental Geology ***or***			
PHYS 101	Physics			
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score (
ENGL 215	Technical Writing	3		ENGL 101
CHEM 105	Introductory Chemistry ***or***	5		MATH 20 or two units of high school algebra and
CHEM 111	General College Chemistry I			CHEM 107 or high school chemistry (CHEM 111)
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			
BSAD 120	Organizational Development ***or***	3		
BSAD 221	Business Communications			
MATH 103R	Technical Math I ***or***			
MATH 103	Technical Mathematics ***or***	3-5		MATH 40/40L (MATH 103)
MATH 120	College Algebra ***or***			
MATH 120R	College Algebra w/ Review			
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
General Education Requirements		**28-31**		
Core Program Requirements		**22**		
EHSS 101	Hazardous Waste Operations & Emergency Response (HAZWOPER)	3		
EHSS 110	Properties and Hazards of Hazardous Materials	3		
EHSS 200	Safety and Health Regulations and Standards	3		
EHSS 201	EHS Laboratory	1		EHSS 101
EHSS 202	Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 101
EHSS 275	Analytical Applications for EHS	3		MATH 103 or higher
EHSS 290	EHS Program Capstone	3		EHSS 204
Health & Safety Emphasis				
Choose three of the following:				
EHSS 205	Principles of Industrial Hygiene ***or***			
EHSS 210	Incident & Accident Investigation ***or***	9		EHSS 200
EHSS 211	Workers Compensation Legislation for EHS ***or***			
EHSS 218	Industrial Process and Hazard Control			
Total Credit Hours Required		**66-69**		

Environmental Health & Safety Technology

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

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
Choose one of the following:				
BIOL 101	General Biology ***or***			BIOL 100 or CHEM 105 (BIOL 109)
BIOL 102	Environmental Science ***or***			
ALHT 108	Introductory Anatomy and Physiology ***or***	5-6		
BIOL 109	Anatomy and Physiology ***or***			
GEOL 103	Environmental Geology ***or***			
PHYS 101	Introductory Physics			
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
BSAD 221	Business Communications ***or***	3		ENGL 30/90 or appropriate placement test score
BSAD 120	Organizational Development			
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			
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 103R	Technical Math I ***or***			
MATH 103	Technical Mathematics ***or***	3-5		MATH 40/40L (MATH 103)
MATH 120	College Algebra ***or***			
MATH 120R	College Algebra w/ Review			
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
General Education Requirements		**28-31**		
Core Program Requirements				
EHSS 101	Hazardous Waste Operations & Emergency Response (HAZWOPER)	3		
EHSS 110	Properties and Hazards of Hazardous Materials	3		
EHSS 200	Safety and Health Regulations and Standards	3		
EHSS 201	EHS Laboratory	1		EHSS 101
EHSS 202	Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 101
EHSS 275	Analytic Applications for EHS	3		MATH 103 or higher
EHSS 290	EHS Program Capstone	3		EHSS 204
Environmental Health & Safety Emphasis				
Choose two of the following:				
EHSS 205	Principles of Industrial Hygiene ***or***			
EHSS 210	Incident & Accident Investigation ***or***	6		EHSS 200
EHSS 211	Workers Compensation Legislation for EHS ***or***			
EHSS 218	Industrial Process & Hazard Control			
Choose two of the following:				
EHSS 217	Concepts of Sustainability Recycling and Pollution Prevention			EHSS 101 (EHSS 217)
or				EHSS 203 (EHSS 220)
EHSS 220	Air Quality Management ***or***	6		EHSS 230 (EHSS 225)
EHSS 225	Water Quality Management ***or***			
EHSS 230	Waste Management			
Total Credit Hours Required		**66-69**		

Environmental Health & Safety Technology

Environmental Health and Safety Technology Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 221 ENGL 119 ENGL 215	Business Communications ***or*** Introduction to Report Writing ***or*** Technical Writing	3		ENGL 30/90 or appropriate placement test score (BSAD 221) ENGL 101 (ENGL 215)
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 101
EHSS 205	Principles of Industrial Hygiene	3		EHSS 200
EHSS 210 EHSS 211	Incident and Accident Investigation ***or*** Workers Compensation Legislation for EHS	3		EHSS 200 (EHSS 210)
EHSS 217 EHSS 230	Concepts of Waste Minimization, Recycling, and Pollution Prevention ***or*** Waste Management	3		EHSS 101 (EHSS 217)
EHSS 290	EHS Program Capstone	3		EHSS 204
Total Credit Hours Required		**34**		

Environmental Specialist Certificate

301800 Revised 11/2012 (Spring 2013)

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 221	Business Communications	3		ENGL 30/90 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 202	Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203	Environmental Regulations	3		
EHSS 204 EHSS 217	Emergency Preparedness and Planning ***or*** Concepts of Waste Minimization, Recycling, and Pollution Prevention	3		EHSS 101
EHSS 220	Air Quality Management	3		EHSS 203
EHSS 225	Water Quality Management	3		EHSS 203
EHSS 290	EHS Capstone	3		EHSS 204
Total Credit Hours Required		**31**		

Environmental Health & Safety Technology

Health and Safety Management Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 101	Accounting Principles I	3		
BSAD 105	Human Resources Management	3		
BSAD 120	Organizational Behavior	3		
BSAD 221	Business communications	3		ENGL 30/90 or appropriate placement test score
Environmental Health and Safety				
EHSS 200	Safety and Health Regulations and Standards	3		
EHSS 210	Incident and Accident Investigation	3		EHSS 200
EHSS 211	Workers Compensation Legislation for EHS	3		EHSS 200
EHSS 218	Industrial Process and Hazard Control	3		EHSS 200
EHSS 290	EHS Capstone	3		EHSS 204
Total Credit Hours Required		**28**		

Health and Safety Specialist Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 221	Business Communications	3		Satisfactory ASSET score or ENGL 30/90 (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 101
EHSS 205 EHSS 218	Principles of Industrial Hygiene ***or*** Industrial Process and Hazard Control	3		EHSS 200 (EHSS 205) EHSS 200 (EHSS 218)
EHSS 210 EHSS 211	Incident and Accident Investigation ***or*** Workers Compensation Legislation for EHS	3		EHSS 200
EHSS 290	EHS Capstone	3		EHSS 204
Total Credit Hours Required		**31**		

Fire Science Technology

Offered at MCC-Blue River

A.A.S. Fire Science Technology ..... 67-69 Credits
Fire Science Certificate ..... 32 Credits

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

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

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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 100	Mathematics for Business or higher	3		MATH 20 or 20L or appropriate placement score
PSYC 140	General Psychology	3		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
General Education elective 100 or above		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 161	Fire Investigation I	3		FSTE 204, FSTE 205
FSTE 169	Fire Prevention	3		
FSTE 170	Haz-Mat Awareness and Operations	3		
FSTE 172	Strategies and Tactics	3		FSTE 104
FSTE 179	Principles of Emergency Services	4		
FSTE 192	Fire Protection Systems	3		
FSTE 193	Legal Aspects of the Fire Service	3		
FSTE 202	Intro to Fire and Emergency Services Administration	3		
FSTE 203	Managing in Today's Fire Service/ Capstone	3		FSTE 200, 204
FSTE 204	Principles of Fire Emergency Safety and Survival	3		
FSTE 205	Fire Behavior and Combustion	3		
FSTE 206	Fire Investigation II	3		
FSTE 107	Fire Science Physical Fitness I	1		Enrollment in Fire Academy
FSTE 108	Fire Science Physical Fitness II	1		FSTE 107
FSTE 109	Fire Science Physical Fitness III	1		FSTE 108
Total Credit Hours Required		**67-69**		

Fire Science Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
EMS 150	Emergency Medical Technician-Basic	8		The student must be 18 years old by the end of the course and must hold a high school diploma or GED.
FSTE 161	Fire Investigation I	3		FSTE 204, FSTE 205
FSTE 169	Fire Prevention	3		
FSTE 170	Haz-Mat Awareness and Operations	3		
FSTE 179	Principles of Emergency Services	4		
FSTE 189	Fire Fighter II	4		FSTE 179
FSTE 107	Fire Science Physical Fitness I	1		Enrollment in MCC Fire Academy
FSTE 108	Fire Science Physical Fitness II	1		FSTE 107
FSTE 109	Fire Science Physical Fitness III	1		FSTE 108
FSTE 204	Principles of Fire Emergency Safety and Survival	3		
Total Credit Hours Required		**32**		

Foreign Language Interpreting

Offered at MCC-Maple Woods

Foreign Language
Interpreting Certificate ..... 16 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

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
FLIN 100	Introduction to Interpreting	3		Admission to certificate program
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		**16**		

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.

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. 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 30/90 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		
COMM 100 Fundamentals of Speech	3		ENGL 30/90 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*			
HUDV 100/101 Strateges for Academic Excellence/ Lifelong Learning	1-2		
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 ..... 64 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.

A.A.S. Game Development

Specific Program Requirements (Must be taken at JCCC)	Credits	Semester Taken	Prerequisites
GAME 102 The Business of Games	3		
GAME 104 Introduction to Game Development	1		
GAME 105 Beginning Game Creation	3		
GAME 180 Artificial Intelligence for Games*	3		
GAME 240 Agile Game Development*	2		
GAME 250 Game Capstone*	4		
Game Elective	3		
Design Track Courses ***or*** Programming Track Courses	28		
Design Track Courses			
ENGL 150 Digital Narratives*	3		
GAME 120 Game Design I*	4		
GAME 132 Game Level Editing*	4		
GAME 134 Game World Creation*	4		
GAME 136 Game Prototyping*	4		
GAME 220 Game Design II*	4		
GAME 235 Game Quality Assurance*	2		
GAME 238 Serious Game Design*	3		
Programming Track Courses			
CS 201 Concepts of Programming Algorithms Using C#*	4		
CS 236 Object-Oriented Programming Using C#*	4		
GAME 110 Flash Gaming	4		
GAME 121 Game Programming I*	4		
GAME 221 Game Programming II*	4		
GAME 255 Mobile Game Programming*	4		
MATH 191 Math & Physics for Games I* ***or*** PHYS 191 Math & Physics for Games I*	4		
Game Electives			
GAME 110 Flash Gaming	4		
GAME 120 Game Design I*	4		
GAME 121 Game Programming I*	4		
GAME 132 Game Level Editing*	4		
GAME 134 Game World Creation*	4		
GAME 136 Game Prototyping*	4		
GAME 220 Game Design II*	4		
GAME 221 Game Programming II*	4		
GAME 235 Game Quality Assurance*	2		
GAME 238 Serious Game Design*	3		
GAME 255 Mobile Game Programming*	4		
GAME 292 Special Topics:*	3		
ENGL 150 Digital Narratives*	3		
HUM 155 Classical Mythology	3		
HUM 156 World Mythology	3		
* Prerequisite/Corerequisite required			

continued on next page

Game Development

A.A.S. Game Development continued...

Specific Programs Requirement- Must be taken at MCC	Credits	Semester Taken	Prerequisites/Equivalences
CSIS 123 Programming Fundamentals	3		
ENGL 101 Composition & Reading I	3		
MATH 120 College Algebra	3		
COMM 100 Fundamentals of Speech ***or*** COMM 102 Fundamentals of Human Communication ***or*** COMM 223 Interpersonal Communication	3		
Humanities Elective	3		
Social Science/Economics Elective	3		
Physical Education Elective	1		
Total Credit Hours Required	**66**		

Social Science and Economics Electives that will transfer from MCC to JCCC:
ANTH 100, ANTH 110, ANTH 120, ECON 110, ECON 210, ECON 211, GEOG 111, GEOG 112, POLS 135, POLS 136, POLS 137, POLS 234, PSYC 140, SOCI 160, SOCI 163, SOCI 170, SOCI 220

Health, Physical Education & Recreation Electives that will transfer from MCC to JCCC:
DANC 100, DANC 111, DANC 121, DANC 122, EMS 100, PHED 105, PHED 106, PHED 107, PHED108, 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 141, PHED 142, PHED 143, PHED 144, PHED 145, PHED 146, PHED 147, PHED 157, PHED 158, PHED 159, PHED 165, PHED 166, PHED 167, PHED 168, PHED 173, PHED 174, PHED 178, PHED 179, PHED 180

Geographic Information Systems

Offered at MCC-Maple Woods and MCC-Longview

Geographic Information Systems Certificate ..... 34-40 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

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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 CSIS 143 CSIS 177	 Web Development Database Design and Management Database Application and Design with Access	3		 CSIS 110 or 115 (CSIS 128) CSIS 110 or 115 (CSIS 143) One Windows based course (CSIS 177)
One of the following: GEOG 105 GEOG 113 GEOG 114 GEOG 207 GEOG 210	 World Geography Cultural/Human Geography Introduction to Geography Geography of the United States and Canada Economic Geography	3		
One of the following: GEOG 104 GEOL 101 GEOL 103	 Physical Geography Physical Geology 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, 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		**34-40**		

Graphic Design

Offered at MCC-Penn Valley

A.A.S. Graphic Design..... 64 Credits

This program leads to the Associate in Applied Science degree and prepares students for jobs as graphic designers or transfer to a four-year degree program.

A.A.S. Graphic Design

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ART 103	Design Foundations	3		
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 119	College Math or higher	3		MATH 110
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Any ART History course		3		
Specific Program Requirements				
GDES 110	Computers in Design I	3		
ART 110	Drawing I	3		
ART 115	Orientation to Graphic Communications*	3		
ART 123	Color Theory	3		ART 103 or concurrent enrollment
GDES 160	Graphic Design I*	3		GDES 150 or concurrent enrollment, READ 11/31 or higher, formal acceptance
GDES 150	Computers in Design II	3		GDES 110
ART 247 ART 282 ART 139	Digital imaging ***or*** Graphic Media - Advanced Color Correction ***or*** Film & Darkroom Photography	3		GDES 110 (ART 247) GDES 110 and ART 115 (ART 282)
ART 250 ART 254	Printmaking ***or*** Silk Screen Printing I	3		
GDES 210	Graphic Design II*	3		GDES 160
GDES 245	Web Design*	3		GDES 150 or equivalent
GDES 250	Graphic Design III*	3		GDES 210 or concurrent enrollment
GDES 255	Advanced Web Design*	3		GDES 245
ART 281	Introduction to Graphic Media - File Preparation*	3		GDES 110 and ART 115
GDES 264	Art Portfolio- Graphic Design	3		GDES 210 or concurrent enrollment
ART	Elective	6		
Total Credit Hours Required		**64**		

Recommended Electives (suggested categories based on student intent

Graphic Design		**Illustration**		**Graphic Media emphasis**		**Transfer**	
GDES 290*	GD Internship	ART 105	DigitalArtFoundations	ART 282*	GM-Adv Color CX	ART 111	Drawing II
ART 157*	History of GD	ART 270*	Illustration	ART 283*	Adv Graphic Media	ART 220	Painting I
ART 283*	GM-Adv. Color Cx	ART 111	Drawing II	ART 247*	Digital Imaging	ART 170	Ceramics
ART 104	3D Animation	ART 112	Drawing III				
ART 280*	Spec. Studies (in GD)	ART 113	Drawing IV				
ART 139*	Film and Darkroom Photography	ART 220	Painting I				
		ART 221	Painting II				
ART 247	Digital Imaging	ART 222	Painting III				
ART 242	Photography II	APTX 130*	Fashion Illustration and Technical Drawing				
ART 282	Adv GM-Adv Color CX						
ART 204	3D Animation II	ART 131*	Fashion Illustration II				

* These courses are only offered on the Penn Valley campus.

Graphic Media

Offered at MCC-Penn Valley

Graphic Media Technician Certificate .....25 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.

Graphic Media Technician Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
GDES 110	Computers in Design I	3		
ART 115	Orientation to Graphic Communications	3		
GDES 202	Computers in Design II	3		GDES 110
ART 281	Introduction to Graphic Media - File Preparation	3		ART 115 and GDES 110
ART 282	Graphic Media - Advanced Color Correction	3		ART 115 and GDES 110
ART 283	Advanced Graphic Media	3		ART 115, 281, 282, GDES 150
ART 285	Variable Data Publishing	3		ART 281 and 282, GDES 150
ART 290	Graphic Media Internship	3		ART 283 and 285
Total Credit Hours Required		**25**		

Health Information Management

Offered at MCC-Penn Valley

A.A.S. Health Information Management .....
..... 74.5-80.5 Credits
Coding Specialist Certificate ..... 42.5-48.5 Credits

An introduction to information technology specific to healthcare and health information management. Topics include computer hardware, operating systems, networking concepts, programming languages, and user interfaces specific to healthcare. Special emphasis is placed on the practical application of database management principles, including the design and normalization of data tables, data security, and information retrieval and reporting inherent in electronic health records management.

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 Commission on Accreditation of Health Informatics and Health Information Management.

Admission to the Program

Since enrollment is limited, students must apply for admission to the Health Information Technology program. For more information, go to **www.mcckc.edu/hite**

A.A.S. Health Information Management

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 100 CHEM 105	Introductory to Cell Biology or Introduction to Chemistry for Health Science	3-5		MATH 20 or 20L
BIOL 109 BIOL 110 BIOL 210	Human Anatomy and Physiology ***or*** Human Anatomy ***and*** Human Physiology	6-10		BIOL 100 or CHEM 105 (BIOL 109) BIOL 110 and BIOL 100 or CHEM 105 (BIOL 210)
BIOL 137	Intro to Pathology	4		BIOL 110 and 210, BIOL 109, ALHT 108
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
COMM 100	Fundamentals of Speech	3		
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		
Specific Program Requirements				
CSIS 115	Tecnology Fundamentals and Applications	3		
HIM 100	Medical Terminology	3		
HIM 101	Introduction to Health Information Management	4		BIOL 100, ENGL 101 and HIM 100
HIM 108	Legal Aspects of Health Information	3		BIOL 100, ENGL 101 and HIM 100
HIM 110	Pharmacology	2		BIOL 100, ENGL 101, HIM 100
HIM 112	Database for Health Information	2		BIOL 109, CSIS 115, HIM 101, HIM 108
HIM 115	Healthcare Statistics	3		BIOL 109, CSIS 115, HIM 101, HIM 108
HIM 120	Quality Improvement in Healthcare	3		BIOL 109, CSIS 115, HIM 101, HIM 108
HIM 130	Health Data Systems	3		BIOL 109, CSIS 115, HIM 101, HIM 108
HIM 135	Organizational Management	3		BIOL 109, CSIS 115, HIM 101, HIM 108
HIM 202	Clinical Classification Systems - Diagnostic	4		HIM 112, 115, 120, 130, 135
HIM 207	Clinical Classification Systems - PCS	4		HIM 112, 115, 120, 130, 135
HIM 214	Healthcare Reimbursement Methodologies	3		HIM 112, 115, 120, 130, 135
HIM 215	Clincial Professional Practice I	3		HIM 112, 115, 120, 130, 135
HIM 218	Ambulatory Care Coding - CPT	3		BIOL 137, HIM 202, HIM 207, HIM 214, HIM 215
HIM 221	Coding Professional Practice	2.5		BIOL 137, HIM 202, HIM 207, HIM 214, HIM 215
HIM 222	Health Information Management Competency	3		BIOL 137, HIM 202, HIM 207, HIM 214, HIM 215
Total Credit Hours Required		**74.5-80.5**		

Health Information Management

Coding Specialist Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BIOL 100 CHEM 105	Introduction to Cell Biology ***or*** Introduction to Chemistry for Health Science	3-5		
BIOL 109 BIOL 110 BIOL 210	Human Anatomy and Physiology ***or*** Human Anatomy ***or*** Human Physiology	6-10		BIOL 100 or CHEM 105 (BIOL 109) BIOL 110 and BIOL 100 or CHEM 105 (BIOL 210)
BIOL 137	Introduction to Pathophysiology	4		BIOL 100 and 210, BIOL 109, ALHT 108
CSIS 115	Technology Fundamentals and Applications	3		
HIM 100	Medical Terminology	3		
HIM 101	Introduction to Health Information Management	4		BIOL 100, ENGL 101 and HIM 100
HIM 110	Pharmacology	2		BIOL 100, ENGL 101, HIM 100
HIM 202	Clinical Classification Systems - Diagnostic	4		HIM 112, 115, 120, 130, 135
HIM 207	Clinical Classification Systems - PCS	4		HIM 112, 115, 120, 130, 135
HIM 214	Healthcare Reimbursement Methodologies	3		HIM 112, 115, 120, 130, 135
HIM 218	Ambulatory Care Coding - CPT	3		BIOL 137, HIM 202, HIM 207, HIM 214, HIM 215
HIM 221	Coding Professional Practice	2.5		BIOL 137, HIM 202, HIM 207, HIM 214, HIM 215
Total Credit Hours Required		**42.5-48.5**		

Heating, Ventilation, Air Conditioning & Refrigeration

Offered at MCC-Business & Technology

A.A.S. HVAC..... 64-67 Credits
Energy Efficiency Certificate..... 43 Credits
HVAC Advanced Certificate..... 42-43 Credits
HVAC Certificate..... 24 Credits

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

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

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-7		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 110 or satisfactory score in Math placement test (MATH 150)
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		4-5		See Courses section of this catalog for individual course prerequisites.
Specific Program Requirements				
EHSS 111 EHSS 112	Intro to Health & Safety for General Industry ***or*** Intro to Health & Safety for Construction	1		
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
HVAC 136	Residential Heating and Air Conditioning II	4		HVAC 135
HVAC 221	Commercial Refrigeration	4		HVAC 109, 120, 136
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	2		CSOS 100 or CSIS 115
INTE 224	Energy Management, Efficiency and Conservation	3		
6 hours from the following: HVAC/INTE/WELD electives		6		
Total Credit Hours Required		**64-67**		

Heating, Ventilation, Air Conditioning & Refrigeration

Energy Efficiency Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
HVAC Certificate*		24*		
HVAC 240	Geo-Thermal Heat Pumps	3		HVAC 136
HVAC 201	Stationary Engineering	3		HVAC 111 and 120
INTE 224	Energy Management, Efficiency, and Conservation	3		
GEOL 180	Energy and the Environment	5		
BSAD 219	Entrepreneurship	3		
*Includes HVAC 109, 111, 120, 135, 136, 230, COLL 100				
Total Credit Hours Required		**41**		

Heating, Ventilation and Air Conditioning Advanced Certificate

COLL 100	First Year Seminar	1		
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
HVAC 136	Residential Heating and Air Conditioning II	4		HVAC 135
HVAC 221	Commercial Refrigeration	4		HVAC 109, 120, and 136
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 224	Stationary Engineering or Energy Management, Efficiency, and Conservation	3		HVAC 111 and 120 (HVAC 201) HVAC 109 and INTE 115 (INTE 175)
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
MATH 103R	Technical Mathematics I w/ Review or higher	3-4		MATH 40 or 40L
Total Credit Hours Required		**42-43**		

Heating, Ventilation and Air Conditioning Certificate

COLL 100	First Year Seminar	1		
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		**24**		

Hospitality Management

Offered at Johnson County Community College, Coordinated at MCC

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

Dietary Manager Certificate ..... 27 Credits

This program leads to an Associate in Applied Science degree with three options: Chef Apprenticeship, Hotel and Lodging, and Food and Beverage as well as Dietary Manager certificate. 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.

A.A.S. Hospitality Mgmt. Chef Apprenticeship

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 30/90 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 or 20L or appropriate placement test score
PSYC 140	General Psychology	3		
COMM 100 COMM 102 COMM 223	Fundamentals of Speech ***or*** Fundamentals of Human Communication ***or*** Interpersonal Communications	3		ENGL 30/90 or appropriate placement test score (COMM 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. **Humanities Electives that will transfer from MCC to JCCC:** ART 108, ART 150, ART 151, ART 159, ENGL 120, ENGL 121, ENGL 122, ENGL 124, ENGL 127, ENGL 128, ENGL 142, ENGL 150, ENGL 151, ENGL 165, ENGL 167, ENGL 220, ENGL 221, ENGL 222, ENGL 223, FREN 203, SPAN 203, SPAN 204, HIST 120, HIST 121, HIST 133, HIST 134, HIST 140, HUMN 140, HUMN 145, MUSI 108, PHIL 100, PHIL 101, PHIL 200, PHIL 201, PHIL 203, THEA 114, COMM 128 **Computer Electives that will transfer from MCC to JCCC:** CSIS 115
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		
Hospitality Program Electives				

Humanities Electives that will transfer from MCC to JCCC:
ART 108, ART 150, ART 151, ART 159, ENGL 214, ENGL 216, ENGL 218, ENGL 220, ENGL 221, ENGL 222, ENGL 223, ENGL 234, ENGL 240, ENGL 250, ENGL 254, ENGL 255, ENGL 256, ENGL 268, FREN 203, FREN 204, GERM 204, SPAN 203, SPAN 204, HIST 120, HIST 121, HIST 134, HIST 140, HIST 150, HUMN 103, HUMN 133, HUMN 134, HUMN 140, HUMN 145, MUSI 108, MUSI 160, PHIL 100, PHIL 101, PHIL 200, PHIL 201, PHIL 203, THEA 106, THEA 114, COMM 128
Computer Electives that will transfer from MCC to JCCC:
CSIS 115

HMGT 126 Food Management* 4
HMGT 130 Hospitality Law 3
HMGT 132 Seminar in Housekeeping Operations 3
HMGT 150 Sem: Food Service Sales & Marketing 3
HMGT 203 Hotel Sales & Marketing* 3
HMGT 207 Hospitality Human Resource Management* 3
HMGT 221 Design & Facilities Management* 3
HMGT 240 Advanced Baking* 4
HMGT 248 Confectionery Arts 3
HMGT 250 Introduction to Catering 3
HMGT 256 Casino Management 3
HMGT 265 Front Office Management 3
HMGT 268 Hospitality Managerial Accounting*
*Prerequisite/Corequisite required

Total Credit Hours Required	**75**		

Hospitality Management

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 30/90 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		
COMM 100 COMM 102 COMM 223	Fundamentals of Speech ***or*** Fundamentals of Human Communications ***or*** Interpersonal Communications	3		ENGL 30/90 or appropriate placement test score (COMM 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 Electives that will transfer from MCC to JCCC: CSIS 115
Humanities Electives that will transfer from MCC to JCCC:
ART 108, ART 150, ART 151, ART 159, ENGL 214, ENGL 216, ENGL 218, ENGL 220, ENGL 221, ENGL 222, ENGL 223, ENGL 234, ENGL 240, ENGL 250, ENGL 254, ENGL 255, ENGL 256, ENGL 268, FREN 203, FREN 204, GERM 204, SPAN 203, SPAN 204, HIST 120, HIST 121, HIST 134, HIST 140, HIST 150, HUMN 103, HUMN 133, HUMN 134, HUMN 140, HUMN 145, MUSI 108, MUSI 160, PHIL 100, PHIL 101, PHIL 200, PHIL 201, PHIL 203, THEA 106, THEA 114, COMM 128
Hospitality Program Electives:
HMGT 130, HMGT 203, HGMT 223, HGMT 250, HGMT 256, HGMT 275

*Prerequisite/corequisite required

Hospitality Management

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 30/90 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		
COMM 100 COMM 102 COMM 223	Fundamentals of Speech ***or*** Fundamentals of Human Communications ***or*** Interpersonal Communications	3		ENGL 30/90 or appropriate placement test score (COMM 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 the JCCC 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**		

Hospitality Electives at JCCC:

*Prerequisite/corequisite required

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

Computer Electives that will transfer from MCC to JCCC: CSIS 115

Humanities Electives that will transfer from MCC to JCCC:

ART 108, ART 150, ART 151, ART 159, ENGL 214, ENGL 216, ENGL 218, ENGL 220, ENGL 221, ENGL 222, ENGL 223, ENGL 234, ENGL 240, ENGL 250, ENGL 254, ENGL 255, ENGL 256, ENGL 268, FREN 203, FREN 204, GERM 204, SPAN 203, SPAN 204, HIST 120, HIST 121, HIST 134, HIST 140, HIST 150, HUMN 103, HUMN 133, HUMN 134, HUMN 140, HUMN 145, MUSI 108, MUSI 160, PHIL 100, PHIL 101, PHIL 200, PHIL 201, PHIL 203, THEA 106, THEA 114, COMM 128

Hospitality Management

Dietary Manager Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements (must be taken at JCCC)		Credits	Semester Taken	Prerequisites
HMEC 151	Nutrition & Meal Planning	3		See JCCC course descriptions in the course section of the JCCC catalog for individual course prerequisites.
HMGT 120	Food Service Sanitation	1		
HMGT 123	Professional Cooking I*	3		
HMGT 128	Supervisory Management	3		
HMGT 207	Hospitality Human Resource Management*	3		
DIET 100	Foodservice Management for Dietary Managers	3		
DIET 105	Foodservice Internship for Dietary Managers	1		
DIET 200	Medical Nutrition Therapy*	3		
DIET 205	Medical Nutrition Therapy Seminar*	1		
Specific Program Requirements (must be taken at MCC)		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
MATH 100	Mathematics for Business or higher	3		MATH 20 or 20L or acceptable score on math placement test
Total Credit Hours Required		**27**		
* Prerequisite/Corerequisite required				

Industrial Technologies

Offered at MCC-Business & Technology

A.A.S. Industrial Technology
Construction Management ..... 64 Credits
Critical Facilities..... 71 Credits
Industrial Electrical ..... 67 Credits
Industrial Maintenance ..... 66 Credits
Instrumentation & Controls..... 67-69 Credits
Military Technology..... 64-68 Credits
Millwright..... 65-69 Credits
Multi-craft..... 63 Credits
Photovoltaics ..... 65 Credits
Stationary Engineer..... 71 Credits

Industrial Technology Certificates
Industrial Electrical ..... 35-36 Credits
Industrial Maintenance ..... 36-39 Credits
Instrumentation & Controls..... 35-37 Credits
Millwright Certificate ..... 36-37 Credits
Photovoltaic..... 36 Credits
Programmable Logic Controller..... 39-40 Credits
Stationary Engineer..... 36-37 Credits
Sterile Processing and Environmental Services
..... 16 Credits

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

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

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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 100 MATH 110	Mathematics for Business ***or*** Intermediate Algebra	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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		
Total General Education Requirements		**20**		
Specific Program Requirements				
BSAD 100 BSAD 101	Introduction to Accounting ***or*** Accounting Principles I	3		
BSAD 109 BSAD 120	Principles of Supervision ***or*** Organizational Behavior	3		
BSAD 127 BSAD 128 *Select three of the following four CSMG courses:* CSMG 150 CSMG 160 CSMG 170 CSMG 180	Management Internship I ***and*** Management Internship II ***or*** Construction Management Leadership Construction Project Management Communications for the Construction Trades General and Specialty Contractor Dynamics	6		
BSAD 219 BSAD 204	Entrepreneurship ***or*** Business Management	3		
BSAD 153 CSIS 115 CSIS	Accounting Information Systems, PC ***or*** Tecnology Fundamentals and Applications ***or*** Any Programming Language Course	3		BSAD 101 (BSAD 153)
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		
BSAD 254 BSAD 255 BSAD 270	Business Law I ***or*** Business Law II ***or*** Legal Environment of Business	3		
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		**64**		

Industrial Technologies

AAS INTE – Critical Facilities Emphasis

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 or appropriate placement test score
ENGL 215 SPAN 100	Technical Writing ***or*** Beginning Occupational Spanish	3		ENGL 101 (ENGL 215)
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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Choose one of the following Math options				
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I ***or*** Technical Mathematics I w/ review ***or*** College Algebra ***or*** College Algebra w/ review ***and*** Technical Mathematics II ***or*** Trigonometry PreCalculus or higher	5-7		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, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (Except 104,110 or GIS Courses), HIST, HUMN, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Required		**20**		

Core Program Requirements				
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health & Satety for General Industry	1		
INTE 107	Industrial Electrical Safety	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment (INTE 110) concurrent enrollment or completion of MATH 103R or higher (INTE 112) INTE 112 or equivalent (INTE 113)
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
Specific Program Requirements				
HVAC 111	Principles of Heating, Ventilation and Air Conditioning	3		
HVAC 135	Residental Heating and Air Conditioning I	4		HVAC 109, 111, 120 or taken concurrently
HVAC 136	Residental Heating and Air Conditioning II	4		HVAC 135
HVAC 201	Stationary Engineering	3		HVAC 111 and 120
HVAC 221	Commercial Refrigeration	4		HVAC 109, 120, and 136
HVAC 230	Sheet Metal Layout & Fabrication	4		
INTE 140	Fundamentals of Industrial Maintenance	3		
INTE 271	Programmable Logic Controllers I	4		INTE 110, 175 and CSIS 100 or concurrent enrollment
INTE 275	Electric Motor Controls II	3		INTE 175
INTE 276	Electrical Troubleshooting	3		INTE 275
Total Credit Hours Required		**71**		

Industrial Technologies

Offered at MCC-Business & Technology

A.A.S. INTE Industrial Electrical emphasis

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 or appropriate placement test score
ENGL 215 SPAN 100	Technical Writing ***or*** Beginning Occupational Spanish	3		ENGL 101 (ENGL 215)
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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-7		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 110 or satisfactory score on math placement test (MATH 150).
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**20**		
Core Program Requirements				
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health & Safety for General Industry	1		
INTE 107	Industrial Electrical Safety	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
Industrial Electrical Program Requirements				
INTE 142	National Electric Code	3		INTE 110
INTE 225	Industrial Electrical Print Reading	3		INTE 115
INTE 271	Programmable Logic Controller I	4		INTE 110 and 175 and CSIS 100 or concurrent enrollment
INTE 273	Variable Speed Motors and Drives	3		INTE 175 and 271
INTE 272	Programmable Logic Controller II	3		INTE 115 and 271
INTE 275	Electric Motor Controls II	3		INTE 175
INTE 277	Program Logic Controller Troubleshooting	3		INTE 115 and 271
INTE 276	Electrical Troubleshooting	3		INTE 275
Electives: CHEM, CSIS, INTE, MATE, PHYS, ETEC		6		
Total Credit Hours Required		**67**		

Industrial Technologies

AAS INTE – Industrial Maintenance

COLL 100	First Year Seminar	1		
General Education Requirements		**Credits**	**Semester Taken**	**Prerequisites**
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 or appropriate placement test score
ENGL 215 SPAN 100	Technical Writing ***or*** Beginning Occupational Spanish	3		ENGL 101 (ENGL 215)
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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-7		 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 110 or satisfactory score on math placement test (MATH 150).
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**20**		
Core Program Requirements				
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health & Safety for General Industry	1		
INTE 107	Industrial Electrical Safety	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment (INTE 110) concurrent enrollment or completion of MATH 103R or higher (INTE 112) INTE 112 or equivalent (INTE 113)
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
Specific Program Requirements				
INTE 140	Fundamentals of Industrial Maintenance	3		
CIMM 105	Intro to Blueprint Reading	1		
INTE 142	National Electric Code	3		INTE 110
INTE 150	Fundamentals of Hydraulics	3		
INTE 151	Industrial Rigging	3		
CIMM 130	Machining for Related Occupations	5		
WELD 110	Welding Industry Fundamentals	3		
WELD 120	Thermal Cutting Processes Lecture	1		WELD 110 or taken concurrently
WELD 121	Thermal Cutting Processes Lab	1		WELD 120 or taken concurrently
Choose 1 of the following 3 pairs: WELD 140 WELD 141 WELD 150 WELD 151 WELD 160 WELD 161	 Shielded Metal Arc Welding I (Stick) Lecture ***and*** Shielded Metal Arc Welding I (Stick) Lab ***or*** Gas Metal Arc Welding I (MIG) Lecture ***and*** Gas Metal Arc Welding I (MIG) Lab ***or*** Gas Tungsten Arc Welding I (TIG) Lecture ***and*** Gas Tungsten Arc Welding I (TIG) ***Lab***			 WELD 121 or taken concurrently (WELD 140) WELD 140 or taken concurrently (WELD 141) WELD 121 or taken concurrently (WELD 150) WELD 150 or taken concurrently (WELD 151) WELD 121 or taken concurrently (WELD 160) WELD 160 or taken concurrently (WELD 161)
Electives: CHEM, CSIS, INTE, CIMM, PHYS, ETEC		3		
Total Credit Hours Required		**66**		

Industrial Technologies

AAS INTE – Instrumentation & Controls

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 or appropriate placement test score
ENGL 215 SPAN 100	Technical Writing ***or*** Occupational Spanish	3		ENGL 101 (ENGL 215)
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		
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-7		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 110 or satisfactory score in Math placement test (MATH 150)
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement score
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (except 104, 110 or 110 or GIS courses), HIST, HUMN, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**20**		
Core Program Requirements				
CSIS 100	Digital Literacy	2		
INTE 107	Industrial Electrical Safety	1		
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment (INTE 110) concurrent enrollment or completion of MATH 103R or higher (INTE 112) INTE 112 or equivalent (INTE 113)
INTE 115	Electrical Print Reading	3		
INTE 175	Electric Motor Controls I	3		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
Specific Program Requirements				
CSIS 110	Technology and Information Management or	3		
CSIS 111	Microcomputer Hardware Concepts	3		CSIS 110
CSIS 123	Programming Fundamentals	3		MATH 40/40L or higher or appropriate score on placement test
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	4		INTE 110 and INTE 175 and CSIS 100 or concurrent enrollment
INTE 272	Programmable Logic Controllers II	3		INTE 115 and INTE 271
INTE 277	Programmable Logic Controller Troubleshooting	3		INTE 115 and INTE 271
INTE 280	Networking- HMI for the PLC	4		INTE 272
INTE 290	Programmable Logic Controllers Capstone	4		INTE 277 or concurrent enrollment
Total Credit Hours Required		**69**		

Industrial Technologies

A.A.S. Indus. Tech. Military Technology

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I ***or*** Technical Mathematics I w/ review ***or*** College Algebra ***or*** College Algebra w/ review ***and*** Technical Mathematics II ***or*** Trigonometry PreCalculus or higher	5-7		MATH 20 or 20L or appropriate placement test (MATH 103R) 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 110 or satisfactory score on the math placement test (MATH 150)
Any Gen Ed course numbered 100 or above		3-5		
Total General Education Requirements		**18**		
Specific Program Requirements				
Electives (EHSS, ETEC, HVAC, INTE, CIMM, WELD, CSIS)		15		
4 Year Military Technology Training & Job Experience		30		
(Credit by Certification*)				
Total Credit Hours Required		**64-68**		

*MCC will award 30 college credits to students who successfully complete a documented military technology training program and the above 33-37 credit hours. The student must submit to the MCC Registrar documentation of successful completion of 4 years military technology training and job experience in the form of a certified page from the member's service record or a certified electronic transcript. The credit will be transcripted upon completion of 15 MCC credits.

Industrial Technologies

AAS INTE – Millwright

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 or appropriate placement test score
ENGL 215 SPAN 100	Technical Writing ***or*** Beginning Occupational Spanish	3		ENGL 101 (ENGL 215)
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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-7		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**20**		
Core Program Requirements				
CSIS 100	Digital Literacy	2		
INTE 107	Industrial Electrical Safety	1		
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment (INTE 110) concurrent enrollment or completion of MATH 103R or higher (INTE 112) INTE 112 or equivalent (INTE 113)
INTE 115	Electrical Print Reading	3		
INTE 175	Electric Motor Controls I	3		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115
Specific Program Requirements				
CIMM 105	Intro to Blueprint Reading	1		
INTE 140	Fundamentals of Industrial Maintenance	3		
INTE 150	Fundamentals of Hydraulics and Pneumatics	3		
INTE 151	Industrial Rigging	3		
INTE 260	Industrial Pipefitting and Plumbing Fundamentals	3		INTE 140
CIMM 130	Machining for Related Occupations	5		
WELD 110	Welding Industry Fundamentals	3		
WELD 120	Thermal Cutting Processes Lecture and	1		WELD 110 or taken concurrently
WELD 121	Thermal Cutting Processes Lab	2		WELD 120 or taken concurrently
Electives		4		
Total Credit Hours Required		**65-69**		

Industrial Technologies

AAS INTE – Multi-craft Emphasis

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 or appropriate placement test score
ENGL 215 SPAN 100	Technical Writing ***or*** Beginning Occupational Spanish	3		ENGL 101 (ENGL 215)
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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry **or** PreCalculus or higher	5-7		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 110 or satisfactory score in math placement test (MATH 150).
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**20**		
Core Program Requirements				
CSIS 100	Intro to Personal Computing	2		
EHSS 111	Intro to Health & Safety for General Industry	1		
INTE 107	Industrial Electrical Safety	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment (INTE 110) concurrent enrollment or completion of MATH 103R or higher (INTE 112) INTE 112 or equivalent (INTE 113)
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	2		CSIS 115 or CSIS 100 or higher
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
Specific Program Requirements				
CIMM 105	Intro to Blueprint Reading	1		
INTE 140	Fundamentals of Industrial Maintenance	3		
HVAC 111	Principles of Heating, Ventilation, & Refrigeration	3		
CIMM 130	Machining for Related Occupations	5		
Electives: Choose from the following disciplines: EHSS, HVAC, INTE, CIMM, ETEC		15		
Total Credit Hours Required		**63**		

Industrial Technologies

AAS INTE – Photovoltaic Emphasis

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 or appropriate placement test score
ENGL 215 SPAN 100	Technical Writing ***or*** Beginning Occupational Spanish	3		ENGL 101 (ENGL 215)
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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Choose one of the following Math options				
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I ***or*** Technical Mathematics I w/ review ***or*** College Algebra ***or*** College Algebra w/ review ***and*** Technical Mathematics II ***or*** Trigonometry PreCalculus or higher	5-7		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, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (Except 104,110 or GIS Courses), HIST, HUMN, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Required		**20**		

Core Program Requirements				
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health & Satety for General Industry	1		
INTE 107	Industrial Electrical Safety	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment (INTE 110) concurrent enrollment or completion of MATH 103R or higher (INTE 112) INTE 112 or equivalent (INTE 113)
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
Specific Program Requirements				
INTE 142	National Electric Code	3		INTE 110
INTE 185	Photovoltaic Systems	3		
INTE 224	Energy Management, Efficiency & Conservation	3		
INTE 230	Solar/Photovoltaic Design/Installation	4		INTE 142, INTE 185, and either ETEC 110, HVAC 109 or INTE 110
INTE 242	Master and Journeyman Prep	3		INTE 142
INTE 270	Instrumentation and Process Controls	3		INTE 225 and INTE 272
INTE 271	Programmable Logic Controllers I	4		INTE 110, 175 and CSIS 100 or concurrent enrollment
INTE Electives		6		
Total Credit Hours Required		**65**		

Industrial Technologies

AAS INTE – Stationary Engineer

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 or appropriate placement test score
ENGL 215 SPAN 100	Technical Writing ***or*** Beginning Occupational Spanish	3		ENGL 101 (ENGL 215)
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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 Option 2: MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-7		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 110 or satisfactory score on math placement test.
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**20**		

Core Program Requirements				
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health & Satety for General Industry	1		
INTE 107	Industrial Electrical Safety	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment (INTE 110) concurrent enrollment or completion of MATH 103R or higher (INTE 112) INTE 112 or equivalent (INTE 113)
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
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 201	Stationary Engineering	3		HVAC 111 and 120
HVAC 221	Commercial Refrigeration	4		HVAC 109, 120, and 136
HVAC 230	Sheet Metal Layout & Fabrication	4		
INTE 270	Instrumentation & Process Controls	3		INTE 225 & 272
INTE 271	Programmable Logic Controller I	4		INTE 110, 175 and CSIS 100 or concurrent enrollment
Electives: ETEC, HVAC, INTE, MATE		3		
Total Credit Hours Required		**71**		

Industrial Technologies

Industrial Electrical Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health and Safety in General Industry	1		
INTE 110	Industrial Electrical Principles	4		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	4		INTE 110, 175 and CSIS 100 or concurrent enrolment
INTE 273	Variable Speed Motors and Drives	3		INTE 175 and 271
Any 3 of the following:		9		
INTE 272	Programmable Logic Controller II			INTE 115 and 271
INTE 275	Electric Motor Controls II			INTE 175
INTE 277	Program Logic Controller Troubleshooting			INTE 115 and 271
INTE 225	Industrial Electrical Print Reading			INTE 115
MATH 103R	Technical Math I w/ Review or higher	3-4		MATH 20 or appropriate placement score
Total Credit Hours Required		**35-36**		

Industrial Maintenance Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 100	Digital Literacy	2		
INTE 107	Industrial Electrical Safety	1		
EHSS 111	Introduction to Health and Safety in General Industry	1		
INTE 110 INTE 112 INTE 113	Industrial Electrical Principles ***or*** Industrial Electrical DC Principles ***and*** Industrial Electrical AC Principles	4		MATH 103 or concurrent enrollment (INTE 110) concurrent enrollment or completion of MATH 103R or higher (INTE 112) INTE 112 or equivalent (INTE 113)
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Emplyment Strategies for Technical Careers	2		
INTE 140	Fundamentals of Industrial Maintenance	3		
INTE 150	Fundamentals of Hydraulics and Pneumatics	3		
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
MATH 103R	Technical Math I w/ review or higher	3-4		MATH 20 or appropriate placement score
CIMM 130	Machining for Related Occupations	5		
WELD 100	Introduction to Welding/Cutting Processes	1		MATH 20 or appropriate placement score
Choose 2 of the following: INTE 121 INTE 221 INTE 142 CIMM 105	 Internship & Co-Op and Internship & Co-Op II or National Electric Code and Introduction to Blueprint Reading	4-6		INTE 110 (INTE 142)
Total Credit Hours Required		**36-39**		

Industrial Technologies

Instrumentation & Controls Certificate

COLL 100	First Year Seminar	1		
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		
Choose one of the following Math options: **Option 1:** MATH 103R MATH 103 MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I w/ Review or Technical Mathematics or College Algebra or College Algebra w/ Review and Technical Mathematics II or Trigonometry PreCalclus or higher	5-7		
ETEC 130 INTE 280	Digital Electronics or Networking- HMI for the PLC	4		Completion of or concurrent enrollment ETEC 110 or INTE 110
INTE 110	Industrial Electrical Principles	4		
INTE 111	Microcomputer Hardware Repairs	3		
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 270	Instrumentation & Process Control	3		HVAC 201 or INTE 271
INTE 271	Programmable Logic Controllers I	4		INTE 110, INTE 175 & CSIS 100 or concurrent enrollment
INTE 291	Process Controls Capstone	4		INTE 270 and INTE 272
Total Credit Hours Required		**35-37**		

Millwright Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 115	Technology Fundamentals and Applications	3		
EHSS 111	Introduction to Health and Safety in General Industry	1		
INTE 110	Industrial Electrical Principles	4		MATH 103 or concurrent enrollment
INTE 140	Fundamentals of Industrial Maintenance	3		
INTE 150	Fundamentals of Hydraulics	3		
INTE 151	Industrial Rigging	3		
INTE 260	Industrial Pipefitting and Plumbing Fundamentals	3		INTE 140
MATE 115	Blueprint Reading for the Trades	3		
MATH 103R	Technical Mathematics I w/ review or higher	3-4		MATE 20 or appropriate placement score
WELD 140	Shielded Metal Arc Welding I (stick) Lecture	1		WELD 121 or concurrent enrollment
WELD 141	Shielded Metal Arc Welding I (stick) Lab	2		WELD 140 or concurrent enrollment
WELD 230	Layout & Fabrication Lecture	1		WELD 130; one WELD 100 level lecture & lab
WELD 231	Layout and Fabrication Lab	2		WELD 230
WELD 240	Shielded Metal Arc Welding II (stick) Lecture	1		WELD 141
WELD 241	Shielded Metal Arc Welding II (stick) Lab	2		WELD 240
Total Credit Hours Required		**36-37**		

Industrial Technologies

Photovoltaics Certificate

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
MATH 103	Technical Math or higher	3		MATH 40/40L or appropriate score on placement exam
INTE 110	Industrial Electrical Principles	4		Completion of or concurrent enrollment in MATH 103
INTE 115	Electrical Print Reading	3		INTE 110
INTE 142	National Electrical Code	3		INTE 110
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 270	Instrumentation and Process Control	3		INTE 225, INTE 272
EHSS 111 EHSS 112	Introduction to Health and Safety for General Industry ***or*** Introduction to Health and Safety for Construction	1		
INTE 185	Solar/Photovoltaic Systems	3		
INTE 230	Solar/Photovoltaic Design and Installation	3		INTE 185, INTE 142, and either HVAC 109 or INTE 110, or ETEC 110.
GEOL 180	Energy and the Environment	5		
INTE 271	PLC I	4		INTE 110, INTE 175 and CSIS 100 or concurrent enrollment
Total Credit Hours Required		**36**		

INTE Programmable Logic Controller Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health & Safety for General Industry	1		
ETEC 130	Digital Electronics	4		Completion of or concurrent enrollment in ETEC 110 or INTE 110
INTE 110	Industrial Electrical Principles	4		Completion of or concurrent enrollment in MATH 103 and INTE 115
INTE 115	Electrical Print Reading	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 225	Industrial Electrical Print Reading	3		INTE 115
INTE 271	Programmable Logic Controller I	4		INTE 110, 175 and CSIS 100 or concurrent enrollment
INTE 272	Programmable Logic Controller II	3		INTE 115 and 271
INTE 277	Programmable Logic Controller Troubleshooting	3		INTE 115 and 271
INTE 290	Programmable Logic Controller Capstone	4		INTE 277 or concurrent enrollment
MATH 103R	Technical Mathematics I w/ review	3-4		MATH 20 or appropriate placement scores
Total Credit Hours Required		**39-40**		

Industrial Technologies

Stationary Engineer Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
EHSS 111	Introduction to Health and Safety for General Industry I	1		
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, 120, and 136
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	4		INTE 110, 175 and CSIS 100 or concurrent enrollment
MATH 103/103R Technical Math w/ review or higher		4		MATH 20 or appropriate placement score
Total Credit Hours Required		**37**		

Indus. Tech. Sterile Processing and Environmental Services Certificate

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
CSIS 100	Digital Literacy	2		
EHSS 111	Introduction to Health & Safety for General Industry	1		
INTE 102	Communication for Industry	2		
INTE 103	Environmental Services for the Health Field	4		
INTE 108	Central Services Sterilization Processes	2		
INTE 109	Central Services Sterilization Lab	2		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115
Total Credit Hours Required		**16**		

Industrial Trades Apprenticeship Program

Offered at MCC-Business & Technology

These degree completion programs grant college credit by certification for certain federally approved apprenticeship programs. An eligible apprenticeship must contain a minimum 450 clock hours of classroom instruction and a program-specific number of clock hours of on-the-job training. Thirty to forty-two hours of MCC credit leading toward an AAS in Industrial Technology will be awarded upon completion of 15 hours of MCC coursework and receipt of a certificate and/or journeyman card for the appropriate craft.

A.A.S. Industrial Technology

Industrial Mechanic ..... 64-66 Credits
Industrial Pipefitter/Sprinkler Fitter ..... 65-67 Credits
Industrial Warehouse Worker ..... 62-63 Credits
Industrial Welder ..... 65-67 Credits
Lineman Tech/Cable Splicer ..... 63-65 Credits
Maintenance Electrician ..... 63-65 Credits
Millwright..... 64-66 Credits
Sheet Metal ..... 64-66 Credits

AAS INTE – Industrial Mechanic

COLL 100	First Year Seminar	1		
General Education Requirements		**Credits**	**Semester Taken**	**Prerequisites**
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 orappropriate 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, COMM		3-5		
Total General Education Requirements		18		
Specific Program Requirements		**Credits**	**Semester Taken**	**Prerequisites**
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Introduction to Personal Computers or Technology Fundamentals and Applications or higher	2-3		
EHSS 111	Intro to Safety & Health for General Industry	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151 MATE 130	Industrial Rigging or Machining for Related Occupations	3-5		
General Electives		6		
Industrial Mechanic Apprenticeship*		29		
Total Credit Hours Required		**64-66**		

*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.

Industrial Trades Apprenticeship Program

AAS INTE – Industrial Pipefitter/Sprinkler Fitter

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5 or 6-9 see empha-sis area		
Total General Education Requirements		**19**		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 107	Industrial Electrical Safety	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Industrial Pipefitter/Sprinkler Fitter Apprenticeship*		29		
Total Credit Hours Required		**65-67**		
*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.				

Industrial Trades Apprenticeship Program

A.A.S. Indus. Warehouse Worker

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I ***or*** Technical Mathematics I w/ review ***or*** College Algebra ***or*** College Algebra w/ review ***and*** Technical Mathematics II ***or*** Trigonometry PreCalculus or higher	6-8		MATH 20 or 20L or appropriate score on placement test (MATH 103R) 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 110 or satisfactory score on the math placement test (MATH 150)
SPAN 100 SPAN 101	Beginning Occupational Spanish ***or*** Elementary Spanish I	3-5		
Total General Education Requirements		**18**		
Specific Program Requirements				
EHSS 111	Introduction to Health and Safety for General Industry	1		
EHSS 100	Introduction to Environmental Health and Safety	3		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115
CSIS 110	Technology and Information Management	3		
CSIS 115	Technology Fundamentals and Applications	3		
INTE 151	Industrial Rigging	3		
BSAD 109	Principles of Supervision	3		
BSAD 210	Logistics Management	3		
BSAD 211	Operations Management	3		
BSAD 212	Transportation and Operations and Management	3		
BSAD 213	Warehouse and Distribution Centers	3		
BSAD 219	Entrepreneurship	8		
Warehouse Worker Apprenticeship*		8		
Electives		1-3		
Total Credit Hours Required		**62-65**		

*Federally approved Warehouse Worker apprenticeship program that contains a minimum of 144 clock hours of classroom and instruction and 2000 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.

Industrial Trades Apprenticeship Program

AAS INTE – Industrial Welder

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**18**		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 112	Introduction to Health and Safety for Construction	1		
INTE 107	Industrial Electrical Safety	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or PCC Certification
INTE 151 CIMM 130	Industrial Rigging *or* Machining for Related Occupations	3-5		
General Electives		6		
Industrial Welders Apprenticeship*		29		
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 Trades Apprenticeship Program

AAS INTE – Lineman Technician/Cable Splicer

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
MATH 103 MATH 103R MATH 104 MATH 120 MATH 130 MATH 150	Technical Mathematics I ***or*** Technical Mathematics I w/ review ***and*** Technical Mathematics II ***or*** College Algebra ***and*** Trigonometry ***or*** PreCalculus	5-7		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		
Total General Education Requirements		18		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
LINE 106	Safety and Accident Prevention	3		
INTE 110	Industrial Electrical Principles	4		MATH 103
INTE 120	INTE Internship I	3		
INTE 124	Employment Strategies for Technical Careers	2		CSOS 100 or CSIS 115 or higher
INTE 220	INTE Internship II	3		
Technician/Cable Splicer Apprenticeship*		30		
Total Credit Hours Required		**63-65**		

*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 Trades Apprenticeship Program

Ind. Main. Electrician Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or or ENGL 90 orappropriate 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**18**		

Specific Program Requirements				
EHSS 100	Introduction to Environmental, Health & Safety	3		
CSIS 100 CSIS 115	Introduction to Personal computers or Technology Fundamentals and Applications or higher	2-3		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
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*		29		
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.				

Industrial Trades Apprenticeship Program

AAS INTE – Millwright

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		**18**		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Digital Literacy or Technology Fundamentals and Applications or higher	2-3		
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115
INTE 151	Industrial Rigging	3		
General Electives		6		
Millwright Apprenticeship*		29		
Total Credit Hours Required		**64-66**		

*Federally approved Millwright apprenticeship program that contains a minimum of 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 Trades Apprenticeship Program

Sheet Metal Apprenticeship Degree Completion Program

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or ENGL 90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Option 1: MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-8		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 110 or satisfactory score in Math placement test (MATH 150)
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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		3-5		
Total General Education Requirements		18		

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 109	Principles of Supervision	3		
CSIS 100 CSIS 115	Introduction to Personal Computer or Technology Fundamentals and Applications or higher	2-3		
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115 or higher
INTE 151	Industrial Rigging	3		
General Electives		6		
Sheet Metal Apprenticeship (Credit by Certification*)		29		
Total Credit Hours		**64-66**		

* 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.

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. Merchandising ..... 68 Credits

Interior Design Retail Sales/Manufacturers Representative Certificate ..... 30 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 30/90 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**		

Health, Physical Education & Recreation Electives that will transfer from MCC to JCCC:
DANC 100, DANC 111, DANC 121, DANC 122, EMS 100, PHED 105, PHED 106, PHED 107, PHED108, 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 141, PHED 142, PHED 143, PHED 144, PHED 145, PHED 146, PHED 147, PHED 151, PHED 157, PHED 158, PHED 159, PHED 165, PHED 166, PHED 167, PHED 168, PHED 173, PHED 174, PHED 178, PHED 179, PHED 180

Interior Design

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 30/90
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 30/90 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**		

****Recommended Business/Entrepreneurship/Marketing Electives at MCC:**

BSAD 101 Accounting Principles I
BSAD 219 Entrepreneurship
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 121 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, 121, 122, EMS 100, 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, 151, 158, 159, 165, 166, 167, 168, 173, 174, 178, 179

*Prerequisite/corequisite required

Interior Design

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 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 30/90 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 ITMD 180	Image Management ***or*** 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**		

*Prerequisite/corequisite required

***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 205 Marketing

Health, Physical Education & Recreation Electives that will transfer from MCC to JCCC:

DANC 100, DANC 111, DANC 121, DANC 122, EMS 100, PHED 105, PHED 106, PHED 107, PHED108, 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 141, PHED 142, PHED 143, PHED 144, PHED 145, PHED 146, PHED 147, PHED 151, PHED 157, PHED 158, PHED 159, PHED 165, PHED 166, PHED 167, PHED 168, PHED 173, PHED 174, PHED 178, PHED 179, PHED 180

Interior Design

Interior Design Retail Sales/Manufacturers 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 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**		

***Prerequisite/corequisite**
***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*

Interior Design

Interior Design & Merchandising Entrepreneurship Certificate

Specific Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
BSAD 219	Entrepreneurship	3		
MATH 100	Mathematics for Business	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 Internship 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		
Total Credit Hours Required		**30**		
Additional Recommended ENTR Coursework: Students may also want to select additional ENTR courses to complement their certificate study- not included in Program Requirements. *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		

Lineman

Offered at MCC-Business & Technology

A.A.S. Lineman..... 62-67 Credits
Lineman Certificate..... 50-52 Credits

Electric utility line technicians install and repair poles, conductors, cables and equipment used in electrical power and distribution systems. The certificate program is intended to prepare individuals for employment at any electric utility offering an apprenticeship in the United States. Applicants with formal training typically have higher starting salaries and greater opportunity for advancement within the industry. Applicants must apply to the program.

A.A.S. Lineman

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
SPAN 100	Beginning Occupational Spanish or higher	3-5		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Choose one of the following Math opetions. **Option 1:** MATH 103 MATH 103R MATH 120 MATH 120R MATH 104 MATH 130 **Option 2:** MATH 150	 Technical Mathematics I **or** Technical Mathematics I w/ review **or** College Algebra **or** College Algebra w/ review **and** Technical Mathematics II **or** Trigonometry PreCalculus or higher	5-7		 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 110 or satisfactory score in Math placement test (MATH 150)
Specific Program Requirements				
CSIS 115	Technology Fundamentals and Applications	3		
LINE 104	Pole Climbing Skills	5		
LINE 105	Electrical Distribution Systems	3		INTE 110
INTE 110	Industrial Electrical Principles	4		Completion of or current enrollment in MATH 103
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or PCC Certification
LINE 210	Pole Framing and Construction Specifications	3		LINE 104 and 105 or concurrent enrollment
LINE 215	Setting and Replacing Poles	3		LINE 104 and 105 or concurrent enrollment
LINE 237	Transformer Theory and Installation	3		LINE 104 and 105 or concurrent enrollment
LINE 241	Conductor Installation and Metering	3		LINE 104 and 105 or concurrent enrollment
LINE 250	Fusing, Substations, & Voltage Regulation	3		LINE 210 and 237 or concurrent enrollment
LINE 251	Installation and Troubleshooting Underground Distribution Systems	3		LINE 215 and 241 or concurrent enrollment
LINE 252	Advanced Pole Climbing	3		LINE 104 and 215 or concurrent enrollment
LINE 253	Safety and Accident Prevention	3		LINE 215 and 237 or concurrent enrollment
Choose from the following (Must total 3 credits) CSMG 140 CSMG 150 CSMG 210 EHSS 200 EHSS 210 INTE 142 INTE 224	 Beginning Print Reading Construction Management Leadership Accident Prevention and Loss Control Safety and Health Regulations & Standards Incident and Accident Investigation National Electric Code (NEC) Energy Management, Efficiency and Conservation	3-4		 EHSS 200 (EHSS 210) INTE 110 (INTE 142)
Total Credit Hours Required		**62-67**		

Lineman

Lineman Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 115	Technology Fundamentals and Applications	3		
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate
LINE 104	Pole Climbing Skills	5		
LINE 105	Electrical Distribution Systems	3		INTE 110
INTE 110	Industrial Electrical Principles	4		Completion of or concurrent enrollment in MATH 103/103R or higher
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or PCC Certification
LINE 210	Pole Framing and Construction Specifications	3		LINE 104 and 105 or concurrent enrollment
LINE 215	Setting and Replacing Poles	3		LINE 104 and 105 or concurrent enrollment
LINE 237	Transformer Theory and Installation	3		LINE 104 and 105 or concurrent enrollment
LINE 241	Conductor Installation and Metering	3		LINE 104 and 105 or concurrent enrollment
LINE 250	Fusing, Substations, & Voltage Regulation	3		LINE 210 and 237 or concurrent enrollment
LINE 251	Installation and Troubleshooting Underground Distribution Systems	3		LINE 215 and 241 or concurrent enrollment
LINE 252	Advanced Pole Climbing	3		LINE 104 and 215 or concurrent enrollment
LINE 253	Safety and Accident Prevention	3		LINE 215 and 237 or concurrent enrollment
Choose one of the following Math options. **Option 1:** MATH 103 Technical Mathematics I **or** MATH 103R Technical Mathematics I w/ review **or** MATH 120 College Algebra **or** MATH 120R College Algebra w/ review **and** MATH 104 Technical Mathematics II **or** MATH 130 Trigonometry **Option 2:** MATH 150 PreCalculus or higher		5-7		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 110 or satisfactory score in Math placement test (MATH 150)
Total Credit Hours Required		**50-52**		

LPN-ADN Bridge Program

Offered at MCC-Penn Valley

LPN-ADN Bridge Program ..... 75-81 Credits

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 (ATI 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 has 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. For more information, go to www.mcckc.edu/bridge

Accreditation

- The nursing program is fully 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 3343 Peachtree Road, N.E. #500. Atlanta, GA. 30326; telephone (404) 975-5000; fax (404) 975-5020.

LPN-ADN Bridge Program

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

COLL 100	First Year Seminar	1		
Prerequisite Courses:				
BIOL 100 CHEM 105	Introduction to Cell Biology ***or*** Introductory Chemistry for Health Sciences	3-5		MATH 20/20L or appropriate placement test score
BIOL 109 ***or*** BIOL 110 BIOL 210	Antomy and Physiology ***or*** Human Anatomy ***and*** 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: ALHT 108, BIOL 101, 104, 106, 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 30/90 or appropriate placement test score
The student must complete one of the following courses: HIST 120 HIST 121 POLS 135 POLS 136 POLS 137 *Students transferring one of these courses from out of state will be required to complete POLS 153 The Missouri Constitution.*	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		
SOCI 160	Sociology	3		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 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		ENGL 101, SOCI 160, RNUR 234, 238, COMM 100 or 102, HIST 120/121, or POLS 135/136/137. Constitutional requirement may be taken concurrently.
RNUR 234	Child Centered Nursing	4		BIOL 208, RNUR 134, 138, 141, or taken concurrently: ENGL 101, SOCI 160.
RNUR 238	Adult Nursing II	5		BIOL 208, RNUR 134, 138, 141 OR taken concurrently: ENGL 101, SOCI 160.
RNUR 244	Adult Nursing III	7		ENGL 101, SOCI 160, RNUR 234, RNUR 238, or taken concurrently: COMM 100 & HIST 120/121 or POLS 135/136/137 or SOSC 151
Total Credit Hours Required		**75-81**		

Major Appliance Technology

Offered at Kansas City Kansas Community College

Major Appliance Technology Certificate				
Essential Courses *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
EHSS 111	Introduction to Health and Safety for General Industry *	1		EQV: MAPRO 100
INTE 124	Employment Strategies for Technical Careers	2		EQV: MAPRO 160
*This course must be taken first				
Essential Courses *Must be taken at Kansas City Kansas Community College*				
MAPRO 103	Tools of the Trade	1		
MAPRO 108	Basic Electricity	3		
MAPRO 112	Fundamentals of Refrigeration	2		
MAPRO 115	Parts Research and Ordering Systems	1		
MAPRO 120	Principles of Combustion	2		
MAPRO 135	Oxy/Acetylene Safety/Usage	2		
MAPRO 140	Brazing/Swaging/Silver and Soft Soldering	3		
MAPRO 205	Gas and Electric Wall Ovens- Domestic/Professional	3		
MAPRO 210	Gas and Electric Ranges/Cook Tops Domestic/Professional/Commercial	3		
MAPRO 220	Dishwashers – Domestic/Professional/Commercial	3		
MAPRO 222	Advanced Refrigeration	2		
MAPRO 230	Refrigerators/Freezers Domestic/Commercial	3		
MAPRO 233	Ice Makers-Domestic/Clear Ice/Commercial Ice Makers	3		
MAPRO 235	Commercial Walk-in/Reach-in Freezers/Coolers	3		
MAPRO 243	Microwave Ovens-Domestic/Commercial	3		
MAPRO 245	Top and Front Load Clothes Washers–Domestic/Commercial	3		
MAPRO 247	Gas and Electric Clothes Dryers/Stack Laundry-Domestic/Commercial	3		
Electives *Choose 6 credit hours to complete program*				
MAPRO 215	Ventilation Hoods/Make-Up Air Blowers – Domestic/Commercial	3		
MAPRO 240	Steam Ovens/Proffers/Deep Fryers –Domestic/Commercial	3		
MAPRO 284	Special Projects	3		
MAPRO 290	Internship	3		
MAPRO 291	Internship II	3		
Total Credit Hours Required		**52**		

Mortuary Science

Offered at Kansas City Kansas Community College
Coordinated at MCC

A.A.S. Mortuary Science ..... 78-79 Credits

This program leads to an Associate in Applied Science degree that seeks to prepare students to function as practitioners in the field of funeral service. 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. Mortuary Science

Specific Program Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology	5		
BIOL 110	Human Anatomy	5		
BIOL 208	Microbiology	5		BIOL 100 or CHEM 105 or higher, plus one of the following courses: ALHT 108, BIOL 101, 104, 106, 109, or 110.
BSAD 101	Accounting Principles I	3		
CSIS 115	Intro. to Microcomputer Applications	3		
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
MATH 100	Mathematics for Business	3		
BSAD 204	Business Management	3		
PSYC 140	General Psychology	3		
PSYC 230	Death and Dying	3		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
PHIL 100 PHIL 203	Intro to Philosophy ***or*** Ethics	3		
Specific Program Requirements *Must be taken at Kansas City Kansas Community College*				
HUDV 100/101	Strategies for Academic Excellence/Lifelong Learning	1-2		
MTSC 101	Orientation to Funeral Service	2		
MTSC 105	Mortuary Law	3		
MTSC 108	Mortuary Chemistry	3		
MTSC 110	Restorative Art	4		
MTSC 201	Pathology	3		
MTSC 205	Embalming Theory	4		
MTSC 210	Mortuary Management	3		
MTSC 212	Funeral Service Merchandising	3		
MTSC 225	Funeral Service Counseling	3		
MTSC 240	Mortuary Science Practicum I	3		
MTSC 241	Mortuary Science Practicum II	3		
Total Credit Hours Required		**78-79**		

* A minimum cumulative grade point average of 2.5. This includes all undergraduate college courses taken.
* Human Anatomy and Accounting must have been taken within the last 4 years to transfer to KCKCC.
* All General Education requirements (37 hours) must be completed with a "C" grade or better prior to acceptance into the program.

Music Technology

Offered at Kansas City Kansas Community College
Coordinated at MCC

A.A.S. Music Technology..... 61-64 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 30/90 or appropriate placement test score
ENGL 102 ENGL 215	Composition and Reading II or Technical Writing	3		
PSYC 140 SOCI 160	General Psychology ***or*** Sociology	3		
COMM 100 COMM 223	Fundamentals of Speech or Interpersonal Communication	3		ENGL 30/90 or appropriate placement test score
MATH 120	College Algebra or higher	3		MATH 110 or appropriate placement test score
MUSI 108	Music Appreciation	3		
Specific Program Requirements *Can be taken at KCKCC or MCC*				
Humanities Core		3		
MUSC 111	Music Theory I (MUSI 110 at MCC)	4		
MUSC 112	Music Theory II (MUSI 111 at MCC)	4		
MUSC 213	Music Theory III (MUSI 210 at MCC)	4		
MUSC 214	Music Theory IV (MUSI 211 at MCC)	4		
Performance Groups (4 semesters)		4		
Piano Class/Applied Piano (4 semesters) ***or*** Voice Class/Applied Voice (4 semsters) ***or*** Other Applied Lessons (4 semesters)		4		
NASC 130 PHYS 101	Introductory Physics at KCKCC ***or*** Introductory Physics at MCC	3-5		
HUDV 100/101	Strategies for Academic Excellence/Lifelong Learning*	1-2		
Music Tecchnology Requirements *Must be taken at KCKCC*				
AUDIO 110	Music Technology I	3		See KCKCC course descriptions in the Courses section of this catalog for individual course prerequisites.
AUDIO 210	Music Technology II	3		
AUDIO 230	Multimedia Production	3		
AUDIO 240	Sound Editing and Synthesis	3		
AUDIO 250	Audio and Recording Techniques	3		
Total Credit Hours Required		**61-64**		

* MUST be taken at KCKCC

Nursing

Do you like helping other people and working in a fast-paced, challenging environment? There is growing demand for trained nursing professionals and Metropolitan Community College has the programs you need to get started on your pathway to a nursing career. There are several ways to enter this path at MCC: Certified Nursing Assistant (CNA), Licensed Practical Nurse (LPN), and Registered Nurse (RN). Students who want to continue their education can go on to a Bachelor's of Science in Nursing (BSN) and beyond. You can start at any level, or start at CNA and move up while you work.

Certified Nursing Assistant (CNA)

Education Requirements: The MCC program is 175 hours, which includes 100 hours of clinical training.
What Does a CNA Do? Certified Nursing Assistants assist the healthcare team in direct patient care duties such as monitoring vital signs, obtaining heights and weights, and monitoring intake and output. You may also choose to continue your education by becoming a Certified Medical Technician (CMT), or by entering one of the other nursing or allied health programs.
How Do I Get Started? You must be at least 18 years of age, with a valid social security number, and a government issued, valid photo ID. For further information see http://mcckc.edu/classes/continuinged/healthcare/cna_cmt.asp

Licensed Practical Nurse (LPN)

Education Requirements: Twelve months of training in such areas as anatomy, physiology, pharmacology and direct patient care. LPNs must pass a national board exam and maintain a professional license.
What Does an LPN Do? Licensed practical nurses are allowed to perform simple medical procedures under the direct supervision of either a doctor or a registered nurse. Common tasks include administering medications, (LPNs can do IV medications if IV certified); dressing wounds; measuring blood pressure, heart rate and temperature; collecting samples; and maintaining patient records. An LPN may also choose to continue on and become a Registered Nurse through MCC's LPN to ADN Bridge Program.
How Do I Get Started? For further information please see the Practical Nursing page of this catalog.

Registered Nurse (RN)

Education Requirements: There are several educational routes that can be taken in pursuit of an RN qualification. The most common is a 2-year program that culminates with earning an Associate's Degree in Nursing (ADN). Other options include a hospital diploma program that involves a 3-year course of study, or earning a 4-year BSN degree (see below). If you are already an LPN, please see the LPN-ADN Bridge Program page of this catalog for more information.
What Does an RN Do? A registered nurse supervises the work of an LPN and is responsible for the overall safety and care of patients. RN's also have a wide array of nursing career options available and may work for insurance companies, attorneys, schools, surgical centers and even as independent medical consultants.
How Do I Get Started? For further information please see the Professional Nursing page of this catalog.

Bachelor's in Nursing (BSN) and Master's in Nursing (MSN)

Typical Education Requirements: After successful completion of an ADN degree, the RN may decide to earn a BSN or MSN. The BSN offers the professional registered nurse upward mobility in the field of nursing to management positions and more advanced degrees. One to three additional years of study may be required depending on if a student goes part-time or full-time. The MSN would be of most interest to students interested in nursing education.
What Does a BSN Do? The role of the BSN nurse is the same as the ADN nurse.
How Do I Get Started? Locate a school offering a BSN program.
For further information see http://www.allnursingschools.com/nursing-careers/article/nursing-career-path

Occupational Education

Offered at all Campuses

A.A.S. Occupational Education ..... 65-67 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

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101 CHEM 107 PHYS 101	General Biology ***or*** Preparatory General Chemistry ***or*** Introductory Physics	5		MATH 104 (PHYS 112) MATH 110 (CHEM 107)
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
HIST 120 HIST 121 ***or*** *Two of the following:* POLS 135 POLS 136 POLS 137	United States History to 1865 ***and*** United States History Since 1865 Introduction to Political Science Introduction to American National Politics Introduction to State and Local Politics	6		
MATH 119 MATH 120	College Mathematics ***or*** College Algebra	3		MATH 110 (MATH 119) MATH 110 (MATH 120)
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, COMM/THEA		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		**65-67**		
*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.....74 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.

For more information, go to
www.mcckc.edu/ occupationaltherapy

A.A.S. Occupational Therapy Assistant

COLL 100	First Year Seminar	1		
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 30/90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
PSYC 140	General Psychology	3		
Specific Program Requirements				
EMS 100	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		**74**		

Paralegal Practice

Offered at MCC-Penn Valley

A.A.S. Paralegal Practice ..... 64-67 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

COLL 100	First Year Seminar	1		
Specific Program Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
SOCI 160	Sociology	3		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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 115	Technology Fundamentals and Applications	3		
PARA 100	Introduction to Paralegal Practice	3		
PARA 104	Principles of Legal Technology	3		PARA 100, CSIS 110 or higher
PARA 126	Criminal Law and Procedures	3		PARA 100
PARA 176	Legal Research	3		PARA 100
PARA 177	Legal Writing	3		PARA 176
PARA 185	Ethics for the Paralegal	3		PARA 100
PARA 290	Internship in Paralegal Practice	3		PARA 100, 104, 176, 177, 185
PARA	Electives	12		
Electives from CRJU, Foreign Language, MATH or CSIS		6		
Total Credit Hours Required		**64-67**		

Paramedic

Offered at MCC-Penn Valley

A.A.S. Paramedic ..... 73-78 Credits
Paramedic Certificate..... 53-60 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.
For more information, go to **www.mcckc.edu/EMT**

A.A.S. Paramedic

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ALHT 108 BIOL 109 or BIOL 110 and BIOL 210	Introductory Anatomy and Physiology ***or***	5-10		
BIOL 150	Medical Terminology	2		
BIOL 100 CHEM 105	Introduction to Cell Biology *or* Introductory Chemistry	3-5		
ENGL 101	Composition and Reading I	3		ENGL 30/90 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 110	Intermediate Algebra	3		MATH 40/40L
PSYC 140	General Psychology	3		
SOCI 160	Sociology	3		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 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		ALHT 108, or BIOL 109, or BIOL 110 & 210 admission to the Paramedic Program, and Missouri licensed EMT or equivalent from another state.
EMS 202	Paramedic Skills Laboratory I	2		ALHT 108 or 109 or BIOL 110 and 210, admission to the Paramedic program, and Missouri medical tecnician licensure
EMS 214	Paramedic Skills Laboratory II	2		EMS 202
EMS 206	Paramedic Pharmacology	4		EMS 200
EMS 212	Emergency Cardiology	4		EMS 206
EMS 218	Medical Emergencies	2		EMS 212
EMS 224	Trauma Management	2		EMS 218
EMS 230	Care of Women and Children	2		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		**73-78**		

Paramedic

Paramedic Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
BIOL 100 CHEM 105	Introduction to Cell Biology ***or*** Introduction to Chemistry for Health Science	3-5		
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		ALHT 108, or BIOL 109, or BIOL 110 & 210 admission to the Paramedic Program, and Missouri licensed EMT or equivalent from another state.
EMS 202	Paramedic Skills Laboratory I	2		ALHT 108 or 109 or BIOL 110 and 210, admission to the Paramedic program, and Missouri medical tecnician licensure
EMS 214	Paramedic Skills Laboratory II	2		EMS 202
EMS 206	Paramedic Pharmacology	4		EMS 200
EMS 212	Emergency Cardiology	4		EMS 206
EMS 218	Medical Emergencies	2		EMS 212
EMS 224	Trauma Management	2		EMS 218
EMS 230	Care of Women and Children	2		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		**53-60**		

Physical Therapist Assistant

Offered at MCC-Penn Valley

A.A.S. Physical Therapist Assistant..... 73-79 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. The program offers a traditional program with all classes at the Health Science Institute, as a well as a web based program, with lecture classes delivered on-line. Applications for the web based program are due October 1st. Prospective students should download the Prospective Student Information Packet and the Program Application at **www.mcckc.edu/physicaltherapy**

A.A.S. Physical Therapist Assistant

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 100	Intro to Cell Biology	3		
BIOL 109 BIOL 110 BIOL 210	Anatomy and Physiology ***or*** Human Anatomy ***and*** Human Physiology	6-10		BIOL 100 or CHEM 105
BIOL 150	Medical Terminology	2		
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Prerequisite Courses				
PTHA 151	Intro to Physical Therapy	2		
Specific Program Requirements				
EMS 102	Basic Emergency Patient Care	1		
PTHA 152	Physical Therapy Fundamentals I	4		Formal acceptance into the program
PTHA 153	Kinesiology	4		BIOL 109 or BIOL 110 and BIOL 210 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 or BIOL 110 and BIOL 210 PTHA 152 and 160
PTHA 160	Medical Diseases	2		Formal acceptance into the program
PTHA 161	Physical Therapy Fundamentals II	4		BIOL 109 or BIOL 111 and BIOL 210, PTHA 152 and 160
PTHA 162	Clinical Experience I	2		PTHA 153, 154, 159, 161 and EMS 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		**73-79**		

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 Revised 5/2012 (Fall 2013)

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 30/90 or satisfactory score on the ASSET test
CHEM 105	Introductory Chemistry ^	5		
ALHT 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 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, ANTH 120, ECON 110, ECON 210, ECON 211, GEOG 111, GEOG 112, POLS 135, POLS 136, POLS 137, POLS 234, PSYC 140, SOCI 160, SOCI 163, SOCI 170, SOCI 220

Humanities Electives that will transfer from MCC to JCCC:

ART 108, ART 150, ART 151, ART 159, ENGL 214, ENGL 216, ENGL 218, ENGL 220, ENGL 221, ENGL 222, ENGL 223, ENGL 234, ENGL 240, ENGL 250, ENGL 254, ENGL 255, ENGL 256, ENGL 268, FREN 203, FREN 204, SPAN 203, SPAN 204, HIST 120, HIST 121, HIST 133, HIST 134, HIST 140, HUMN 133, HUMN 134, HUMN 140, HUMN 145, MUSI 108, PHIL 100, PHIL 101, PHIL 200, PHIL 201, PHIL 203, THEA 106, THEA 114, COMM 128

Communication electives that will transfer from MCC to JCCC:

BSAD 221, ENGL 102, ENGL 215, COMM 100, COMM 102, COMM 223, COMM 233

Indicates prerequisite courses, which must be completed prior to the clinic year at JCCC. The elective courses must be completed for the AAS degree, which establishes eligibility for the Registered Polysomnographic Technologist examination.

Practical Nursing

Offered at MCC-Penn Valley

Practical Nursing Certificate ..... 53.5-59.5 Credits

Accreditation

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. The Practical Nursing Program is conditionally approved by the Missouri State Board of Nursing and accredited by the National League of Nursing Accrediting Commission. The MSBN can be contacted at 3605 MO Blvd., P.O Box 656 Jefferson City, MO 65102-0656; telephone 573-751-0681. The Accreditation Commission for Education in Nursing, Inc. can be contacted as a resource for information on the nursing program. The address is 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326.

For more information, go to **www.mcckc.edu/pvnursing**

Practical Nursing Certificate

303400 Revised 10/2013 (Spring 2014)

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 100 CHEM 105 BIOL 109 BIOL 110	Introduction to Cell Biology ***or*** Introduction Chemistry for Health Sciences Anatomy and Physiology ***or*** Anatomy and BIOL 210 Physiology	9-15		 BIOL 100 or CHEM 105 BIOL 110 and either BIOL 100 or CHEM 205
Specific Program Requirements		Credits	Semester Taken	Prerequisites
PNUR 100	Personal and Vocational Concepts	1		Biology 109 or Biology 110 and BIOL 210 and Admission to the PN Program
PNUR 103	Fundamentals of Practical Nursing II	10		
PNUR 110	Pharmacology	4		PNUR 103
PNUR 128	Mental Health Nursing	4		PNUR 110
PNUR 132	The Childbearing Family	4		PNUR 110
PNUR 136	Venous Access and Intravenous Infusion	1.5		PNUR 110
PNUR 138	Nursing of the Adult I	8		PNUR 110
PNUR 144	Nursing of the Adult II	8		PNUR 138
PNUR 146	Leadership	3		PNUR 144
Total Credit Hours Required		**53.5-59.5**		

Professional Nursing

Offered at MCC-Penn Valley

A.A.S. Professional Nursing ..... 71-77 Credits

The Professional Nursing program plan leads to the Associate in Applied Science in Nursing degree. Beginning students are prepared 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. For more information, go to www.mcckc.edu/pvnursing

Admission to the program

Every student in the nursing program should be aware that the Missouri State Board of Nursing may refuse to issue a license to any person who has been found guilty of violating federal or state laws and for any of 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 fully 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 3343 Peachtree Road NE, suite 500 Atlanta, GA 30326; P – 404-975-5000; fax – 404-975-5020.

A.A.S. Professional Nursing

COLL 100	First Year Seminar	1		
Prerequisite Courses:		Credits	Semester Taken	Prerequisites
BIOL 100 CHEM 105	Intro to Cell Biology ***or*** Introductory Chemistry	3-5		MATH 20/20L or appropriate placement test score
BIOL 109 BIOL 110 BIOL 210	Anatomy and Physiology ***or*** Human Anatomy ***and*** 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		
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 30/90 or appropriate placement test score
HIST 120 HIST 121 POLS 135 POLS 136 POLS 137 *Students transferring one of these courses from out of state will be required to complete POLS 153 The Missouri Constitution.*	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 243	Human Lifespan Development	4		PSYC 140
SOCI 160	Sociology	3		
COMM 100 COMM 102	Fundamentals of Speech ***or*** Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
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		ENGL 101, SOCI 160, RNUR 234, 238, COMM 100 OR 102, HIST 120/121 OR POLS 135/136/137 (Constitutional requirement may be taken concurrently)
RNUR 234	Child-Centered Nursing	4		BIOL 208, RNUR 134, 138, 141 or taken concurrently: ENGL 101, SOCI 160
RNUR 238	Adult Nursing II	5		BIOL 208, RNUR 134, 138, 141 or taken concurrently: ENGL 101, SOCI 160
RNUR 244	Adult Nursing III	7		ENGL 101, SOCI 160, RNUR 234, RNUR 238, or taken concurrently: COMM 100 & HIST 120/121 or POLS 135/136/137 or SOSC 151
Total Credit Hours Required		**71-77**		

Radiologic Technology

Offered at MCC-Penn Valley

A.A.S. Radiologic Technology ..... 78 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.

Enrollment in this program is limited. The application form may be obtained from the program coordinator, the counseling department, or the office of the division of life science.

For more information, go to **www.mcckc.edu/radiology**

A.A.S. Radiologic Technology

COLL 100	First Year Seminar	1		
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 30/90 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 110	Intermediate Algebra or higher	3		MATH 40 or 40L
PSYC 140	General Psychology	3		
COMM 100	Fundamentals of Speech	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements				
RATE 150	Introduction to Radiologic Technology	2		
RATE 160	Fundamentals of Radiologic Technology	2		
RATE 165	Patient Care	3		RATE 160
RATE 171	Radiographic Imaging I	3		RATE 160
RATE 172	Radiographic Procedures 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 Imaging II	2		RATE 160 and concurrent enrollment in RATE 180
RATE 175	Clinical Practice II	4		RATE 173 and concurrent enrollment in RATE 176
RATE 176	Radiographic Procedures II	3		BIOL, RATE 165, 172, 173, concurrent enrollment in RATE 175
RATE 178	Clinical Practice III	4		RATE 175
RATE 180	Digital Imaging Environment	2		RATE 171
RATE 270	Radiation Biology and Protection	3		RATE 174, 180
RATE 278	Pathology	2		RATE 279, 280 and concurrent enrollment in RATE 282
RATE 279	Radiographic Procedures III	2		RATE 176 and concurrent enrollment in RATE 280
RATE 280	Clinical Practice IV	5		RATE 178, concurrent enrollment in RATE 279
RATE 281	Radiation Physics	3		RATE 171 and RATE 180
RATE 282	Clinical Practice V	5		RATE 280
RATE 283	Final Seminar	2		RATE 279 and 280
RATE 285	Imaging Modalitics	2		RATE 176 and concurrent enrollment in RATE 279 and 280
Total Credit Hours Required		**78**		

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		
CSIS 100	Digital Literacy	2		
CSIS 101	Introduction to Word Processing	1		Keyboarding skills with minimum of 35 wpm
CSIS 102	Introduction to Spreadsheet Applications	1		
ECON 110 ECON 210	Introduction to Economics or Macroeconomics	3		
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
MATH 103	Technical Mathematics I	3		MATH 40 or 40L or satisfactory score on math placement test
PHED or Health Elective*		1		
PHIL 200	Logic	3		
COMM 102	Fundamentals of Human Communication	3		ENGL 30/90 or appropriate placement test score
Specific Program Requirements *Must be taken at Johnson County Community College*				
MTH 131	Technical Mathematics II*	3		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.
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		
Technical Electives — Must be taken at JCCC:				
AUTO 125	Introduction to Automotive Shop Practices	3		
AUTO 165	Automotive Engine Repair*	4		
CET 105	Construction Methods	3		
CET 129	Construction Management	3		
CPCA 138	Windows for Microcomputers*	1		
DRAF 123	Interpreting Machine Drawings*	2		
DRAF 129	Interpreting Architectural Drawings	2		
ELEC 120	Introduction to Electronics	3		
ELEC 126	Microcomputer A+ Preparation	3		
ELEC 133	Programmable Controllers	3		
ELEC 150	Introduction to Telecommunications	3		
ENGR 180	Engineering Land Surveying I*	3		
GEOS 140	Physical Geography	3		
GEOS 141	Physical Geography Lab*	2		
HVAC 123	Electromechanical Systems	4		
INDT 125	Industrial Safety/OSHA 30	3		
MFAB 130	Introduction to Gas Metal Arc Welding I (GMAW I)*	4		
MFAB 152	Manufacturing Materials and Processes	3		
MFAB 240	Metallurgy	2		
*Prerequisite/Corequisite required				
Total Credit Hours		**64**		

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: ALHT 108, BIOL 101, 104, 106, 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 30/90 or appropriate placement test score
MATH 110 MATH 120	Intermediate Algebra ***or*** College Algebra or higher^	3		MATH 40 or 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		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.
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 JCCC. 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.
Social Science and Economics Electives that will transfer from MCC to JCCC:
ANTH 100, ANTH 110, ANTH 120, ECON 110, ECON 210, ECON 211, GEOG 111, GEOG 112, POLS 135, POLS 136, POLS 137, POLS 234, PSYC 140, SOCI 160, SOCI 163, SOCI 170, SOCI 220
Humanities Electives that will transfer from MCC to JCCC:
ART 108, ART 150, ART 151, ART 159, ENGL 214, ENGL 216, ENGL 218, ENGL 220, ENGL 221, ENGL 222, ENGL 223, ENGL 234, ENGL 240, ENGL 250, ENGL 254, ENGL 255, ENGL 256, ENGL 268, FREN 203, FREN 204, SPAN 203, SPAN 204, HIST 120, HIST 121, HIST 133, HIST 134, HIST 140, HIST 150, HUMN 133, HUMN 134, HUMN 140, HUMN 145, MUSI 108, MUSI 160, PHIL 100, PHIL 101, PHIL 200, PHIL 201, PHIL 203, COMM 106, COMM 114, COMM 128
Communication electives that will transfer from MCC to JCCC:
BSAD 221, ENGL 102, ENGL 215, COMM 100, COMM 102, COMM 103, COMM 133

Surgical Technology

Offered at MCC-Penn Valley

Surgical Technology ..... 63-69 Credits
Surgical Technology Certificate ..... 54-60 Credits

This program leads to an Associate in Applied Science degree or certificate of proficiency and prepares students for entry-level jobs as operating room technicians.

A.A.S. Surgical Technology

COLL 100	First Year Seminar	1		
General Education Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
BIOL 100 CHEM 105	Introduction to Cell Biology ***or*** Introductory Chemistry for Health Sciences	3-5		MATH 20 or satisfactory score or placement test
BIOL 109 BIOL 110 BIOL 210	Anatomy and Physiology ***or*** Human Anatomy ***and*** Human Physiology	6-10		BIOL 100 ***or*** CHEM 105 BIOL 110 ***and*** either BIOL 100 ***or*** CHEM 105
BIOL 208	Microbiology	5		BIOL 100 ***or*** CHEM 205 ***or*** higher, plus one of the following courses: ALHT 108, BIOL 101, 104, 106, 109, ***or*** 110
ENGL 101	Composition and Reading I	3		ENGL 30/90 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		
COMM 100 COMM 102	Fundamentals of Speech or Fundamentals of Human Communications	3		
Specific Program Requirements				
SURT 100	Introduction to Surgical Technology	2		
SURT 103	Central Services Process	4		
SURT 105	Care of the Surgical Patient	3		BIOL 100 or CHEM 105, BIOL 109 or BIOL 110 & BIOL 210, BIOL 208, MATH 20/20L or appropriate placement score & formal acceptance into the Surgical Technology Program
SURT 109	Pharmacology for the Surgical Technologist	2		BIOL 100 or CHEM 105, BIOL 109 or BIOL 110 & BIOL 210, BIOL 208, MATH 20/20L or appropriate placement score & formal acceptance into the Surgical Technology Program
SURT 120	Fundamentals of Surgical Technology I	5		SURT 100, 103, 105, and 109
SURT 121	Fundamentals of Surgical Technology II	5		SURT 100, 103, 105, 109
SURT 130	Surgical Procedures II	5		SURT 100, 103, 105, 109, 120, 121
SURT 131	Surgical Procedures II	5		SURT 100, 103, 105, 109, 120, 121, and 130
SURT 141	Clinical Experience I	6		SURT 120, 121, 130
SURT 150	Surgical Technology Capstone	2		SURT 120, 121, 130
Total Credit Hours Required		**63-69**		

Surgical Technology

Offered at MCC-Penn Valley

Surgical Technology Certficate

COLL 100	First Year Seminar	1		
General Education Requirements *Must be taken at one of the MCC campuses*		Credits	Semester Taken	Prerequisites
BIOL 100 CHEM 105	Introduction to Cell Biology ***or*** Introductory Chemistry for Health Sciences	3-5		MATH 20 or satisfactory score or placement test
BIOL 109 BIOL 110 BIOL 210	Anatomy and Physiology ***or*** Human Anatomy ***and*** Human Physiology	6-10		BIOL 100 ***or*** CHEM 105 BIOL 110 ***and*** either BIOL 100 ***or*** CHEM 105
BIOL 208	Microbiology	5		BIOL 100 ***or*** CHEM 205 ***or*** higher, plus one of the following courses: ALHT 108, BIOL 101, 104, 106, 109, ***or*** 110
Specific Program Requirements				
SURT 100	Introduction to Surgical Technology	2		
SURT 103	Central Services Process	4		
SURT 105	Care of the Surgical Patient	3		BIOL 100 or CHEM 105, BIOL 109 or BIOL 110 & BIOL 210, BIOL 208, MATH 20/20L or appropriate placement score & formal acceptance into the Surgical Technology Program
SURT 120	Fundamentals of Surgical Technology I	5		SURT 100, 103, 105, and 109
SURT 121	Fundamentals of Surgical Technology II	5		SURT 100, 103, 105, 109
SURT 130	Surgical Procedures II	5		SURT 100, 103, 105, 109, 120, 121
SURT 131	Surgical Procedures II	5		SURT 100, 103, 105, 109, 120, 121, and 130
SURT 141	Clinical Experience I	6		SURT 120, 121, 130
SURT 150	Surgical Technology Capstone	2		SURT 120, 121, 130
Total Credit Hours Required		**54-60**		

Trade Apprenticeship Degree Completion Programs

Offered at MCC-Business & Technology

These degree completion programs grant college credit by certification for certain federally approved apprenticeship programs. An eligible apprenticeship must contain a minimum 450 clock hours of classroom instruction and a program-specific number of clock hours of on-the-job training. Thirty to forty-two hours of MCC credit leading toward an AAS in Industrial Technology will be awarded upon completion of 15 hours of MCC coursework and receipt of a certificate and/or journeyman card for the appropriate craft.

Construction Trades Apprenticeship Programs

Offered at MCC-Business & Technology

These degree completion programs grant college credit by certification for certain federally approved apprenticeship programs. An eligible apprenticeship must contain a minimum 450 clock hours of classroom instruction and a program-specific number of clock hours of on-the-job training. Thirty to forty-two hours of MCC credit leading toward an AAS in Industrial Technology will be awarded upon completion of 15 hours of MCC coursework and receipt of a certificate and/or journeyman card for the appropriate craft.

A.A.S. Industrial Technologies

Bricklayer ..... 64-66 Credits
Construction Carpentry ..... 64-66 Credits
Construction Cement Masons ..... 64-66 Credits
Construction Driver & Logistics ..... 63-67 Credits
Construction Ironwork ..... 64-66 Credits
Construction Laborer ..... 64-66 Credits
Floor Layer ..... 64-66 Credits
Glaziers ..... 64-66 Credits
Inside Wiring
3 -Year program ..... 64-66 Credits
5 -Year program ..... 67-68 Credits
Painter ..... 64-66 Credits
Plumbing ..... 64-66 Credits

Industrial Trades Apprenticeship Programs

Offered at MCC-Business & Technology

These degree completion programs grant college credit by certification for certain federally approved apprenticeship programs. An eligible apprenticeship must contain a minimum 450 clock hours of classroom instruction and a program-specific number of clock hours of on-the-job training. Thirty to forty-two hours of MCC credit leading toward an AAS in Industrial Technology will be awarded upon completion of 15 hours of MCC coursework and receipt of a certificate and/or journeyman card for the appropriate craft.

A.A.S. Industrial Technology

Industrial Mechanic ..... 64-66 Credits
Industrial Pipefitter/Sprinkler Fitter ..... 65-67 Credits
Industrial Warehouse Worker ..... 62-63 Credits
Industrial Welder ..... 65-67 Credits
Lineman Tech/Cable Splicer ..... 63-65 Credits
Maintenance Electrician ..... 63-65 Credits
Millwright ..... 64-66 Credits
Sheet Metal ..... 64-66 Credits

Veterinary Technology

Offered at MCC-Maple Woods

A.A.S. Veterinary Technology .....78 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.

Call the program office (816) 604-3235 for more information

For more information, go to **www.mcckc.edu/veterinary**

A.A.S. Veterinary Technology

COLL 100	First Year Seminar	1		
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30/90 or appropriate placement test score
ENGL 102	Composition and Reading II	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		
COMM 100 COMM 103	Fundamentals of Speech or Interpersonal Communication	3		ENGL 30/90 or appropriate placement test score
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: ALHT 108, BIOL 101, 104, 106, 109, 110.
CHEM 105 CHEM 111	Introductory Chemistry or General College Chemistry	5		
Specific Program Requirements				
VETT 100	Veterinary Practice Management	2		
VETT 101	Principles of Animal Science I	4		
VETT 108	Clinical Mathematics for Veterinary Technicans	1		Admission into Veterinary Technician Program.
VETT 110	Principles of Animal Science II	4		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 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**		

Welding

Offered at MCC-Business & Technology

A.A.S. Welding Technology and Management ..... 63-68 Credits
MIG Certificate..... 22-23 Credits
MIG/TIG Certificate..... 22-23 Credits
Welding Construction Certificate ... 22-24 Credits

This Welding Technology & Management program provides the students with the training that meets the standards of the American Welding Society's curriculum. Curriculum will prepare the students to successfully pass the AWS written certification tests.

This will allow the student to engage in gainful employment in the welding/fabrication industry as welding is one of the high-demand occupations designated by the state of Missouri. Students completing the two-year degree will acquire the skills required of managerial and technical training personnel. This will allow students to transcend the welding industry into other welding-related careers when these opportunities are present, fulfilling the personal desires of promotion throughout their careers. Students completing welding certificates can later come back and integrate course work already completed into the two-year degree and complete the degree while employed.

A.A.S. Welding Technology and Management

COLL 100	First Year Seminar	1		
General Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENG 30 or appropriate placement 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 MATH 103R MATH 104 MATH 120 MATH 130 MATH 150	Technical Mathematics I ***or*** Technical Mathematics I w/ review ***and*** Technical Mathematics II ***or*** College Algebra ***and*** Trigonometry ***or*** PreCalculus	5-7		MATH 40 or MATH 40L or appropriate placement score. MATH 20 or 20L or appropriate placement score to MATH 103R. MATH 103 MATH 110 or satisfactory score on the math placement test. MATH 120 or satisfactory score on the placement test. MATH 110 or satisfactory score on the math placement test.
SPAN 100	Beginning Occupational Spanish	3		
COMM 100	Fundamentals of Speech	3		
Specific Program Requirements				
CSIS 100	Digital Literacy	2		
EHSS 111 EHSS 112	Introduction to Health & Safety for General Industry ***or*** Introduction to Health & Safety for Construction	1		
INTE 124	Employment Strategies for Technical Careers	2		CSIS 100 or CSIS 115
WELD 110	Welding Industry Fundamentals	3		
WELD 120	Thermal Cutting Processes Lecture	1		WELD 110 or concurrent enrollment
WELD 121	Thermal Cutting Processes Lab	2		WELD 120 or concurrent enrollment
WELD 130	Print Reading & Weld Symbols	3		
WELD 140	Shielded Metal Arc Welding I (stick) Lecture	1		WELD 121 or concurrent enrollment
WELD 141	Shielded Metal Arc Welding I (stick) Lab	2		WELD 140 or concurrent enrollment
WELD 150	Gas Metal Arc Welding I (MIG)(stick) Lecture	1		WELD 121 or concurrent enrollment
WELD 151	Gas Metal Arc Welding I (MIG)(stick) Lab	2		WELD 150 or concurrent enrollment
WELD 160	Gas Tungsten Arc Welding I (TIG) Lecture	1		WELD 121 or concurrent enrollment
WELD 161	Gas Tungsten Arc Welding I (TIG) Lab	2		WELD 160 or concurrent enrollment
WELD 230	Layout and Fabrication Lecture	1		WELD 130 and one WELD 100 level lecture & lab
WELD 231	Layout and Fabrication Lab	2		WELD 230 and one WELD 100 level lecture & lab
WELD 240	Shielded Metal Arc Welding II (stick) Lecture	1		WELD 141
WELD 241	Shielded Metal Arc Welding II (stick) Lab	2		WELD 240
WELD 250	Gas Metal Arc Welding II (MIG) Lecture	1		WELD 151
WELD 251	Gas Metal Arc Welding II (MIG) Lab	2		WELD 250
WELD 260	Gas Tungsten Arc Welding II (TIG) Lecture	1		WELD 161
WELD 261	Gas Tungsten Arc Welding II (TIG) Lab	2		WELD 260
WELD 270	Flux Core Arc Welding Lecture	1		WELD 151 or concurrent enrollment
WELD 271	Flux Core Arc Welding Lab	2		WELD 270 or concurrent enrollment
WELD 290	Management Skills for the Trades	3		WELD 231 and one WELD 100 level lecture & lab
Electives: BSAD, ETEC 152, ETEC 169, MATE 100/101 or MATE 130		3-7		
Total Credit Hours Required		**63-68**		

Welding

Welding Construction Certificate

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
MATH 103R	Technical Math I w/ review or higher	3-5		MATH 20 or 20L or appropriate score on placement test
WELD 110	Welding Industry Fundamentals	3		
WELD 120	Thermal Cutting Processes Lecture	1		WELD 110 or taken concurrently
WELD 121	Thermal Cutting Processes Lab	2		WELD 120 or taken concurrently
WELD 130	Print Reading & Weld Symbols	3		
WELD 140	Shielded Metal Arc Welding Lecture	1		WELD 121 or taken concurrently
WELD 141	Shielded Metal Arc Welding Lab	2		WELD 140 or taken concurrently
WELD 150	Gas Metal Arc Welding I Lecture	1		WELD 121 or taken concurrently
WELD 151	Gas Metal Arc Welding I Lab	2		WELD 150 or taken concurrently
WELD 160	Gas Tungsten Arc Welding I Lecture	1		WELD 121 or taken concurrently
WELD 161	Gas Tungsten Arc Welding I Lab	2		WELD 160 or taken concurrently
Total Credit Hours Required		**22-24**		

Welding MIG Certificate (AWS modular certification)

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
MATH 103R	Technical Math I w/ review or higher	3-4		MATH 20 or 20L or appropriate score on placement test for MATH 103R
WELD 110	Welding Industry Fundamentals	3		
WELD 120	Thermal Cutting Processes Lecture	1		WELD 110
WELD 121	Thermal Cutting Processes Lab	2		WELD 120 or concurrent enrollment
WELD 130	Print Reading & Weld S ymbols	3		
WELD 150	Gas Metal Arc Welding I (MIG) Lecture	1		WELD 121 or concurrent enrollment
WELD 151	Gas Metal Arc Welding I (MIG) Lab	2		WELD 150 or concurrent enrollment
WELD 230	Layout and Fabrication Lecture	1		WELD 130 and one WELD 100 level lecture & lab
WELD 231	Layout and Fabrication Lab	2		WELD 230 and one WELD 100 level lecture & lab
WELD 270	Flux Core Arc Welding Lecture	1		WELD 151 or concurrent enrollment
WELD 271	Flux Core Arc Welding Lab	2		WELD 270 or concurrent enrollment
Total Credit Hours Required		**22-23**		

Welding MIG/TIG (AWS modular certification)

COLL 100	First Year Seminar	1		
Specific Program Requirements		Credits	Semester Taken	Prerequisites
MATH 103R	Technical Math I w/ review or higher	3-4		MATH 20 or 20L or appropriate score on placement test for MATH 103R
WELD 110	Welding Industry Fundamentals	3		
WELD 120	Thermal Cutting Processes Lecture	1		WELD 110 or concurrent enrollment
WELD 121	Thermal Cutting Processes Lab	2		WELD 120 or concurrent enrollment
WELD 130	Print Reading & Weld Symbols	3		
WELD 150	Gas Metal Arc Welding I (MIG) Lecture	1		WELD 121 or concurrent enrollment
WELD 151	Gas Metal Arc Welding I (MIG) Lab	2		WELD 150 or concurrent enrollment
WELD 160	Gas Tungsten Arc Welding I (TIG) Lecture	1		WELD 121 or concurrent enrollment
WELD 161	Gas Tungsten Arc Welding I (TIG) Lab	2		WELD 160 or concurrent enrollment
WELD 230	Layout and Fabrication Lecture	1		WELD 130 and one WELD 100 level lecture & lab
WELD 231	Layout and Fabrication Lab	2		WELD 230 and one WELD 100 level lecture & lab
Total Credit Hours Required		**22-23**		

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 Global Diversity requirement. Please see an academic advisor for details.

This symbol denotes courses that are part of the Missouri Transfer Library. Please see an academic advisor for details.

Agribusiness/Grounds and Turf Management

AGBS 100 The Green Industry - Introduction to Urban Agribusiness
3 credits. 3 hours. (Lecture 3 hours.)
Survey of arboricultural, floricultural, and ornamental horticulture occupations in the greens industry.

AGBS 106 Landscape Design and Maintenance
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Principles of landscape design and required maintenance procedures. Introduction of computer aided design software program.

AGBS 107 Deciduous Trees and Shrubs
3 credits. 3 hours. (Lecture 3 hours.)
A practical study of woody plants, shade trees, ornamental and flowering trees, and deciduous and flowering shrubs indigenous to the Midwest designed for the practitioner in agribusiness. Course provides an in-depth study of environmental adaptability, cultural practices, diseases, pests, and seasonal effects in the Midwest.

AGBS 108 Evergreens and Herbaceous Plants
3 credits. 3 hours. (Lecture 3 hours.)
A practical study of coniferous evergreens, broadleaf evergreens, reliable low-maintenance perennials, and bedding annuals indigenous to the Midwest. Designed for the practitioner in agribusiness. Discussion of diseases, pests, and seasonal effects in the Midwest.
AGBS 109 Pest Management/Turf and Ornamental
3 credits. 3 hours. (Lecture 3 hours.)
Environmental, safety, and regulatory considerations of turf and ornamental pest control.

AGBS 115 Soil Fertility and Fertilizers
3 credits. 3 hours. (Lecture 3 hours.)
Types of fertilizers for soil and crops. Fertilizers: their components, their formulation, and their application. Investigating aspects of the nature and properties of soils.

AGBS 135 Turfgrass Management I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
An introduction to the basics of turfgrass management. Emphasis on plant growth, identification, and characteristics of the major cold and warm season turf grasses such as blue grasses, ryegrasses, bentgrass, fescues, bermuda grass, and zoysia grass. Establishment procedures and mowing practices will be covered.

AGBS 140 Turfgrass Management II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
More specific information provided on turfgrass management. Topics such as green construction, topdressing, sprayer calibration, management programs (i.e., setting up a lawn care program), and the influence environment has on turfgrass growth.

AGBS 145 Irrigation and Installation
3 credits. 3 hours. (Lecture 3 hours.)
Study design, operations, and maintenance of modern golf courses and landscape facilities, including water requirements, supply, and distribution.

AGBS 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.

ALHT 108 Anatomy and Physiology for Allied Health
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Fundamentals of anatomy and physiology are taught with emphasis on relevance to individuals in health care fields. This course is intended for students enrolling in an allied health program requiring this course. It is not intended for any nursing program.

Animal Health Science

MCC-Maple Woods

Christopher Morrow

ANHS 100 Introduction to Animal Health Science Careers
1 credit. 1 hour. (Lecture 1 hour.)
Introduction to careers in the animal health industry. Covers education, career outlook, compensation and responsibilities.

ANHS 130 Veterinary Terminology
2 credits. 2 hours. (Lecture 2 hours.)
Professional language of veterinary medicine. Analysis of veterinary medical terms by roots and combining forms. Disease processes, anatomy, diagnostic and therapeutic procedures for each body system. Selected veterinary medical specialties.

Anthropology

MCC-Longview

Melissa Eaton

ANTH 100 General Anthropology

3 credits. 3 hours. (Lecture 3 hours.)

This survey of anthropology emphasizes the four-field holistic approach to the study of humans. This course will focus on both biological and cultural perspectives related to the study of human origins and development, social organization, subsistence patterns, language, culture and adaptation to the environment.

ANTH 110 Cultural Anthropology

3 credits. 3hours. (Lecture 3 hours.)

This survey of cultural anthropology will explore anthropological theories and methodologies that explore the concepts of culture, social institutions and organization. Topics will include economy, political organization, kinship, family, art, marriage, language, law and religion.

ANTH 120 Introduction to Archaeology

3 credits. 3 hours. (Lecture 3 hours.)

Archaeology is the study of past cultures through their material remains. This course introduces archaeological goals, methods, theories, and ethics. Topics include archaeological survey, excavation, dating techniques, artifact analysis, conservation, cultural adaptation and change.

ANTH 140 Introduction to Physical Anthropology

3 credits. 3 hours. (Lecture 3 hours.)

Physical anthropology, also called biological anthropology, studies the connection of biology and culture in humans and closely related primates. This course emphasizes the scientific method, genetics, evolutionary theory, human biological variation, primate behavior, and the analysis of fossil evidence

ANTH 290 Special Topics in Anthropology

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)

Prerequisites: ANTH 100 or above & ENGL 101.

Guided readings, discussion, and writing and/or field experience in anthropology. Topics and material will vary by instructor each semester. Specific reading list activities and writing assignments to be determined by instructor.

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 Advance Apparel Construction

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)

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 Advertising and Promotion for Merchandising Environments

3 credits. 3 hours. (Lecture 3 hours.)

Application of marketing, advertising, promotion, and special events to effectively market product assortments for retail, wholesale, and industry tradeshow settings. Course culminates in student production of PANACHE student fashion showcase.

APTX 130 Fashion Illustration and Technical Drawing

3 credits. 6 hours. (Lecture 1 hour. Laboratory 4 hours.)

Fundamentals of fashion illustration with emphasis on fashion drawing and technical drawing techniques. Fabric rendering, use of materials, and format methods used by apparel designer and product development professionals.

APTX 211 Pattern Design - Flat Pattern

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)

Prerequisite: Previous sewing and apparel construction experience necessary.

Basic principles and methods of flat pattern drafting. Development of skirt, bodice, pant and dress slopers; in full scale sizes. Cut, sew and fit muslin 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.)

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 217 Twentieth Century Costume History

3 credits. 3 hours. (Lecture 3 hours.)

Prerequisite: APTX 118.

History of dress and industry development throughout the twentieth century. Examination of the changing role of the designer in product development, influences of mass communication, as well as social, political and economic influences.

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 & MATH 100.

Application of merchandising principles for both manufacturing and retail firms. Emphasis on retail mathematics, 6-month planning, and issues related to profitability.

APTX 221 Merchandising II

3 credits. 3 hours. (Lecture 3 hours.)

Application of merchandising principles for both manufacturing and retail firms. Emphasis on budget and assortment planning, development and presentation of apparel and related products, and use of computer technology to plan and execute.

APTX 225 Pattern Design - CAD

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)

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 Apparel and Textiles Studies
1-3 credits. 1.5-5 hours. (Lecture 0.5-4 hour. Laboratory 1 hour.)
In-depth exploration of an Apparel and Textiles topic. Variable 1-3 credit course will differ by topic and semester.

APTX 250 Computer Aided Fashion Illustration and Technical Drawing
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: APTX 130 & COLL 100.
Fashion illustration and technical drawing techniques utilizing state-of-the-art computer software and industry-level computer aided techniques.

APTX 275 Design Portfolio Presentation
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: 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-Longview
James Smith
Daniel Reneau

MCC-Maple Woods
Carlos Bass

MCC-Penn Valley
Mary Beth Moley
Darlene Town
Bernadette Torres

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, and InDesign 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 Art Foundation
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 utilize vector, rastor and presentation processes with the design elements and principles to establish visual literacy. Keyboarding skills are highly recommended. This class does not meet the 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 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 138 Digital Photography
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
This course will integrate contemporary digital technology and the current functional roles of photography as a form of expression that can be descriptive, explanatory, poetic, evaluative or theoretical. Emphasis will be directed toward the development of visual literacy and the ability to see photographically using color and gray scale light in the process of purposeful image making. Adobe Photo Shop skills will be developed for image manipulation as a ¿digital darkroom.¿ Essential camera skills will be mastered.

ART 139 Film & Darkroom Photography
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 influence 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 157 History of Graphic Design
3 credits. 3 hours. (Lecture 3 hours.)
Students will obtain an overview of the evolution of graphic communication from pre-history through Postmodern Design and the Digital Revolution. Students will be able to identify the works of influential artists, movements, and the impacts of world historical events, technology, and social tendencies on graphic design.

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 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 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 247 Digital Imaging
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisites: ART 105 or ART 138 or GDES 110 & COLL 100.
Advanced exploration of photographic techniques, images and themes using the computer, digital camera, and scanners. Photoshop will be primary software utilized in the production of innovative digital images and solutions.

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 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 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
2-3 credits. 4-6 hours. (Laboratory 4-6 hours.)
Individual projects involving media and techniques chosen by the student with the advice of the instructor.

ART 281 Introduction to Graphic Media - File Preparation
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: GDES110 & ART 115.
Introduction to the graphic media process that follows a digital file from creation through output & contract proof. Emphasis on using proper techniques and workflows to ensure successful file output and printing.

ART 282 Graphic Media - Advanced Color Correction
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: GDES 110 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 Graphic Media
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: GDES 150, ART115, GDES 281 and ART 282 or approval of the instructor.
Analysis of digital files for proper output. Emphasis on preventative file preparation, preflighting, trouble-shooting problem files, trapping and imposition with a large concentration on file output.

ART 285 Variable Data Publishing
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: GDES 150, ART 115, GDES 281 and ART 282 or approval of the instructor.
An overview of variable data technology. The course will focus on merging data and images to digitally personalized products for data driven communications. Students are encouraged to take ART 283 and ART 285 concurrently.

ART 290 Graphic Media Internship
3 credits. 14 hours. (Field Studies 14 hours.)
Prerequisite: ART 283 and ART 285.
Cooperative work experience in graphic media

Automotive Technology

MCC-Longview

Bryan Compton | Gary McDaniel

David Patience | Rory Perrodin

Edward Schauffler

AUTO 100 Introduction to Automotive Service
2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
This is a required course for all persons taking an automotive technology course with a lab component. This course meets the requirements for COLL 100 for automotive students. This course will also cover items necessary for students success specific to automotive service.

AUTO 101 Automotive Internship I
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisites: AUTO 100, two AUTO courses numbered 117 or higher.
Cooperative on-the-job training in the automotive industry.

AUTO 102 Automotive Internship II
3-99 credits. 3-99 hours.
Prerequisites: AUTO 100 and AUTO 101.
Cooperative on-the-job training in the automotive industry. This course builds on the work experience gained in AUTO 101.

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
Prerequisite: Be enrolled in one of the corporate emphasis areas, maintain a C average and be approved by a sponsoring dealer.
1 credit. 40 hours. (Field Studies 40 hours.)
Co-operative on-the-job training in the automotive industry. This course is only open to GM ASEP and Ford ASSET emphasis students.

AUTO 106 Cooperative Work Experience II
Prerequisite: Be enrolled in one of the corporate emphasis areas, maintain a C average and be approved by a sponsoring dealer.
1 credit. 40 hours. (Field Studies 40 hours.)
Co-operative on-the-job training in the automotive industry. This course is only open to GM ASEP and Ford ASSET emphasis students.

AUTO 107 Cooperative Work Experience III
1 credit. 40 hours. (Field Studies 40 hours.)
Prerequisite: Be enrolled in one of the corporate emphasis areas, maintain a C average and be approved by a sponsoring dealer.
Co-operative on-the-job training in the automotive industry. This course is only open to GM ASEP and Ford ASSET emphasis students.

AUTO 108 Cooperative Work Experience IV
1 credit. 40 hours. (Field Studies 40 hours.)
Prerequisite: Be enrolled in one of the corporate emphasis areas, maintain a C average and be approved by a sponsoring dealer.
Co-operative on-the-job training in the automotive industry. This course is only open to GM ASEP and Ford ASSET emphasis students.

AUTO 117 Automotive Maintenance and Light Repair
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: Concurrent enrollment in or completion of AUTO 100.
This is an introductory course designed to provide the student with fundamentals of operation, service, maintenance and light repair of modern automobiles. Students will learn basic automotive shop safety, tool and equipment use, basic engine, cooling system, brake, steering, suspension, serpentine belt and electrical system maintenance.

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 Engine Repair
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: Concurrent enrollment in or completion of AUTO 100.
This course covers the history, theory of operation, diagnosis, and repair of automotive gasoline and light-duty diesel engines. The student will receive instruction on engine maintenance and repair including methods, tools and procedures required to properly recondition engine assembilies. Reconditioning of engine assemblies and components include cylinder head and valve service, psiton and ring service, block and bearing service. This course emphasizes percision measuring and engine mechanical systems diagnosis.

AUTO 166 Automotive Electrical Systems
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: Concurrent enrollment in or completion of AUTO 100.
This course incorporates a study of the theory, construction, and repair of modern automotive electrical systems. Operational theory, testing and repair of batteries, charging systems, starting systems, lighting systems, wiring and accessories will be stressed. Practice in the use of test equipment to diagnose vehicle electrical systems will be covered in detail.

AUTO 171 Automotive Chassis Systems
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisite: Concurrent enrollment in or completion of AUTO 100.
This course covers the history, theory of operation, dignosis, service and repair of automotive chassis systems. Instruction on braking systems, on and off-car rotor resurfacing, drum resurfacing ABS operation, four-wheel alignments, front and rear suspension and steering systems, tire and wheel balancing are covered in detail. Precision measuring related to brake durms and rotors will practiced.

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.)
Prerequisite: Concurrent enrollment in or completion of AUTO 100.
This course incorporates the theory of operation and service procedures of manual drive trains and axles including drivelines, constatn velocity (CV) joints, manual transmissions and transaxles, differentials and clutches. Noise, vibration, and harshness (NVH) will be covered in this course.

AUTO 201 Honda PACT Certification: Express Tech
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: AUTO 117 and COLL 100.
This course is required for a student to become Honda PACT certified in Express Tech (Maintenance and Light Repair). This course paired with the prerequisite AUTO 117, Automotive Maintenance and Light Repair, will prepare a student to enter the automotive field as a Honda Express Tech.

AUTO 202 Honda Certification: Electrical Fundamentals
2 credits. 2hours. (Laboratory 0 hour.)
Prerequisite: AUTO 166.
This course will allow a student to become Honda certified in electrical fundamentals.

AUTO 203 Honda Certification: Engine Repair
2 credits. 2hours. (Laboratory 4 hours.)
Prerequisite: AUTO 150.
This course will allow a student to become Honda certified in engine repair.

AUTO 204 Honda Certification: Brake Systems
1 credit. 1hour. (Laboratory 0 hour.)
This course will allow a student to become Honda certified in brake systems.

AUTO 205 Honda Certification: Suspension and Steering
2 credits. 2hours. (Laboratory 0 hour.)
Prerequisite: AUTO 172.
This course will allow a student to become Honda certified in suspension and steering.

AUTO 206 Honda Certification: Manual Transmission
1 credit. 1hour. (Laboratory 0 hour.)
Prerequisite: AUTO 174.
This course will allow a student to become Honda certified in manual transmission.

AUTO 207 Honda Certification: Automatic Transmission
2 credits. 2hours. (Laboratory 0 hour.)
Prerequisite: AUTO 272.
This course will allow a student to become Honda certified in automatic transmission.

AUTO 208 Honda Certification: Air Conditioning
2 credits. 2hours. (Laboratory 0 hour.)
Prerequisite: AUTO 202 or Honda Electrical Fundamentals Certification and AUTO 264.
This course will allow a student to become Honda certified in air conditioning.

AUTO 209 Honda Certification: Restraints
0.5 credit. 0.5hours. (Laboratory 0 hour.)
Prerequisites: AUTO 100 and AUTO 166.
This course will allow a student to become Honda certified in restraints.

AUTO 250 Diesel Diagnosis and Repair
6 credits. 9 hours. (Lecture 3 hours. Laboratory 5 hours.)
Prerequisites: AUTO 150 and AUTO 166.
Discussion of diesel engine construction and operation as compared to gasoline engines. Study of diesel engine air, fuel, emissions, and electronic control systems. Study of how diesel engines and systems operate and how to diagnose, service, and repair these 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 Automotive Air Conditioning
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: AUTO 166.
This course incorporates history, theories of operation, diagnosis, and repair of various types of automotive air conditioners, and cabin heating systems. Practice using regrigerant identification and reclaiming equipment. Students will ave the opportunity to become certified to purchase and handle refirigerants.

AUTO 272 Automatic Transmissions and Transaxles
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisites: AUTO 100, AUTO 166, and one of the following: AUTO 150, AUTO 172, AUTO 174, AUTO 276, AUTO 278, AUTO 280.
This course incorporates history, theories of operation, testing, diagnosis and repair of automatic transmissions and transaxles. Hydraulic theory, torque multiplication factor, and planetary gear set operation will be covered in detail. Proper disassembly and reassembly procedures will be emphasized.

AUTO 276 Automotive Engine Performance
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisites: AUTO 100, AUTO 150, AUTO 166, and concurrent enrollment in or completion of AUTO 279.
This course incorporates the history, theories of operation, diagnosis, and repair of fuel systems, emissions systems and electronic engine management systems. Ignition system theory and secondary system checks will be covered. This course will emphasize published diagnostics procedures.

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 company¿s computer-equipped vehicles. Includes Ford certifications.

AUTO 279 Automotive Electronic Systems
6 credits. 8 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisites: AUTO 100 and 166.
This course builds on previous learning in automotive electrical systems. Electronic principles and theories of operation are explored in detail. Application, diagnosis and repair of automotive computer management systems will be covered.

AUTO 280 Diagnosis and Repair
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: Completion of AUTO 100, AUTO 150, AUTO 166, AUTO 172, AUTO 174 (not required for GM ASEP or Ford ASSET students) and AUTO 264.
Concurrent enrollment in or completion of AUTO 272, AUTO 276, and AUTO 278. This course employs a lecture/laboratory approach to the use of diagnostic equipment pertaining to drivability issues, network communications, and computerized management of all vehicular systems. This course will concentrate on development of diagnostic processes without published procedures. This course is designed to increase problem solving and critical thinking skills.

AUTO 282 Hybrid Electric Vehicles
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: AUTO 100, AUTO 150, AUTO 166, AUTO 276, AUTO 279.
Concurrent enrollment in or completion of AUTO 280. This course incorporates history, theories of operation, maintenance, diagnosis and repair of hybrid electric power trains. Computerized management systems related to hybrid electric vehichle systems will be covered in detail.

AUTO 288 Alternative Fuels & Vehicles
6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)
Prerequisites: AUTO 100, AUTO 150, AUTO 166, AUTO 276, and AUTO 279.
Concurrent enrollment in or completion of AUTO 280. This course incorporates history, theories of operation, maintenance, diagnosis and repair of alternative fuel vehicle power trains including hybrid electric vehicles. Computerized management systems related to alternative fuel and hybrid electric vehicles will be covered in detail.

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 credits. 1-3 hours. (Lecture 1-3 hours.)
Moving from sentence to paragraph writing. Topic sentences, coherence, focus, and organization.

BASK 40 Mathematic Skills/Special Topics
1 credit. 1 hour. (Lecture 1 hour.)
Various topics in basic arithmetic based on student needs. Will include fractions, decimals, ration and proportion, critical thinking and geometric concepts.

Biology

MCC-Blue River
Mehdi Borhan
Shari Harden
Todd Martin
Rachel Smith

MCC-Longview
Eugene Fenster
Keet Kopecky
Greg Loftin
Stephen Reinbold
Lavon Tonga

MCC-Maple Woods
Rani Duggal
Larry Reichard
Paul Smith
Kenneth Snell
Cammie Snow
Scott Quinton

MCC-Penn Valley
David Belt
Mahmoud Bishr
Robin Craig-Carriga
Terrence Davin
Nancy Harrington
Steven Lewis

BIOL 100 Introduction to Cell Biology
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 20 or MATH 20L or appropriate placement test score.
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 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 125 Biology of Human Sexuality
3 credits. 3 hours. (Lecture 3 hours.)
Exploration of human sexuality and the broad spectrum of its development, manifestations and expressions. Reproductive strategies across the kingdoms; development, anatomy and physiology of human reproductive and sexual systems from conception to maturity; sexual function and dysfunction; gender and sexual expression; sexual health and infection; fertility and infertility; roles of society, culture and relationships in human sexuality.

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.
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 flora 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 Canaday	Zach McNeil	James Moes
	Randy Kidd	Kimberly Luken

MCC-Penn Valley

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 Introduction to Business
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 Accounting Information Systems
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 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: BSAD 120, BSAD 150, BSAD 221, CSIS 115, MATH 20 & 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 198 Service-learning in Business
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
This is an experiential learning opportunity that links concepts and principles of business 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 business course topic and learning objectives.

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 207 Labor Management Relations
3 credits. 3 hours. (Lecture 3 hours.)
Current issues in the industrial and post-industrial society. Contract negotiations, arbitration policies, conflict theories, strategies for conflict resolution, and administering the collective bargaining agreement. This course is taught by The Institue for Labor Studies.

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 219 Entrepreneurship
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: 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
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 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. Student 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 228 Problems in Small Business Operations
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BSAD 219.
Introduces the fundamentals of business management, including planning, raising capital, using business information, managing employees, and marketing products and services. The course focuses on principles needed to operate a small business and is designed for those who may eventually have their own businesses or for those who desire to upgrade their skills in their present businesses.

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.

BSAD 290 Business Capstone
1 credit. 1 hour. (Lecture 1 hour.)
This course is required to obtain an Associate in Applied Science Degree. Independent study in business related areas under the supervision of a faculty member. Pass/Fail.

Chemistry

MCC-Blue River
Shveta Chaudhary

MCC-Longview
Nelson Borys

MCC-Maple Woods
Carla Huffman

MCC-Penn Valley
Douglas Martin
Michael Sweetland
Ahmed El-Sherif

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 appropriate placement test score 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: CHEM 107 or high school chemistry & MATH 120.
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

CDCG 101 Fundamentals of Early Care and Education
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30.
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.
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 & ENGL 30.
This course explores knowing and understanding young children's characteristics and needs; the multiple influences 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 teacher's 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 137 Behavior Management in Afterschool Programs

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 127.
This course teaches a comprehensive social and emotional intelligence classroom management program empowering adults, children, and youth. The Standards of the National AfterSchool Association are followed in this course. The course meets requirements of the Missouri Youth Development Credential.

CDCG 147 Enhancing Academics through Afterschool Programs

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CDCG 127.
This course prepares adults to support the learning of children and youth during out-of-school time. Adults can provide activities that allow students to process and use what they are learning during the school day in out-of-school time. This course explores grade level expectations, multiple intelligences, learning styles, and other teaching strategies appropriate for out-of-school time. The Standards of the National AfterSchool Association are followed in this course. The course meets requirements of the Missouri Youth Development Credential.

CDCG 149 Child Development Internship I

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: CDCG 113 & 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 & 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 placement test score.
This course is a survey and history of literature appropriate for young children (birth through age 8). Criteria for selection and evaluation of children's literature are included. Techniques for integrating children¿s 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 placement 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 teacher's 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.

College

Offered at all campuses

COLL 100 First-Year Seminar

1 credit. 1 hour. (Lecture 1 hour.)
The course is designed to help students adjust to the MCC community, develop a better understanding of the learning process, and acquire essential academic survival skills.

Communication Studies

MCC-Blue River
Dee Mathison

MCC-Longview
Bill Cue

MCC-Maple Woods
Lynette Jachowicz
Ayanna Bridges
Daniel Wright

MCC-Penn Valley
Kim Wilcox

COMM 100 Fundamentals of Speech

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or ENGL 90 or appropriate placement test score.
An introductory public speaking course including practical application of speaking and listening skills. The emphasis will be on the organization and delivery of subject matter.

COMM 102 Fundamentals of Human Communication

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 / 90 or appropriate placement test score.
An introduction to the process of human communication covering the basic forms of public speaking as well as topics in interpersonal communication. This course will emphasize the practical application of speaking and listening skills.

COMM 110 Argumentation and Debate

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 / 90 or appropriate placement test score.
This course will present the theory, methods, structure and execution of competitive debate. Students will participate in competitive debates with other area debate squads.

COMM 112 Introduction to Mass Communication

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 30 / 90 or appropriate placement test score.
This course provides a historical study of the content, structure and control of modern communications in the United States. Students will learn criteria for evaluating media content relative to the nature and consequences of news, entertainment, and advertising.

COMM 118 Introduction to Public Relations I

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 30 / 90 or appropriate placement test score.
An overview of the history and practices of public relations. Students will practice writing various public relations materials and examining field and case studies. Topics will include sections on unethical public relations practices and the relationship of public relations to the press and to society.

COMM 128 Introduction to Film

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 30 / 90 or appropriate placement test score.
This course consists of viewing and analyzing films from a historical and technical perspective. It will examine various aspects of film as visual language art form by examining its genres and theoretical perspectives.

COMM 130 Directed Studies in Communications

1 credit. 1 hour. (Independent Study 1 hour.)
Prerequisites: COMM 100.
Students will work independently in a professional environment designed to give them professional work experience in a selected program area within the field of communications. Students may also choose to do an independent project under the supervision of a faculty member. Those students selecting work in a professional environment will also be under the supervision of the director or supervisor for the selected work environment.

COMM 131 Directed Studies in Debate

1-3 credits. 1-3 hours. (Independent Study 1-3 hours.)
Prerequisites: COMM 100.
Students will work independently in a professional environment designed to give them professional work experience in a selected program area within the field of debate. Students may also choose to do an independent project under the supervision of a faculty member. Those students selecting work in a professional environment will also be under the supervision of the director or supervisor for the selected work environment.

COMM 198 Service-learning in Communications

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Prerequisites: COMM 100.
This is an experiential learning opportunity that links concepts and principles of communications 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 communications course topic and learning objectives.

COMM 200 Media Internship I

3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: At least 6 hours from any two of the following courses in COMM: 112, 118, 263.
This internship is designed to provide students with practical experience working at a local media outlet.

COMM 201 Advanced Public Speaking

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: COMM 100.
This course will provide students with additional practice in public speaking situations with special emphasis on organization, development of ideas, and mechanics of delivery.

COMM 203 Media Internship II

3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisites: COMM 200.
This internship is designed to provide students with additional practical experience working at a local media outlet.

COMM 204 Small Group Communication

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 / 90 or appropriate placement test score.
A study of strategies and communication relationships unique to small groups. Emphasis on the development of both leadership and participation skills.

COMM 223 Interpersonal Communication

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 / 90 or appropriate placement test score.
An overview of the processes and practices of interpersonal communication. Topics include the role of self-concept, perception, language, diversity, conflict, and listening. This course examines various forms and contexts of verbal and non-verbal communication.

COMM 228 African Film

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 30 / 90 or appropriate placement test score.
An overview of contemporary African culture and history through the medium of movies by African filmmakers. Themes will include the legacies of colonialism, identity formation, globalization, and the changing sex roles in modern Africa.

COMM 233 Intercultural Communication

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 30 or 90 or appropriate placement test score.
This course will examine how cultural variables and practices impact communication. It will emphasize achieving cultural communication competence and reducing cultural conflict by examining the role of identity, ethnicity, gender, perception, values, beliefs, and attitude within and outside one's culture.

COMM 263 Digital Video Production

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: ENGL 30 / 90 or appropriate placement test score.
This course provides students with the skills to shoot, edit, and produce digital video content. Students will use modern video lighting, recording, digitizing, and editing equipment to create video productions suitable for broadcast or distribution via optical disc or the web.

COMM 264 Digital Video Editing

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: COMM 263 (formerly MSCM 263).
This course builds on the topics presented in COMM 263 and provides students with the skills necessary to create sophisticated video productions using digital video editing software. Students will use advanced editing techniques, create special effects for video and audio, use multi-track audio and audio restoration techniques, create video programs for television and the internet, and produce a digital portfolio.

Computer Integrated Machining & Manufacturing

MCC-Business & Technology

Cindy Adams David Grady

CIMM 100 Introduction to Machining and Manufacturing

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
This course is designed to introduce the student to the manufacturing environment, requirements and career opportunities of major technologies in industry. The course will cover the history, setting of manufacturing and industry, safety, drawing, measurement and layout and an introduction to basic shop equipment.

CIMM 101 Machine Shop Safety

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
This course covers the safe use of basic shop power equipment and hand tools. The student will learn precision measurement methods. This course is designed for students in engineering disciplines. It serves as a prerequisite for supervised use of the Engineering Student Machine Shop and serves as a prerequisite for all UMKC Engineering Lab courses.47110

CIMM 102 Basic Lathe Operation

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisite: CIMM 101 or concurrent enrollment.
This course covers the safe use and proper operation of a manual lathe. This course is designed for students in engineering disciplines. It serves as a prerequisite for supervised use of the Engineering Student Machine Shop and serves as a prerequisite for all UMKC Engineering Lab courses.

CIMM 103 Basic Mill Operation

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisite: CIMM 101 or concurrent enrollment.
This course covers the safe use and proper operation of a manual mill. This course is designed for students in engineering disciplines. It serves as a prerequisite for supervised use of the Engineering Student Machine Shop and serves as a prerequisite for all UMKC Engineering Lab courses.

CIMM 105 Introduction to Blueprint Reading

1 credit. 1 hour. (Lecture 1 hour.)
The student will learn to read and interpret basic blueprints commonly found in manufacturing. This course is designed for students in the machining and manufacturing careers.

CIMM 110 Manual Lathe Operation

3 credits. 3 hours. (Lecture 1.5 hours. Laboratory 3 hours.)
Prerequisite: CIMM 100 with a C or better or concurrent enrollment.
The student will learn to select appropriate tooling, setup and safely operate a manual lathe. This course is designed for students in machining and manufacturing careers.

CIMM 115 Manual Mill

3 credits. 3 hours. (Lecture 3 hours. Laboratory 3 hours.)
Prerequisite: CIMM 100 with a C or better or concurrent enrollment.
The student will learn to select appropriate tooling, setup and safely operate a manual mill. This course is designed for students in machining and manufacturing careers.

CIMM 120 CNC Programming Fundamentals

2 credits. 2 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
Prerequisites: CIMM 105 and CIMM 110 or CIMM 115 or concurrent enrollment.
The student will learn the fundamentals of Computer Numerical Control (CNC) programming, write a basic late and mill program, load and prove out a program. This course is designed for students in machining and manufacturing careers.

CIMM 121 CNC Lathe Operation Fundamentals

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisites: CIMM 110 or concurrent enrollment.
The student will learn the fundamentals of Computer Numerical Control (CNC) lathe programming and operation. This course is designed for students in machining and manufacturing careers.

CIMM 122 CNC Mill Operation Fundamentals

4 credits. 4 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: CIMM 115 or concurrent enrollment.
The student will learn the fundamentals of Computer Numerical Control (CNC) mill programming and operation. This course is designed for students in machining and manufacturing careers.

CIMM 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.

CIMM 150 Lathe Internship & Co-Op

3 credits. 3 hours. (Lecture 3 hours. Clinical 6 hours.)
Prerequisites: CSIS 100, INTE 124, CIMM 100, CIMM 105, CIMM 110, and CIMM 121, or concurrent enrollment and a GPA of 2.
0 in the prerequisite classes. The student will get on-the-job work experience as a manual and/or CNC lathe machinist. The student will attend class and work on specific skill development related to manual and/or CNC lathe operation.

CIMM 151 Mill Internship & Co-Op

3 credits. 3 hours. (Lecture 3 hours. Clinical 3 hours.)
Prerequisites: CIMM 100/105/115/122, CSIS 100, INTE 124, or concurrent enrollment.
The student will get on-the-job experience as a manual and/or CNC mill operator. The student will attend class and work on specific skill development related to manual and/or CNC mill operation.

CIMM 155 Grinding Operations

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisites: CIMM 100 & 105 & 110 & 115.
This course covers the fundamentals of safely operating various pieces of grinding equipment. The emphasis will be on the care and use of surface grinders. This course is designed for students in machining and manufacturing careers.

CIMM 160 Advanced Lathe Operations

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisites: CIMM 121 or concurrent enrollment.
This course covers numerous topics in lathe operation not covered by the basic courses. This will include CNC Lathe as well as Manual Lathe. The course is designed for students in the machining and manufacturing careers.

CIMM 161 Advanced Mill Operations

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisites: CIMM 122 or concurrent enrollment.
This course covers numerous topics in mill operation not covered by the basic courses. This will include CNC mill as well as manual mill. The course is designed for students in the machining and manufacturing careers.

CIMM 199 Special Problems and Projects

1-3 credits. 1-3 hours. (Laboratory 2-6 hours.)
Prerequisite: Instructor Approval and COLL100.
Independent study in machining and manufacturing areas under the supervision of a faculty member.

CIMM 200 Advanced Machining
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: CIMM 150 & 151 or CIMM 160 & 161.
This course will provide advanced machining concepts in lathe and mill operations. It will also give an overview of Metallurgy and Geometric Dimensioning and Tolerancing.

CIMM 225 MasterCAM I
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: CSIS 100 & (CIMM 121 or CIMM 122). This course is designed as an introduction to MasterCAM software. Menu screens and configuration of the software will be covered working thru 2-D projects on the lathe and mill.

CIMM 226 MasterCAM II
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: CIMM 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.

CIMM 231 Capstone - Job Planning, Benchwork & Layout
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: CIMM 100, CIMM 105.
Students receive NIMS Level I Credentials in Job Planning, Benchwork, and Layout upon successful completion of the performance tests and theory exams. NIMS documents the skills of the individuals through the skill standard developed through a consortium.

CIMM 232 Capstone - Milling
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: CIMM 100, 105 & 115.
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.

CIMM 233 Capstone - Chucking
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: CIMM 100, 105 & 110 & COLL 100.
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.

CIMM 234 Capstone - Turning
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: CIMM 100, 105 & 110.
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.

CIMM 235 Capstone - Surface Grinding
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: CIMM 100, 105 & 115.
A student receives NIMS Level I Credential Surface Grinding upon successful completion of the performance test and theory exam. NIMS documents the skills of the individual through the consortium developed skill standards.

CIMM 236 Capstone - CNC Milling
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisite: CIMM 100, 105 & 122.
Students receive NIMS Level I Credentials in CNC Milling upon successful completion of the performance tests and theory exams. NIMS documents the skills of the individuals through the skill standard developed through a consortium.

CIMM 237 Capstone - CNC Turning
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisite: CIMM 100, CIMM 105, CIMM 121.
Students receive NIMS Level I Credentials in CNC Turning upon successful completion of the performance tests and theory exams. NIMS documents the skills of the individuals through the skill standard developed through a consortium.

CIMM 238 Capstone - Drill Press
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Prerequisites: CIMM 100, CIMM 105.
Students receive NIMS Level I Credentials in Drill Press upon successful completion of the performance tests and theory exams. NIMS documents the skills of the individuals through the skill standard developed through a consortium.

CIMM 290 Capstone Project
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisites: CIMM 155, CIMM 200.
The student will work in the lab under the direction of a faculty member to demonstrate the ability to do multiple machining operations with Job Planning, Measurement, Safety, Heat Treatment, Blueprint Reading, Milling, Turning, and Grinding.

Computer Science Information Systems

MCC-Blue River
Brian Hurley
Melissa Napper

MCC-Business & Technology
Katherine Ellis
Alex Hamilton

MCC-Longview
Cinthia Herbert
Dennis Jirkovsky

MCC-Maple Woods
Gary May
Mark Murtha
Dempsey Yearry

MCC-Penn Valley
Edward Durant

CSIS 100 Digital Literacy
2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
This course provides a basic introduction to personal computing. Through the use of lecture, demonstration, and hands-on experience, the student will be introduced to microcomputer hardware, operating systems, several software applications. The internet, internet safety, and internet-based applications are also covered. A keyboarding component is included.

CSIS 102 Customer Service Principles
1 credit. 1hour. (Lecture 0.5 hour. Laboratory 1 hour.)
A course in the principles of customer service as it applies to the IT help desk environment. Students gain a solid base of knowledge in customer service concepts and strategies, meeting customer wants and needs, providing superior customer service, handling difficult customers and building permanent customer relations.

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 105 Desktop Client Support
3 credits. 3hours. (Lecture 2.5 hours. Laboratory 1 hour.)
This course prepares students to take the Microsoft Certified Technology Specialist exam. Students will learn to implement, administer and troubleshoot the Microsoft Windows client operating system. Topics include installation, upgrades, restoration, user profiles and accounts, and the TCP/IP protocol.

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 Network Fundamentals CCNA Exploration 1
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: CSIS 110 or CSIS 115.
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. It uses the OSI and TCP layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Labs use a ¿model Internet¿ to allow students to analyze real data without affecting production networks. Packet Tracer (PT) activities help students analyze protocol and network operation and build small networks in a simulated environment. At the end of the course, students build simple LAN topologies by applying basic principles of cabling, performing basic configurations of network devices such as routers and switches, and implementing IP addressing schemes.

CSIS 113 Routing Protocols and Concepts CCNA Exploration 2
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: CSIS 112.
This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. By the end of this course, students will be able to recognize and correct common routing issues and problems. Students complete a basic procedural lab, followed by basic configuration, implementation, and troubleshooting labs in each chapter. Packet Tracer activities reinforce new concepts, and allow students to model and analyze routing processes that may be difficult to visualize or understand.

CSIS 115 Technology Fundamentals and Applications
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
This course provides basic technology skills needed for success in college-level coursework and career preparation. Topics include file management on local, network and cloud-based storage media. Additional topics include word processing, spreadsheet, database, and presentation software as well as navigation of web-based information, data security and personal information assurance.Test out option available upon request.

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 123 Programming Fundamentals
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MATH 40 or MATH 40L or appropriate placement test score.
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 introduces students to both the theory and practice of conducting business over the Internet and World Wide Web. Students will examine business strategies for electronic commerce, technologies for electronic commerce, and integration of business and technology strategies used in electronic commerce. create site-wide navigation links and publish a store.

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 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 152 Linux Operating System
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
This course provides a comprehensive overview and hands-on experience with the Linux operating system.

CSIS 161 Networking 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. Student will be presented with a foundation of technical terms and vocabulary that will enable them to deal effectively with users and providers of communications services. Hands-on activity will give the student experience configuring communications software to access other computers, networks, 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 Principles of Information Assurance
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 110.
This course introduces the field of information security and assesses the information security environment within which organizations function.

CSIS 172 LAN Windows Server
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: (CSIS 112 or 161) and (CSIS 151 or 152) and COLL 100.
Fundamental skills necessary to effectively manage, monitor, and maintain a Microsoft network including installation of Windows Server, configuration of Active Directory, management of user accounts, file shares, group policies, and network printing.

CSIS 174 Technologies Used on Local Area Networks
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 172.
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 hours. Laboratory 2 hours.)
Prerequisite: CSIS 172.
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: CSIS 110 or CSIS 115.
This course is designed to provide students with an understanding of Microsoft Access by utilizing fundamental hands-on exercises. The student will develop skills through table, query, form, and report creation. In addition, advanced skills in report, form, and SQL techniques 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 a Transmission Control Protocol/Internet Protocol (TCP/IP) based network.

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 182 Enterprise Security Management
3 credits. 3hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 170.
This course examines managerial aspects of computer security and risk management for enterprises. The student will acquire knowledge for accreditation, procurement, extension and operation principles for secure computing systems.

CSIS 202 Healthcare IT Principles
3 credits. 3hours. (Lecture 2.5 hours. Laboratory 1 hour.)
This course prepares students to take the CompTIA Healthcare IT Technician exam. Students will learn the best practices for protecting health information following government regulations and laws, troubleshoot computer and network issues within an electronic health record system, and understand the medical organization operation.

CSIS 208 Secure E-Commerce
3 credits. 3hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 112.
An in-depth study of secure electronic commerce, cryptography, passwords, certification authorities, public key infrastructure, biometrics, and digital signatures. Legal and national policy secure electronic commerce issues will be discussed.

CSIS 212 LAN Switching and Wireless CCNA Exploration 3
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: CSIS 113.
This course provides a comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model and how to select devices for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual LANs, VTP, and Inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WLAN in a small-to-medium network.

CSIS 213 Accessing the WAN CCNA Exploration 4
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: CSIS 212.
This course discusses the WAN technologies and network services required by converged applications in enterprise networks. The course uses the Cisco Network Architecture to introduce integrated network services and explains how to select the appropriate devices and technologies to meet network requirements. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principles of traffic, access control, and addressing services. Finally, students learn how to detect, troubleshoot, and correct common enterprise network implementation issues.

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 Implementing Cisco IP Routing: CCNP 1
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: CSIS 213.
This course teaches students how to implement, monitor, and maintain routing services in an enterprise network. Students will learn how to plan, configure and verify the implementation of complex enterprise LAN and WAN routing solutions, using a range of routing protocols in IPv4 and IPv6 environments. The course also covers the configuration of secure routing solutions to support branch offices and mobile workers. Comprehensive labs emphasize hands-on learning and practice to reinforce configuration skills.

CSIS 217 Implementing IP Switching: CCNP 2
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: CSIS 213.
This course teaches students how to implement, monitor, and maintain switching in converged enterprise campus networks. Students will learn how to plan, configure, and verify the implementation of complex enterprise switching solutions. The course also covers the secure integration of VLANs, WLANs, voice, and video into campus networks. Comprehensive labs emphasize hands-on learning and practice to reinforce configuration skills.

CSIS 218 Maintaining and Troubleshooting IP Networks: CCNP 3
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: CSIS 216 and 217.
This course teaches students how to monitor and maintain complex, enterprise routed and switched IP networks. Skills learned include the planning and execution of regular network maintenance, as well as support and troubleshooting using technology-based processes and best practices, based on systematic and industry recognized approaches. Extensive labs emphasize hands-on learning and practice to reinforce troubleshooting techniques.

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 & 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 222 Object-Oriented Programming with Java
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATH 104 or higher, CSIS 123.
This course introduces object-oriented programming (OOP) using the Java language. Course topics include a review of structured programming concepts, use of a Java Integrated Development Environment (IDE), and an introduction to object-oriented design and coding methodology. The object-oriented approach to Java programming emphasizes data encapsulation, data abstraction, inheritance, polymorphism, use of built-in classes and libraries, class hierarchies, reusable design, applets incorporating graphical user interfaces, and event-driven programming.

CSIS 223 Object-Oriented Programming
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 123 & MATH 110.
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 XHTML 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: CSIS 223 & MATH 110.
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 241 Discrete Structures for Computer Science II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: CSIS 223 & MATH 141.
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 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 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 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: CSIS 223 & MATH 141.
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
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: CSIS 113.
This course helps students develop the skills needed to succeed in IT related degree programs and prepare for the CCNA Security certification. It provides a theoretically rich, hands-on introduction to network security, in a logical sequence. The goals of this course are to: provide an in-depth, theoretical understanding of network security, provide students with the knowledge and skills necessary to design and support network security, provide an experience-oriented course that employs industry-relevant instructional approaches to prepare students for associate-level jobs in the industry, and enable students to have significant hands-on interaction with IT equipment to prepare them for certification exams and career opportunities.

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 279 Web Database Programming
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 123, 128, and 143.
This course will teach web site developers who perform architectural planning, technology selection, or web site programming tasks how to create web sites that use current web database technology components on both the client workstation and the web server. The course will show students how to create a multi-tiered web site that accesses a database using current web database programming tools.

CSIS 285 Digital Forensics
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: CSIS 272.
Digital crime scene investigation practices and digital evidence capture, documentation, validation and preservation techniques are taught through in-depth participatory exercises. Steganography, mobile data acquisition, network monitoring, decryption, manual and automated file and password recovery techniques are taught.

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, floor 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 influence 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 floor 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
Douglas Thompson		

MCC-Maple Woods

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 15 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 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

Hema Udupa

DENA 100 Introduction to Dental Assisting
1 credit. 1 hour. (Lecture 1 hour.)
This course introduces students to basic dental terminology, roles of the dental assistant and members of dental health team, scope of dentistry as well as the legal and ethical responsibilities of a dental health care worker.

DENA 102 Head and Neck Anatomy
2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
Prerequisites: Formal Admission into the Dental Assisting Program, DENA 100, ENGL 101.
This course utilizes a systems approach to the gross anatomy of the head and neck with emphasis on the maxilla, mandible and supporting structures of the oral cavity, oral tissues, temporomandibular joint, neuromuscular and circulatory function.

DENA 103 Dental Anatomy
2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
Prerequisites: Formal Admission into the Dental Assisting Program, DENA 100, ENGL 101.
This course introduces students to various dental science topics such as a detailed study of crown and root morphology of both primary and permanent dentition, supporting oral structures, eruption schedule and numbering system. It also provides an understanding of the embryonic development of the orofacial structures, tooth development (oral embryology) and histology.

DENA 104 Dental Emergencies and Pharmacology
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisites: Formal admission to the Dental Assisting Program, DENA 100, ENGL 101.
This course provides an overview of emergencies common to the dental office settings. 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 practice, different types of anesthesia used in the dental office, the methods of administration and precautions during their use.

DENA 105 Dental Materials I
2.5 credits. 5 hours. (Laboratory 5 hours.)
Prerequisites: Formal Admission into the Dental Assisting Program, DENA 100, ENGL 101.
This course is designed to provide students with basic knowledge of various dental materials and manipulation of alginate materials, impression materials, bite registration materials, cements and gypsum products and their role in making dental models. Students will gain laboratory experience in the handling, practical application, safe use of dental materials and laboratory equipment in addition to following infection control procedures in accordance with OSHA and CDC.

DENA 108 Oral Microbiology and Infection Control
1.5 credits. 3 hours. (Lecture 1 hour. Laboratory 1 hour.)
Prerequisites: DENA 101, DENA 102, DENA 103, DENA 104, DENA 105, EMS 100.
This course provides an overview of microbiological aspects with emphasis on practical infection and hazard control, sterilization and monitoring, chemical disinfectants, aseptic techniques, infectious disease, HIPPA and OSHA Standards.

DENA 110 Chairside Assisting I
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisites: DENA 101, DENA 102, DENA 103, DENA 104, DENA 105, EMS 100.
The course introduces the students to various dental terminologies and responsibilities as a dental assistant in the dental operatory which includes patient preparation, record keeping, delivery of pre and post-op instructions, methods of oral evacuation, utilization of rubber dam, matrix, anesthetic, fluoride, wedge, assisting with amalgam and composite procedures, coronal polishing techniques and assisting during dental and medical emergencies. The above responsibilities will be performed using standard considerations for infection control.

DENA 115 Dental Radiology I
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: DENA 101, DENA 102, DENA 103, DENA 104, DENA 105, EMS 100.
This course is an introduction to 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: DENA 101, DENA 102, DENA 103, DENA 104, DENA 105, EMS 100.
This course is the practical clinical experience in operative and oral hygiene procedures utilizing four-handed dentistry in the clinics. Current federal, state and local regulatory mandates related to infection control and hazardous waste management will be discussed. Additionally, ethical dilemmas in dentistry as well as medical emergencies will be examined in detail.

DENA 205 Dental Materials II
3 credits. 6 hours. (Laboratory 6 hours.)
Prerequisites: DENA 101, DENA 102, DENA 103, DENA 104, DENA 105, EMS 100.
This course provides instruction in advanced manipulation of dental cements, amalgam, esthetic restorations (composites), alginates, gypsum products, sealants and various specialty dental materials. Emphasis is placed on the understanding and safe application of materials used in the dental office and laboratory, cements, varnishes, bases and liners.

DENA 210 Chairside Assisting II
5 credits. 9 hours. (Lecture 1 hour. Laboratory 8 hours.)
Prerequisites: DENA 108, DENA 110, DENA 115, DENA 125, DENA 205.
This course primarily emphasizes on various dental specialties such as theories of orthodontics, periodontics, prosthodontics, oral surgery, endodontics, and pedodontics. As well as the application of different procedures, instruments and current concepts of chairside assisting.

DENA 215 Dental Radiology II
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisites: DENA 108, DENA 110, DENA 115, DENA 125, DENA 205.
This course emphasizes radiographic techniques, procedures and infection control methods as well as on 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.)
Prerequisites: DENA 108, DENA 110, DENA 115, DENA 125, DENA 205.
Students will learn 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 application and use as well as learn Eaglesoft practice management software. Hands-on experience in private practice offices and/or clinic DENA 250.

DENA 230 Oral Pathology
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisites: DENA 108, DENA 110, DENA 115, DENA 125, DENA 205.
This course provides an overview of diseases of the human body, including basic cell tissues, with specific emphasis on diseases of the oral and maxillofacial region.

DENA 250 Clinical Experience II
4 credits. 16 hours. (Clinical 16 hours.)
Prerequisite: DENA 108, DENA 110, DENA 115, DENA 205.
This course is a continuation of the student¿s clinical experience with emphasis placed on the application of principles and procedures of four-handed dentistry in general and specialty private practices as well as laboratory and clinical support functions.

DENA 260 Dental Assisting Seminar
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: DENA 108, DENA 110, DENA 115, DENA 125, DENA 205.
This course provides an overall review and clarification of all and any of the materials covered within the academic year by discussion, dialogue between students and instructor as a step towards the preparation for the Dental Assisting National Board Examination. Further emphasis is placed on preparation of personal resume, interviewing techniques and job applications for successful employment.

Economics

MCC-Blue River ***MCC-Longview*** ***MCC-Maple Woods***
Hossein Bahmaie
Jill Kingsbury

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 MATH 40L or appropriate placement test score.
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, inflation, 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 MATH 40L or appropriate placement test score.
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***
Russell Powlas

MCC-Penn Valley
Carrie Pickerel-Brooks

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. 3.5 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 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.

Emergency Medical Services

MCC-Penn Valley

Art Brady

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 credits. 4 hours. (Lecture 4 hours.)
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.

EMS 202 Paramedic Skills Lab I
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: BIOL 108 or BIOL 109, or BIOL 110 & 210, admission to the Paramedic Program, and Missouri Emergency Medical Technician licensure or equivalent for another state.
This course will develop the student¿s ability to perform basic and advanced pre-hospital emergency medical procedures.

EMS 206 Paramedic Pharmacology
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: EMS 200.
This course is designed to enable the student to perform assessments in advance life support interventions for patients suffering from cardiac emergencies. The student will be introduced to cardiac assessment, electrocardiographic monitoring, electrical therapy, and appropriate medication administration. The student will also receive training through the American Heart Association's Advanced Cardiovascular Life-Support (ACLS) course.

EMS 212 Emergency Cardiology
4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: Admission to the EMT-Paramedic program and EMS 206.
This course is designed to enable the student to perform assessments in advance life support interventions for patients suffering from cardiac emergencies. The student will be introduced to cardiac assessment, electrocardiographic monitoring, electrical therapy, and appropriate medication administration. The student will also receive training through the American Heart Association's Advanced Cardiovascular Life-Support (ACLS) course.

EMS 214 Paramedic Skills Laboratory II
2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: EMS 202.
This course will develop the student's ability to perform basic and advanced pre-hospital emergency medical procedures and integrate those procedures in to simulated patient care situations.

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 credits. 2 hours. (Lecture 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 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: EMS 224.
This course covers women's 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***
Carol Pflum

MCC-Maple Woods ***MCC-Penn Valley***
Dan Justice

ENGR 101 Introduction to the Engineering Profession
1 credit. 1 hour. (Lecture 1 hour.)
Designed to help engineering students understand the learning process, acquire essential academic survival skills, and to learn the necessary study skills for engineering. This course is an equivalent for COLL 100 for students in Engineering and Engineering Technology.

ENGR 104 Programming for Engineers and Scientists
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: (MATH 120 & 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 or appropriate placement test score.
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 & 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 & 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 James Cline Robert Dumler

ETEC 110 Basic Electronics
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: MATH 110 or appropriate placement test score.
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 118 AC Circuit Analysis
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: (ETEC 110 or INTE 110) & (MATH 104, MATH 130 or MATH 150).
This course covers AC circuits, complex numbers, inductance, capacitance, RL and RC circuits, RC time constants and transients, resonance, transformers, relays and switches. Introduction to Solid State Principles and filters as they relate to electrical and electronic power supplies.

ETEC 130 Digital Electronics
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: ETEC 110 or INTE 110.
The course covers basic digital gates, logic circuits, timers, counters, shift registers, flip flops, 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.)
Prerequisite: MATH 40 or MATH 40L or appropriate placement test score.
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
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 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, floor 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, Microstation
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152.
An introduction to computer aided drafting/design (CADD) using Microstation. Topics will include creating basic and complex geometry, CADD standards, dimensioning, cells and cell libraries, plotting and reference files.

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 199 Special Projects in ETEC
1-3 credits. 1-3 hours. (Lecture 1-3 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.)
Prerequisite: ETEC 152.
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, Revit
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152 or concurrent enrollment.
An introduction to Building Information Modeling using Revit. Building design, layout and components of residential and commercial buildings will be created. Topics will also include levels, views, detailing, scheduling, elevations and sections.

ETEC 212 Computer Integrated Manufacturing & Robotic Control
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
This course applies principles of robotics and automation to Computer Aided Design (CAD). Course builds on computer solid modeling skills developed in Introduction to Engineering Design, and Design & Drawing for Production. Students use Computer Numerical Control (CNC) equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing, and design analysis are included.

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 220 or 230.
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 Introduction to Structural Steel Design
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, Inventor
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152 or concurrent enrollment.
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, Solidworks
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 152 or concurrent enrollment.
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 272 Advanced Parametric Modeling and Prototyping, Inventor
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 270.
Advanced parametric modeling using Inventor. Topics include advanced part modeling, sheet metal models and flat patterns, weldments, plastic parts, drawing standards, adaptive parts and assemblies, iParts, iMates and iFeatures.

ETEC 273 Advanced Parametric Modeling & Prototyping, Solidworks
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: ETEC 271.
Advanced parametric modeling using Solidworks. Topics include advanced part modeling, sheet metal models and flat patterns, weldments, drawing standards, library features and library parts.

ETEC 275 Build Project
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: ETEC 220.
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 of electronics.

ETEC 290 Internship in Engineering Technology
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 295 Capstone Project in Engineering
3 credits. 3hours. (Lecture 1 hour. Laboratory 3 hours.)
Prerequisites: ETEC 152, ETEC 269, ETEC 270 or ETEC 271.
Capstone design/build project for engineering technology. This project will include the design and fabrication of a project of suitable complexity and scope. The project will include a comprehensive production document set and a functional prototype.

English

MCC-Blue River

David Collins
Theresa Hannon
Rich Higgason
Robyn McGee
Emily Morgan

MCC-Longview

Zoe Albright
Anne Dvorak
Amy Prochaska
Casey Reid
Dawnielle Robinson-Walker
Jan Rog
Pat McKeown-Sparks
Eric Sullivan
Susan Satterfield

MCC-Maple Woods

T. Joel Conway
Michelle Potts
Melissa Renfrow
David Sharp
Michael Warren
Stephanie Zerkel-Humbert

MCC-Penn Valley

Craig Bartholomaus
Lisa Spaulding
Christine Howell
Lane VanHam
Anita Leverich
Ashley Meyer

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 ENGL 80 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 80 Foundations of College Writing I

4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: Appropriate placement score.
Students will practice writing clear paragraph and multi-paragraph documents that utilize the conventions of written standard English and develop critical thinking skills by writing about reading. The course culminates in a required satisfactory-unsatisfactory exit portfolio.

ENGL 90 Foundations of College Writing II

4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: ENGL 28 or ENGL 80 or satisfactory score on placement test.
Students will practice writing thesis-support multi-paragraph documents that utilize the conventions of written standard English and develop critical thinking skills by writing about reading. The course culminates in a required satisfactory-unsatisfactory exit portfolio.

ENGL 101 Composition & Reading I

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 or ENGL 90 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 reflective expression to critical analysis through writing.

ENGL 101R Composition and Reading I - Reentry

4 credits. 4 hours. (Lecture 4 hours.)
Prerequisite: ENGL 30 or ENGL 90 or appropriate placement test score.
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 reflective 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 reflect 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 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 credit. 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 201.
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 205 Principles of American Journalism

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101.
This course explores the underlying principles of journalism, changing practices in journalism, relations among journalism and other social institutions, and current issues and problems facing journalists in the digital age. The course places U. S. journalism in a global context.

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 217 Scientific Writing
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101.
Course focuses on developing skills in scientific writing for students interested in or majoring in the sciences. Prepares students to compose written products appropriate to contexts requiring scientific communication and documentation.

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 254. 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 fluency 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.)
Prerequisite: 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 fluency 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 fluency 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. This course emphasizes hazard identification, avoidance, control, and prevention. The topics will include clean air, clean water, hazardous waste, hazard communication, fall protection, confined space, respiratory protection, and personal protective clothing. Passing students meeting the attendance requirement will receive an OSHA 30-hr Outreach Card for General Industry.

EHSS 101 Hazardous Waste Operations and Emergency Response (HAZWOPER)
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 techniques, air monitoring equipment, hazardous waste documentation, and incident command system (ICS) will be covered. This course meets the requirements of OSHA's HAZWOPER regulation (29 CFR 1910.120(e). Upon satisfactory completion students will receive a 40-hr HAZWOPER certificate.

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, chemical and health hazards of hazardous materials based on the nine DOT hazard classes, NIOSH Pocket Guide and EPA's definition of characteristic hazardous waste. Included are toxic, corrosive, reactive, flammable and combustible liquids, compressed gases, LP-gases and cryogenic liquids. Upon satisfactory completion students will receive an OSHA 2015 (Hazardous Materials) certificate.

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 112 Introduction to Health and Safety for Construction
1 credit. 1 hour. (Lecture 1 hour.)
This course provides an overview of the Occupational Safety and Health Administration (OSHA) standards relevant to construction. Among the subjects covered in the program are: an introduction to OSHA, stuck by, and caught in/between , excavations, electrical safety, health hazards, walking and working surfaces, stairs and ladders, tool, hand and power, personal protective equipment, fall protection and safety and health programs. Students will receive a 10-hr Construction 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 walking and working surfaces, hazard communication (hazcom), confined spaces, personal equipment, electrical, machine safeguarding, exit routes/fire protection, lockout/tagout, welding, and recordkeeping. In addition, hazard recognition and safe work practices will be covered. Upon satisfactory completion students will receivecertificates in OSHA 511 (OSHA Standards Course for General Industry) and OSHA7845 (OSHA Recordkeeping).

EHSS 201 EHS Laboratory
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: EHSS 101.
The course is designed to present the hands-on activities related to the field of EHS. Topics include: Air sampling, Asbestos, Blueprint reading, Electricity, Ergonomics, HVAC/Ventilation, Lead, Noise, Rigging and Welding.

EHSS 202 Transportation and Storage of Hazardous Materials
3 credits. 3 hours. (Lecture 3 hours.)
A presentation of detailed information required for the handling, transportation, and storage of hazardous materials. Procedures for safe handling, storing, and preparing hazardous materials for shipment by all modes of transport as required by applicable Department of Transportation (DOT) regulations will be covered. Students will use reference materials, labeling, and preparing materials for shipment. Students will also learn the critical competencies required for properly responding to hazardous material emergencies. Upon satisfactory completion students will receive a 40-hour HAZMAT certificate in 49 CFR 171-180.

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. Subjects included in this course are: EPA history, specific regulations regarding surface water (CWA), air (CAA), drinking water (SDWA), hazardous waste (RCRA), Superfund (CERCLA), Endangered Species (ESA) and Community Right-to-Know (EPCRA).

EHSS 204 Emergency Preparedness and Planning
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 101.
This course will cover a broad range of proactive and regulatory approaches to emergency planning. Analysis techniques, methods of auditing and conducting hazard assessments are covered. Subject materials are presented for students working in industry as well as the public sector of emergency planning and incident response. Upon satisfactory completion students will receive certificates in FEMA IS 100, IS 200 and OSHA 7105 (Evacuation and Emergency Planning).

EHSS 205 Principles of Industrial Hygiene
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200.
This course is presented to provide the fundamentals of hazard identification and control related to industrial applications and worker health exposures. Information is given in key areas that cover recognition, evaluation, and control of toxic materials and the effects on the body, radiation, noise, ventilation, thermal stress and ergonomics. Upon satisfactory completion students will receive a certificate in OSHA 521 (Guide to Industrial Hygiene).

EHSS 210 Incident and Accident Investigation
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200.
This course provides an introduction to basic accident investigation procedures and describes accident analysis techniques. This course will provide students with the basic skills necessary to conduct an effective accident investigation at their workplace and make recommendations for incident reduction. Upon satisfactory completion, students will receive a certificate in OSHA 7505 (Introduction to Accident Investigation).

EHSS 211 Workers Compensation Legislation for EHS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200.
This course provides strategies for tracking, monitoring, managing, and avoiding Workers' Compensation incidents. This course reviews which employees are covered, when they are covered, the requirements for benefits and compensation, and the recordkeeping requirements.

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 Sustainability, Recycling and Pollution Prevention
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 101.
This course is presented to familiarize EHS students with options available to minimize waste, recycle, or other energy conserving concepts in the workplace. Information is presented to present ways of encouraging sustainability through better business practices. Emphasis is placed upon economical considerations for recovery and recycling 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 Hazard Control
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: EHSS 200.
This course presents methods to conduct hazard assessments to identify common health, mechanical, electrical and chemical hazards in industry. Students will identify common problems and hazards, locate a supporting regulation or consensus standard and make recommendations to eliminate or control the hazard.

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.)
Prerequisite: 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 effluent. The course will provide an overview of the spill prevention control and countermeasure (SPCC) plans. Students will develop a practical understanding of advantages and disadvantages of established and new treatment processes, conduct case studies, evaluate treatment options.

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.

EHSS 275 Analytical Applications for EHS
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 103 or higher.
The course covers some of the everyday problems and questions EHS professionals are faced with, such as ergonomics, ventilation, noise, abatement, radiation, thermal stress, hazardous material concentrations, and environmental sampling.

EHSS 290 EHS Program Capstone
3 credits. 3hours. (Lecture 3 hours.)
Prerequisite: EHSS 204.
This capstone course is designed to merge the skills and lessons learned into cohesive and comprehensive applications for the discipline. This course will cover the principles of program development and implementation for all types of EHS programs, discusses management styles, and connects students with current professionals to hear the realities of the profession. Students will develop and deliver training, create a written EHS program, and sit for the Occupational Health and Safety Certification (OHST) examination. Upon satisfactory completion, students will receive a certificate for OSHA 7500 (Introduction to Safety and Health Management)

Fire Science Technology

MCC-Blue River

Robert Little — 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 107 Fire Service Physical Fitness I
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: Admission to the Fire Academy.
First in a series of classes designed to develop the student's level of physical fitness related to the fire service and fire service testing (C-PAT). Emphasis will be given to the individuals muscle strength and endurance, cardiovascular endurance, flexibility, and body composition. Includes assessment, planning, and participation in an individual fitness program based on the International Fire Chief's Association and the International Association of Fire Fighters' C-PAT criteria. The student will be shown and explained the C-PAT process and will have access to specific C-PAT equipment, training free weights, weight machines, and a variety of cardiovascular equipment.

FSTE 108 Fire Service Physical Fitness II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: FSTE 107.
Second in a series of classes designed to develop the student's level of fire service physical fitness. This course will expand on the concepts introduced in FSTE 107, in addition to offering an introduction to C-PAT the student will began training on and using the fire service C-PAT equipment. Emphasis is given to the individual program of each student.

FSTE 109 Fire Service Physical Fitness III
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: FSTE 108.
Last in a series of classes designed to develop the student's level of fire service physical fitness. This course will expand on the concepts introduced in FSTE 107/108, in addition to offering a variety of advanced techniques and programming ideas to complete the C-PAT teat in the allotted time.

FSTE 161 Fire Investigation I
3 credits. 3 hours. (Lecture 3 hours.)
This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firesetter, and types of fire causes.

FSTE 169 Fire Prevention
3 credits. 3 hours. (Lecture 3 hours.)
This course provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation.

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 Strategy and Tactics
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: Principles of Emergency Services, or instructor approval.
This course provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents.

FSTE 179 Principles of Emergency Services
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis;organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safety initiatives. This course is also designed to instruct the student in all phases of basic firefighter techniques. The student will be eligible for Fire Fighter I state certification upon completion of the course and successful completion of the Fire Fighter I 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
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: FSTE 179.
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 Fire Protection Systems
3 credits. 3 hours. (Lecture 3 hours.)
This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

FSTE 193 Legal Aspects of the Fire Service
3 credits. 3 hours. (Lecture 3 hours.)
This course will address the Federal, State, and local laws that regulate emergency services and include a review of national standards, regulations, and consensus standards.

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 and Emergency Services Administration
3 credits. 3 hours. (Lecture 3 hours.)
This course introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer.

FSTE 203 Managing in Today's Fire Service
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 101 & FSTE 200 & FSTE 201.
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.

FSTE 204 Principles of Fire and Emergency Services Safety and Survival
3 credits. 3 hours. (Lecture 3 hours.)
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

FSTE 205 Fire Behavior and Combustion
3 credits. 3 hours. (Lecture 3 hours.)
This course explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.

FSTE 206 Fire Investigation II
3 credits. 3 hours. (Lecture 3 hours.)
This course is intended to provide the student with advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and court-room testimony.

FSTE 207 Fire Protection Hydraulics and Water Supply
3 credits. 3 hours. (Lecture 3 hours.)
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

Foreign Language

MCC-Blue River

Jennifer Rogers

MCC-Longview

Carol Kuznacic

MCC-Penn Valley

Ruth Heath

MCC-Maple Woods

Mary Ann Blitt

Chad Montuori

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 credits. 4 hours. (Lecture 4 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.)
Prerequisite: CHIN 101.
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. Develop basic communication skills (listening, reading, writing, and speaking). Study of the culture of Spanish-speaking countries.

SPAN 102 Elementary Spanish II

5 credits. 5 hours. (Lecture 5 hours.)
Prerequisites: Spanish 101 or Spanish 111 or appropriate placement score.
Develop communication skills (listening, reading, writing and speaking). 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 or appropriate placement score.
Continued development of communication skills with emphasis on reading, writing and speaking. Study of Spanish-speaking cultures. Spanish is the language of instruction

SPAN 204 Intermediate Spanish II

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: SPAN 203 or appropriate placement score.
Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. Current topics in the Spanish-speaking world. 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 Study Abroad 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 short-term 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 Study Abroad 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 short-term 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 Study Abroad 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 short-term 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 Study Abroad 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 through a short-term 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.

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.

Geography

MCC-Blue River	*MCC-Longview*	*MCC-Maple Woods*
Benjamin Wolfe	Carl Priesendorf	John Horn
	Victor Mèledge-Adé	

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 influence 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 and COLL 100.
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 credit. 63-188 hours. (Field Studies 0 hour.)
Prerequisites: GEOG 120 & GEOG 220.
Internship in a Geographic Information Systems setting. Experience real-workplace requirements, complete assigned tasks by host organization such as GIS data entry, data retrieval, GPS field work, documentation, or general GIS setting duties. Arranged meetings with instructor to discuss work ethics, expectations, challenges, and evaluation.

Geology

MCC-Blue River	*MCC-Longview*	*MCC-Maple Woods*
Benjamin Wolfe	Victor Mèledge-Adé	John Horn
	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.)
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. Influence 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 186 Solar Water and Space Heating
3 credits. 3 hours. (Lecture 3 hours.)
Solar radiation applied to heating water and air, introduction to safe design and installation of solar thermal systems with emphasis on domestic hot water.

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 226 Solar Thermal Design and Installation
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: GEOL 186 & inte 260.
Design, installation and maintenance of solar thermal systems, with special emphasis on residential domestic hot water.

Graphic Design

MCC-Penn Valley
Darlene Town

GDES 110 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, and InDesign are the software applications used.

GDES 150 Computers in Design II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: GDES 110.
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. Photoshop, Illustrator, and InDesign is the software used.

GDES 160 Graphic Design I
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: GDES 150 & READ 11/31 & formal acceptance into program.
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.

GDES 210 Graphic Design II
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: GDES 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.

GDES 245 Web Design
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: GDES 150.
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.

GDES 250 Graphic Design III
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: GEDS 210.
This course will focus on advanced design problems for the crossover of print media into digital/electronic, interactive media, and other non-traditional formats as a campaign for communicating and/or promoting a message or ideas.

GDES 255 Advanced Web Design
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: GDES 245.
Advanced site management, visual design, implementing style sheets for text formatting and layout, adding media; designing with HTML/XHTML, image-editing software, Dreamweaver and Flash.

GDES 264 Art Portfolio-Graphic Design
3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)
Prerequisite: GDES 210 or concurrent enrollment.
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.

Guided Studies

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 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 Management

MCC-Penn Valley

Patricia Elliot

HIM 100 Medical Terminology
3 credits. 3 hours. (Lecture 3 hours.)
This course introduces elements of medical terminology, such as the etymology of words used to describe the human body. Students learn to apply proper terminology and spelling for major pathological conditions. This course identifies and explains the terms used for the integumentary, respiratory, nervous, reproductive, endocrine, urinary, digestive, lymphatic, hematic, immune, and musculoskeletal systems.

HIM 101 Introduction to Health Information Management
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisites: HIM 100, ENGL 101, (BIOL 100 or CHEM 105) and Formal Admittance to the Health Information Management Program.
This course is an introduction to the health information management profession addressing its history and structure of the national association and ethical values. The course explores the history of healthcare delivery systems and external factors that influence, impact and change the healthcare industry to include key accrediting bodies, and state and federal regulatory agencies. Introduction to health record content, structure, and origin of clinical information for various healthcare settings and providers are addressed.

HIM 108 Legal Aspects of Health Information
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HIM 100, ENGL 101, (BIOL 100 or CHEM 105) and Formal Admittance to the Health Information Management Program.
Legal aspects surrounding the maintenance, use, disclosure, medical identity theft, and protection of health information. Understand the use of the medical record as a legal document, response to subpoena and testimony. Familiarization with federal regulations and statutes, including the Federal Privacy Rule of the Health Insurance Portability and Accountability Act (HIPAA) and the American Recovery and Reinvestment Act (ARRA).

HIM 110 Pharmacology
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: HIM 100, BIOL 100, ENGL 101 and Formal Admittance to the Health Information Management Program.
This course introduces pharmacology as the study of drugs through the explanation of therapeutic and adverse effects of drugs, and effects to the body systems.

HIM 112 Database for Health Information
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisites: HIM 101, HIM 108, HIM 110, BIOL 109 or BIOL 110 and BIOL 210, CSIS 115 and Formal Admittance to the Health Information Management Program.
Students will become familiarized with database concepts and the ability to store, retrieve, and process information. This course is designed to familiarize the student with entry level database models commonly used in healthcare. The course will be presented on three levels: concepts, procedures and activities.

HIM 115 Healthcare Statistics
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HIM 101, HIM 108, HIM 110, BIOL 109 or BIOL 110 and BIOL 210, CSIS 115 and Formal Admittance to the Health Information Management Program.
This course focuses on the computation, interpretation and reporting with the use of graphs of healthcare statistics within the organization.

HIM 120 Quality Improvement in Healthcare
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HIM 101, HIM 108, HIM 110, BIOL 109 or BIOL 110 and BIOL 210, CSIS 115 & Formal Admittance to the Health Information Management Program.
This course focuses on continuous performance improvement methods and effective use of teamwork for improving quality in healthcare settings. Compliance with guidelines of regulatory and accrediting agencies.

HIM 130 Health Data Systems
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisites: HIM 101, HIM 108, HIM 110, BIOL 109 or BIOL 110 and BIOL 210, CSIS 115 and Formal Admittance to the Health Information Management Program.
The role of health information management and the electronic health record that includes computer hardware, operating systems, networking concepts, and user interfaces. Emphasis is placed on the practical application of database management principles, data security, and information retrieval and reporting inherent in electronic health records management.

HIM 135 Organizational Management
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: HIM 101, HIM 108, HIM 110, BIOL 109 or BIOL 110 and BIOL 210, CSIS 115 and Formal Admittance to the Health Information Management Program.
Students analyze the challenges and rewards of managing personnel and processes in the healthcare setting. Students apply human resource management practices to personnel in healthcare organizations to include budget development and control, personnel, recruitment and retention, performance.

HIM 202 Clinical Classification Systems - Diagnostic
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: HIM 112, 115, 120, 130, 135 and Formal Admittance to the Health Information Management Program.
The course teaches students nomenclatures and use of the International Classification of Disease (ICD) system using ICD coding guidelines as they relate to body systems. Students develop an understanding for the need of quality information and standards of ethical coding by utilizing codes as they apply to the Prospective Payment Systems.

HIM 207 Clinical Classification Systems - PCS
4 credits. 4 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: HIM 112, 115, 120, 130, 135 and Formal Admittance to the Health Information Management Program.
This course addresses the nomenclatures and classification systems for coding and indexing of procedures for inpatient healthcare environment. Coding compliance, ethical coding practices, and application of procedure-based payment systems will be reinforced.

HIM 214 Healthcare Reimbursement Methodologies
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: HIM 112, 115, 120, 130, 135 and Formal Admittance to the Health Information Management Program.
Analyze revenue cycle from the perspective of the HIM professional, payer, patient, and the needs of the healthcare organization. Emphasis is on clinical documentation needs for coding, reimbursement, claims management, and revenue cycle.

HIM 215 Clinical Professional Practice
3 credits. 9 hours. (Clinical 9 hours.)
Prerequisite: HIM 112, 115, 120, 130, 135 and Formal Admittance to the Health Information Management Program.
Students are placed in a didactic supervised learning environment related to the health information management field in both a traditional and non-traditional healthcare setting. Students are expected to perform job responsibilities as supervised by a credentialed HIM professional.

HIM 218 Ambulatory Care Coding - CPT
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: BIOL 137, HIM 202, HIM 207, HIM 214, HIM 215 and Formal Admittance to the Health Information Management Program.
Coding of medical services and procedures using the Current Procedural Terminology (CPT) classification system and use of HCPCS coding system applicable to ambulatory settings. Validation of codes adhering to coding compliance, ethical guidelines, and utilize health information systems for data collection through coding and abstracting.

HIM 221 Coding Professional Practice
2.5 credits. 5 hours. (Laboratory 5 hours.)
Prerequisite: BIOL 137, HIM 202, HIM 207, HIM 214, HIM 215 and Formal Admittance to the Health Information Management Program.
Virtual experience in health information coding processes.

HIM 222 Health Information Management Competency Review
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: BIOL 137, HIM 202, HIM 207, HIM 214, HIM 215 and Formal Admittance to the Health Information Management Program.
This course offers a review HIM competencies, skills and knowledge pertinent to the technology and relevant to the professional development of the student. They prepare for job seeking through resumes, mock job interviews and professional conduct. Students take mock registration exams for self-evaluation of the domains, subdomains and tasks.

Heating, Ventilation and Air Conditioning

MCC-Business & Technology

Cecil Davis, Jr. 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 HVAC/R. Development of basic skills required for installation, maintenance and servicing HVAC/R equipment. This course prepares students for the EPA 608 refrigeration certification test.

HVAC 135 Residential Heating A/C I
4 credits. 5.5 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: HVAC 111 & 120; HVAC 109 or concurrent enrollment.
Students will develop a basic understanding of residential heating and cooling systems, operation and maintenance.

HVAC 136 Residential Heating and Cooling II
4 credits. 5 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: HVAC 135.
Maintenance, servicing and troubleshooting of high efficiency residential equipment.

HVAC 201 Stationary Engineering
3 credits. 3 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
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.)
Prerequisites: HVAC 109, 120 and 136.
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 2 hours. Laboratory 2 hours.)
Prerequisites: HVAC 136 & HVAC 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.
Operation, servicing and troubleshooting of Geo-Thermal and Air Source heat pump systems.

HVAC 250 HVAC Internship
3 credits. 7 hours. (Lecture 1 hour. Field Studies 6 hours.)
Prerequisites: Program Coordinator approval; HVAC 109, 111, 120, 135 and GPA of 3.0 or higher. This course is designed to give the student real world experience in the HVAC/R industry. The student will enhance HVAC/R skills learned in prior courses under the direction of a mentor in the industry. Student is responsible for securing internship employment.

HVAC 291 Special Topics
1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Prerequisites: HVAC 109, 111, 120 & 135.
Independent study in HVAC/R related areas under the supervision of the faculty member.

History

MCC-Blue River
Sharon Bagg
William Worley

MCC-Longview
Patricia McGovern
David Miller
Randall Moore

MCC-Maple Woods
Diane Boldt
Crystal Johnson
William Young

MCC-Penn Valley
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.

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.

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 150 Native American History
3 credits. 3 hours. (Lecture 3 hours.)
This course will examine North American history in the United States from pre-Columbian times to the present. Attention will be paid to social, cultural, political, legal, and environmental factors which influenced intertribal relationships and relationships between Native Americans and non-Native Americans. The course will focus on the diversity of experiences based on region and specific tribal identity. The accomplishments of individual Native Americans will also be examined.

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 conflicts, 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.
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.

Human Services

MCC-Longview

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 2 hours. Field Studies 1 hour.)
Prerequisite: Human Services Program Coordinator consent, HUMS 168 and co-enrollment in HUMS 203.
Initial field experience in a social service, mental health, juvenile treatment, or other community service agency.

HUMS 202 Human Services Practicum II
3 credits. 3 hours. (Lecture 1 hour. Field Studies 2 hours.)
Prerequisite: Human Services Program Coordinator consent, HUMS 201 and 203, and concurrent enrollment in HUMS 204.
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: Human Services Program Coordinator consent, HUMS 168, and concurrent enrollment in HUMS 201.
Analysis of the practicum learning experience. Discussion of strategies useful in learning to work with different client populations. Development of interpersonal skills essential to establishing necessary relationships.

HUMS 204 Colloquia II
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: Human Services Program Coordinator consent, HUMS 201 and 203, and concurrent enrollment in HUMS 202.
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 influences.

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 influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics 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 influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics 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 influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics 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 influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics 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 influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics 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 influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics 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 influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics 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 influenced the development of major political, cultural, social, and economic systems. Readings in such topics as the Judeo-Christian tradition, humanism, the scientific revolution, and the democratic revolution will be used to critically assess the fundamental ideas that provide the basis for much of our knowledge and experience. Topics will vary every semester.
Requirement Designation: Honors

Industrial Technology

MCC-Business & Technology

Joseph Manson Joseph Roche

INTE 102 Communication for Industry

2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
This course will introduce the student to the requirements needed for good communication in the workplace environment. It will include the development of verbal, nonverbal, written and electronic communication skills. Students will practice communication in a simulated environment.

INTE 103 Environmental Services for the Health Field

4 credits. 5 hours. (Lecture 2 hours. Laboratory 3 hours.)
This course will introduce the student to the requirements needed for work in the environmental services housekeeping for the health industry. The student will learn general housekeeping skills, the proper safety and handling of biohazard materials and chemicals, basic Health Insurance Portability and Accountability (HIPAA) policies, and how safety and OSHA standards apply in the workplace.

INTE 107 Industrial Electrical Safety

1 credit. 1 hour. (Lecture 1 hour.)
This course will introduce the student to electrical safety rules and procedures in the industrial arena. The student will learn the NFPA 70E requirements, meter safety and how to safely work around electrical circuitry in the workplace.

INTE 109 Central Services Sterilization Process Lab

2 credits. 4 hours. (Laboratory 4 hours.)
Prerequisite: Concurrent enrollment or completion of INTE 108.
This course will introduce the student to importance and requirements for working in the central services sterilization process services. The student will learn general sterilization skills, the proper safety and handling of biohazards materials and chemicals, preparation and packaging, basic instruments and inventory controls.

INTE 110 Industrial Electrical Principles

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: MATH 103 or higher.
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 111 Microcomputer Hardware Repair

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
This course introduces the student to maintenance, upgrading, setup, and expansion of industrial microprocessor hardware. Students will explore microprocessor architecture, functions, and components as well as methods and procedures for installation, troubleshooting, and modifications of industrial microprocessor systems. Emphasis will be on the use of microprocessor hardware and software used in an industrial setting.

INTE 112 Industrial Electrical DC Principles
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: Concurrent enrollment or completion of MATH 103R or higher.
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 Watt's laws in DC circuits. The student will learn basic concepts in direct current circuits and applications.

INTE 113 Industrial Electrical AC Principles
2 credits. 2.5 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: INTE 112 or equivalent.
This course is an introductory course for the individual who is moving into an industrial maintenance or related activity. This course will build on the concepts learned in INTE 112 and expand into alternating circuit concepts including introduction to transformers and 3 phase power distribution.

INTE 115 Electrical Print Reading
3 credits. 3 hours. (Lecture 3 hours.)
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 121 INTE Internship & Co-Op
3 credits. 8 hours. (Laboratory 0.5 hour. Field Studies 7.5 hours.)
Prerequisites: INTE 107, INTE 115, INTE 110, EHSS 111, INTE 112, INTE 140, INTE 175, WELD 100, CIMM 130 and COLL 100.
The student will get on-the-job work experience as an Industrial Maintenance worker. The student will attend class and work on specific skill development related to maintenance duties in industry.

INTE 124 Employment Strategies for Technical Careers
2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
Prerequisite: CSIS 100 or PCC Certification.
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 131B Special Problems and Projects
2 credits. 2 hours. (Lecture 2 hours.)
Independent study in Industrial Technologies related areas under the supervision of the faculty member.

INTE 131C Special Problems and Projects
3 credits. 3 hours. (Lecture 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 fluid power equipment. Lubricants and lubrication will be covered. The replacement of seals and bearings will be covered. Correct application and selection of hand and power tools. Basic motor alignment including laser alignment will be introduced.

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 and Pneumatics
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
An introduction to fluid power and pneumatic concepts. Topics include the physics of fluid power, safety, hydraulic pumps, air compressors, actuators, pressure and flow measurement and regulation, basic maintenance, motors, coolers, and operation of hydraulic and pneumatic systems.

INTE 151 Industrial Rigging
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to demonstrate to the student safe and correct means of rigging and hoisting equipment. Topics will include wire rope, synthetic and chain slings. The student will learn the fundamentals of wire rope maintenance, center of gravity calculations and safe crane operation.

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 185 Solar/Photovoltaic Systems
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Solar radiation as applied to photovoltaic technology, photovoltaic system component selection, and introduction to safe design and installation of photovoltaic systems.

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 221 INTE Internship & Co-Op II
3 credits. 8 hours. (Laboratory 0.5 hour. Field Studies 8 hours.)
Prerequisites: INTE 121.
The student will get on-the-job work experience as an Industrial Maintenance worker. The student will attend class and work on specific advanced skills related to maintenance duties in industry.

INTE 224 Energy Management, Efficiency, and Conservation
3 credits. 3 hours. (Lecture 3 hours.)
Introduces fundamental concepts of energy management, including energy production and costs, and efficiency/conservation methods available for energy use reduction. Analysis of methods by which energy is used, and its environmental and financial impacts and consequences. Investigation of methods to identify and assess energy conservation opportunities. Optional field trips.

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&ID¿s (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 230 Solar/Photovoltaic Design and Installation
4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: INTE 142, INTE 185 & (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.

INTE 242 Master & Journeyman Electrical Exam Preparation
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: INTE 142 or instructor approval.
The course is designed to present a review of electrical principles, the requirements of the National Electric Code for safe, code compliant electrical installations. Topics include: NEC (National Electrical Code) Overview, electrical math as it relates to electrical theory, conductor sizing, conductor box fill, conduit wire fill, electrical services, motor calculations and protection requirements. Service calculations and overcurrent protection, hazardous locations, overcurrent protection, single and multifamily dwelling, and commercial occupancies, single-phase and three-phase transformer calculations.

INTE 260 Industrial Pipefitting and Plumbing Fundamentals

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisites: INTE 140.
This course will teach the basic fundamentals of pipefitting and plumbing. The historical importance of these trades will be covered, as well as their modern day significance. Plumbing hardware and piping will be identified. Safety will be emphasized.

INTE 270 Instrumentation and Process Controls

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: HVAC 201 or INTE 271.
This course is designed to introduce the individual to various types of instrumentation and control schemas. This course will primarily cover pressure, temperature, level and flow 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

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: INTE 110, 175 & CSOF 100.
The course is designed to provide the individual with an ability to understand the various output methods, programming and troubleshooting techniques using the programmable controllers (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. The student will be able to correlate motor control systems to PLC systems.

INTE 272 Programmable Logic Controller II

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: INTE 115 & INTE 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 & INTE 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 & INTE 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.

INTE 280 Networking - HMI for the PLC

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: INTE 272.
This class will assist the student in developing and creating graphical user interfaces to use as a front end for PLC applications. They will learn the basics for the most common HMI software in use. They will learn Ethernet and serial communication protocols and how to set up PLC networks using TCP/IP and RS-232.

INTE 290 Programmable Logic Controller Capstone

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisite: INTE 277.
This course will assist the student in developing and creating documentation to support a portfolio to present to prospective employers. The student will use the skills they have acquired in previous classes to convert several Motor Control relay logic systems to the most current PLC programming software. They will create safety procedures to use in the workplace related to Programmable Logic Controllers. The student will learn how to use function block diagram programming in PLC¿s.

INTE 291 Process Controls Capstone

4 credits. 4 hours. (Lecture 2 hours. Laboratory 4 hours.)
Prerequisites: INTE 270 and 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 different control schemas, pressure, temperature, level and flow detection and calculations. Lab activities will include calibration, designing and implementing different control loops with hands-on labs. Using PLC and stand-alone control devices.

Land Surveying

MCC-Longview

David Gann

SRVY 135 Elementary Surveying

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: MATH 130 or MATH 150 with a minimum grade of C on placement test.
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: ETEC 152 & SRVY 135.
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: MATH 115 & SRVY 135.
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

Douglas Thompson — Gary Hacker

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.)
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.)
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
4 credits. 7 hours. (Lecture 1 hour. Laboratory 6 hours.)
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
5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 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 & LWEN 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.

Library and Information Studies

MCC-Blue River
Jared Rinck

MCC-Business & Technology

MCC-Longview
Candice Baldwin

MCC-Maple Woods
Linda Carter
Mary Northrup

MCC-Penn Valley
Michael Korklan

LIBR 100 Introduction to Library & Online Research
1 credit. 1 hour. (Lecture 1 hour.)
This is a library course designed to familiarize students with the variety of information resources available to them to satisfactorily complete college assignments and to enhance the skills necessary to locate, manage and evaluate these resources.

LIBR 110 College Research and Information Literacy
3 credits. 3 hours. (Lecture 3 hours.)
This course is designed to develop college level information literacy skills focusing on library and internet resources. Students will build critical thinking skills while learning to determine information needs and to effectively and efficiently locate, evaluate and manage information through lecture and participatory activities. Emphasis will be placed on concepts which relate to the organization of information in any media.

Lineman

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 with the use of fall arrest equipment. The student will be taught two methods of climbing: free-climbing while tethered to a fall arrest device and hitchhiking with a fall arrest safety device. 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.)
Prerequisite: INTE 110.
The student will learn how power is generated, transported and distributed. Different methods and types of electrical power transmission and distribution systems, structures and equipment will be emphasized. The student will learn how the Power Grid is interlocked across multiple utilities.

LINE 210 Pole Framing and Construction Specifications

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: LINE 104 & LINE 105 or concurrent enrollment.
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 & LINE 105 or concurrent enrollment & COLL 100.
The student will learn the basic principles in setting and replacing poles. There will be an emphasis on safety, the proper use vehicle grounding practices and manual pole setting. The student will gain working knowledge of temporary pole supports, rigging, minimum approach distances and worksite hazard analysis.

LINE 237 Transformer Theory and Installation

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: LINE 104 & LINE 105 or concurrent enrollment.
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 104 & LINE 105 or concurrent enrollment.
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, proper connection types, installation, stringing, sagging, dead-ending, and splicing of overhead and underground service conductors.

LINE 250 Fusing, Substations and Voltage Regulation

3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisite: LINE 210 & LINE 237 or concurrent enrollment.
The student will be familiarized with the different types and methods of system coordination, substations, capacitors, voltage regulators and auto-transformers, oil reclosures, sectionalizers and the applicaton/coordination of fuses will also be gained. Practical experience in the grounding, inspection, maintenance and operation of basic substations will be expanded. The student will be familiarized with installation and operation of single and three-phase regulators, 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 215 & LINE 241 or concurrent enrollment.
The student will have a working knowledge of the different types of underground distribution systems, able to identify the types of cable used in underground distribution, describe proper cable installation procedures, demonstrate proper cable preparation techniques using manufacturers¿ specifications for splicing and terminating cable, list safe work procedures and demonstrate the proper techniques for isolation and grounding underground cable sections.

LINE 252 Advanced Pole Climbing

3 credits. 4 hours. (Lecture 1 hour. Laboratory 4 hours.)
Prerequisites: LINE 104 & LINE 215 or concurrent enrollment.
This course reinforces to the student the proper and safe methods of wood pole climbing. The student must master climbing wood pole structures with the use of fall arrest equipment while performing various detailed tasks. The student will spend extended periods of time on the pole while constructing complex assignments. 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 safe work practices associated with the electrical utility industry.

LINE 253 Safety and Accident Prevention

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisites: LINE 215 & LINE 237 or concurrent enrollment.
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.

Mathematics

MCC-Blue River
George Green
Stacey McMillen
Rebecca Schuering
Cheryl Winter

MCC-Longview
My An Tran
Beth Bletscher
Jennifer Johnson
Le Ann Lotz-Todd
Diane Sweet
Jason Pallett
Kristi Rottinghaus

MCC-Maple Woods
Kimberly Christensen
Terry Hobbs
Saeeda Irfan
Bill Morgan
Robert Skrukrud
Andrea Vorwark

MCC-Business & Technology
Kimball Marsh

MCC-Penn Valley
Tim Chappell
Christopher Hacker
Nic LaHue
Donald Lee
Gregory Mitchell
Alicia Valdivieso

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 appropriate placement test score.
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 appropriate placement test score.
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 MATH 20L or appropriate placement test score.
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 or MATH 20L or appropriate placement test score.
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 placement test score.
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 40 or MATH 40L or appropriate placement test score.
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 MATH 40L or appropriate placement test score.
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 MATH 40L or appropriate placement test score.
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.)
Prerequisite: MATH 40 or MATH 40L or appropriate placement test score.
A combination of the topics in MATH 40 or 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 appropriate placement test score.
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 or appropriate placement test score.
A course designed for students seeking a liberal arts education. The objective of this course is to provide students with a mathematical experience that will include topics from algebra, geometry, probability, and statistics. This course has a strong emphasis on applications.

MATH 120 College Algebra
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 110 or appropriate placement test score.
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 appropriate placement test score.
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 higher or appropriate placement test score.
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, and solution of triangles. Plane geometry is strongly recommended.

MATH 135 Number Systems for Elementary Teachers
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: MATH 119 or higher.
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 appropriate placement test score.
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 higher or 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.
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: CSIS 223 & MATH 141.
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.

Music

MCC-Blue River
Rebecca Johnson

MCC-Longview
Cathy Hardy-Parcell

MCC-Maple Woods
Jim Murray III

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 113 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 116 Evolution of Jazz

3 credits. 3 hours. (Lecture 3 hours.)
A study of the rich ethnic background and evolution of jazz music and its many styles. African, African-American, and European cultures will be examined in terms of the role each has played, and continues to play, in defining and influencing American culture through jazz. Important performers, composers, musicians, educators, and writers of jazz will be identified with respect to their contributions to the art form. Critical listening activities supplement the course content.

MUSI 117 Special Problems in Music

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)
Directed studies in special interest music topics (e.g., composition, MIDI music, pedagogy, music industry, etc.).

MUSI 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 121 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 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 130 Private Instruction I
1 credit. 0.5 hour. (Laboratory 2 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 131 Private Instruction I
2 credits. 1 hour. (Laboratory 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 132 Private Instruction II
1 credit. 0.5 hour. (Laboratory 2 hours.)
Prerequisite: MUSI 130 or MUSI 131.
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 133 Private Instruction II
2 credits. 1 hour. (Laboratory 4 hours.)
Prerequisite: MUSI 130 or MUSI 131.
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 150 Midi Music Production on the Computer
3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)
Prerequisite: MUSI 107 or MUSI 112 or MUSI 130 or MUSI 131.
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 Mixed Chorus III
1 credit. 3 hours. (Laboratory 3 hours.)
Prerequisite: MUSI 102.
Open to all students interested in group singing. Performance of various types of chorale music in public.

MUSI 202 Mixed Chorus IV
1 credit. 3 hours. (Laboratory 3 hours.)
Prerequisite: MUSI 201.
Open to all students interested in group singing. Performance of various types of choral music in public.

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 205 Orchestra III
1 credit. 4 hours. (Laboratory 4 hours.)
Prerequisite: MUSI 106.
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 206 Orchestra IV
1 credit. 4 hours. (Laboratory 4 hours.)
Prerequsite: MUSI 205. 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 210 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 211 Music Theory IV
4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)
Prerequisite: MUSI 210.
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 212 Class Piano III
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: MUSI 113.
Melodic harmonization, sight-reading, and transposition. Performance of piano literature of various periods.

MUSI 213 Class Piano IV
2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)
Prerequisite: MUSI 212.
Melodic harmonization, sight-reading, transposition, accompanying, and reading from an open score. Performance of piano literature of various periods.

MUSI 230 Private Instruction III
1 credit. 0.5 hour. (Laboratory 2 hours.)
Prerequisite: MUSI 132 or MUSI 133.
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 231 Private Instruction III
2 credits. 1 hour. (Laboratory 4 hours.)
Prerequisite: MUSI 132 or MUSI 133.
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 232 Private Instruction IV
1 credit. 0.5 hour. (Laboratory 2 hours.)
Prerequisite: MUSI 230 or MUSI 231.
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 233 Private Instruction IV
2 credits. 1 hour. (Laboratory 4 hours.)
Prerequisite: MUSI 230 or MUSI 231.
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

Elisabeth Koch — 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: 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: Admission to 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: 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. 2 hours. (Lecture 0.5 hour. Clinical 1.5 hours.)
Prerequisite: 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, EMS 100, OTHA 100, OTHA 102, OTHA 103, OTHA 106, & OTHA 116 & Admission to the Occupational Therapy program.
Hands-on introduction to high tech assistive technology and augmentative communication.

OTHA 120 Pediatrics
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: BIOL 109, EMS 100, OTHA 100, OTHA 102, OTHA 103, OTHA 106, & OTHA 116 & Admission to the Occupational Therapy program.
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, EMS 100, OTHA 100, OTHA 102, OTHA 103, OTHA 106 & OTHA 116 & Admission to the Occupational Therapy program.
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, EMS 100, OTHA 100, OTHA 102, OTHA 103, OTHA 106 & OTHA 116 & Admission to the Occupational Therapy program.
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 & BIOL 210) & Admission to the Occupational Therapy or Physical Therapy 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, OTHA 120, OTHA 121, OTHA 130 & OTHA 154 & Admission to the Occupational Therapy program.
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, OTHA 120, OTHA 121, OTHA 130 & OTHA 154 & Admission to the Occupational Therapy program.
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, OTHA 120, OTHA 121, OTHA 130 & OTHA 154 & Admission to the Occupational Therapy program.
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, OTHA 120, OTHA 121, OTHA 130 & OTHA 154 & Admission to the Occupational Therapy program.
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, OTHA 120, OTHA 121, OTHA 130 & OTHA 154 & Admission to the Occupational Therapy program.
Directed experience in specified community settings.

OTHA 217 Fieldwork Seminar
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: OTHA 118, OTHA 120, OTHA 121, OTHA 130 & OTHA 154 & Admission to the Occupational Therapy program.
Preparation for full-time clinical practice, the national certification process, state licensure, and future employment.

OTHA 222 Level II Fieldwork
12 credits. 40 hours. (Clinical 40 hours.)
Prerequisite: OTHA 201, OTHA 202, OTHA 203, OTHA 208, OTHA 212 & OTHA 217 & Admission to the Occupational Therapy program.
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.)
An introduction to the American legal system and the role of the paralegal. Students will examine the philosophical and historical background of law, legal context, organization, purpose and ethics. Paralegal career requirements, opportunities and responsibilities are presented. Systems approaches to law office management including billing practices, timekeeping and law office library systems are reviewed.

PARA 104 Principles of Legal Technology
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisites: CSIS 115 & PARA 100.
This course will provide an overview of the primary types of technology and related skills utilized regularly by practicing paralegals. The course offers a broad understanding of legal technology and the need for paralegals to be proficient with computers, software, and other forms of technology. The material will address how various technologies are utilized both in the office and in the courtroom. Students will study challenges associated with technology such as ethics and security. Various software applications will be studied, including document management, timekeeping, spreadsheets, and presentation graphics. This is a hands-on course conducted in the computer lab and allows the student to apply the course material through a variety of activities.

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 the civil law of torts including 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. Students will learn the techniques and skills necessary to conduct legal research and evaluate factual scenarios to formulate research issues and topics.

PARA 177 Legal Writing
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 176.
Students will draft weekly briefs, memoranda, or pleadings and review and revise settlements, leases, transactional documents, and employment documents.

PARA 181 Property
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
An introduction and overview of the legal issues pertaining to both real and personal property, including ownership and tenant rights; deeds, leases, easements, licenses, bailment, zoning, condemnation/eminent domain, and related issues.

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.
An introduction and overview of Federal and State laws and rules pertaining to criminal evidence including admissibility, competency, relevancy, presentation of physical and other material evidence, direct and circumstantial evidence, hearsay and exceptions to the hearsay rule.

PARA 248 Constitutional Law
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
The course 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.)
Prerequisite: PARA 100.
An introduction and overview of the legal relationship between employer and employee, management and labor, and the applicable federal and state laws and regulations.

PARA 279 Family Law
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
An introduction and overview of the legal rights, responsibilities and related issues in the area of domestic law, including marital, non-marital and parental family relationships.

PARA 283 Wills, Trusts and Probate
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
An introduction and overview of estate administration, including legal principles and issues involved in the construction and administration of the various forms of wills, trusts, testate and intestate estates and related issues.

PARA 284 Intellectual Property
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
This course is an introduction to intellectual property law including patent, trademark, trade secrets 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.
The course examines the First Amendment, free speech theory and its common law origin, history and the significance of a free press, prior restraints, regulation of media, and balancing the rights to a fair trial, and a free press. Civil law including defamation and invasion of privacy as well as current developments involving the Internet and social networking are introduced.

PARA 290 Internship in Paralegal Practice
3 credits. 15 hours. (Field Studies 15 hours.)
Prerequisite: PARA 100, PARA 104, PARA 176, PARA 177 or PARA 185.
The student must complete 15 credit hours of Paralegal courses before taking this course. This course is a capstone to the Paralegal Program and provides student with opportunities to gain practical work experience under the supervision of an attorney in the legal field.

PARA 292 Litigation
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
Introduces the student to the essential role which paralegals play in the initial, pretrial and trial process in civil litigation.

PARA 294 Bankruptcy
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PARA 100.
This bankruptcy course is designed to provide the student an overview of bankruptcy laws and procedures, the history of bankruptcy, and summary of the bankruptcy code and rules. This course will also teach the different roles of the U.S. Bankruptcy Court, Bankruptcy Judges, Panel of Trustees, Creditors and the Bankruptcy Bar in the process of bankruptcy administration. This course will broaden the student¿s perspective on how bankruptcy affects the economy, politics, employment and business throughout the nation.

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.

Philosophy

MCC-Blue River

MCC-Longview
Michael Connelly
Ann Morgan

MCC-Maple Woods
Doug Fishel

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 influence of religion and the philosophy of religion on the contemporary world, and other specific philosophical and theological problems.

PHIL 102 World Philosophy
3 credits. 3 hours. (Lecture 3 hours.)
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

MCC-Blue River ***MCC-Longview***

MCC-Maple Woods ***MCC-Penn Valley***

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, flexibility, and body composition. Includes assessment, planning, and participation in an individual fitness program based on the student's needs. The student will have access to free weights, weight machines, and a variety of cardiovascular equipment.

PHED 108 Physical Fitness II
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 107.
Second in a series of classes designed to develop the student's level of physical fitness. This course will expand on the concepts introduced in PHED 107, in addition to offering a variety of advanced techniques and programming ideas. Emphasis is given to the individual program of each student.

PHED 109 Physical Fitness III
1 credit. 2 hours. (Laboratory 2 hours.)
Prerequisite: PHED 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 151 Introduction to Exercise Science, Physical Education and Recreation
3 credits. 3 hours. (Lecture 3 hours.)
An introductory course for the student considering a career in exercise science, physical education and recreation. History, philosophy and careers in physical activity will be explored.

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.

PHED 235 Kinesiology- Exercise Science
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: BIOL 108 or BIOL 110.
Discussion of the anatomy and function of the musculoskeletal system which will include muscular origin and insertion and the mechanics of muscular action. Knowledge of body mechanics and the body as a lever system will assist in the ability to analyze movement.

Physical Therapist Assistant

MCC-Penn Valley

Randall Leighton Rachel McGraw 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: Admission to the Physical Therapy 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, or (BIOL 110 & BIOL 210), PTHA 152 & PTHA 160 & Admission to the Physical Therapy program.
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 & BIOL 210) & Admission to the Occupational Therapy or Physical Therapy 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 & Admission to the Physical Therapy program.
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 & Admission to the Physical Therapy program.
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 or (BIOL 110 & BIOL 210), PTHA 152 & PTHA 160 & Admission to the Physical Therapy program.
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: Admission to the Physical Therapy 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 or (BIOL 110 & BIOL 210), PTHA 152 & PTHA 160 & Admission to the Physical Therapy program.
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: EMS 100, PTHA 153, PTHA 154, PTHA 159, & PTHA 161 & Admission to the Physical Therapy program.
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 & Admission to the Physical Therapy program.
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 & concurrent enrollment in PTHA 155, PTHA 158, PTHA 164 & PTHA 171 & Admission to the Physical Therapy program.
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 & Admission to the Physical Therapy program.
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: Admission to the Occupational Therapy or Physical Therapy program 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

MCC-Maple Woods
Cynthia Sexton-Proctor

MCC-Penn Valley
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: 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: MATH 210 & PHYS 220.
Calculus-based introduction to the principles of electricity and magnetism, light and geometrical optics, and modern physics with an emphasis on problem solving and applications in engineering and science careers.

Political Science

MCC-Blue River

MCC-Longview
John Shively

MCC-Maple Woods
Perri Lampe

MCC-Penn Valley
Deborah Scott

POLS 135 Introduction to Political Science
3 credits. 3 hours. (Lecture 3 hours.)
An introduction to the theory of politics, government, and administration, with emphasis on the United States and Missouri constitutional systems. Comparison of governmental systems, institutions, ideologies and participation among nations and 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: POLS 135, POLS 136, or POLS 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 199 Special Topics in Political Science
1-3 credits. 1-3hours. (Lecture 1-2 hours.)
Topics and material will vary by instructor each semester. Specific research topics and writing assignments to be determined by instructor. This course is intended to go into detail and research beyond the material covered in American National Government, Introduction to Political Science and State and Local Government.

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 conflict, 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 — Christina Heard

Meskerem Desta — Betty Reynolds

PNUR 100 Personal and Vocational Concepts

1 credit. 1 hour. (Lecture 1 hour.)
Prerequisites: BIOL 108 or 109 & Admission to the Practical Nursing program.
An introduction to the role of the student in the program and the role of the practical nurse, including history, nursing trends, health care teams and health care delivery systems. The impacts of social, cultural, ethnic and spiritual issues on health care as well as ethical and legal responsibilities are presented.

PNUR 103 Fundamentals of Practical Nursing

10 credits. 14 hours. (Lecture 8 hours. Clinical 6 hours.)
Prerequisite: PNUR 100.
The Fundamentals of Practical Nursing course introduces the student to the role of the practical nurse in the provision
of basic nursing care to diverse populations across the life span. Professional communication, critical thinking, theory concepts, the nursing process and evidenced based practice are taught. Clinical experiences allow the learner to apply knowledge and skills introduced in the lab and classroom. The concepts introduced and incorporated into the care of individuals are: basic needs; biological, nutrition, psychological, social and spiritual, hygiene, physiological functioning, safety, cultural diversity, societal influences, developmental stages and principles of teaching/learning.

PNUR 110 Pharmacology

4 credits. 6 hours. (Lecture 3 hours. Clinical 3 hours.)
Prerequisite: PNUR 103 & Admission to the Practical Nursing program.
Introduction of basic pharmacology information for safe administration of medications by the practical nurse. Calculating accurate dosages for safe administration of medications and understanding the legal and ethic responsibilities related to medication administration is required. Drug classifications, common drugs to each class, usual dosage, and mechanism of action, side effects, contraindications, cautions, nursing implications and patient educational needs are presented.

PNUR 128 Mental Health Nursing

4 credits. 5 hours. (Lecture 3.5 hours. Clinical 1.5 hours.)
Prerequisite: PNUR 110 & Admission to the Practical Nursing program.
Basics for understanding mental illness and its treatment, nursing theory, therapeutic modalities and clinical applications for the major DSM-IV-TR disorders will be presented. The role and functions of the LPN (guided by scope of practice & standards) in addressing a client's psychosocial needs in mental health practice settings will be introduced. Assessment, therapeutic communication, nursing approach and pharmacologic interventions will be emphasized. Clinical component of course allows student opportunity to develop a skill set to use in diverse practice settings to meet client needs.

PNUR 132 The Childbearing Family

4 credits. 5 hours. (Lecture 3.5 hours. Clinical 1.5 hours.)
Prerequisites: PNUR 110 & Admission to the Practical Nursing program.
This course is an introduction to maternity and pediatric nursing. Prenatal development, prenatal care, nursing care during labor and birth with a focus on the family after birth is integrated into the course. Nursing care using basic nursing skills in caring for the term, preterm and post-term newborn is included in the course and clinical components. Care of the hospitalized pediatric client and health care adaptations for the child and family is taught. Common pediatric disorders, illnesses, and diseases are reviewed by body systems. Medication administration and pediatric dosage calculations are incorporated. The clinical component allows the student the opportunity to further develop nursing knowledge using evidence based practice, assessment skills, self-awareness, and demonstrate competency of nursing care.

PNUR 136 Venous Access and Intravenous Infusion

1.5 credits. 2 hours. (Lecture 1 hour. Laboratory 1 hour.)
Prerequisites: PNUR 110 & Admission to the Practical Nursing program.
This course will prepare the student practical nurse to perform limited intravenous fluid therapy treatment using the knowledge, skills, and competency required to perform such therapy safely and in accordance to Missouri Rule 4 CSR 200.6010.

PNUR 138 Nursing of the Adult I

8 credits. 12 hours. (Lecture 6 hours. Clinical 6 hours.)
Prerequisite: PNUR 110.
This course prepares the student to care for the adult client with needs ranging from simple to complex in a variety of settings. This course teaches nursing related to the body systems of: respiratory, cardiac, special senses, urinary and musculoskeletal. Common diseases and disorders of each system along with the etiology, pathophysiology, clinical manifestations, medical and pharmacological management, and nursing management are emphasized. The nursing process and critical thinking are utilized to identify nursing problems, patient/client goals, planning, intervention and evaluation that meet the patient/client needs.

PNUR 144 Nursing of the Adult II

8 credits. 12 hours. (Lecture 6 hours. Clinical 6 hours.)
Prerequisite: PNUR 138 & Admission to the Practical Nursing program.
This course prepares the student to care for the adult client with needs ranging from simple to complex in a variety of settings. This course teaches nursing related to the body systems of: endocrine, neurological, gastrointestinal, reproductive and integumentary. Common diseases and disorders of each system along with the etiology, pathophysiology, clinical manifestations, medical and pharmacological management, and nursing management are emphasized. The nursing process and critical thinking are utilized to identify nursing problems, patient/client goals, planning, intervention and evaluation that meet the patient/client needs.

PNUR 146 Leadership

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: PNUR 144 & Admission to the Practical Nursing program.
This course focuses on leadership principles needed for the practical nurse (PN) to function in an effective manner in the leadership role. Concepts and theories of leadership, communication, group process, legal responsibilities, ethical issues, decision-making, cultural competence and health care trends will be discussed.

Professional Nursing

MCC-Penn Valley

Robin Bellamy — Roger Bidwell — Kathy Alford
Charlotte Paige — Brenda Kotar — Catherine McClendon
Tammie Willis — Michelle Martin — Amy Parrish
Shelli Stufflebeam-Ely — Nancy Spangler
Leejae Wansing

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: PSYC 243 & Admission to the professional nursing program.
The student will acquire knowledge fundamental to the development of basic skills and attitudes essential for the practice of nursing. The principles of physical, biological, and behavioral sciences and nursing theory serve as the foundation. This first clinical laboratory course is designed to introduce the student to the role of the professional nurse in meeting basic needs common to all clients. Students are prepared to establish the nurse-client relationship through communication skills. Planned clinical experience is designed to allow the student to utilize the nursing process to deliver safe, individualized nursing care according to legal/ethical guidelines.

RNUR 131 Essential Nursing Concepts
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: PSYC 243 & Admission to the professional nursing program.
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: BIOL 208, PSYC 243, RNUR 126, & RNUR 131 & Admission to the Professional Nursing program.
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: BIOL 208, PSYC 243, RNUR 126, & RNUR 131 & Admission to the Professional Nursing program.
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: BIOL 208, PSYC 243, RNUR 126, & RNUR 131 & Admission to the Professional Nursing program.
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: ENGL 101, RNUR 234, RNUR 238, SOCI 160, SPDR 100 & one of the following: HIST 120, 121, POLS 135, 136 or 137.
This fourth semester course will focus on leadership and management principles necessary for the professional nurse to function in an effective manner in the leader/manager role. Concepts and theories of nursing care delivery models, leadership and management, delegation of patient care, communication, time management, conflict resolution, legal responsibilities, ethical issues, decision making, issues, trends in nursing, and graduate role integration and professional development will be explored. Concepts and principles of emergency management and disaster planning, and the physical and psychological effects of bioterrorism are also examined.

RNUR 234 Child-Centered Nursing
4 credits. 8 hours. (Lecture 2 hours. Clinical 6 hours.)
Prerequisite: Admission to nursing program; BIOL 208, RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141.
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 nursing program; BIOL 208, RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141.
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: ENGL 101, RNUR 234, RNUR 238, SOCI 160, SPDR 100 & one of the following: HIST 120, HIST 121, POLS 135, POLS 136, POLS 137.
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
Kimberly Glackin

MCC-Longview
Angela Bahner
Matthew Westra
Susan Benoit

MCC-Maple Woods
Julia Bishop
Robert Williams

MCC-Penn Valley
Monica Gimenez-Villarejo
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 influences, 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 influencing 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

Dana Adler — 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 scope of practice, roles, responsibilities and duties of a radiologic technologist.

RATE 160 Fundamentals of Radiologic Technology
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: Admission to the Radiologic Technology Program.
Overview of the foundations of radiologic technology. Topics related to the health care environment, health information management, basic patient interactions, body mechanics, patient transportation and radiographic terminology will be explored.

RATE 165 Patient Care
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: RATE 160 & Admission to the Radiologic Technology program.
Patient care and management concepts and practice in the radiologic sciences.

RATE 171 Radiographic Imaging I
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisite: RATE 160 & Admission to the Radiologic Technology program.
Exploration of materials and factors relating to image production and traditional image processing methods.

RATE 172 Radiographic Procedures I
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisite: RATE 160 & concurrent enrollment in RATE 165 & RATE 173 & Admission to the Radiologic Technology program.
Anatomy, radiographic procedures, patient positioning and image evaluation of the chest, abdomen, digestive system, urinary system, and upper limb.

RATE 173 Clinical Practice I
3 credits. 12 hours. (Clinical 12 hours.)
Prerequisite: RATE 160 & concurrent enrollment in RATE 165 & RATE 172 & Admission to the Radiologic Technology program.
Performance of patient examination in a clinical setting under the supervision of a Radiologic Technologist.

RATE 174 Radiographic Imaging II
2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
Prerequisite: RATE 171 & concurrent enrollment in RATE 180 & Admission to the Radiologic Technology program.
Factors relating to radiographic image quality and technical factor selection.

RATE 175 Clinical Practice II
4 credits. 16 hours. (Clinical 16 hours.)
Prerequisite: RATE 173 & concurrent enrollment in RATE 176 & Admission to the Radiologic Technology program.
Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

RATE 176 Radiographic Procedures II
3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)
Prerequisite: RATE 165, RATE 172, RATE 173 & concurrent enrollment in RATE 175 & Admission to the Radiologic Technology program.
Anatomy, radiographic procedures, patient positioning and image evaluation of the lower limb, pelvis, bony thorax and vertebral column.

RATE 178 Clinical Practice III
4 credits. 16 hours. (Clinical 16 hours.)
Prerequisites: RATE 175 & Admission to the Radiologic Technology program.
Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

RATE 180 Digital Imaging Environment
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: RATE 171 & Admission to the Radiologic Technology program.
Components, principles and operation of digital imaging systems in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are explored. Exploration of all aspect of the digital imaging environment from the radiology information system to the digital image management or picture archiving and communication system.

RATE 270 Radiation Biology and Protection
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: RATE 174 & RATE 180 & Admission to the Radiologic Technology program.
The principles of radiation biology and techniques used to protect the patient and personnel from the effects of exposure to ionizing radiation.

RATE 278 Pathology
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: RATE 279 & RATE 280 & Admission to the Radiologic Technology program.
Human disease processes and their relationship to radiographic procedure performance.

RATE 279 Radiographic Procedures III
2 credits. 2 hours. (Lecture 1.5 hours. Laboratory 1 hour.)
Prerequisite: RATE 176 & concurrent enrollment in RATE 280 & Admission to the Radiologic Technology program.
Anatomy, radiographic procedures, patient positioning and image evaluation of the cranium, facial bones, and biliary system; advanced contrast media exams and procedural adaptations for trauma patients, mobile and surgical radiographic procedures.

RATE 280 Clinical Practice IV
5 credits. 20 hours. (Clinical 20 hours.)
Prerequisite: RATE 178 & concurrent enrollment in RATE 279 & Admission to the Radiologic Technology program.
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 171 & RATE 180 & Admission to the Radiologic Technology program.
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
5 credits. 20 hours. (Clinical 20 hours.)
Prerequisite: RATE 280 & Admission to the Radiologic Technology program.
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, RATE 279 & RATE 280 & Admission to the Radiologic Technology program.
Preparation for the National Registry examination. Simulation of American Registry of Radiologic Technologists examination.

RATE 285 Imaging Modalities
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisite: RATE 176 & concurrent enrollment in RATE 279 & RATE 280 & Admission to the Radiologic Technology program.
Exploration of advanced modalities within the radiologic sciences.

Reading

MCC-Blue River

MCC-Longview
Kelli Cronk

MCC-Maple Woods

MCC-Penn Valley
Vicki Raine
Millie Nottingham

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: READ 10/30 or appropriate placement test score.
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: READ 13/33 or appropriate placement test score.
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: READ 15, READ 16 or READ 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: READ 15, READ 16 or READ 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: READ 15, READ 16 or READ 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: READ 10/30 or appropriate placement test score.
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: READ 13/33 or appropriate placement test score.
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 85 Developmental Reading II
3 credits. 3 hours. (Lecture 3 hours.)
Improvement of reading skills with an emphasis on vocabulary, comprehension, rate, and textbook strategies.

READ 100 College Reading
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: READ 11/31 or appropriate placement test score.
Enhancement of ability to interact independently with printed material at the college level. College level vocabulary and reading comprehension, flexibility in reading rate, critical and analytical reading, text strategies.

READ 101 Speed Reading
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: READ 100.
Purpose and methods of speed reading. Guided practice in surveying, scanning, skimming, and developing flexibility of reading rates.

READ 103 Linguistic Comprehension III (Companion for READ 100)
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: READ 18/38 or appropriate placement test score.
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: 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 Intrepreting

MCC-Maple Woods

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.

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
Cynthia Heddlesten

MCC-Longview
Tammie May
Julia Spence

MCC-Maple Woods
Jessica Halperin

MCC-Penn Valley

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.

Surgical Technology

MCC-Penn Valley
Roger Massey

SURT 100 Introduction to Surgical Technology

2 credits. 2 hours. (Lecture 2 hours.)
Introduction to the profession of surgical technology. Historical aspects of surgery, roles of the surgical team and ethical, legal and moral issues will be discussed.

SURT 103 Central Services

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)
This course focuses on the preparation of instruments and equipment for surgical procedures. The role of a Central Services Technician will be discussed. Upon successful completion of this course students will be eligible to sit for a central services national certification examination.

SURT 105 Care of the Surgical Patient

3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: (BIOL 100 or CHEM 105) & (BIOL 109 or BIOL 110&210) & BIOL 208 & (MATH 20/20L or appropriate placement score) & formal acceptance into the Surgical Technology program.
This course covers basic concepts related to preoperative care; both physical and psychosocial needs of the surgical patient will be addressed. The importance of medical language, chart review and documentation will also be discussed in this course.

SURT 109 Pharmacology for the Surgical Technologist

2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: BIOL 100 or CHEM 105, BIOL 109 or BIOL 110 & 210, BIOL 208, MATH 20/20L or appropriate placement score & formal acceptance into the Surgical Technology program.
This course focuses on the use and stages of anesthesia. Preparation and calculation of drugs and solutions commonly used during surgical procedures will also be discussed.

SURT 120 Fundamentals of Surgical Technology I

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisites: SURT 100, SURT 103, SURT 105 and SURT 109.
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.

SURT 121 Fundamentals of Surgical Technology II

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisites: SURT 100, SURT 103, SURT 105 and SURT 109.
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.

SURT 130 Surgical Procedures I

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisites: SURT 100, SURT 103, SURT 105, SURT 109, SURT 120, and SURT 121 & Admission to the Surgical Technology program.
Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology diagnostic interventions, and surgical interventions for a variety of surgical procedures. Emphasis on surgical procedures related to General, Minimally Invasive, Obstetrics/Gynecology, Genitourinary, Otorhinolaryngology and Orthopedic surgical specialties. Incorporating instruments, equipment, and supplies required for perioperative case management. Post-operative care and complications of the surgical patient is discussed.

SURT 131 Surgical Procedures II
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: SURT 100, SURT 103, SURT 105 SURT 109, SURT 120, SURT 121 and SURT 130 & Admission to the Surgical Technology program.
Examines the pathophysiology diagnostic interventions, and surgical interventions for a variety of surgical procedures. Emphasis on surgical procedures related to Oral Maxillofacial, Ophthalmic, Cardiothoracic, Peripheral Vascular, and Neurosurgery Surgical Procedures. Includes instruments, equipment, and supplies required for perioperative case management and Post-operative care and complications of the surgical patient is discussed.

SURT 140 Clinical Experience
6 credits. 6 hours. (Clinical 18 hours.)
Prerequisites: SURT 120, SURT 121, SURT 130 & Admission to the Surgical Technology program.
Directed practice in a clinical setting.

SURT 150 Surgical Technology Capstone
2 credits. 2 hours. (Lecture 2 hours.)
Prerequisites: SURT 120, SURT 121 and SURT 130.
This course will prepare and allow for student completion of the national certification examination. Topics of focus will include maintenance of professional credentials through professional development, employment, additional career pathways and current trends.

Theater

MCC-Blue River ***MCC-Longview***

MCC-Maple Woods
Daniel Wright

THEA 106 Theater Appreciation
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 30 / 90 or appropriate placement test score.
Theater Appreciation is an overview of theater from the playgoer¿s perspective. The course will include a discussion of theater as a composite art form, investigate theater 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.

THEA 112 Oral Interpretation of Literature
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 30 / 90 or appropriate placement test score.
This course will provide an analysis and presentation of literary works to increase appreciation of and skill in reading aloud in individual and group performances.

THEA 114 Theater and the Western World
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: ENGL 30 / 90 or appropriate placement test score.
The study of the history of theater from ancient Greece to the present. The course will explore the evolution of the many types of theater activities. This course will include the reading and discussion of plays using the elements of theater based on Aristotle's 'Poetics.' Exploration of the creation of theater as a profession. The Connection of modern issues with the themes of plays read. Different cultures will be explored through the study of theater of arts.

THEA 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.

THEA 116 Children's Theater
3 credits. 4.5 hours. (Lecture 1.5 hours. 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.

THEA 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.

THEA 121 Elements of Play Production
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: ENGL 30 / 90 or appropriate placement test score.
Identify and apply the elements of play production necessary to produce a theatrical performance through reading, observation and practical experience.

THEA 122 Theater Practicum
1-3 credits. 2-6 hours. (Laboratory 2-6 hours.)
Prerequisite: COLL 100.
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.

THEA 132 Directed Studies in Theater
1-3 credits. 1-3 hours. (Independent Study 1-3 hours.)
Students will work independently in a professional environment designed to give them professional work experience in a selected program area within the field of theater. Students may also choose to do an independent project under the supervision of a faculty member. Those students selecting work in a professional environment will also be under the supervision of the director or supervisor for the selected work environment.

THEA 220 Acting II
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisite: THEA 120.
A continuation and advanced study of the skills taught in THEA 120 Acting I, 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.

Veterinary Technology

MCC-Maple Woods
Christopher Morrow

VETT 100 Veterinary Practice Management
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
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 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: Admission to the Veterinary Technician Program.
Vocabulary. Metric and apothecary conversions. Drug and dosage calculations. Preparation of solutions based on percents, ratios and drugs. Infusion flow rates and constant rate infusion.

VETT 110 Principles of Animal Science II
4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)
Prerequisite: VETT 101 & Admission to the Veterinary Technology program.
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 & 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 & VETT 110 & Admission to the Veterinary Technology program.
Administration of anesthetics and surgical assisting, bandaging, casting, blood transfusions, surgical preparations and postoperative procedures, parenteral fluid administration, and intravenous hookups. Introduction to orthopedics, electrocardiography, bone marrow cytology, and pharmacology.

VETT 201 Clinical Pathology Techniques I
4 credits. 7 hours. (Lecture 1 hour. Laboratory 6 hours.)
Introduction to laboratory procedures including preparation of blood smears, cell identification, fecal analysis, and parasitology, urinalysis and urine sediment valuation.

VETT 202 Veterinary Anatomy
5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)
Prerequisite: BIOL 101 or BIOL 106 & VETT 101 & VETT 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, VETT 110 & VETT 201 & Admission to the Veterinary Technology program.
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 & Admission to the Veterinary Technology program.
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 & Admission to the Veterinary Technology program.
Introduction of anesthetics, surgical assisting, bandaging, casting, blood transfusions, surgical preparations, and post-operative care. Administration of parenteral fluid and emergency treatments. Introduction to ophthalmology and dermatology.

VETT 211 Clinical Pathology Techniques II
5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)
Prerequisite: VETT 201 & Admission to the Veterinary Technology program.
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 & VETT 110 & Admission to the Veterinary Technology program.
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 direction of cooperation veterinarian to provide 400 hours of actual work experience.

Welding

MCC-Business & Technology

Tim Gill

WELD 100 Introduction to Welding/Cutting Processes
1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)
Student will develop an awareness of oxy-fuel cutting and of the more common welding processes in the welding industry. An emphasis will be placed on GMAW welding with student experiencing the process in the laboratory setting.

WELD 105 Welding for the Trades
3 credits. 5 hours. (Lecture 1 hour. Laboratory 4 hours.)
This course provides an introduction to the flame cutting and plasma cutting processes, brazing, stick (arc) welding and MIG welding. This is not a code welding course but students will learn to identify and correct welding problems.

WELD 110 Welding Industry Fundamentals
3 credits. 3 hours. (Lecture 3 hours.)
Student will develop an awareness of the welding industry. Emphasis will be placed on American Welding Society (AWS) welding codes and standards as they relate to the construction, fabrication and maintenance industry.

WELD 120 Thermal Cutting Processes Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD 110.
Student will develop the knowledge required of thermal cutting processes. Emphasis will be placed on manual and mechanized oxy-fuel cutting, plasma arc cutting, and air-carbon arc cutting.

WELD 121 Thermal Cutting Processes Lab
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 120.
Student will develop the skills required to be proficient in the thermal cutting processes. The emphasis will be on manual and mechanized oxy-fuel cutting (OFC), plasma arc cutting (PAC), and air-carbon arc cutting (CAC-A).

WELD 130 Print Reading & Weld Symbols
3 credits. 3 hours. (Lecture 3 hours.)
Student will develop an understanding of line interpretation and apply this knowledge to orthographic and isometric drawings. Skill development in recognizing structural shapes from prints and interpreting welding symbols on prints will also be emphasized.

WELD 140 Shielded Metal Arc Welding I (stick) Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD 121.
Student will develop an awareness of arc welding safety and the shielded metal arc welding (SMAW) process. This includes acquiring the knowledge of power sources and polarities, principles of operation, welding techniques, electrode identification and use, code welding, and maintenance of SMAW equipment.

WELD 141 Shielded Metal Arc Welding I (stick) Lab
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 140.
Student will develop the skills of welding safely and of the shielded metal arc welding (SMAW) process. This includes applying the knowledge of power sources and polarities, principles of operation, welding techniques, and electrode identification and use to code welding procedures in all positions with fillet and groove welds, and maintenance of SMAW equipment.

WELD 150 Gas Metal Arc Welding I (MIG) Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD 121.
Student will develop an awareness of arc welding safety and the gas metal arc welding (GMAW) processes. This includes acquiring the knowledge of power sources and polarities, principles of operation, welding techniques, modes of filler metal transfer, filler metal identification and use, code welding, and maintenance of GMAW equipment.

WELD 151 Gas Metal Arc Welding I (MIG) Lab
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 150.
Student will develop the skills of welding safely and of the gas metal arc welding (GMAW) processes. This includes applying the knowledge of power sources and polarities, principles of operation, welding techniques, modes of filler metal transfer, filler metal identification and use to code welding procedures in all positions with fillet and groove welds, and maintenance of GMAW equipment.

WELD 160 Gas Tungsten Arc Welding I (TIG) Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD 121.
Student will develop an awareness of arc welding safety and the gas tungsten arc welding (GTAW) processes. This includes acquiring the knowledge of power sources and polarities, principles of operation, welding techniques, electrode identification and use, filler metal identification and use, code welding, and maintenance of GTAW equipment and accessories.

WELD 161 Gas Tungsten Arc Welding I (TIG) Lab
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 160.
Student will develop the skills of welding safely and the gas tungsten arc welding (GTAW) processes. This includes applying the knowledge of power sources and polarities, principles of operation, welding techniques, electrode identification and use, filler metal identification and use, code welding, and maintenance of GTAW equipment and accessories.

WELD 230 Layout & Fabrication Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD 130 and one WELD 100 level lecture & one WELD 100 level lab.
Student will learn and apply basic rigging operations to material handling. Mathematical formulas, geometrical principles, and charts associated with fabrication will be emphasized. The safe and proper use of fabrication tools and equipment will be stressed.

WELD 231 Layout & Fabrication Lab
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 230 and one WELD 100 level lecture & one WELD 100 level lab.
Layout and fit-up operations will be presented which include selection and use of shop tools and equipment, processing materials, and fabrication safety. Processed parts will be assembled and welded using shop prints with welding symbols.

WELD 240 Shielded Metal Arc Welding II (stick) Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD141.
Student will learn the theory and techniques of advanced shielded metal arc welding processes. This will include fillet and groove welds in all positions on mild steel and stainless steel plates with stainless steel electrodes. Pipe techniques will also be addressed for welding fillet and groove welds in all positions on carbon steel pipe.

WELD 241 Shielded Metal Arc Welding II (stick) Lab
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 240.
Student will develop skills using the theory and technique associated with advanced shielded metal arc welding processes. This will include fillet and groove welds in all positions on mild steel and stainless steel plates with stainless steel electrodes. Pipe welding skills will also be developed for welding fillet and groove welds in all positions on carbon steel pipe.

WELD 250 Gas Metal Arc Welding II (MIG) Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD 151.
Student will learn the theory and techniques of advanced gas metal arc welding processes. This will include fillet and groove welds in all positions on carbon steel pipe and aluminum plate with the different modes of wire transfer. The student will also identify and recommend repairs for given weld defects.

WELD 251 Gas Metal Arc Welding II (MIG) Lab
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 250.
Student will develop skills using the theory and techniques of advanced gas metal arc welding processes. This will include fillet and groove welds in all positions on carbon steel pipe and aluminum plate with the different modes of wire transfer. The student will also identify and initiate recommended repairs for given weld defects.

WELD 260 Gas Tungsten Arc Welding II (TIG) Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD 161.
Student will learn the theory and techniques of advanced gas tungsten arc welding processes. This will include fillet and groove welds in all positions on carbon steel, aluminum, and stainless steel round tubing. The student will also identify and recommend repairs for given weld defects.

WELD 261 Gas Tungsten Arc Welding II (TIG) Lab-
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 260.
Student will develop skills using the theory and techniques of advanced gas tungsten arc welding processes. This will include fillet and groove welds in all positions on carbon steel, aluminum, and stainless steel round tubing. The student will also identify and initiate recommended repairs for given weld defects.

WELD 270 Flux Core Arc Welding I Lecture
1 credit. 1 hour. (Lecture 1 hour.)
Prerequisite: WELD 151.
Student will learn the theory and techniques of flux cored arc welding, both self-shielded and gas-shielded. This will include fillet welds and groove welds in all positions on carbon steel plates and pipe. The student will also identify and recommend repairs for given weld defects.

WELD 271 Flux Core Arc Welding I Lab
2 credits. 3.5 hours. (Lecture 0.5 hour. Laboratory 3 hours.)
Prerequisite: WELD 270.
Student will develop skills using the theory and techniques of flux cored arc welding, both self-shielded and gas-shielded. This will include fillet welds and groove welds in all positions on carbon steel plates and pipe. The student will also identify and initiate recommended repairs for given weld defects.

WELD 290 Management Skills for the Trades
3 credits. 3 hours. (Lecture 3 hours.)
Prerequisites: WELD 231 and one WELD 100 level lecture & one WELD 100 level lab or entry level requirements of other campus departments.
Student will learn and apply different training methods to meet the requirements of different learning styles. Basic principles of management and the psychology associated with working relationships will be emphasized throughout the course material. Skills in project cost estimation and facilities management will also be developed.

Officers of the District

Mark S. James, Chancellor
MCC- Administrative Center
B.S., University of Central Missouri
M.S., Joint Military Intelligence College

Paul D. Long, Vice Chancellor, Academic Affairs and Technology
MCC-Administrative Center
B.A., University of Missouri–Kansas City
M.A., University of Kentucky
Ph.D., University of Missouri–St. Louis

Tuesday Stanley, Vice Chancellor, Administrative Services and Student Development
MCC-Administrative Center
B.A., Purdue University
M.B.A., Lehigh University
Ed.D., University of Pennsylvania

Michael Banks, President
MCC-Blue River
B.A., St. Louis University
M.F.A., Southern Illinois University, Carbondale
Ph.D., St. Louis University

Hasan Naima, President
MCC-Business & Technology
B.S., Utah State University
B.S., Washington State University
M.S., University of Idaho
M.S., Utah State University
Ph.D., University of Idaho

Kirk Nooks, President
MCC-Longview
Ed.D., George Washington University

Uptal Goswami, President
MCC-Maple Woods
B.A., Delhi University
M.A., Boston University
Ph.D., Southern Methodist University

Joseph Seabrooks, President
MCC-Penn Valley
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

Administration

Shelli R. Allen, Dean of Student Development and Enrollment
MCC-Maple Woods
B.A., Truman State University
M.A., University of Iowa

Patricia Amick, Director of Administrative Systems and Management Services
MCC-Administrative Center
B.S., Iowa State University
B.S., Iowa State University

Brian C. Bechtel, Associate Dean
MCC-Maple Woods
B.S., University of Nebraska–Lincoln
M.A., University of Missouri–Kansas City
Ed.D., University of Missouri–Columbia

Sydney Beeler, Director of Student Development
MCC-Administrative Center
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

Kristy A. Bishop, Director of Institutional Research & Assessment
MCC-Administrative Center
B.A., University of Missouri-Kansas City
M.S., Avila University
Ph.D., University of Kansas

Bradley A. Bridges, Director of Auxiliary Services
MCC-Administrative Center
B.S., Indiana University

Domenick R. Brouillette, Associate Director, Public Safety
MCC-Administrative Center
B.S., Central Missouri State University
M.B.A., University of Iowa

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

Cheryl Carpenter-Davis, Dean of Instruction
MCC-Penn Valley
A.A., Cerritos College
B.A., MidAmerica Nazarene College
M.Ed., MidAmerica Nazarene College
Ed.D., University of Missouri–Columbia

Evelyn Claiborne, Director, Practical Nursing
MCC-Penn Valley- Health Science Institute
M.S., University of Mary
M.B.A., University of Mary

Rebecca R. Curtis, Resource Center Coordinator, Francis Child Development Institute
MCC-Penn Valley
B.S., University of Kansas
M.S., University of Kansas

Brandi D. Fockler, Director, Employee Benefits
MCC-Administrative Center
A.A., MCC-Longview
B.S., Park University

Steven J. Frommelt,Director of Accounting
MCC-Administrative Center
B.A., Loras College

Karen D. Goos, Dean of Student Development/ Support Services
MCC-Longview
B.A., Doans College
M.S., University of Central Missouri

Lester Hardegree, Executive Director and Dean of Health Science Institute
MCC-Penn Valley- Health Science Institute
B.S., University of Georgia
M.A.E.., University of Georgia
Ph.D., Nova Southeastern University

Dawn Hatterman, Associate Dean
MCC-Maple Woods
B.S., Nebraska Wesleyan University
M.S., University of Missouri-Kansas City

Michael Hendershot, Director of Western Mo Public Safety Training Institute
MCC-Blue River
B.A., Evangel University

Leo J. Hirner, 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

Kent Huyser Executive Director, Foundation
MCC-Administration Center
B.S., William Jewell College

Londell Jamerson, Chief of Campus Police
MCC-Administrative Center
B.A., Lindenwood University

Melinda Johnson, Associate Dean of Student Development
MCC-Penn Valley
B.S.E., Missouri Western State College
M.S.E., University of Wisconsin- La Crosse

Douglas Lightfoot, Director, Facility Services
MCC-Administrative Center
B.S., Grand Canyon University

Kevin Kelley, Director, Community & Business Development
MCC-Administration Center
A.A., Kansas City Kansas Community College
B.B.A., University of Missouri- Kansas City
M.S., Saint Mary College
Ph.D., Northcentral University

Basil M. Lister, Associate Dean of Instruction
MCC-Blue River
B.S., Northwest Missouri State University
M.S., Florida State University

Tristan Londré, Director of Career Education
MCC-Administrative Center
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City
Ph.D., University of Missouri–Kansas City

Teresa A. Loney, Director, Tech Prep.
MCC-Business & Technology
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

Mindy McCallum, Dean of Instruction
MCC-Longview
B.A., University of Missouri–Kansas City
M.S., University of Kansas
Ed.D., University of Kansas

Larry M. McCloud, Associate Dean of Instruction
MCC-Penn Valley
B.A., Iowa State University
M.L.A., Baker University

Christina C. McGee, Director, Employee Relations & Training
MCC-Administrative Center
B.A., Purdue University
M.B.A., Missouri State University

Sandra McIlnay, Director, Health Sciences
MCC-Penn Valley
B.S., University of Kansas
M.S.Ed., University of Kansas

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

Karen Moore, Dean of Student Services
MCC-Business & Technology
B.A., University of Akron
M.P.A., University of Akron

Linda D. Nelson, Associate Dean of Student Services
MCC-Longview
B.A., Southwest Missouri State University
M.A., University of Missouri-Kansas City

Dena Norris, Director, Student Financial Services
MCC-Administrative Center
A.A., Metropolitan Community College
B.S., Park University
M.S., Baker University

Frances A. Padow, Director, Educational Services
MCC-Administrative Center
B.S., Saint Mary College
M.A., Saint Mary College

Nancy Russell, Executive Director of Workforce Development
MCC-Administrative Center
B.S., Michigan State University
M.Ed., Texas A&M University

Gary Schieber, Director, Computer Services
MCC-Administrative Center
B.S., University of Missouri

Eric Sligar, Police Major
MCC-Administrative Center
B.S., University of Kansas
M.S., University of Central Missouri

Gurbhushan Singh, Associate Dean of Instruction
MCC-Longview
B.S., Avila University
M.S., Avila University

Mary Truex, Director, Recruitment & Compensation
MCC-Administrative Center
B.A., University of Northern Iowa

Jennifer Walk, Director of Educational Opportunity
MCC-Administrative Center
B.S., University of Kansas
M.S., University of Central Missouri

Kathy Walter-Mack, Chief of Staff & Associate Vice Chancellor, Human Resources
MCC-Administrative Center
B.A., Roosevelt University
J.D., DePaul University

Thomas A. Wheeler, Dean of Instruction
Business & Technology
A.A.S., Longview Community College
B.S., Kansas State University
M.S., Pittsburg State University
Ed.D., University of Kansas

Faculty

Cindy Adams, Computer Integrated Machining & Manufacturing
MCC-Business & Technology

Dana Adler, Radiologic Technology
MCC-Penn Valley
B.S., Avila University
M.S., Kansas State University

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 Coordinator
MCC-Penn Valley
B.S., University of Kansas
M.B.A., Baker University

Kathy Alford, Nursing
MCC-Penn Valley
B.S., Boston College
M.B.A., University of Mary
M.S., University of Mary

William Allyn, Engineering Technology
MCC-Business & Technology
Chair, Technology
B.S., Central Missouri State University
M.S.Ed., University of Central Missouri

Sharon Bagg, History
MCC-Blue River
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

Diane C. Bailey, Mathematics
MCC-Longview
B.S., University of Missouri–Columbia
M.S., University of Missouri–Columbia

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., University of Massachusetts

Carlos E. Bass, Art
MCC-Maple Woods
B.A., San Diego State University
M.F.A., California State University

Audrey V. Battrum, Mathematics
MCC-Maple Woods
B.S., Lakehead University, Thunder Bay Ontario
M.S., University of Missouri–Kansas City

Robin Bellamy, Nursing
MCC-Penn Valley
B.S., Rockhurst University
M.S., University of Central Missouri

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., St. Lukes College of Nursing
M.S., University of Kansas

Julia Bishop, Psychology
MCC-Maple Woods
B.A., University of Nebraska
M.A., University of Nebraska
Ph.D., University of Nebraska

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

Beth Bletscher, Mathematics
MCC-Longview
B.S., Emporia State University
M.A., Emporia State University

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

Diane Boldt, History
MCC-Maple Woods
A.A., MCC-Longview
B.A., University of Missouri-Kansas City
M.A., University of Missouri-Kansas City

Mehdi Borhan, Biology
MCC-Blue River
B.A., University of Kansas
M.A., University of Kansas

Nelson F. Borys, Chemistry
MCC-Longview
B.S., University of Illinois
M.S., University of Wyoming
Ph.D., University of Georgia

D.J. Box, Physics
MCC-Longview
B.S., University of Kansas
M.S., University of Illinois

Arthur M. Brady Jr., Emergency Medical Technology
MCC-Penn Valley
A.A., MCC-Penn Valley
B.A., University of Missouri-Columbia

Dawn B. Brady, Counselor
MCC-Penn Valley
B.A., Missouri Western State College
M.A., Northwest Missouri State College

Ayanna L. Bridges, Speech
MCC-Maple Woods
B.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

Linda Carter, Librarian
MCC-Maple Woods
B.A., Missouri Western State College
M.A., University of Missouri–Columbia

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
B.S., Pittsburg State University
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

Shveta Chaudhary, Chemistry
MCC-Blue River
B.S., University of Delphi
Ph.D., University of Delphi

David B. Collins, English
MCC-Blue River
M.A., Northwest Missouri State University

Bryan D. Compton, Automotive Technology
MCC-Longview
A. A.S., Metropolitan Community College
B.S., Park University

Michael J. Connelly, Philosophy
MCC-Longview
B.A., Salisbury State University
M.A., University of Delaware

James M. Cline, ETEC
MCC-Business & Technology
B.S., Pittsburg State University
M.S., Pittsburg State University

Timothy J. Conway, English
MCC-Maple Woods
B.S., Auburn University
M.A., Auburn University

Robin Craig-Carriaga, Biology
MCC-Penn Valley
B.S., Kansas State University
M.S., Kansas State University
Ph.D., Kansas State University

Kelli A. Cronk, Reading
MCC-Longview
B.A., Xavier University
M.A., University of Kansas

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

Terrence Davin, Biology
MCC-Penn Valley
B.S., Pennsylvania State University
M.S., Frostburg State University

Kendall C. Davis, Welding
MCC-Business & Technology

Cecil K. Davis Jr., Climate Control
MCC-Business & Technology

Meskerem Desta, Nursing
MCC-Penn Valley
B.S., University of Kansas
M.S., Mid America Nazarene University

Katherine Douglas, Computer Science
MCC-Business & Technology
A.A., MCC-Longview
B.S., Kennedy-Western University
M.S., University of Central Missouri

Amy D. Parrish, Nursing
MCC-Penn Valley
A.S., Community College of Allegheny County
B.S., University of Memphis
M.S., Webster University

Paramjit (Rani) K. Duggal, Biology
MCC-Maple Woods
B.S., Rajasthan University, India
M.S., Maharaja Sayajirao University
M.S., Bowling Green State University

Richard Dumler, Engineering Technology
MCC-Business & Technology
B.S., University of Central Missouri
M.S., University of Central Missouri

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
Chair, Communications
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.A., University of Missouri-Columbia

Patricia Elliot, Health Information Technology
MCC-Penn Valley
A.A.S., Metropolitan Community College
B.S., University of Mary
M.S., University of Mary

Ahmed N. El-Sherif, Chemistry
MCC-Penn Valley
B.S., Ain Shams University
M.S., Arkansas 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

Douglas R. Fishel, Philosophy
MCC-Maple Woods
B.C.M., Friends University
M.M., Southwest Baptist Theological Seminary
M.L.A., Oklahoma City University
M.A., University of Kansas

David Gann, Land Surveying
MCC-Longview
Chair, Math, Science & Engineering
B.S., Harvey Mudd

Lyle E. Gibson, History
MCC-Penn Valley
B.A., University of Arkansas
M.A., University of Missouri-Kansas City

Timothy L. Gill, Industrial Technology
MCC-Business & Technology
Certified Welding Inspector (CWI)
Certified Welding Educator (CWE)
B.S., University of Missouri-Columbia
M.S., University of Missouri-Columbia
Ph.D., University of Missouri-Columbia

Monica Gimenez-Villarejo, 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

David C. Grady, Computer Integrating Machining & Manufacturing
MCC-Business & Technology
A.E., Metropolitan Community College

George A. Green, Mathematics
MCC-Blue River
B.S., Alcorn State University
M.S., Alcorn State University

Gary L. Hacker, Criminal Justice
MCC-Blue River
B.A., Mid-America Nazarene University

Jessica R. Halperin, Sociology
MCC-Maple Woods
B.S., Emporia State University
M.A., University of Missouri- Kansas City

Theresa Hannon, English
MCC-Blue River
B.A., Indiana University
M.F.A., Arizona State University

Alexander Hamilton, Computer Science
MCC-Business & Technology
B.S., University of Central Missouri

Chris Hacker, Mathematics
MCC-Penn Valley
B.S., University of Missouri- Kansas City
M.S., University of Missouri- Kansas City

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
Chair, Math, Science & Engineering
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

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

Christina Heard, Nursing
MCC-Penn Valley
M.S., University of Mary
M.B.A., University of Mary

Cynthia Heddlesten, Sociology
MCC-Blue River
B.A., University of Missouri- Kansas City
M.A., University of Missouri- Kansas City

Cinthia A. Herbert, Computer Science/Information Systems
MCC-Longview
B.S., Central Missouri State University
M.S., University of Phoenix

Rich 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

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

John D. Horn, Geology/GIS
MCC-Maple Woods
B.S., Arkansas Technical University
M.S., University of Arkansas
Ph.D., University of Nebraska

Christine M. Howell, English
MCC-Penn Valley
B.A., Missouri Southern State University
M.A., University of York

Carla Huffman, Chemistry
MCC-Maple Woods
A.S., Kettering College
B.S., College of Mt. St. Joseph
M.A., Miami University of Ohio

Barbara J. Hurst, Mathematics
MCC-Penn Valley
B.A., Washburn University
M.A., University of Kansas

Saeeda Irfan, Mathematics
MCC-Maple Woods
B.S., Punjab University, Pakistan
M.S., Quad-e-Azam University, Pakistan
M.Phil., Quad-e-Azam University, Pakistan

Lynette M. Jachowicz, Speech
MCC-Maple Woods
Chair, Humanities
B.A., University of Northern Colorado
M.A., University of Kansas

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
Chair, Social Science, History
B.A., University of Wisconsin-Madison
M.A., University of Kansas

Jennifer B. Johnson, Mathematics
MCC-Longview
B.S., University of Central Missouri
M.A., Avila University

Rebecca L. Johnson, Music
MCC-Blue River
A.A., McCook Community College
B.A., University of Northern Colorado
M.M., University of Nebraska

Steven Johnson, Associate Dean of Instruction
MCC-Blue River
B.S., DeVry University
M.S., Central Missouri State University
Ph.D., St. Louis University

Monica Johnston, Continuing Education
MCC-Penn Valley
B.S., University of Kansas
M.B.A., Keller Graduate School of Management

Dan Justice, Engineering
MCC-Penn Valley
B.S., University of Missouri–Rolla
M.S., University of Texas
Ph.D., University of Texas

Victorie J. Kelley, Counselor
MCC-Blue River
B.S., Central Missouri State University
M.S., Kansas State University
Ed.S., University of Missouri–Kansas City

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
J.D., University of Missouri-School of Law-Columbia

Elisabeth Koch, Occupational Therapy
MCC-Penn Valley
B.A., University of Missouri–Kansas City
M.O.T., Rockhurst University

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

Brenda Kotar, Nursing
MCC-Penn Valley
M.S., University of Mary

Michael Korklan, Librarian
MCC-Penn Valley
B.Ed., University of Missouri–Columbia
M.A., University of Missouri–Columbia

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 La Hue, Mathematics
MCC-Penn Valley
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

Donald Lee, Mathematics
MCC-Penn Valley
B.S., Central Missouri State College
M.S., Central Missouri State College

Randall E. Leighton, Physical Therapy
MCC-Penn Valley
B.G.S., University of Kansas
M.S., University of Kansas

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

Robert H. Little, Fire Science
MCC-Blue River
A.A.S., Metropolitan Community College

William G. Loftin, Biology
MCC-Longview
B.S., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

Leann L. Lotz-Todd, Mathematics
MCC-Longview
B.A., William Jewell College
M.A., University of Missouri–Kansas City

Kimberly A. Luken, Accounting
MCC-Maple Woods
A.A., Muscatine Community College
B.A., University of Northern Iowa
M.A., University of Iowa

Joseph Manson, Stationary Engineering/HVAC
MCC-Business & Technology
B.S., Pittsburg State University
HVAC Certification

Kimball V. Marsh, Mathematics
MCC-Business & Technology
B.A., Cameron University
M.A., Kansas University

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
Chair, Natural and Social Sciences
B.S., Kansas State University
Ph.D., University of Minnesota–Twin Cities

Michelle Martin, Nursing
MCC-Penn Valley
B.S., Rockhurst University

Roger Massey, Surgical Technology
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

J. Burke Maxted, Counselor
MCC-Longview
B.A., University of Missouri–Kansas City
M.S., Central Missouri 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.A., Webster University

Tammie B. May, Sociology
MCC-Longview
B.S., Sterling College
M.A., Central Missouri State University

Catherine McClendon, Nursing
MCC-Penn Valley
B.S., Pittsburg State University
M.S., University of Missouri- KC

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.A., Arkansas State University
SCCT., Arkansas State University

James McGraw, Counselor
MCC-Longview
B.S., University of Iowa
M.A., University of Iowa
Ed.D., University of Northern Colorado

Rachel M. McGraw, Physical Therapy Assisting
MCC-Penn Valley
B.S.,
M.S.,

Stacey L. McMillen, Mathematics
MCC-Blue River
B.S., Northwest Missouri State University

Zack K. McNeil, Business
MCC-Longview
B.B.A., Mount Mercy College
M.B.A., Penn State University

Victor Meledge-Ade, Geography/GIS
MCC-Longview
A.S., Colorado Technical University
B.S., Colorado Technical University
M.S., South Dakota State University

Ashley Meyer, English
MCC-Penn Valley
B.A., Eastern Illinois University

David C. Miller, History
MCC-Longview
B.A., University of California At Riverside
M.A., University of Kansas
M.Phil., University of Kansas
Ph.D., University of Kansas

Margaret A. Miller, Reference Librarian
MCC-Longview
B.A., Bethany College
M.A., University of Kansas
M.S., Emporia State University

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
P.h.D., University of Missouri–Columbia

R. Randall Moore, History
MCC-Longview
Chair, Social Science
B.A., Virginia Wesleyan College
M.A., University of Richmond
Ph.D., University of South Carolina

Anne M. Morgan, Philosophy
MCC-Longview
A.A., Metropolitan Community College
B.A., University of Missouri- Kansas City
M.A., University of Kansas
Ph.D., University of Kansas

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

James J. Murray III, Music
MCC-Maple Woods
B.S., William Jewell College
M.M., University of Denver

Mark A. Murtha, CSIS
MCC-Maple Woods
A.A.S., MCC- Business & Technology
A.A., MCC- Maple Woods
A.A.S., MCC- Maple Woods
B.A., University of Missouri- Kansas City
M.A., University of Missouri- Kansas City

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

Millie Nottingham, Reading
MCC-Penn Valley
B.A., Ottawa University
M.Ed., Rockhurst University

Charlotte Paige, Nursing
MCC-Penn Valley
A.A., Metropolitan Community College
B.S., Graceland University
M.S., Graceland University

Jason R. Pallett, Mathematics
MCC-Longview
B.S., University of Tulsa
M.S., University of Tulsa

Amy Parrish, Nursing
MCC-Penn Valley
B.S., University of Memphis
M.S., Webster University

David A. Patience, Automotive
MCC-Longview
B.A.S., Sienna Heights University

Rory Perrodin, Automotive
Chair, Technology and Business
MCC-Longview
A.A.S., Dodge City Community College
B.S., Pittsburg State University
M.S.VTE., Pittsburg State University

Carol Pflum,Engineering
MCC-Longview
B.S., University of Missouri- Rolla
M.S., Missouri University of Science & Technology

Carrie L. Pickerel-Brooks, Education
MCC-Penn Valley
B.S., Northwest Missouri State University
M. Ed., University of Hawaii
Ed. D., University of Houston

Angela A. Pons-Sepsis, Health Clinical
MCC-Penn Valley
B.S., University of Kansas
M.S., University of St. Mary
M.B.A., University of St. Mary

Michelle A. Potts, English
MCC-Maple Woods
B.A., Park College
M.A., University of Missouri–Kansas City

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

Amy L. Prochaska, English
MCC-Longview
A.A., Marshalltown Community College
B.A., Iowa State University
M.A., University of Reno

Scott E. Quinton, Biology
MCC-Longview
B.A., University of Louisville
M.A., University of Arkansas
Ph.D., University of Kentucky

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
Chair, Science & Technology
A.S., Delta College
B.S., Central Michigan University
M.S., Michigan State University
Ed.D., West Virginia University

Mary Casey Reid, English
MCC-Longview
B.A., Missouri State University
M.A., Missouri State University

Stephen L. Reinbold, Biology
MCC-Longview
B.S., Eastern Illinois University
M.S., Eastern Illinois University
Ph.D., Illinois State University

Daniel L. Reneau, Art
MCC-Longview
B.F.A., Kansas City Art Institute
M.F.A., California College of the Arts

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

Jared Rinck, Librarian
MCC-Blue River
B.S., Central Missouri State University
M.A., Central Missouri State University
M.A., University of Missouri- Columbia

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

Jennifer Rogers, Spanish
MCC-Blue River
B.A., University of Missouri–Columbia
M.A., University of Missouri–Columbia

Jan Rog, English
MCC-Longview
B.A., Rockhurst University
M.A., Arizone 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

Susan E. Satterfield, English
MCC-Longview
A.A., MCC-Longview
B.A., Central Missouri State University
M.A., Central Missouri State University

Edward W. Schauffler, Automotive
MCC-Longview
A.A., MCC-Longview
B.S., Central Missouri 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.

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
Chair, Math, Physics, Communication
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

John F. Shively, Political Science
MCC-Longview
B.A., University of Missouri-Kansas City
M.A., University of Missouri-Kansas City

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

James Smith, Art
MCC-Longview
Chair, Business, Arts & Automotive
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

Rachel E. Smith, Biology
MCC-Blue River
D.V.M., University of Missouri–Columbia
B.A., University of Missouri–Columbia
B.S.B.A., University of Missouri–Columbia

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

Deanna Snyder, Distance Education Instructor/ Coordinator
MCC-Penn Valley
B.A., Grinnell College
M.S.M., Iowa State University
Ph.D., Iowa 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

Julia M. Spence, Sociology
MCC-Longview
A.A., Metropolitan Community College
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

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

Eric Sullivan, English
MCC-Longview
B.A., University of Michigan
M.A., The California State University

Russell D. Sullivan, Fire Science
MCC-Blue River
Missouri State Certification
Class A police officer

Michael E. Sweetland, Chemistry
MCC-Penn Valley
B.S., Saint Norbert College
M.S., University of Pittsburg

Kimberly Thebeau-Siercks, Radiologic Technology
MCC-Penn Valley
B.S., Avila College
M.S., Kansas State University

Douglas A. Thompson, Criminal Justice
MCC-Blue River
A.A., Metropolitan Community College

Michael R. Thorne, Heating, Ventilation, & Air Conditioning
MCC-Business & Technology
Certificate in Heating and Refrigeration

Louis Tobin, Industrial Technology
MCC-Business & Technology
Certificate in Heating and Refrigeration

Lavon M. Tonga, Biology
MCC-Longview
B.F.A., Kansas City Art Institute
M.F.A., University of Miami

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

My An Tran, Mathematics
MCC-Longview
B.S., University of California
M.M., University of California
Ph.D., University of California

Rickey H. Turner, Criminal Justice
MCC-Longview
B.A., University of Nebraska
M.A., University of South Carolina

Handady H. Udupa, Dental Assisting
MCC-Penn Valley
B.D.S., Bangalore University-Bangalore, India

Alicia R. Valdivieso, Mathematics
MCC-Penn Valley
B.S., University of La Verne
M.S., University of California

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

Lee Jae Wansing, Nursing
MCC-Penn Valley
A.A., University of Mary
M.S.N., University of Mary

Michael Warren, English
MCC-Maple Woods
B.A., University of Kansas
M.F.A., University of Montana
M.A., University of Central Missouri

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

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

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

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

Dempsey A. Yearry, Computer Science/Information Systems
MCC-Maple Woods
B.S., Devry Institute of Technology

William Young, History
MCC-Maple Woods
B.A., Iowa State University
M.A., Iowa State University

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.

Marvin R. Aaron (1993-2013), 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

Stanley R. Abrahamson (1994-2013), Director, Automotive Technology
MCC-Longview
B.S., Pittsburg State University
M.S., Pittsburg State University

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
MCC-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

Gail Barham (1989-2010), Director, Organizational Development
MCC-Administrative Center
A.A., Longview
B.A., University of Missouri–Kansas City
M.S., Kansas State University

Lynn Barron (2000-2011), Associate Dean
MCC-Maple Woods
B.S., Missouri Western State College
M.Ed., William Woods University

Edith Bartholomew (1957-1985), English
MCC-Penn Valley
A.B., Wheaton College
A.M., Northwestern University

Carolyn Baskett (1999-2013), Associate Vice Chancellor, Human Resources
MCC-Administrative Center
B.S., Alabama A & M University
M.A., Ottawa 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

Linda F. Bell (1973-2013), Child Development
MCC-Penn Valley
B.S., University of Arkansas, Pine Bluff
M.S., Emporia State University

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

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

Mary Susanne Boatright (2001-2012), Librarian
MCC-Blue River
B.A., University of Texas
M.L.S., University of Texas

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

Margaret Boyd (2000-2015), Interim Executive Director, HSI
Executive Director, Workforce Development
MCC-Administrative Center
B.S., University of Arkansas
M.S., University of Central Arkansas

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

Rebecca A. Breit (1997-2013), Library and Learning Resource
MCC-Business & Technology
B.A., University of California-Riverside
M.Ed., University of Missouri-Columbia

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

Carolyn S. Brown (1989-2013), Director- Resource Development
MCC-Administrative Center
A.A.S., Metropolitan Community College
B.S., Park University

Beverlye J. Brown (1988-2008), Associate Vice Chancellor and Assistant to the Chancellor
MCC-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

Mark A. Burns (1997-2013), Director,Finance & Business Services
MCC-Administrative Center
B.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

Christine Smith Butler (1986-2011), Director, Resource Development
MCC-Administrative Center
B.A., University of Colorado, Boulder
M.S., University of Missouri–Columbia

Cynthia A. Butler (2001-2011), Director, Student Financial Aid
MCC-Administrative Center
A.A., Penn Valley
B.S., Avila College

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

Kurt Canow (1986-2013), English
MCC-Longview
B.A., Doane College
M.A., Rice University
M.A., Southern Illinois 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

Sharon H. Carter (2003-2012), Health Careers Coordinator
MCC-Penn Valley
B.S., University of Wisconsin-Madison
M.S., University of Kansas-Lawrence

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

Theresa Chop (1993-2013), Occupational Therapy Assistant
MCC-Penn Valley
B.S., University of Kansas
M.S., University of Kansas

John Church (1993-2013), Mathematics
MCC-Longview
B.A., University of Chicago
M.A., University of Texas–Austin

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

Janet Cline (1983-2013), Dean of Student Development & Support Services
MCC-Longview
B.A., Avila College
M.A., 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

Barbara Cooke (1997-2013), Counselor
MCC-Maple Woods
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

Harvey J. Cooke (1968-1995), Business
MCC-Penn Valley
Chair, Business
B.S., Emporia State University
M.S., Emporia State University

Paula K. Cooley (2001-2011), Learning Assistance Center
MCC-Maple Woods
B.A., University of Missouri-Kansas City
M.A., University of Missouri-Kansas City

Gene F. Cota (1985-2013), Biology
Chair, Life Sciences
MCC-Penn Valley
A.A., Johnson County Community College
B.A., 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
MCC-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

Deborah Craig-Claar (1988-2013), Speech
MCC-Penn Valley
B.A., University of Redlands
M.F.A., Northwestern University
Ph.D., University of Missouri–Kansas City

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

Paul D. Damminga (1988-2012), Automotive
MCC-Longview
B.S., Ferris State University

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

Richard Decker (2002-2012), Heating/Ventilation and Air Conditioning
MCC-Business & Technology

Thomas E. Dewey (1969-2000), Counselor
MCC-Penn Valley
B.S., Pittsburg State University
M.S., Pittsburg State University

Karen Dexter (1985-2013), Associate Dean of Instruction
MCC-Longview
B.S., Kansas State University
M.S., Kansas State University

Richard Diklich (1972-2002), Automotive Technology
MCC-Longview
B.S., Pittsburg State University

M. Albert Dimmitt, Jr. (1990-2013), Dean of Instruction
MCC-Penn Valley
B.A., Southwestern College
M.S., Kansas State University
Ed.D., University of Missouri–Kansas City

Theodore M. Dinges (1981-2011), Business
MCC-Longview
B.B.A., Washburn University
J.D., Washburn 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
MCC-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
MCC-Administrative Center
B.A., Long Island University
M.A., New York University

Charles E. Dube (1994-2009), Associate Dean
MCC-Maple Woods
B.S., New Mexico State University
M.B.A., Kansas State University
M.S.Ed., Kansas State 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

Morssie L. Edgerson (2004-2012), English
MCC-Longview
B.S., Lincoln University
M.A., University of Missouri–Kansas City

Sylvia L. Edwards (1987-2006), English
MCC-Longview
B.A., Hastings College
M.A., Fort Hays State University

Kenneth R. Eichman (1991-2012), Mathematics
MCC-Longview
B.S., Fort Hays State University
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

Diane M. Enkelmann (1990-2013), Business
MCC-Penn Valley
B.A., Benedictine College
M.A., University of Missouri–Columbia
M.B.A., University of Missouri–Columbia

Barbara Eubank (1993-2013), Education
MCC-Longview
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

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

William Fairbanks (1987-2009), Automotive
Chair, Technology and Business
MCC-Longview
B.S.Ed., Pittsburg State University

Joseph Fiedler (1981-2010), District Director, Accounting Services
MCC-Administrative Center
B.S., Alma College

Stan D. Fields (1992-2013), Director, Business Development
MCC-Administrative Center
B.S., Park University
M.S.,University of Central Missouri

Connie Flick-Hruska (1985-2013), Counselor
MCC-Longview
B.S., Slippery Rock University
M.Ed., 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

Randall Forchee (1995-2010), Engineering
MCC-Longview
B.S., University of Missouri–Rolla
M.S., University of Missouri–Rolla

Ellen P. Forrest (1971-2000), Associate Vice Chancellor and Assistant to the Chancellor
MCC-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

Cora E. Franklin (2001-2011), Nursing
MCC-Penn Valley
B.S., University of Missouri–Kansas City

Jennie Frederick (1993-2011), Art
MCC-Maple Woods
B.F.A., Kansas City Art Institute
M.F.A., Indiana State University

Moira R. Frey (1986-2013), Chemistry
MCC-Longview
B.S., University of Wyoming
M.S., University of Washington

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
MCC-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
MCC-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

Deborah Goodall (1995-2013), President
MCC-Business & Technology
B.S., University of Colorado
M.S., Central Missouri State University

Patricia Goodwin (2003-2010), Director, Able Program
MCC-Penn Valley
B.S., University of Minnesota
M.A., University of Missouri–Kansas City

Zola Gordy (1995-2013), Retention Coordinator
MCC-Penn Valley
B.A., University of Missouri–Kansas City
M.A., University of Missouri–Kansas City

Charles M. Gosselin (1970-1998), Associate Dean of Instructional Technology
MCC-Penn Valley
B.S., Rockhurst College
M.S., University of Missouri–Kansas City

Diana J. Grahn (1990-2013), English
MCC-Longview
Chair, Humanities
B.A., University of Missouri–Kansas City
M.A., University of Missouri-Kansas City

Sharon L. Graves (1987-2011), Practical Nursing
MCC-Penn Valley
B.S.N., Central Missouri State University
M.S.N., Bishop Clarkson College

Ronald E. Greathouse (1969-2000), Vice Chancellor, Administrative Services
MCC-Administrative Center
B.S., Pittsburg State University
M.S., Pittsburg State University

Fred L. Grogan (1985-2013), President
MCC-Longview
B.A., Bates College
M.A., Arizona State University
Ph.D., University of Missouri–Columbia

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
MCC-Administrative Center
B.S., University of Missouri–Kansas City
M.S., University of Kansas
Ph.D., Louisiana State University

Sharon Hamsa (1992-2013), Mathematics
MCC-Longview
B.A., Benedictine College
M.A., St. Louis University
M.A., Notre Dame 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
MCC-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-Longview
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

William Hodgkinson, (1989-2011), English
MCC-Penn Valley
B.S., Central Michigan University
M.A., Central Michigan University

Sharon E. Hogan (1990-2010), 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

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

Patricia P. Illing (1989-2010), Reading
MCC-Longview
B.S.Ed, University of Missouri-Columbia
M.S., University of Kansas

Priscilla Jackson-Evans (1989-2013), History
MCC-Longview
B.A., University of Missouri–Columbia
M.A., University of Missouri–Columbia

Robert W. Jensen (1982-2004), District Director, Financial Services
MCC-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

Douglas E. Johnson (2004-2013), Industrial Technology
MCC-Business & Technology
B.S., Park College

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

Gary H. Johnson (1993-2011), Computer Science/ Information Systems
MCC-Longview
A.S., Metropolitan Junior College–Kansas City
B.S./B.A., Avila College
M.B.A., Avila College

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
MCC-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

Maureen Kennedy (1981-2010), Counselor
MCC-Penn Valley
B.A., Fontbonne College, St. Louis, Mo
M.Ed., University of Missouri–Columbia

Harold Kenyon (1996-2013), EMT–Paramedic
MCC-Penn Valley
A.A.S., MCC-Penn Valley

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

Sherry Kinney (2002-2011), Nursing
MCC-Penn Valley
B.S.N., Webster University

Kathryne Kiser (1992-2010), Speech Communication
MCC-Longview
B.A., University of Kansas
M.A., University of Kansas

Karen Kistner (1970-1997), District Director, Occupational Systems
MCC-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

Karen S. Komoroski (1989-2013), Nursing
MCC-Penn Valley
B.S.N., Graceland College
M.N., University of Kansas
Ed.S., University of Missouri–Kansas City
Ph.D., University of Kansas

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

Joyce S. Kuhn (1989-2013), Speech and Theater
MCC-Longview
B.A., Northern Colorado University
M.A., Northern Colorado University

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

Mark Lidman (1987-2009), English
MCC-Maple Woods
B.A., University of Virginia
M.A., Purdue University
Ph.D., University of Missouri–Columbia

D. Kim Lindaberry (2000-2011), Art
MCC-Longview
B.F.A., Kansas City Art Institute
M.F.A., Georgia State University

Elizabeth Lindquist (2001-2011), Dean of Instruction
MCC-Longview
B.A., University of Kansas
M.Phil., University of Kansas
Ph.D., University of Kansas

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

J. Dennis Lowden (2000-2013), Philosophy
MCC-Blue River
B.A., Excelsior College/University of The State of New York
M.A., University of Kansas

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
MCC-Administrative Center
B.S., Pittsburg State University

Terri Lowry (1992-2013), English
MCC-Longview
B.A., University of Missouri–Kansas City
M.F.A., University of Montana–Missoula

Jerry Macke (1998-2012), Computer Science
MCC-Penn Valley
B.A., St. Thomas College

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

Anne Mahoney (1990-2013), Speech & Drama
MCC-Blue River
B.A., University of Arkansas
M.A., University of Kansas

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
MCC-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

Pamela G. Matthiesen (1986-2009), Computer Science/ Information Systems
MCC-Maple Woods
B.S., Central Missouri State University

Gloria Maxwell (1999-2013), Librarian
MCC-Penn Valley
B.A., Central Missouri State University
M.A., Central Missouri State University
M.L.S., Emporia State University

Louise S. McCants (1983-1988), District Director of Instructional Services
MCC-Administrative Center
B.S., Oklahoma State University
M.S., Oklahoma State University
Ph.D., Ohio State University

Debra Lewis McCarty (1989-2012), Reading
MCC-Maple Woods
B.S., Northwest Missouri State University
M.A., University of Missouri–Kansas City

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

Murvell V. McMurry (1982-2011), Counselor
MCC-Penn Valley
B.S., Lincoln University
M.Ed., Iowa State University

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

Darrel Meyer (1998-2012), Director, Facility Services
MCC-Administrative Center
B.S., Kansas State University
M.P.M., Keller Graduate School

Linda Spotts Michael (1981-2005), Business
MCC-Maple Woods
A.A.S., Junior College of Kansas City
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

Donald Miller (1994-2013), Chemistry
MCC-Blue River
B.A., Taylor University
M.S., Purdue University

Dorothy Miller (1994-2013), Director, Purchasing
MCC-Administrative Center
B.S., Southeast Missouri State University
M.S., Arkansas State University

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

Elizabeth N. Minis (1989-2013), Dean of Student Services
MCC-Penn Valley
B.S., Emporia State University
M.S., Emporia State University
Ed.D., University of Missouri–Columbia

Brian Mitchell (1985-2010), Biology
MCC-Longview
B.S., Illinois State University
M.S., Illinois State University
Ph.D., University of Missouri–Columbia

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

Patricia L. Munn (1981-2013), Biology
Chair, Natural Sciences
MCC-Longview
B.S., University of Missouri–Columbia
M.S., University of Missouri–Columbia

Stewart E. Nelson (1963-1999), History
MCC-Maple Woods
A.B., Park College
M.A., University of Kansas

John R. O'Connell (1990-2013), Physical Education
MCC-Longview
B.A., Fort Lewis College, Colorado
M.A., Adams State College, Colorado

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

Carroll O'Neal (1967-2011), Acting Associate Dean of Student Services
MCC-Penn Valley
B.A., University of Missouri–Kansas City
M.P.A., Park College

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
MCC-Administrative Center
A.A., MCC-Maple Woods
B.S., Park College
M.P.A., University of Missouri-Kansas City

Karen Sue Richards (1987-2009), 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

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

Gwendolyn K. Robertson (1984-2012), Physical Therapist Assistant
MCC-Penn Valley
B.S., University of Kansas
M.A., University of Missouri–Kansas City

Colvert L. Roll (2007-2013), Criminal Justice
MCC-Blue River
B.S., Southwest Missouri State University
M.Admin of Justice., Wichita State University

Jan A. Rosenblum (1990-2013), Counselor, Educational Opportunity Center
MCC-Penn Valley
B.A., College of Emporia, Kansas
M.S., Emporia State University

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

Merna S. Saliman (1998-2013), 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

James H. Sampson (1963-1983), Director of Personnel
MCC-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

Barbara Schaefer (1994-2011), Counselor
MCC-Blue River
B.S., Southeast Missouri State University
M.A., Southeast Missouri State University

Elliott Schimmel (1998-2013), History
MCC-Longview
Chair, Social Sciences
B.A., Fairleigh Dickinson University
M.A., Syracuse University
Ph.D., Florida 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

Jennifer Scott (1995-2013), Health Information Technology
MCC-Penn Valley
B.S., University of Kansas

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

Leah Shelton (2000-2010), Access Counselor
MCC-Blue River
B.A., William Jewell
M.A., University of Missouri–Kansas City

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
MCC-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

Rosemary Shocklee-Fusaro (1996-2010), Nursing
MCC-Penn Valley
B.S.N., Avila College
M.Ed., University of Missouri–Kansas City
M.S.N., University of Missouri–Kansas City

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

Mary A. Simpson (1975-2013), Reading
MCC-Blue River
B.A., Claflin College
M.A., Florida A & M University

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

Jane A. Smeltzer (1995-2011), Director, Financial Services
MCC-Administrative Center
B.S., University of Missouri–Columbia
M.B.A., University of Missouri–Kansas City

David Smith (2001-2013), English
MCC-Blue River
B.A., Old Dominion University
M.A., Old Dominion University
Ph.D., University of North Carolina–Chapel Hill

Robert J. Smith (1993-2010), Counselor, Educational Opportunity Center
MCC-Penn Valley
M.A., University of Missouri–Kansas City

Shirley Fieth Smith (1969-1991), Office Systems
MCC-Longview
B.S., Central Missouri State University
M.A., Central Missouri State University

Jacqueline I. Snyder (1995-2010), Chancellor
MCC-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

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
MCC-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

J. Michael Sturgeon (1991-2009), Computer Science/ Information Systems
MCC-Penn Valley
B.S., Missouri Western State College

Mary Svoboda-Chollet (1997-2013), Child Growth and Development
MCC-Penn Valley
B.S., University of Nebraska-Lincoln
M.S., University of Kansas

Suzana Swager (1985-1997), Basic Skills
MCC-Blue River
B.A., Southwest Baptist College
M.S., Central Missouri State University

Judith E. Taylor (1990-2010), Radiologic Technology
MCC-Penn Valley
B.H.S., University of Missouri–Columbia
M.Ed., University of Missouri–Columbia

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

Ronald L. Taylor (1989-2013), 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 (1997-2013), Manufacturing Technology
MCC-Business & Technology
Chair, Technology
A.A., MCC-Longview
B.S., Central Missouri State University
M.S., 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
MCC-Administrative Center
B.S., Wayne State University
M.S., Wayne State University
Ed.S., University of Missouri–Kansas City

Leta H. Tyhurst (1993-2012), Learning Center
MCC-Longview
B.S., University of Missouri–Columbia
M.S., University of Missouri–Columbia

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

W. Douglas Washer (1989-2010), Philosophy
MCC-Longview
B.A., Southwest Missouri State University
M.A., University of Missouri–Columbia

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

Janet L. Weaver (1987-2013), Outreach Counselor
MCC-Maple Woods
B.A., University of Missouri–Kansas City
M.Ed., University of Missouri–Columbia

Reinhard Weglarz (1985-2013), Director, Budget & Planning
MCC-Administrative Center
B.S., Benedictine College
M.B.A., University of Missouri–Kansas City

dorether Welch (1995-2013), 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

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
MCC-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

Susan Wilson (1982-2013), Director, Student Development
MCC-Administrative Center
B.S., Emporia State University
Ed.D., University of Missouri–Columbia

Patricia A. Winberg (1993-2013), Nursing
MCC-Penn Valley
R.N., Research Medical Center
B.S.N., Avila College
M.S.N., University of Kansas Medical School of Nursing

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

Janet K. Wyatt (1987-2013), Mathematics
MCC-Longview
Chair, Math and Engineering
B.S., University of Arkansas
M.A., University of Arkansas

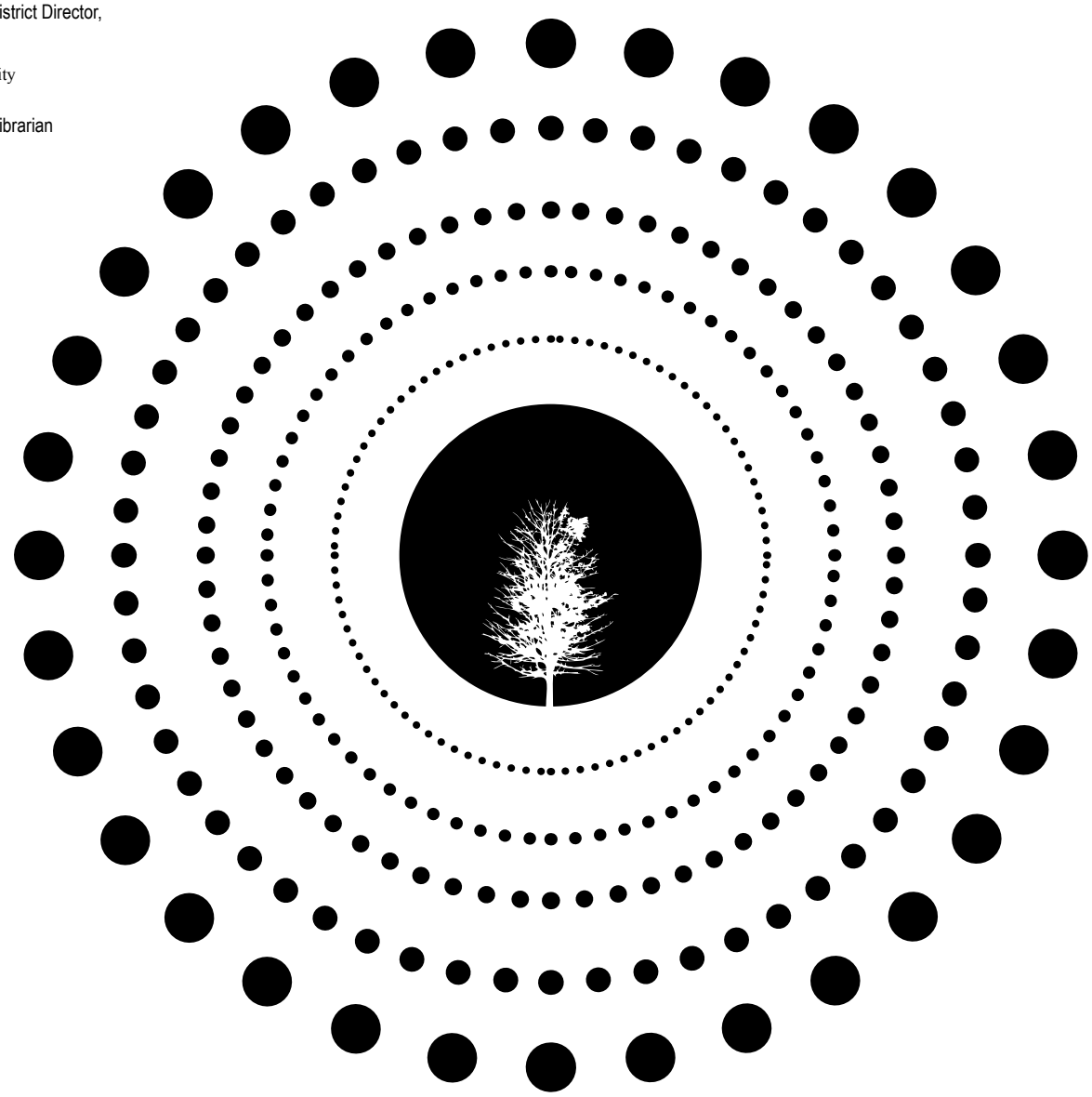
Christine A. Yannitelli (1972-2004), Counselor
MCC-Maple Woods
B.A., Michigan State University
M.Ed., University of Missouri–Columbia
M.A., University of Missouri–Kansas City

Virginia D. Yates (1968-1984), Reading
MCC-Penn Valley
B.S., Pittsburg State University
M.A., University of Missouri–Kansas City

Ruth Yunker (1997-2009), 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

Jane M. Zeitner (1998-2010), District Director, Educational Programs
MCC-Administrative Center
B.S., Brigham Young University
M.S., Avila College

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.

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.

ADVISING TRACKS. Advising tracks are 4-6 courses that have been selected by the discipline that should easily transfer to receiving institutions or be prerequisites for courses in the major.

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 60 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.)

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 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 completion as well as certificate programs that include only 12 to 20 credits hours.

COLLEGE 100. COLL 100 is a one credit hour course designed to help students adjust to the MCC community, develop a better understanding of the learning process, and acquire essential academic survival skills. The course should be completed during students' first enrolled semester.

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 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 60 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.

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.

GLOBAL DIVERSITY. A Global Diversity course addresses two of the following factors:

· The behavior, ideals, values and beliefs of diverse groups of people, and a cognitive awareness of the student's own perspective as it relates to other groups and societies.

· The sources of emotion, community, commonality, and conflict associated with diversity factors including race, ethnicity, gender, religion, sexual orientation, and political ideology.

· Groups historically excluded from the dominant culture.

· At least 50% of the course content reflects the international nature of the course including international events, current or historical and relevant geographical knowledge.

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

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

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

HOME 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.

HYBRID. Courses in which some portion of classroom instruction is replaced with online activities. These courses require classroom attendance on campus.

INSTITUTE FOR WORKFORCE INNOVATION
The MCC Institute for Workforce Innovation serves businesses and community organizations by offering consulting services, contract training, and short-term training for career certifications and job readiness.

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 coordinated general education courses are called Learning Communities and are taught by a team of faculty members. The integration of disciplines within a Community 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.

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.

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. MCC grants admission and enrollment to students outside the state of Missouri through the National Council for State Authorization Reciprocity Agreements (NC-SARA). To learn more about member states please check http://www.mhec.org/sara.

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.

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

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 ##.

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 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.

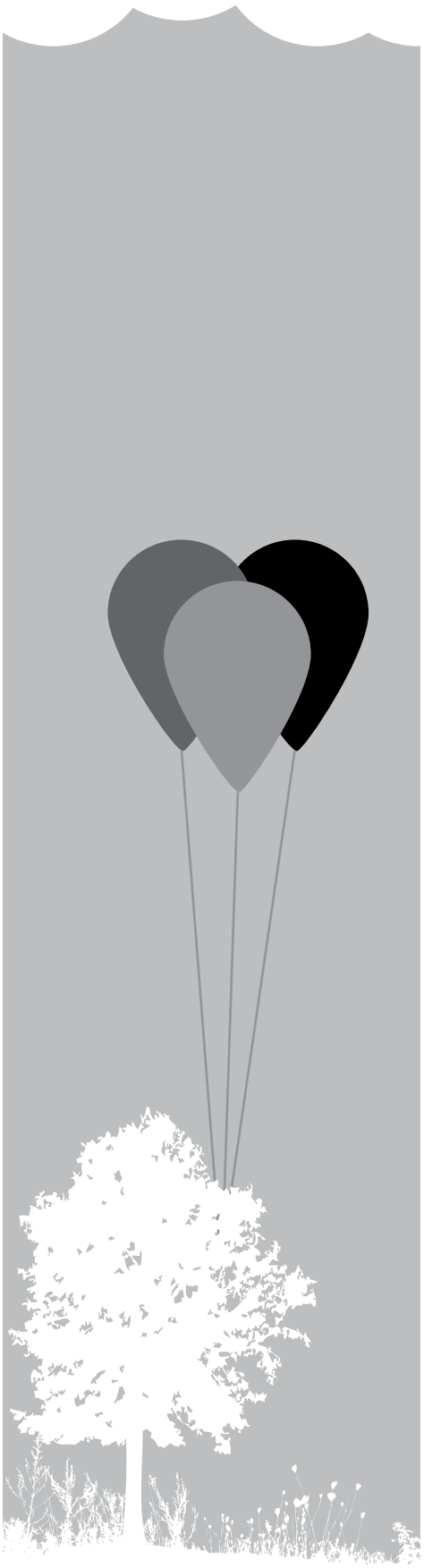
TRANSFER LIBRARY. The Missouri Coordinating Board for Higher Education has approved a new statewide "transfer course library" that will assist students with the transfer of selected courses for credit at public colleges and universities in the state. The library will make the transfer process easier for more students.

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.



Index

A

ABLE Program 18
Academic Advising 17, 242
Academic Renewal 15
Academic Information 14
- academic integrity 15
- academic intervention and support 15
- academic record 15
- academic renewal 15
- academic standards 14
- attendance-financial aid 15
- audit 14
- credit by certification 15
- credit by examination 15
- credit for advanced standing 15
- dropping a course 16
- Family Educational Rights and Privacy Act 15
- final exams 14
- grade point average (GPA) 14
- honors 14
- repeating classes 14
- satisfactory-unsatisfactory option 14
- scholarship points 14
- student conduct 16
- student disciplinary procedure 16
- student grievances 16
- student load 16
- transcripts 15
- withdrawal from college 16

Academic Year 242
Accreditation 2, 242
Administrative Center 6
Admission Information 9
- admission of high school students 9
- admission to JCCC and KCKCC programs 10
- certifying residency 12
- college admission 9
- determining resident status 12
- eligibility 12
- help for service members 12
- international students 11
- placement testing 11
- resident classification 11
- steps for MCC affiliate program students 10

Advanced Standing 242
Affiliate Agreements 242
Allied Health 165
Alumni 8
Americans with Disabilities Act 21
Animal Health 165
Anthropology
- course descriptions 166

Apparel and Textiles 39
- course descriptions 166
- Design and Product Development 39
- Merchandising and Marketing 40

Art
- course descriptions 167

Articulation Agreements 242
Assessment 19
Associate in Applied Science 242
Associate in Arts 27
Associate in Arts Teaching 28
Associate in Computer Science Degree 29
Associate in Engineering 31
Associate in Science 32
Attendance 15
Audio Engineering 42
Auditing a course 14
Automotive Technology 43
- certificate 48
- Collision Repair Technology 43
- course descriptions 170
- Ford/ASSET 44
- GM/ASEP 45
- Industrial Mechanical 45
- Mechanical 47

B

Bachelor's degree 242
Basic Skills
- course descriptions 172

Biology
- course descriptions 172

Biotechnology 49
- certificate 50

Blue River Campus 5
Board Policy 242
Board of Trustees 4
Bookstores 17
Business 51
- Accounting Emphasis 51
- course descriptions 173
- Logistics Emphasis 52
- Management Emphasis 53
- Office Management Emphasis 54

Business & Technology Campus 5
Business Services 23

C

Campus Life and Leadership 19
- Athletics 19
- Fitness Centers 19
- KC Area Student Exchange 19
- Educational Opportunity Center 19

Cancellation of Classes 19
Career and Technical Program 35
Career Clusters 37
Catalog 9
Catalog Number 242
Certificate Program 242
Chemistry
- course descriptions 175

Child Growth and Development 55
- certificate 56
- course descriptions 175

College 177
College 100
Coding Specialist Certificate 106
Colloquia 242
Commencement 242
Communications
- course descriptions 177

Community Education 23
Compliance with Federal Laws and Regulations 20
Computer Aided Drafting & Design 57
Computer Integrated Machining & Computing 58
- Advanced CIMM 60
- Lathe 59
- Mill 59
- course descriptions 178

Computer Science & Information Systems 61
- CCNP 61
- Cyber Security 63
- Certificates 67
- Cisco 62
- Software Development 64
- Systems Administration and Engineering 65
- Web Technologies 66
- course descriptions 179

Conference Hours 242
Construction Management 69
- course descriptions 182

Construction Trades Apprenticeship Program 70,161
Contact Hour 242
Continuing Education 23
- continuing education units 242

Corequisite 242
Counseling 17
Course 242

Courses at MCC
• course numbering 165
Course Description 242
Credit 242
Credit by Certification 15, 242
Credit by Examination 15, 243
Credit Course 243
Credit for Advanced Standing 15, 242
Credit Hour 243
Criminal Justice
• Adult Corrections 82
• course descriptions 183
• Juvenile Services 83
• Police Science-600 Program 84
• Police Science Emphasis 84
Curriculum 243

D

Dance
• course descriptions 184
Definitions of Academic Terms 242
Degree 243
Dental Assisting 85
• certificate 86
• course descriptions 185
Developmental Course 243
Directory Information 243
Disability Support Services 18
Disciplinary Procedure 16
Discipline 243
Distance Education 243
District Resident 12, 243
Dropping a Course 16
Drug Free Schools and Communities Act 22
Dual Credit 243

E

Economics
• course descriptions 186
Education
• course descriptions 186
Educational Plan 243
Educational Services
• basic skills courses 172
• community education courses 24
• career and technical programs 35
• transfer programs 26
• workforce training and business solutions 23
Elective 24
Emergency Medical Services 186
Emeriti 233
Energy Efficiency Certificate 108
Engineering
• course descriptions 187
Engineering Technology
• Civil 88
• course descriptions 188
• Mechanical/Manufacturing Engineering 91
• Architecture 87
• Computer and Electronics 89
• Construction Management 90
• course descriptions 187
English as a Second Language
• course descriptions 192
English Language and Literature
• course descriptions 190
Environmental Health & Safety Technology 94
• certificate 95
• course descriptions 194
• EHSS Health and Safety 93
• Environmental 92

F

Faculty 243
Family Educational Rights and Privacy Act 15
Federal Laws and Regulations
• Americans with Disabilities Act 21
• compliance 20
• Drug Free Schools and Communities Act 22
• Family Educational Rights and Privacy Act 15
• nondiscrimination 20
• right to know 21
Federal Work-Study Program 245
Financial Aid 13
Financial Information 13
• financial aid 13
• refund policy 13
• tuition and fees 13
• tuition payment plan 13
Fire Science Technology 97
• course descriptions 195
First Year Seminar 9
Foreign Language
• course descriptions 197
Foreign Language Interpreting
• course descriptions 198
Forensic Chemistry 99
Foundation 8
Full-Time Student 243

G

Game Development 100
GED 243
General Education 243
General Education Certificate 33
General Information 20
Geographic Information Systems 102
Geography
• course descriptions 198
Geology
• course descriptions 199
Global Diversity 243
Glossary of Academic Terms 242
Grade Point Average (GPA) 14
Graduation Requirements 26
Grant 244
Graphic Design 103
• course descriptions 199
Graphic Media Technician 104
Grievances 16
Guided Studies
course descriptions 200

H

Health Information Management 105
• Coding Specialist 100
• course descriptions 200
Heating, Ventilation & Air Conditioning 107
• certificates 108
• course descriptions 201
History
• course descriptions 202
History of MCC 7
Home Schooling 244
Honors 14
Hospitality Management 109
• Chef Apprenticeship 109
• Food and Beverage 110
• Hotel and Lodging 111
Humanities
• course descriptions 204
Human Sciences
• course descriptions 203
Human Services
• course descriptions 203

I

Industrial Technologies
• Bricklayer 70
• Construction Carpentry 71
• Construction Cement Masons 72
• Construction Driver and Logistics 73
• Construction Ironworker 74
• Construction Laborer 75
• Construction Management 113
• course descriptions 205
• Critical Facilities 114
• Floor Layer 76
• Glaziers 77
• Industrial Electrical 115

- Industrial Electrical Certificate 123
- Industrial Maintenance 116
- Industrial Main. Certificate 123
- Industrial Main. Electrician 132
- Industrial Mechanic 127
- Industrial Pipefitter/ Sprinkler Fitter 128
- Industrial Welder 130
- Inside Wiring- 3 year program 78
- Inside Wiring- 5 year program 79
- Instrumentation & Controls 117
- Instrumentation & Controls Certificate 124
- Lineman Technician/ Cable Splicer 131
- Millwright 119, 133
- Millwright Certificate 125
- Military Technology 118
- Multi-craft Emphasis 120
- Painter 80
- Photovoltaic121
- Plumbing 81
- Programmable Logic Controller Certificate 125
- Sheet Metal 134
- Stationary Engineer 122
- Stationary Engineer Certificate 126
- Warehouse Worker 129

Institute for Workforce Innovation 244
Industrial Trades Apprenticeship Program 127, 161
Intercollegiate Activities 244
Interdisciplinary Course 244
Interior Design 135
- Interior Design & Merchandising Entrepreneurship 139
- Interior Design Advanced 138
- Interior Entrepreneurship 136
- Interior Merchandising 137
- Interior Design Retail Sales Manufacturers Representative 138

International Student 11, 244
International Studies 34
Internship 244
Intramural Activities 19, 244

K

KCASE/Kansas City Area Student Exchange 19
KC REACHE 244

L

Laboratory Hours 244
Lab and Studio fees 13
Land Surveying
- course descriptions 207

Law Enforcement
- course descriptions 208

Learning Assistance Center 18
Learning Communities 244
Lecture Hours 244
Libraries 17
Library Science 208
Lineman 140
- course descriptions 209
- certificate 140

Longview Campus 5

M

Major 244
Map 5
Maple Woods Campus 5
Major Appliance Technology 143
Mathematics
- course descriptions 209

MCC 244
MCC Foundation 8
Metropolitan Community College
- accreditation 2
- board of trustees 4
- commitment to diversity 6
- core values 6
- MCC Mission 6
- officers of the district 4
- purpose statements 6
- vision 6

Military/Service Members 12
Minor 244
Mortuary Science 144
Music
- course descriptions 211

Music Technology 145

N

Nondiscrimination 20
Nondistrict Missouri Resident 11
Nonimmigrant Alien Students 23
Nursing 146

O

Occupational Education 147
Occupational Therapy Assistant 148
- course descriptions 212

Officers 4
Out-of-State Resident 11, 244

P

Paralegal Practice 149
- course descriptions 213

Emergency Medical Services - Paramedic 150
- certificate 151
- course descriptions 186

Penn Valley Campus 5
Philosophy
- course descriptions 214

Physical Education
- course descriptions 215

Physical Therapist Assistant 152
- course descriptions 217

Physics
- course descriptions 218

Placement Test 11
Political Science
- course descriptions 218

Polysomnography/ Sleep Technology 153
Practical Nursing 154
- course descriptions 219

Practicum 244
Prerequisite 244
Professional Nursing 155
- course descriptions 219
- LPN-ADN Bridge Program 142

Program Eligibility 36
Program of Study 244
Project Success 18
Psychology
- course descriptions 220

R

Radiologic Technology 156
- course descriptions 221

Railroad Operations Technology
- Railroad Conductor 157

Reading
- course descriptions 222

Reading Center 18
Reentry Programs 18
Registration 244
Regular Student Employment 244
Resident Classification 11
Respiratory Care 158
Returned checks 13
Right to Know 21

S

Satisfactory Academic Progress 15
Scholarship 8, 245
- scholarship points 14

Section 245
Semester 245
Seminar 245
Sexual Harassment 22

Sign Language Interpreting
• course descriptions 223
Social Science
• course descriptions 223
Sociology
• course descriptions 224
Standard of Student Conduct 245
Statement of Ethical Conduct and Assessment 19
Sterile Processing and Environmental Service 126
Student Conduct
• Student Disciplinary Procedure 16
• Student Grievances 16
Student Load 245
Student Participation in Assessment 19
Student Services 17
• academic advising 17
• athletics 19
• computer lab services 17
• disability services 18
• e-mail access 17
• educational opportunities center 19
• fitness centers 19
• grade change 14
• Kansas City area student exchange 19
• learning assistance centers 18
• libraries 17
• parking 17
• project success 18
• reading centers 18
• student employment services 17
Support Services 17
Studio Hours 245
Surgical Technology 159
• course descriptions 224

T

Term 245
Textbooks 17
Theater
• course descriptions 225
Tobacco-Free 21
Trade Apprenticeship Degree Completion 161
Transcript 15
Transfer Degree Programs 26
Transfer Library 245
Tuition 13

U

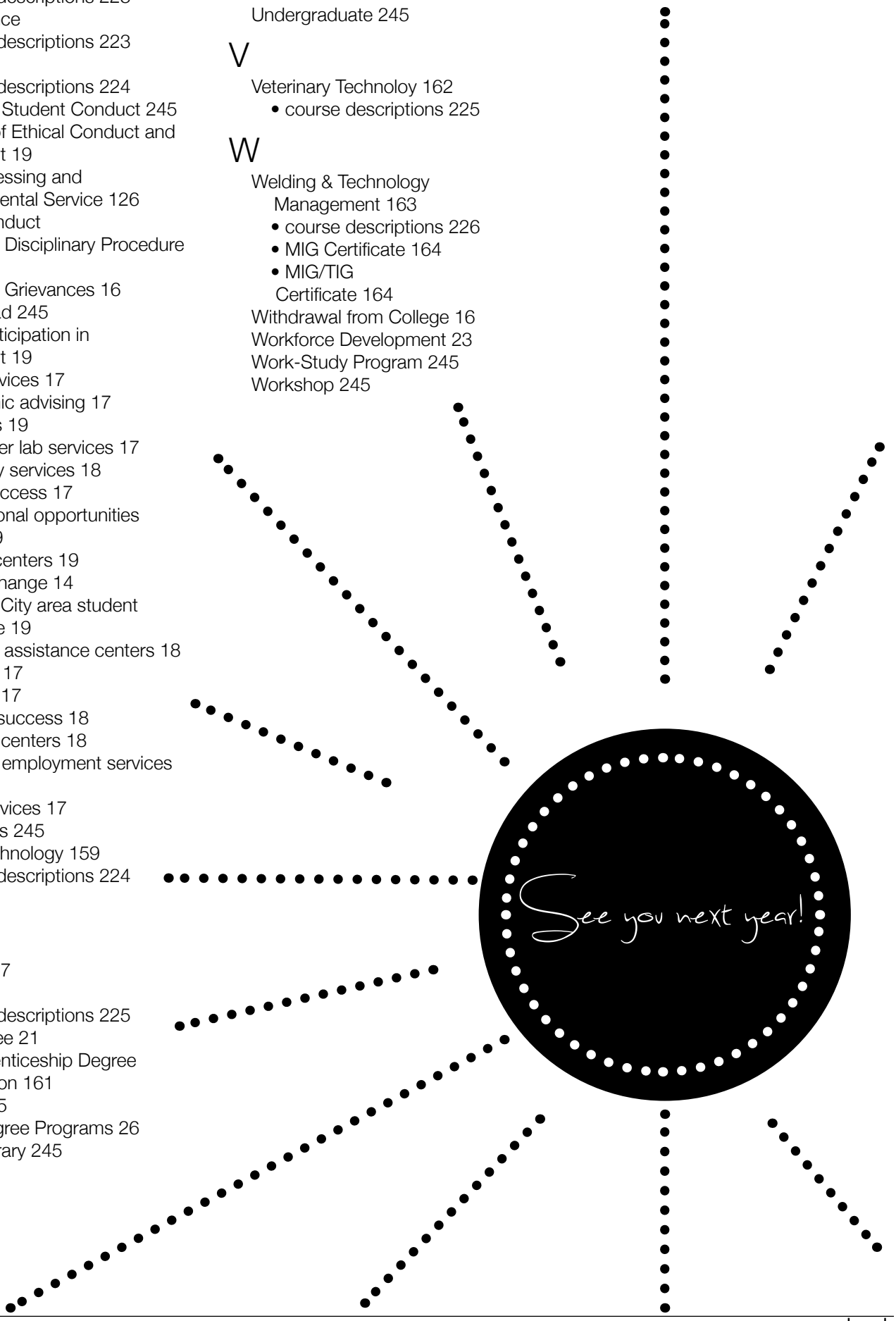
Undergraduate 245

V

Veterinary Technoloy 162
• course descriptions 225

W

Welding & Technology Management 163
• course descriptions 226
• MIG Certificate 164
• MIG/TIG Certificate 164
Withdrawal from College 16
Workforce Development 23
Work-Study Program 245
Workshop 245



Metropolitan Community College