



Metropolitan  
Community College

# 2010- 2011 CATALOG



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YOUR  
PATH**



# Metropolitan Community College Catalog 2010-2011



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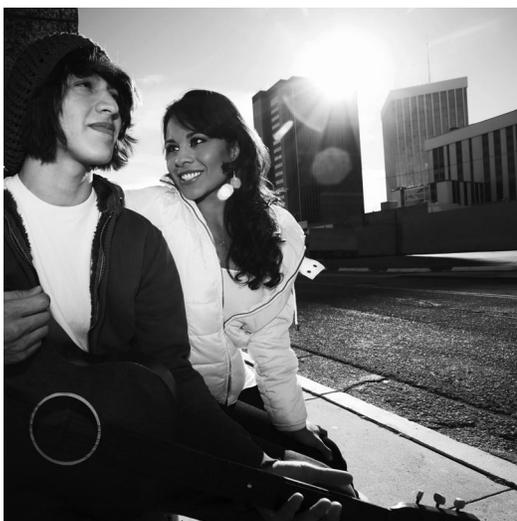
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### NOTE

This catalog contains information that will familiarize you with Metropolitan Community College. Contents of this catalog are current as of the March 2010 publication. Material in the catalog relates to the operations and activities of Metropolitan Community College and is for informational purposes only. It does not represent enforceable contractual obligations of Metropolitan Community College. The college reserves the right to modify programs, course offerings, printed schedules, rules, regulations and operations at any time. Information about these changes is available from members of the counseling and advising staff at any of the campuses. Check out MCC's web site at [www.mcckc.edu](http://www.mcckc.edu).



Serving the four Missouri counties of  
metropolitan Kansas City  
An Equal Opportunity/Affirmative  
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An online copy of the MCC 2010-2011

Catalog can be found at  
**[www.mcckc.edu](http://www.mcckc.edu)**

# Letter from the Chancellor



**Jacqueline I. Snyder, Ed.D.**  
Chancellor



**Mark James**  
Executive Vice  
Chancellor,  
Chancellor Designee

Welcome to Metropolitan Community College, and thank you for your interest in learning with us. Whether you are seeking career training, an associate's degree, leisure classes or professional development, I trust you will find what you need at MCC.

Your success and satisfaction are important to us. That's why we're constantly finding new ways to better support your success:

- Services like mobile enrollment and drive-through book buy-back at MCC-Longview make life easier for on-the-go students.
- New facilities like the Precision Driving Center at MCC-Blue River, the Sports Training Center at MCC-Maple Woods and the Health Science Institute at MCC-Penn Valley enhance student learning with state-of-the-art equipment and resources.
- New and expanded curricula like green-energy courses at MCC-Blue River and the engineering technology program at MCC-Business & Technology provide students with more career options than ever before.
- Articulation agreements and dual admission agreements with local and regional universities offer students seeking a bachelor's degree a simple and affordable way to achieve that goal.
- Partnerships with businesses and community agencies allow the MCC Institute for Workforce Innovation to help out-of-work Kansas Citians prepare for stable, high-demand jobs so they can get back to work fast.
- With recent MAPP test results showing that MCC does as well as, if not better than, other colleges at preparing students with general education courses, MCC is the right choice for students looking for a friendly, affordable way to get started.

With 95 years of providing quality higher education in Greater Kansas City, MCC has brought opportunity to hundreds of thousands of people. I am proud to have been a part of this great college for the past 15 of those years. In June, I will be retiring from MCC, and I will leave with full confidence that the college's tradition of creating real impact in our city will continue with fervor. Mark James, MCC's vice chancellor of administrative services, will assume the role of chancellor beginning July 1, 2010. I am pleased to be succeeded by such a capable, conscientious leader. I am also grateful to you—MCC students, friends and community partners—for the part that you have played in making MCC a great place to round out my 41-year career in education.

As always, MCC remains committed to our mission of preparing students, serving communities and creating opportunities. We will continue to make every effort to ensure the success of our students, the viability of our community and the accessibility of our services.

A handwritten signature in cursive script that reads "Jackie Snyder".

Jacqueline I. Snyder, Ed.D.

# The Board of Trustees

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David L. Disney,  
President



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Vice President



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Mariann Tow

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## The Officers of the District



Jacqueline I. Snyder,  
Chancellor



Mark James,  
Executive Vice  
Chancellor,  
Chancellor Designee



Paul Long,  
Vice Chancellor of  
Educational Services,  
IT and Institute for  
Workforce Innovation



Tuesday Stanley,  
Vice Chancellor of  
Student Development  
& Enrollment Services  
and Administrative  
Services



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MCC-Business &  
Technology



Joe Seabrooks,  
President,  
MCC-Blue River



Fred L. Grogan,  
President,  
MCC- Longview



Merna S. Saliman,  
President,  
MCC-Maple Woods



Bernard Franklin,  
President,  
MCC-Penn Valley

# Academic Calendar

## Fall Semester 2010

New faculty orientation.....August 19 and August 20  
New adjunct faculty orientation.....Saturday, August 21  
Campus Inservice date, no day and evening classes  
.....Monday, August 23  
First date for day and evening classes  
.....Tuesday, August 24  
First date for Saturday classes.....Saturday, August 28  
Labor Day holiday observed, no classes  
.....Monday, September 6  
On-schedule state aid day..... Monday, September 20  
Midterm..... Friday, October 15  
District Inservice, no classes day and evening  
..... Tuesday, October 19  
Last date to withdraw without assessment  
.....Monday, November 15  
Thanksgiving holiday begins at 4:00 p.m.  
.....Wednesday, November 24  
Classes resume.....Monday, November 29  
Last date for Saturday classes .....Saturday, December 11  
Last date for day and evening classes  
..... Friday, December 10  
Final exams, day and evening  
..... December 13, 14, 15, 16, 17  
Saturday final exams.....Saturday, December 18  
Grades due Noon.....Monday, December 20  
Holiday break/offices closed.....December 24- January 1

## Spring Semester 2011

Martin Luther King Jr. holiday, no classes  
..... Monday, January 17  
Campus Inservice date, no classes day and evening  
..... Tuesday, January 18  
First date for classes, day and evening  
..... Wednesday, January 19  
First date for Saturday class.....Saturday, January 22  
On-schedule state aid date .....Monday, February 14  
Midterm .....Friday, March 11  
Spring break .....March 14-19  
Classes resume .....Monday, March 21  
Last date to withdraw without assessment  
..... Monday, April 15  
Last date for Saturday classes .....Saturday, May 7  
Last date for classes, day and evening  
.....Wednesday, May 11  
Reading date, evening finals only.....Thursday, May 12  
Final exams, day and evening  
.....Friday, May 13, 16, 17, 18, 19  
Saturday final exams.....Saturday, May 14  
Last date for evening finals.....Wednesday, May 18  
Last date for day finals.....Thursday, May 19  
Commencement.....Friday, May 20  
Grades due Noon.....Friday, May 20

## Summer Semester 2011

First date for classes, day and evening.....Monday, June 6  
On-schedule state aid date.....Thursday, June 16  
Independence Day observed, no classes  
..... Monday, July 4  
Last date to withdraw without assessment  
.....Thursday, July 14  
Last date for classes, day and evening.....Thursday, July 28  
Grades due Noon.....Monday, August 1

## Fall Semester 2011

New faculty orientation..... August 18 and August 19  
New adjunct faculty orientation..... August 20  
Campus Inservice date, no day and evening classes  
.....Monday, August 22  
First date for day and evening classes  
..... Tuesday, August 23  
First date for Saturday classes.....Saturday, August 27  
Labor Day holiday observed, no classes  
..... Monday, September 5  
On-schedule state aid day.....Monday, September 19  
Midterm..... Friday, October 14  
District Inservice, no classes day and evening  
..... Tuesday, October 18  
Last date to withdraw without assessment  
.....Monday, November 14  
Thanksgiving holiday (No classes, Offices open)  
.....Wednesday, November 23  
Thanksgiving holiday begins at 4:00 p.m.  
..... Wednesday, November 23  
Classes resume .....Monday, November 28  
Last date for Saturday classes  
..... Saturday, December 10  
Last date for day and evening classes  
..... Monday, December 12  
Reading date, evening finals only  
..... Tuesday, December 13  
Final exams, day and evening  
.....Wednesday, December 14, 15, 16, 19  
Saturday final exams .....Saturday, December 17  
Last date for evening finals  
..... Monday, December 19  
Last date for day finals .....Tuesday, December 20  
Grades due Noon ..... Wednesday, December 21  
Holiday break/offices closed.....December 26- January 2





## Preparing students, serving communities, creating opportunities.

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

### Vision

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

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

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

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

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

### Purpose Statements

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

### Commitment to Diversity

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

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

### Core Values

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

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

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

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

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

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

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

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



# Opening Doors of Opportunity Since 1915

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

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



Five years later, three colleges — Longview, Maple Woods, and Penn Valley — opened their doors. In the 80s and 90s, Blue Springs, Fort Osage, Independence and Park Hill School 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-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-Longview was the first community college to achieve *Time* magazine/Princeton Review's College of the Year honors.

## MCC-Maple Woods

MCC-Maple Woods in the Northland gets its name from a nearby stand of sugar maple trees. The campus includes an outstanding veterinary technology program, GIS 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-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. The campus includes a 56,500 square foot meeting and exhibit hall.

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

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

For the district, the Foundation administers 174 scholarships and endowments, sponsors alumni and donor recognition events, and leads the annual Capital Campaign. Our Board of Directors participates in planning, volunteering and administration as well as maintaining relationships with the greater community. The Foundation is committed to forming partnerships that make the 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, athletics, technology, and child care
- Supports the enhancement and construction of new facilities
- Supports educational, literary and scientific activities of MCC
- Encourages greater community involvement, and helps MCC to help itself

## MCC Foundation-Alumni Association

### Foundation Mission

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

### Ways to Give

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

- Make a Credit Card Gift

Call the Foundation office at (816) 604-1195.

- Make an Online Pledge

Go to [www.mcckc.edu/foundationwaystogive](http://www.mcckc.edu/foundationwaystogive) to fill out and submit this pledge on-line and your pledge will be processed quickly.

- Mail a Check or Money Order

Make the donation payable to the Metropolitan Community College Foundation, 3200 Broadway, Kansas City, Missouri, 64111.

All gifts are administered in compliance with the donor's wishes and IRS regulations. No administrative costs are taken from gifts. Gifts may be designated unrestricted, which allows them to be used in the areas of greatest need, or you may specify a particular program or scholarship. Because the Foundation is a non-profit organization, most contributions are tax deductible as a charitable gift. To find out more, call (816) 604-1195 or visit [www.mcckc.edu/foundation](http://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 following semester. If all MCC scholarships are not fully awarded or more funds become available later in the school year, MCC will reopen the review process for those funds still available. All scholarships are awarded based upon available funds.
2. **Read requirements thoroughly.** Read the scholarship and grant requirements carefully and refer to the contact information to find out where to obtain the right application. Meeting all the requirements of a scholarship does not automatically qualify you to receive a scholarship. A committee at each college awards the scholarships, unless otherwise noted. You must have a minimum 2.0 G.P.A. to be considered for any scholarships, unless a higher G.P.A. is noted.
3. **Fill out an application.** Fill out the MCC scholarship application and attach all the required information and documents. Applications with missing information will not be reviewed and you will miss your opportunity to qualify for a scholarship or grant. You may apply for up to six scholarships with one MCC application. Some require different applications. Metropolitan Community College Board of Trustee policy limits students from receiving more than one Institutional fee-paying scholarship per year. If the scholarship requires that you submit financial aid forms, you must complete a Free Application for Federal Student Aid. These forms are available from your high school counselor, your campus financial aid office or online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). When completing the form, use MCC's school code 002484 to speed processing.
4. **Ask questions.** If you have questions, contact the financial aid office at the college you plan to attend. Financial aid office hours vary from campus to campus, so please call ahead.

## MCC Foundation and Institutional Scholarships

(Available at more than one MCC campus)

For all MCC Foundation scholarships the priority application deadline date is April 1. Please contact your campus financial aid office for additional information or visit the online Scholarship Booklet at <http://www.mcckc.edu/pubs/campusScholarshipLists.pdf>.

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

**<http://mcckc.edu/Scholarships>**



**PLAN  
AHEAD  
ASK QUESTIONS**

# Admission Information

## Eligibility

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

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

## College Admission

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

1. Complete the online MCC Application for Admission at [www.mcckc.edu](http://www.mcckc.edu). Once MCC processes your application you are admitted to the college. Some MCC programs have special requirements.  
Note: Due to Missouri House Bill 1549, students may be required to provide documentation to verify legal status in the United States.
2. Request that the appropriate transcripts be sent to the MCC Student Data Center, 3200 Broadway, Kansas City, Missouri 64111. 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 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.
  - d. Home-school students must provide documentation as required by Missouri State Statute 167.031.2 (2)(a), R.S. MO.

- e. Students who are enrolled at a college or university other than MCC may take MCC courses as a visiting student.
- f. If you have already earned a degree, you are not required to see an advisor or take the placement test. However, these services are available to assist you in selecting appropriate courses. If you are planning to pursue a degree or certificate with MCC, it is important you consult with an advisor to ensure your enrollment includes all the necessary courses.

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

## Admission of High School Students

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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](http://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

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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

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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](http://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

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### 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 given by the institute. For more information about enrollment requirements, program curriculum and class scheduling, call (816) 604-4041.

### International Student Application Deadlines Students from Overseas

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

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

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

For more information visit  
[www.mcckc.edu/international](http://www.mcckc.edu/international).

## Placement Testing

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

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

Additional Notes:

- Visiting students who have approval for enrollment from their home college will not be required to take the placement test.
- If a student has taken the ACT examination in the last two years, he or she may be able to use those scores in place of parts of the placement test. The student must submit the ACT scores to the Student Data Center, or bring an official score report when they come to test.

- It is the policy of Metropolitan Community College that all non-native speakers of English take the Applied Language Institute's English Placement Test. This test is only offered at the campuses. Students will be placed at the appropriate level of instruction in the Applied Language Institute based on the results of the English Placement Test.
- 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

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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

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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

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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

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



## Tuition and Fees

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**T**he 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 charges for tuition and fees by the due date. If your financial aid award, scholarship, or payment from an external source becomes unavailable for any reason, you are ultimately responsible for the balance.

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

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

### Lab and Studio Fees

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

### Loss or Damage to District Property

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

## Tuition Payment Plan

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

## Delinquent Accounts

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

## Returned Checks

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

## District Residents 65 and Older

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

## Refund Policy

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

Students receiving financial aid refunds should go online to [myMCCCKC](http://myMCCCKC) for disbursement information.

## Financial Aid

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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](http://www.mcckc.edu)), visit any of the campus financial aid offices, or call one of the following numbers:

MCC-Blue River	(816) 604-6566
MCC-Business & Technology	(816) 604-5252
MCC-Longview	(816) 604-2066
MCC-Maple Woods	(816) 604-3066
MCC-Penn Valley	(816) 604-4066

Students completing the Free Application for Federal Student Aid (FAFSA) should use the following number for all MCC campuses: 002484. The FAFSA may be found on the web at [www.fafsa.ed.gov](http://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 second or third quarter of the term or who has been doing satisfactory work and withdrawn during the last quarter of the term.
- S Average or satisfactory (C or above) performance for assigned work when a student chooses the satisfactory-unsatisfactory option (This option is discussed in the following section.)
- U Below average (D or F) performance for assigned work when a student chooses the satisfactory-unsatisfactory option. No credit or grade points are assigned. (The satisfactory-unsatisfactory option is discussed in the following section.)
- P Passing or better performance in continuing education or noncredit courses.
- I Incomplete work. A student receives this grade when he or she has completed all but a small part of the required coursework. The instructor decides if there is an acceptable reason (for example, a serious illness) why he or she hasn't completed all of it. If the student makes up the work during the following semester, the instructor will change the incomplete to a letter grade. If the work isn't made up, the incomplete will become an F on the student's permanent record.
- 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

Students may repeat a class to try to improve their grades. Although all the grades earned in a particular course will be included on their MCC academic record, only the last grade will be used to determine GPA. Other colleges and universities may have different policies. There may be limits on the number of times a student may repeat the same class.

## Final Exams

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

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

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

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

## Grade Change

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

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

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

## Honors

An honor student must be enrolled in six semester hours or more and have a semester grade point average of 3.5 or higher for all courses in which scholarship points were earned. Each campus also has its own special honors programs. For more information, contact the academic advisors or counselors at the appropriate MCC campus.

## Satisfactory Academic Progress

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

All Federal financial aid recipients and some other scholarship recipients must meet specific standards for satisfactory academic progress. Students are advised to become familiar with the requirements of their scholarships and to seek assistance from the campus financial aid office or to refer to the Financial Aid Handbook at [www.mccck.edu](http://www.mccck.edu).

## Academic Record

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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

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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

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

## Academic Integrity

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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

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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 on-line.

## Credit by Certification

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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

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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

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

## Family Educational Rights and Privacy Act

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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 15.

## Attendance

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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

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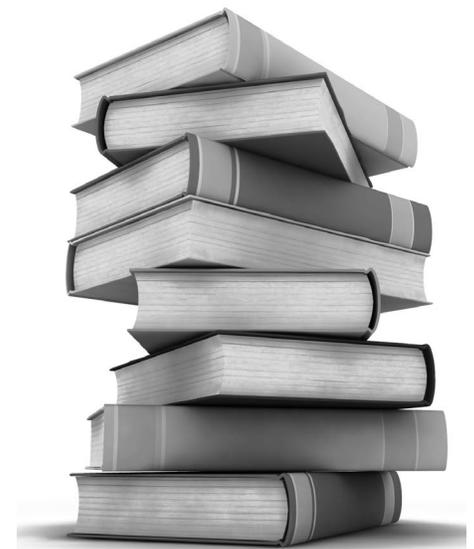
To receive financial aid, you are expected to attend all classes on which the financial aid award is based. Award funds may be delayed if you do not attend the first class. If you stop attending all of your classes before completing 60% of the semester, you will owe money back to federal aid programs.

## Dropping a Course

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Students may drop classes at any time throughout the semester; however, they must officially withdraw from classes by dropping the class through myMCCCKC. Student officially withdraws from a class during the final quarter of the term. Students who withdraw will receive a W if they're passing the class or an F if they're failing. During the first quarter of the class, a withdrawal removes the class from the transcript. In the second or third quarter, a withdrawal assigns a W to the class.

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



## Withdrawal from College

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Students who want to withdraw from all classes before the end of the semester should officially withdraw by dropping their classes through myMCCKC. The date the withdrawals are processed becomes the official date of withdrawal on a student's permanent record. That date may determine the student's semester grades. For example, if a student withdraws from a class during the last quarter of the semester and he or she is doing unsatisfactory work, then the recorded grade will be an F.

### Students who receive federal or state financial aid, including loans:

If you stop attending all of your classes before completing 60% of the semester, you owe money back to the aid program(s).

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

## Student Load

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

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

## Student Conduct

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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

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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

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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.



## Academic Advising

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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

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

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

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

## Counseling

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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

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### Child Care Centers

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

MCC-Maple Woods	(816) 604-8780
MCC-Penn Valley	(816) 604-4142

Every full-time staff person at the child care centers is trained in early childhood education. MCC-Penn Valley offers its own program in Child Growth and Development. Call (816) 604-4539 to learn more about the program.

### Parking

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

## Textbooks and College Bookstores

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

Book costs are determined by the publishers of each title and MCC uses an industry standard markup 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. Those texts will then be available for students to purchase for the next semester.

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](http://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 70 online databases provide access to magazine, journal, and newspaper articles, plus reference information on current events, careers, law, health, history, science, business, literature and more. These databases may also be accessed by students from computers off-campus.

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

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

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

The library staff includes professional librarians who provide assistance in reference and research. The libraries offer computers for access to the databases, the book catalog, and the Internet, as well as space for individual study or research.

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

## Disability Services

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

MCC-Blue River	(816) 604-6651
MCC-Business & Technology	(816) 604-3192
MCC-Longview	(816) 604-2254
MCC-Maple Woods	(816) 604-3192
MCC-Penn Valley	(816) 604-4089

For relay calls, dial 711.

For more information, visit the MCC website at: [www.mcckc.edu/access](http://www.mcckc.edu/access).

## ABLE Program

The ABLE program (Academic Bridges to Learning Effectiveness), offered at Longview and Penn Valley, provides a more intensive level of services for students with Learning Disabilities (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 Longview at (816) 604-2053 or Penn Valley at (816) 604-4717.

Visit the ABLE website at

[www.mcckc.edu/programs/able.html](http://www.mcckc.edu/programs/able.html)

## Learning Assistance Centers

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

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

## Reading Centers

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

MCC-Blue River	(816) 604-6770
MCC-Longview	(816) 604-2665
MCC-Maple Woods	(816) 604-3309

[www.mcckc.edu/tutoring](http://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) 604-6577
MCC-Longview	(816) 604-2237
MCC-Maple Woods	(816) 604-3095
MCC-Penn Valley	(816) 604-4089

## Project Success

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

- academic tutoring that supplements the classroom experience,
- transfer coordination to expose the participants to the opportunities that await them at four-year colleges and universities,
- counseling to provide academic assistance and assist with managing the daily stress,
- cultural enrichment to extend the social dimensions of the participants served,
- workshops to teach and/or strengthen skills needed for success.

These expanded services increase the likelihood of success. Call the Project Success office, (816) 604-4313, to schedule an appointment or visit its web site:

[www.mcckc.edu/pennvalley/success](http://www.mcckc.edu/pennvalley/success)

## Campus Life and Leadership

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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

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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

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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. In addition, the MCC-Longview recreational center includes a huge swimming pool. Since each campus has its own use and operating procedures, please call the following numbers for more information.

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

## Kansas City Area Student Exchange

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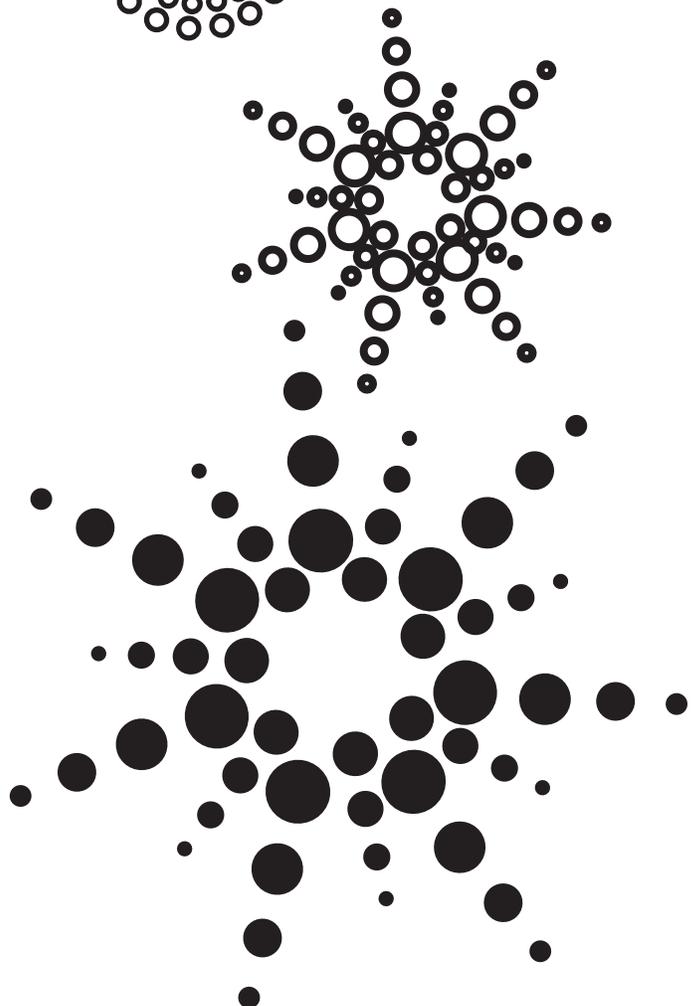
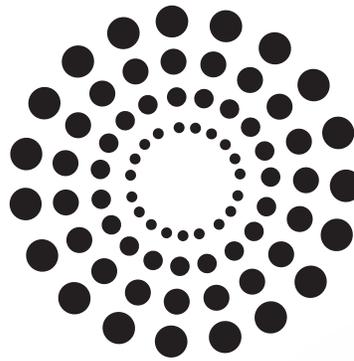
If MCC doesn't offer a course a full-time student (one enrolled in at least 12 credit hours) wants to take, then he or she may enroll in that course at another area college without paying additional fees. The following area colleges belong to the Kansas City Area Student Exchange (KCASE): Avila College, 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)

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

The EOC is funded by the U.S. Department of Education. The center is located at 3100 Main, Suite 100, Kansas City, MO 64111. For more information about EOC or to make an appointment with a counselor, call (816) 604-4400.



# General Information

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## Business & Learning Solutions

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

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

## Cancellation of Classes

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

## Compliance With Federal Laws and Regulations

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### Certification of Accuracy

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

Jacqueline I. Snyder  
Chancellor

### Nondiscrimination

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**

Carolyn Baskett, Associate Vice Chancellor of Human Resources,  
3217 Broadway, Kansas City, Missouri 64111-2429;  
telephone (816) 604-1166

**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, Associate Dean of Student Services,  
1775 Universal Avenue, Kansas City, Missouri 64120-1318;  
telephone (816) 604-5229

**MCC-Longview**

Janet Cline, 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**

Lisa Minis, Dean of Student Services,  
3201 Southwest Trafficway, Kansas City, Missouri 64111-2764;  
telephone (816) 604-4114

Inquiries may also be addressed to the  
Assistant Secretary for Civil Rights,  
U.S. Department of Education,  
400 Maryland Avenue, S.W.,  
Washington, D.C. 20202-1100;  
telephone 1-800-421-3481.



**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 Access 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 Access 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**

Access Counselor,  
20301 E. 78 Highway,  
Independence, Missouri, 64057-2023;  
Telephone: (816) 604-6651

**MCC-Business & Technology**

Access Resource Educator,  
2601 NE Barry Road,  
Kansas City, Missouri, 64156-1200  
Telephone: (816) 604-3192

**MCC-Longview**

Access Resource Educator,  
500 SW Longview Road,  
Lee's Summit, Missouri, 64081-2015;  
Telephone: (816) 604-2254

**MCC-Maple Woods**

Access Resource Educator,  
2601 NE Barry Road,  
Kansas City, Missouri, 64156-1200  
Telephone: (816) 604-3192

**MCC-Penn Valley**

Access Resource Educator,  
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 22.

## Family Educational Rights and Privacy Act

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

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

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

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

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

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

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

## Nonimmigrant Alien Students

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

## Drug Free Schools and Communities Act

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

## Right to Know

MCC complies with the provisions of "The Crime Awareness and Campus Security Act of 1990." A provision of this act requires higher education institutions to provide students an annual report that contains occurrences of criminal offenses and arrests on campus and adjacent public property. This report is available at [www.mccck.edu/crimereport.html](http://www.mccck.edu/crimereport.html) website. For a printed copy, please call (816) 604-1070 or stop by the campus public safety offices.

## Other Information

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

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Cost of Attendance.....	13
Course Load.....	16
Financial Assistance.....	13
Refund Policy.....	13

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

Admissions Coordinator  
MCC-Blue River  
Telephone (816) 604-6548  
20301 East 78 Highway  
Independence, MO 64057

Outreach Coordinator  
MCC-Business & Technology  
Telephone (816) 604-5216  
1775 Universal Avenue  
Kansas City, MO 64120-2427

Admissions Coordinator  
MCC-Longview  
Telephone (816) 604-2568  
500 SW Longview Road  
Lee's Summit, MO 64081-2105

Admissions Coordinator  
MCC-Maple Woods  
Telephone (816) 604-3167  
2601 NE Barry Road  
Kansas City, MO 64156-1299

Admissions Coordinator  
MCC-Penn Valley  
Telephone (816) 604-4623  
3201 Southwest Trafficway  
Kansas City, MO 64111-2764

# Continuing and Community Education

Continuing Professional Education: Get Ready for Work

MCC Continuing Professional Education provides a diversity of offerings and formats for people who want or need to update their skills or expand their skill sets.

## Healthcare

- Pharmacy Technician certification
- Phlebotomy certification
- Certified Nurse Assistant (CNA) certification
- Certified Medication Technician (CMT) certification
- CNA and CMT challenge examinations
- Insulin Administration
- Certified Restorative Nurse Assistant
- Level I Medication Aide

## Information Technology

- Microsoft Certified Application Specialist
- Microsoft Certified Desktop Support Technician
- Microsoft Certified System Analyst
- Microsoft Certified System Engineer
- Microsoft applications training
- Microsoft Certified Project
- A+ certification
- Net+ certification

## Green/Energy

- Deconstruction – Basics and Crew Chief
- Asbestos and Lead Abatement
- National Sustainable Building Advisor Program
- Certified Indoor Air Quality Manager (online)
- Certified Indoor Environmentalist (online)
- Biofuel Production Operations (online)
- Wind Energy Apprentice (online)
- Natural Gas Plant Operations (online)
- Senior Certified Sustainability Professional (online)
- Certified Green Supply Chain Professional (online)

## Safety

- OSHA Training Institute Education Center
- Environmental Health & Safety

## Technical Skills

- Welding
- Gas Utility Technician

## Plus 50 Initiative

- BoomerBlast 2010
- Encore Career Workshop

## Transportation

- CDL-A Truck Driver Training
- Railroad Conductor Training

## Online Courses

- Healthcare, Nutrition and Fitness
- Business and Professional
- IT and Software Development
- Media and Design
- Hospitality and Gaming
- Skilled Trades and Industrial
- Sustainable Energy and Going Green
- Accounting
- Entrepreneurship
- Writing and Publishing
- Criminal Law, Legal Careers and Enforcement
- Sales and Marketing
- Grant Writing and Non-Profit Management

**mccckc.edu**

## MCC-Longview

(816) 604-2030; [mccckc.edu/lvcommed](http://mccckc.edu/lvcommed)

- Adult leisure
- College for Kids/TeenLink
- ACED (classes for adults with developmental disabilities)
- FOCIS (divorce education classes)

## MCC-Blue River

(816) 604-6518; [mccckc.edu/brcommed](http://mccckc.edu/brcommed)

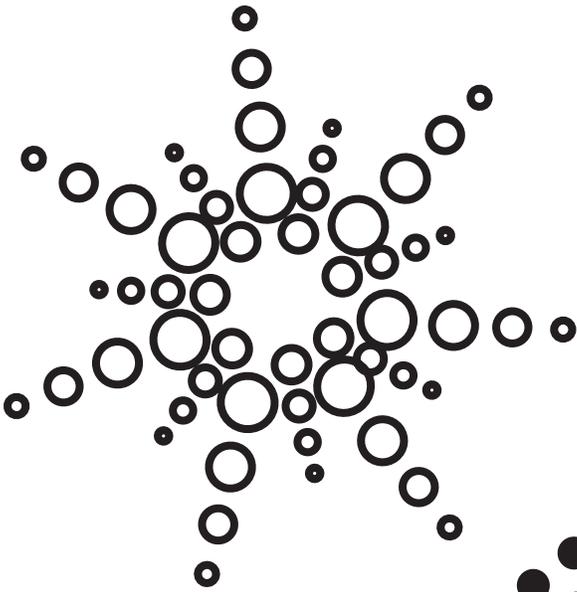
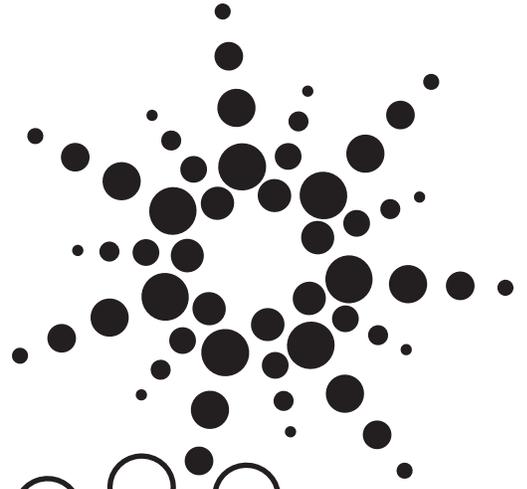
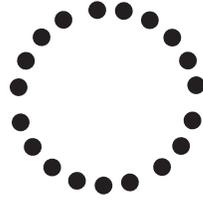
- Driver's education
- Computer classes
- C.E.R.T. emergency response training
- Spanish classes
- Online classes for business and personal interest
- Personal interest (exercise, art, life experiences)
- ACED (classes for adults with developmental disabilities)
- Ed2Go online classes

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

## MCC-Maple Woods

(816) 604-3011; [mccckc.edu/mwcommed](http://mccckc.edu/mwcommed)

- Motorcycle safety
- College for Kids
- Storytelling
- College Experience for Adults with Developmental Disabilities
- Spanish classes
- Computer classes
- Professional development
- Ed2Go online classes



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# graduation requirements.

# Transfer Degree Programs

## Degrees

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

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

These transfer degree programs are described on the following pages.

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

## Degree Graduation Requirements

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### Credentials

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

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

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

### Scholarship

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

### Enrollment

Each graduate must meet one of the following requirements:

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

### Total Credits

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

Students earning any of the five associate degrees offered by MCC must take several general education courses. For the Associate in Arts degree, at least 62 credits are required -- 42 of them in general education courses and 17 hours in electives. The Associate in Computer Science, Associate in Engineering, and Associate in Science also require an area of specialization. In addition to these general education and specialization courses, students must take electives that will bring their total number of credits up to the amount required for the degree. Only courses numbered 100 or higher can be applied toward the degree.

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

# The Associate in Arts Degree

MCC's Associate in Arts degree generally provides the first two years of college work a student might complete at a four-year college or university. The program includes 45 hours of general education courses, as well as enough electives to reach the required 62 credit hours.

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

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

## Degree Requirements

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

1. The graduation requirements for transfer degrees listed on page 25.
2. The general education requirements listed below.
3. Sufficient electives to bring their total number of credits to 62.

## General Education Requirements

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

<http://mccck.edu/gened>

## American Institutions—6 credits

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

Complete two courses from the following:

(One must be HIST.)

HIST 120	United States History to 1865
HIST 121	United States History Since 1865
POLS 135	Introduction to Political Science
POLS 136	Introduction to American National Politics
POLS 137	Introduction to State and Local Politics

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

## Communications—9 credits

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

Complete the following:

ENGL 101	Composition and Reading I <u>and</u>
ENGL 102	Composition and Reading II <u>and</u>
SPDR 100	Fundamentals of Speech <u>or</u>
SPDR 102	Fundamentals of Human Communication

## Humanities—9 credits

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

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

### Art History – any course

### Literature – any course

### Foreign Language – any course (101 or above)

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

### History

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

### Humanities – any course

### Music

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

### Philosophy – any course

### Speech and Drama

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

### Mass Communications

MSCM 112	Introduction to Modern Communications
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## Mathematics—3 credits

Rationale: The Mathematics requirement will enhance the students' ability to think critically; use mathematics to solve problems; use quantitative processes to analyze, evaluate, and interpret solutions; and communicate ideas using mathematical language and symbols.

Complete the following:

MATH 119	College Mathematics or higher-numbered MATH course
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## Natural Sciences—9 credits

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

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

### **Social Sciences—6 credits**

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

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

### **Anthropology - any course**

### **Economics - any course**

### **Geography**

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

History - any course

Social Sciences - any course

Political Science - any course

Psychology - any course

Sociology - any course

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

## **Other Associate in Arts Degree Requirements**

### Learning Enhancement Requirements

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

### Complete a Writing Intensive course:

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

and

### Complete one of the following:

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

or

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

### **Computer—3 credits**

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

### Complete the following:

CSIS 110 Technology and Information Management  
or  
higher-numbered CSIS course

### **Electives—17 credits**

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

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

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

Total credits required for the A.A. degree

62

### Student Participation in Assessment of Academic Achievement

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

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

### Statement of Ethical Conduct and Assessment.

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

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

# The Associate in Arts Degree

## Associate in Arts Degree

General Education Requirements	Credits	Semester Taken	Prerequisites
<b>American Institutions: (2 courses--one must be HIST)</b>			
HIST 120, 121, POLS 135, 136, 137	6		
<b>Communications:</b>			
ENGL 101	3		ENGL 30 or appropriate placement test score
ENGL 102	3		ENGL 101
SPDR 100 or SPDR 102	3		ENGL 30 or appropriate placement test score
<b>Mathematics:</b>			
MATH 119: College Mathematics or higher	3		MATH 110 or appropriate placement test score
<b>Humanities: (3 courses, 3 areas of study, 1 course must be Lit. or Phil.)</b>			
Art History or ART 108	3		See Courses section of this catalog for individual course prerequisites.
Foreign Language 101 or higher or SIGN 101 or 102	3-5		
HUMN	3		
Literature	3		
MSCM 112	3		
MUSI 108, 116 or 160	3		
PHIL	3		
SPDR 103, 104, 106, 110, 112, 114, 128, 133 or 228	3		
HIST/HUMN 133 or 134	3		
<b>Natural Sciences: (2 courses, 1 Biological and 1 Physical)</b>			
BIOL (Must include laboratory)	5		See Courses section of this catalog for individual course prerequisites.
CHEM, GEOG, GEOL (excluding GEOL 225), or PHYS (Must include laboratory)	4-5		
<b>Social Sciences: (2 courses, 2 areas of study)</b>			
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		
<b>Total General Education Courses</b>		<b>42</b>	
<b>Computer Science:</b>			
CSIS 110 or higher CSIS course or credit by examination	3		
<b>Electives: (courses must be numbered 100 or higher)</b> The student may apply up to four hours of credit selected from music performance and up to four hours of credit from physical education activity courses.			
	17		
<b>Total Credit Hours Required</b>		<b>62</b>	
<ul style="list-style-type: none"> <li>All courses must be at least 100 level or higher</li> <li>Courses can only be used once to meet degree requirements</li> <li>You must complete a Writing Intensive course AND either a Human Diversity course or Learning Community as part of the degree Requirements.</li> </ul>			

# The Associate in Arts Business Degree

The Associate in Arts Business degree offers an MCC student the opportunity to transfer seamlessly into a four-year Missouri college or university as a junior, and to achieve his or her Bachelor's degree in Business with two more years of college work. Because there are slight variations in the requirements for Business credit at receiving institutions, students are advised to check with the school to which they plan to transfer or speak with an MCC advisor to make sure they are taking the right classes.

## A.A.S. Business

General Education Requirements	Credits	Semester Taken	Prerequisites
American Institutions (2 courses-- one must be HIST)			
<b>American Institutions: (2 courses--one must be HIST)</b>	3		MATH 40/40L or appropriate placement test score
HIST 120, 121, POLS 135, 136, 137	3		ENGL 30 or appropriate placement test score
<b>Communications:</b>			
ENGL 101	3		ENGL 30 or appropriate placement test score
ENGL 102	3		ENGL 101
SPDR 100 or SPDR 102	3		ENGL 30 or appropriate placement test score
<b>Mathematics:</b>			
MATH 119: College Mathematics or higher	3		MATH 110 or appropriate placement test score
<b>Humanities: (3 courses, 3 areas of study, 1 course must be Lit. or Phil.)</b>			
Art History or ART 108	3		See Courses section of this catalog for individual course prerequisites.
Foreign Language 101 or higher or SIGN 101 or 102	3-5		
HUMN	3		
Literature	3		
MSCM 112	3		
MUSI 108, 116 or 160	3		
PHIL	3		
SPDR 103, 104, 106, 110, 112, 114, 128, 133 or 228	3		
HIST/HUMN 133 or 134	3		
<b>Natural Sciences: (2 courses, 1 Biological and 1 Physical)</b>			
BIOL (Must include laboratory)	5		See Courses section of this catalog for individual course prerequisites.
CHEM, GEOG, GEOL (excluding GEOL 225), or PHYS (Must include laboratory)	4-5		
<b>Social Sciences:</b>			
ECON 210 (required)	3		
One course from the following:			
GEOG (excluding 104,110 and GIS Courses)	3		
HIST	3		
POLS	3		
PSYC	3		
SOCL or ANTH	3		
SOSC	3		
<b>Total General Education Courses</b>	<b>42</b>		
<b>Computer Science</b>			
CSIS 110 or higher CSIS course or Credit by Examination	3		
<b>Required Business Electives (12 credits)</b>			
BSAD 101 Principles of Accounting I	3		
BSAD 102 Principles of Accounting II	3		BSAD 101 or two years of high school accounting
BSAD 270 Legal Environments of Business	3		
ECON 211 Principles of Economics	3		MATH 40 or 40L or a satisfactory score on the placement test
<b>Required Electives</b>			
MATH 115 Statistics			MATH 110 or satisfactory score on Math placement test
Business Elective (course must be numbered 100 or higher)			
Working closely with both campus advisors and MCC business faculty is imperative when selecting electives. Electives will vary based on transfer institution and 4-year degree plan.			
<b>Total Credit Hours Required</b>	<b>63</b>		
All courses must be at least 100 level or higher Courses can only be used once to meet degree requirements Students must complete a Writing Intensive course AND either a Human Diversity course or Learning Community as part of the degree Requirements.			

# The Associate in Arts Criminal Justice Degree

The Associate in Arts in Criminal Justice degree offers an MCC student the opportunity to transfer seamlessly into a four-year Missouri college or university as a junior, and to achieve his or her Bachelor's degree in Criminal Justice with two more years of college work. Because there are slight variations in the requirements for Criminal Justice credit at receiving institutions, students are advised to check with the school to which they plan to transfer or speak with an MCC advisor to make sure they are taking the right classes.

## Associate in Arts Criminal Justice Degree

General Education Requirements	Credits	Semester Taken	Prerequisites
<b>American Institutions: (2 courses--one must be HIST)</b>			
HIST 120, 121, POLS 135, 136, 137	6		
<b>Communications:</b>			
ENGL 101	3		ENGL 30 or appropriate placement test score
ENGL 102	3		ENGL 101
SPDR 100 or SPDR 102	3		ENGL 30 or appropriate placement test score
<b>Mathematics:</b>			
MATH 119: College Mathematics or higher	3		MATH 110 or appropriate placement test score
<b>Humanities: (3 courses, 3 areas of study, 1 course must be Lit. or Phil.)</b>			
Art History or ART 108	3		See Courses section of this catalog for individual course prerequisites.
Foreign Language 101 or higher or SIGN 101 or 102	3-5		
HUMN	3		
Literature	3		
MSCM 112	3		
MUSI 108, 116 or 160	3		
PHIL	3		
SPDR 103, 104, 106, 110, 112, 114, 128, 133 or 228	3		
HIST/HUMN 133 or 134	3		
<b>Natural Sciences: (2 courses, 1 Biological and 1 Physical)</b>			
BIOL (Must include laboratory)	5		See Courses section of this catalog for individual course prerequisites.
CHEM, GEOG, GEOL (excluding GEOL 225), or PHYS (Must include laboratory)	4-5		
<b>Social Sciences: (2 courses, 2 areas of study)</b>			
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		
<b>Total General Education Courses</b>			
	42		
<b>Criminal Justice Electives (must take 6 of the 7 courses)</b>			
CRJU 101 Introduction to Criminal Justice	3		
CRJU 105 American Corrections	3		CRJU 101
CRJU 165 Criminology	3		
CRJU 168 Juvenile Delinquency	3		
CRJU 200 Internship in Criminal Justice	3		The student must complete 15 hours of Criminal Justice including CRJU 101 before taking this course.
CRJU 203 Criminal Investigations	3		
CRJU 223 Criminal Law	3		
<b>Total Credit Hours Required</b>			
	63		
<ul style="list-style-type: none"> <li>All courses must be at least 100 level or higher</li> <li>Courses can only be used once to meet degree requirements</li> <li>You must complete a Writing Intensive course AND either a Human Diversity course or Learning Community as part of the degree Requirements.</li> </ul>			

# 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 C-BASE, and earn a minimum 2.5 GPA. Because requirements may vary, students should consult the School of Education at the four-year transfer institution. In addition to verifying specific university minimums, education students should explore which elective courses will be accepted.

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

## Associate in Arts Teaching Degree

General Education Requirements	Credits	Semester Taken	Prerequisites
<b>American Institutions: (2 courses, one must be HIST)</b>			
HIST 120, 121, POLS 135, 136, 137	6		
<b>Communications:</b>			
ENGL 101	3		ENGL 30 or appropriate placement test score
ENGL 102	3		ENGL 101
SPDR 100 or SPDR 102	3		ENGL 30 or appropriate placement test score
<b>Mathematics:</b>			
MATH 119: College Mathematics or higher	3		MATH 110 or appropriate placement test score
<b>Humanities: (3 courses, 3 areas of study, 1 course must be Lit. or Phil.)</b>			
Art History or ART 108	3		See Courses section of this catalog for individual course prerequisites.
Foreign Language 101 or higher or SIGN 101 or 102	3-5		
HUMN	3		
Literature	3		
MSCM 112	3		
MUSI 108, 116 or 160	3		
PHIL	3		
SPDR 103, 104, 106, 112, 114, 128 or 133	3		
HIST/HUMN 133 or 134	3		
<b>Natural Sciences: (2 courses, 1 Biological and 1 Physical)</b>			
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		
<b>Social Sciences: (2 courses, 2 areas of study)</b>			
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		
<b>Total General Education Courses</b>			
	<b>42</b>		
<b>Education</b>			
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
<b>Electives: (courses must be numbered 100 or higher)</b>			
Working closely with both campus advisors and MCC education faculty is imperative when selecting electives. Electives will vary based on transfer institution and 4 year degree plan. Additionally there are elective courses that will be extremely beneficial for passing the C-BASE exam. (EDUC 285 Education of Exceptional Learners can be used as an elective.)	8		
<b>Total Credit Hours Required</b>			
	<b>62</b>		
<ul style="list-style-type: none"> <li>All courses must be at least 100 level or higher</li> <li>Courses can only be used once to meet degree requirements</li> <li>Students must complete a Writing Intensive course AND either a Human Diversity course or Learning Community as part of the degree Requirements.</li> <li>Students must achieve a minimum GPA of 2.5</li> <li>Students must achieve minimum scores of 235 on each section of the C-BASE</li> <li>We recognize that four-year transfer institutions may have additional requirements including higher GPA, higher C-BASE scores, or additional courses that could be taken at the community college level. Students are encouraged to work closely with an advisor from the receiving institution so that they may understand and prepare to meet all entrance requirements.</li> </ul>			

# The Associate in Computer Science Degree

The Associate in Computer Science (ACS) degree is a preprofessional program that prepares students to transfer to a four-year college or university. It should not be confused with the Associate in Applied Science degree in Computer Science and Information Systems that prepares students for immediate employment.

Because computer science requirements vary at each four-year college or university, students should check with the school they plan to transfer to or speak with an advisor or counselor to make sure they're taking the right classes.

There are two areas of concentration for the Associate in Computer Science degree.

1. Computer Science
2. Computer Information Systems

## Degree Requirements

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

## A.C.S. Computer Science

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

## The Associate in Computer Science Degree (cont)

### A.C.S. Computer Science (cont)

Specific Program Requirements - Choose an Emphasis			
<b>Computer Science Emphasis</b>			
<i>Five of the following:</i>			
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)
<i>15 Credit Hours from the following:</i> 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		
<b>Computer Information Systems Emphasis</b>			
MATH 120 College Algebra	3		MATH 110 or appropriate placement test score
<i>15 Credit Hours from the following:</i> 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		
<b>Total Credit Hours Required</b>	<b>62</b>		
Students must complete a Writing Intensive course and either a Human Diversity course or Learning Community course as part of the degree Requirements.			

# The Associate in Engineering Degree

## Associate in Engineering

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

The Associate in Engineering degree is a preprofessional program that prepares students to transfer to a four-year college or university offering a Bachelor of Science degree in Engineering. Most MCC students transfer to the University of Missouri-Columbia, the University of Missouri-Kansas City or the 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.

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

## Associate in Engineering

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865			
ECON 210	Macroeconomics <i>or</i>	3		
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
<b>Engineering Emphasis Specific Program Requirements</b>				
CHEM 111	General College Chemistry I	5		MATH 120 (or appropriate placement test score) or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
ENGR 101	Intro to the Profession	1		
ENGR 104	Programming for Engineers and Scientists* <i>or</i>	3		MATH 120 and 130 or MATH 150 (ENGR 104) MATH 40/40L or appropriate placement test score (CSIS 123)
CSIS 123	Programming Fundamentals			
ENGR 113	Engineering Design & Microcomputer Applications* <i>or</i>	3-5		MATH 110 (ENGR 113) MATH 40/40L (ETEC 152)
ETEC 152	Engineering Graphics & CADD I			
ENGR 229	Statics	3		MATH 190 and PHYS 220
MATH 180	Analytic Geometry & Calculus I	5		MATH 130 or 150
MATH 190	Analytic Geometry & Calculus II	5		MATH 180
MATH 210	Analytic Geometry & Calculus III	5		MATH 190 or appropriate placement test score
MATH 230	Differential Equations	3		MATH 190
PHYS 220	Engineering Physics I	5		Enrollment in or completion of MATH 190
PHYS 221	Engineering Physics II	5		PHYS 220 and enrollment in or completion of MATH 210
<i>Two of the following seven courses:</i>				
CHEM 221	Organic Chemistry I	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)
CHEM 222	Organic Chemistry II			
ENGR 215	Engineering Statistics and Compilation			
ENGR 223	Thermodynamics and Heat Transfer			
ENGR 230	Dynamics			
ENGR 233	Circuit Analysis I			
ENGR 240	Mechanics of Materials			
<b>Total Credit Hours Required</b>		<b>64-70</b>		

\*Students may substitute BIOL 101 or CHEM 112 for either ENGR 104 or ENGR 113.

## The Associate in Engineering Degree (cont)

### Land Surveying Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History Since 1865			
ECON 210	Macroeconomics <b>or</b>	3		
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score

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

# The Associate in Science Degree

The Associate in Science degree program prepares students to transfer to a four-year college or university to major in either biology or chemistry. Because requirements vary at each four-year college or university, students should check with the school they plan to transfer to or an advisor or counselor to make sure they're taking the right courses.

## Degree Requirements

In order to receive the Associate in Science degree, the student must complete the requirements for all degrees listed on page 25, the general education requirements listed below and the specialized education requirements for either Biology or Chemistry.

## A.S. Biology

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

## A.S. Chemistry

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 102 Composition and Reading II	3		ENGL 101
HIST 120 United States History to 1865 <b>and</b> HIST 121 United States History Since 1865 <b>or</b> <i>Two of the following:</i> POLS 135 Introduction to Political Science POLS 136 Introduction to American National Politics POLS 137 Introduction to State and Local Politics	6		
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
<b>Specific Program Requirements</b>			
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.
<b>Total Credit Hours Required</b>	<b>64</b>		

# Career & Technical Programs & Certificates

## Certificates

In addition to two-year associate degrees, Metropolitan Community College awards certificates to students who complete various career and technical programs. While each campus offers some of the same certificates, others are offered only at one of the MCC campuses.

### Associate in Applied Science Degree

MCC also awards the Associate in Applied Science degree for various occupations. Again, while each campus offers some of the same Applied Science degrees, others are offered only at one of the 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. Specific requirements for each program are described on pages 39 to 133. A minimum of 18 credit hours of general education is required for an A.A.S. degree. Within these 18 credit hours, all A.A.S. degrees will have nine credit hours in Communications and American Institutions. The remaining nine credit hours will provide students with educational experiences to complement MCC's established general education components.

A.A.S. General Education Core Curriculum	
ENGL 101 Composition & Reading I	3
SPDR 100 Fundamentals of Speech or	
SPDR 102 Fundamentals of Human Communications	3
One of the following American Institutions courses:	
HIST 120 United States History to 1865	
HIST 121 United States History Since 1865	
POLS 135 Introduction to Political Science	
POLS 136 Introduction to American National Politics	
POLS 137 Introduction to State and Local Politics	3
Any course(s) numbered 100 or above from the following disciplines:	
ART, ANTH, ECON, ENGL, Foreign Language,	
GEOG (except 104 & 110 and GIS courses), HIST, HUMN, MSCM, MUSI,	
PHIL, POLS, PSYC, SIGN, SOCS, 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](http://www.mcckc.edu) for more information.

## Accreditation

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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](http://www.ncahigherlearningcommission.org) or by phone at 312-263-0456. To review MCC's accreditation materials, please contact the chancellor's office at 816-759-1050.

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

## Program Eligibility

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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.

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

# Apparel and Textiles

Offered at MCC-Penn Valley

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

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

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

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

## Human Sciences

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

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

# Audio Engineering

Offered at Kansas City Kansas Community College  
Coordinated at MCC

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

This is a terminal degree program for students who wish to find employment in a recording-related aspect of the music business or who wish to transfer to another school and pursue a bachelor's degree in a field such as music composition or music technology. Because requirements differ by institution, students wishing to transfer should check with the music faculty or the transfer institution regarding variations in this degree program.

Students must be accepted into the program by both MCC and KCKCC. The student is awarded the degree from KCKCC upon successful completion of all requirements.

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

## A.A.S. Audio Engineering

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

# Automotive Technology

Offered at MCC-Longview

## A.A.S. Automotive Technology

Mechanical .....	70 Credits
Merchandising .....	64 Credits
Ford/ASSET .....	88 Credits
General Motors/ASEP .....	88 Credits
Automotive Technology Certificate .....	52 Credits
Collision Repair Technology .....	69 Credits
Collision Repair Technology Certificate .....	40 Credits
Automotive Undercar Job Ready Certificate .....	17 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.

## A.A.S. Automotive Technology

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 United States History to 1865 <b>or</b> HIST 121 United States History Since 1865 <b>or</b> POLS 135 Introduction to Political Science <b>or</b> POLS 136 Introduction to American National Politics <b>or</b> POLS 137 Introduction to State and Local Politics	3		
SPDR 100 Fundamentals of Speech <b>or</b> SPDR 102 Fundamentals of Human Communication	3		ENGL 30 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, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSOC, 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		
<b>Specific Program Requirements</b>			
<b>Mechanical</b>			200201
AUTO 150 Automotive Power Plants	6		
AUTO 160 Diagnosis and Repair	6		AUTO 150, 166 and 176
AUTO 166 Automotive Electrical Systems	6		
AUTO 170 Automotive Braking Systems	4		
AUTO 172 Automotive Suspension and Steering	4		
AUTO 174 Automotive Power Trains	4		
AUTO 176 Emissions and Fuel Control Systems	6		AUTO 150 and 166
AUTO 264 Air Conditioning	4		
AUTO 272 Automatic Transmissions	6		
AUTO 279 Automotive Electronic Systems	6		AUTO 166

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

## Automotive Technology Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
AUTO 150 Automotive Power Plants	6		
AUTO 160 Diagnosis and Repair	6		AUTO 150, 166 and 176
AUTO 166 Automotive Electrical Systems	6		
AUTO 170 Automotive Braking Systems	4		
AUTO 172 Automotive Suspension and Steering	4		
AUTO 174 Automotive Power Trains	4		
AUTO 176 Emissions and Fuel Control Systems	6		AUTO 150 and 166
AUTO 264 Air Conditioning	4		
AUTO 272 Automatic Transmissions	6		
AUTO 279 Automotive Electronic Systems	6		AUTO 166
<b>Total Credit Hours Required</b>	<b>52</b>		

## Industrial/Technical

<b>Merchandising</b>				
AUTO 100	Automotive Internship I <i>or</i>	3		One semester automotive coursework for AUTO 100
BSAD 127	Management Internship I			
AUTO 101	Automotive Internship II <i>or</i>	3		AUTO 100 (for AUTO 101) or BSAD 127 (for BSAD 128)
BSAD 128	Management Internship II			
AUTO 150	Automotive Power Plants	6		
AUTO 160	Diagnosis and Repair	6		AUTO 150, 166 and 176
AUTO 166	Automotive Electrical Systems	6		
AUTO 170	Automotive Braking Systems	4		
AUTO	Elective	3		
BSAD 100	Introduction to Accounting <i>or</i>	3		
BSAD 101	Accounting Principles I			
BSAD 106	Principles of Salesmanship	3		
BSAD 109	Principles of Supervision	3		
BSAD 112	Retailing Principles	3		
BSAD 205	Marketing	3		
The <i>Merchandising Option</i> prepares students to work as an assistant service manager, automotive service center trainee, automotive salesperson, factory service representative, parts counterperson, or service salesperson.				
<b>Ford/ASSET</b>				
AUTO 105	Cooperative Work Experience I	3		Approval of automotive coordinator
AUTO 106	Cooperative Work Experience II	3		Approval of automotive coordinator
AUTO 107	Cooperative Work Experience III	3		Approval of automotive coordinator
AUTO 108	Cooperative Work Experience IV	3		Approval of automotive coordinator
AUTO 150	Automotive Power Plants	6		
AUTO 160	Diagnosis and Repair	6		AUTO 150, 166 and 176
AUTO 166	Automotive Electrical Systems	6		
AUTO 170	Automotive Braking Systems	4		
AUTO 172	Automotive Suspension and Steering	4		
AUTO 174	Automotive Power Trains	4		
AUTO 176	Emissions and Fuel Control Systems	6		AUTO 150 and 166
AUTO 260	Advanced Diagnosis	6		Be a student in good standing in the General Motors ASEP or Ford Motor Co. ASSET program
AUTO 264	Air Conditioning	4		
AUTO 272	Automatic Transmissions	6		
AUTO 278	Electronic Engine Control	6		AUTO 166 and be a student in the Ford Motor Co. ASSET program
<b>GM/ASEP</b>				
AUTO 105	Cooperative Work Experience I	3		Approval of automotive coordinator
AUTO 106	Cooperative Work Experience II	3		Approval of automotive coordinator
AUTO 107	Cooperative Work Experience III	3		Approval of automotive coordinator
AUTO 108	Cooperative Work Experience IV	3		Approval of automotive coordinator
AUTO 150	Automotive Power Plants	6		
AUTO 160	Diagnosis and Repair	6		AUTO 150, 166 and 176
AUTO 166	Automotive Electrical Systems	6		
AUTO 170	Automotive Braking Systems	4		
AUTO 172	Automotive Suspension and Steering	4		
AUTO 174	Automotive Power Trains	4		
AUTO 176	Emissions and Fuel Control Systems	6		AUTO 150 and 166
AUTO 260	Advanced Diagnosis	6		Be a student in good standing in the General Motors ASEP or Ford Motor Co. ASSET program
AUTO 264	Air Conditioning	4		
AUTO 272	Automatic Transmissions	6		
AUTO 277	Specialized Electronics Training	6		AUTO 166 and class member of General Motors ASEP class.
<b>Total Credit Hours Required</b>				

### Automotive Undercar Job Ready Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
AUTO 103 Fundamentals of Automotive Technology	3		
AUTO 166 Automotive Electrical Systems	6		
AUTO 170 Automotive Braking Systems	4		
AUTO 172 Automotive Suspension and Steering	4		
<b>Total Credit Hours Required</b>	<b>17</b>		

## Industrial/Technical

### A.A.S. Automotive Collision Repair Technology

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing <i>or</i>	3		ENGL 101
ENGL 102	Composition and Reading II			
HIST 120	United States History to 1865 <i>or</i>			
HIST 121	United States History since 1865 <i>or</i>	3		
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business	3		MATH 20 or 20L or appropriate placement test score
PHYS 104	Foundations of Physical Science <i>or</i>	5		
PHYS 101	Introductory Physics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
<b>Specific Program Requirements</b>				
BSAD 100	Introduction to Accounting	3		
BSAD 109	Principles of Supervision	3		
EHSS 100	Intro to Environmental Health and Safety	3		
<b>Specific Program Requirements</b> <i>Provided by participating articulation agreement schools</i>				
AUTO 120	MIG and Structural Welding	3		Accepted into the articulation program for Auto Collision Repair
AUTO 125	Structural Analysis and Damage Repair	6		Accepted into the articulation program for Auto Collision Repair
AUTO 130	Non-Structural Analysis and Damage Repair	6		Accepted into the articulation program for Auto Collision Repair
AUTO 135	Plastics and Adhesives	3		Accepted into the articulation program for Auto Collision Repair
AUTO 140	Automotive Painting	4		Accepted into the articulation program for Auto Collision Repair
AUTO 141	Automotive Refinishing	4		Accepted into the articulation program for Auto Collision Repair
AUTO 166	Automotive Electrical Systems	6		
AUTO 172	Automotive Suspension and Steering	4		
AUTO 264	Air Conditioning	4		
<b>Total Credit Hours Required</b>		<b>69</b>		
The <i>Collision Repair Technology Option</i> , which includes courses offered by participating articulation agreement schools, prepares students to work as collision repair technicians.				
AUTO 264	Air Conditioning	4		
<b>Total Credit Hours Required</b>		<b>69</b>		
The <i>Collision Repair Technology Option</i> , which includes courses offered by participating articulation agreement schools, prepares students to work as collision repair technicians.				

### Collision Repair Technology Certificate

Specific Program Requirements <i>Provided by participating articulation agreement schools</i>		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
<b>Specific Program Requirements</b>				
AUTO 166	Automotive Electrical Systems	6		
AUTO 172	Automotive Suspension and Steering	4		
AUTO 264	Air Conditioning	4		
<b>Total Credit Hours Required</b>		<b>40</b>		

# Biotechnology

Offered at Johnson County Community College  
Coordinated at MCC

A.S. Biotechnology .....	78-84 Credits
A.A.S. Biotechnology.....	67-71 Credits
Biotechnology Certificate .....	33-41 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 <i>Must be taken at one of the MCC Campuses</i>	Credits	Semester Taken	Prerequisites
CHEM 111 General College Chemistry I	5		MATH 120 or two units of high school Algebra and CHEM 107 or high school Chemistry
CHEM 112 General College Chemistry II	5		CHEM 111
CHEM 221 Organic Chemistry I	5		CHEM 112
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215 Technical Writing	3		ENGL 101
MATH 115 Statistics	3		MATH 110 or appropriate placement test score
PHYS 130 General Physics I	5		MATH 130
PHYS 131 General Physics II	5		PHYS 130
SOCI 160 Introduction to Sociology or			
SOCI 163 Social Problems or			
POLS 234 Introduction to International Relations	3		
SPDR Oral Communications Elective	3		
HUMN Electives	6		
ECON/Social Science Electives	6		
PHED Elective	1		
<i>May be taken at any MCC campus or JCCC</i>			
BIOL 208 Microbiology* (MCC) <b>or</b>	5		
BIOL 230 Microbiology* (JCCC)	3		
<i>Must be taken at Johnson County Community College</i>			
BIOL 135 Principles of Cell & Molecular Biology*	4		
BIOL 150 Biology of Organisms*	5		
BIOT 160 Introduction to Biotechnology*	2		
BIOT 165 Laboratory Safety*	1		
BIOL 205 General Genetics*	4		
BIOT 260 Biotechnology Methods*	5		
BIOT 265 Biotechnology Internship (Optional)*	4		
<b>Total Credit Hours Required</b>	<b>78-84</b>		
<b>Oral Communication Electives that will transfer from MCC to JCCC:</b> SPDR 100, 102, 103, 133 <b>Humanities Electives that will transfer from MCC to JCCC:</b> ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 128, 142, 150, 151, 165, 167, 220, 221, 222, 223, FREN 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, SPDR 114, 128 <b>Social Science Electives that will transfer from MCC to JCCC:</b> ANTH 100, 110, ECON 210, 211, GEOG 111, 112, HUSC 162, POLS 136, 137, 303 PSYC 140, SOCI 162, 170 <b>Physical Education Electives that will transfer from MCC to JCCC:</b> DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 140, 141, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180			

\*Prerequisite/corequisite required

## Health

### A.A.S. Biotechnology

Specific Program Requirements <i>Must be taken at one of the MCC Campuses</i>	Credits	Semester Taken	Prerequisites
BIOL 109 Anatomy & Physiology	6		BIOL 100 or CHEM 105
CHEM 105 Introductory Chemistry for Health Sciences <i>Note: CHEM 105 must be taken before BIOL 135, BIOT 160 and BIOT 165</i>	5		
CHEM 205 Organic Chemistry	5		CHEM 105 or CHEM 111
CSIS 115 Introduction to Microcomputer Applications	3		
ENGL 101 Composition and Reading I	3		
ENGL 215 Technical Writing	3		ENGL 101
MATH 103 Technical Mathematics I (or higher)	3-5		MATH 40 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		
<i>May be taken at any MCC campus of JCCC</i>			
BIOL 208 Microbiology (MCC)* <b>or</b>	5		
BIOL 230 Microbiology (JCCC)*	3		
<i>Must be taken at Johnson County Community College</i>			
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 155 Introduction to Bioethics*	3		
BIOT 160 Introduction to Biotechnology*	2		
BIOT 165 Laboratory Safety*	1		
BIOL 205 General Genetics*	4		
BIOL 260 Biotechnology Methods*	5		
BIOL 265 Biotechnology Internship*	4		
PHYS 133 Applied Physics*	5		
<b>Total Credit Hours Required</b>	<b>67-71</b>		

**Humanities Electives that will transfer from MCC to JCCC:** ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 142, 150, 151, 165, 220, 221, 222, 223, GERM 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, SPDR 114, 128

**Physical Education Electives that will transfer from MCC to JCCC:** DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 140, 141, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

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

\*Prerequisite/corequisite required

### Biotechnology Certificate

Specific Program Requirements <i>Must be taken at one of the MCC Campuses</i>	Credits	Semester Taken	Prerequisites
CHEM 105 Introductory Chemistry for Health Sciences <i>Note: CHEM 105 must be taken before BIOL 135, BIOT 160 and BIOT 165</i>	5		
CHEM 205 Organic Chemistry	5		CHEM 105 or CHEM 111
MATH 103 Technical Mathematics I (or higher)	3-5		MATH 40 or 40L
<i>May be taken at any MCC campus or JCCC</i>			
BIOL 208 Microbiology* (MCC)	5		BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 101, 104, 106, 108, 109, or 110
BIOL 230 Microbiology* (JCCC)	3		
<i>Must be taken at Johnson County Community College</i>			
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 260 Biotechnology Methods*	5		
PHYS 133 Applied Physics*	5		
BIOT 265 Biotechnology Internship (Optional)*	4		
<b>Total Credit Hours Required</b>	<b>33-41</b>		

\*Prerequisite/corequisite required

# Business

*Offered at all Campuses*

## A.A.S. Business

Accounting .....	63 Credits
Logistics Management .....	63 Credits
Management .....	63 Credits
Office Management .....	63 Credits
Administrative Support Assistant Certificate .....	30 Credits
Financial Services Program Certificate .....	21 Credits

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

## A.A.S. Business Accounting Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ECON 210	Macroeconomics	3		MATH 40/40L or appropriate placement test score
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History Since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business <b>or</b>	3		MATH 20/20L or appropriate placement test score (MATH 100)
MATH 110	Intermediate Algebra or higher			
PSYC 140	General Psychology <b>or</b>	3		
SOCI 160	Sociology			
SPDR 100	Fundamentals of Speech <b>or</b>	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
<b>Specific Program Requirements</b>				
BSAD 101	Accounting Principles I	3		
BSAD 102	Accounting Principles II	3		BSAD 101 or two years of high school accounting
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30 or appropriate placement test score
BSAD 254	Business Law I <b>or</b>	3		
BSAD 255	Business Law II <b>or</b>			
BSAD 270	Legal Environment of Business			
ECON 211	Principles of Economics	3		MATH 40 or 40L or a satisfactory score on the placement test
CSIS 115	Intro to Microcomputer Applications	3		
MATH 115	Statistics	3		MATH 110 or satisfactory score on Math placement test.
Electives	Any course numbered 100 or above	6		
<b>Specific Emphasis Requirements</b>				
<b>Accounting</b>				
BSAD 102	Accounting Principles II	3		BSAD 101
BSAD 153	General Ledger Accounting Systems, PC	3		BSAD 101
BSAD 154	Managerial Accounting	3		BSAD 101
BSAD 155	Accounting Applications Using Spreadsheet	3		BSAD 101
BSAD 202	Intermediate Accounting I	3		BSAD 102
BSAD 252	Individual Income Tax	3		BSAD 101
BSAD Electives		3		

## Business

### A.A.S. Business Logistics Management Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ECON 210	Macroeconomics	3		MATH 40/40L or appropriate placement test score
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business <i>or</i>	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
MATH 110	Intermediate Algebra or higher			
PSYC 140	General Psychology <i>or</i>	3		
SOCI 160	Sociology			
SPDR 100	Fundamentals of Speech <i>or</i>	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
<b>Specific Program Requirements</b>				
BSAD 101	Accounting Principles I	3		
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30 or appropriate placement test score
BSAD 254	Business Law I <i>or</i>	3		
BSAD 255	Business Law II <i>or</i>			
BSAD 270	Legal Environment of Business			
CSIS 115	Intro to Microcomputer Applications	3		
Electives	Any course numbered 100 or above	6		
<b>Logistics Management</b>				
BSAD 210	Logistics Management	3		
BSAD 211	Operations Management	3		
BSAD 212	Transportation Operations and Management	3		
BSAD 213	Warehouse and Distribution Centers	3		
BSAD Electives		9		

### A.A.S. Business Management Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ECON 210	Macroeconomics	3		MATH 40/40L or appropriate placement test score
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business <i>or</i>	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
MATH 110	Intermediate Algebra or higher			
PSYC 140	General Psychology <i>or</i>	3		
SOCI 160	Sociology			
SPDR 100	Fundamentals of Speech <i>or</i>	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
<b>Specific Program Requirements</b>				
BSAD 101	Accounting Principles I	3		
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30 or appropriate placement test score
BSAD 254	Business Law I <i>or</i>	3		
BSAD 255	Business Law II <i>or</i>			
BSAD 270	Legal Environment of Business			
CSIS 115	Intro to Microcomputer Applications	3		
Electives	Any course numbered 100 or above	6		
<b>Management</b>				
BSAD 105	Human Resources Management	3		
BSAD 109	Principles of Supervision	3		
BSAD 120	Organizational Behavior	3		
BSAD 127	Management Internship I	3		
BSAD 128	Management Internship II	3		BSAD 127
BSAD Electives		6		

## Business

### A.A.S. Business Office Management Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ECON 210	Macroeconomics	3		MATH 40/40L or appropriate placement test score
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business <i>or</i>	3		MATH 20/20L or appropriate placement test score (MATH 100) MATH 40/40L or appropriate placement test score (MATH 110)
MATH 110	Intermediate Algebra or higher			
PSYC 140	General Psychology <i>or</i>	3		
SOCI 160	Sociology			
SPDR 100	Fundamentals of Speech <i>or</i>	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
<b>Specific Program Requirements</b>				
BSAD 101	Accounting Principles I	3		
BSAD 204	Business Management	3		
BSAD 205	Marketing	3		
BSAD 221	Business Communications	3		ENGL 30 or appropriate placement test score
BSAD 254	Business Law I <i>or</i>	3		
BSAD 255	Business Law II <i>or</i>			
BSAD 270	Legal Environment of Business			
CSIS 115	Intro to Microcomputer Applications	3		
Electives	Any course numbered 100 or above	6		
<b>Office Management</b>				
BSAD 103	Business English	3		ENGL 30 or appropriate placement test score
BSAD 161	Professional Development and Business Careers	3		
BSAD 190	Office Management	3		
CSIS 103	Document Processing I	3		
CSIS 104	Document Processing II	3		CSIS 103
CSIS 116	Introduction to Desktop Publishing	3		CSIS 103 or 115
BSAD Electives		3		
<b>Total Credit Hours Required</b>		<b>63</b>		

### Administrative Support Assistant Certificate

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

### Financial Services Program Certificate

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

# Child Growth and Development

Offered at MCC-Penn Valley

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

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

Admission to the Program

To be admitted to the program, students must complete the **A.A.S. Child Growth & Development**

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](http://www.mcckc.edu/cdcg)

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

## Child Growth and Development Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
SPDR 100 Fundamentals of Speech <b>or</b> SPDR 102 Fundamentals of Human Communication	3		ENGL 30 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		
<b>Total Credit Hours Required</b>	<b>30</b>		

# Commercial Drivers License - A

CDLA Certificate..... 16 Credits

1. Student must be at least 18 years of age
2. Provide a high school diploma or GED
3. Compass Placement Test
4. Have a valid operator's license
5. Provide a valid CDL-A Permit
6. Provide a valid DOT drug Screen & DOT physical
7. Meet Federal Requirements to work in the career field
8. Sign a release for the Motor Vehicle Report

Students completing this program will be prepared to seek employment as an entry-level truck driver in the trucking industry. Entry-level truck drivers typically find employment as over-the-road drivers, transporting various types of cargo throughout the United States. The certificate meets all state and federal requirements for truck driver training. The program is designed to prepare students to sit for the Missouri or Kansas CDL Class A exam.

## CDLA Certificate

General Education Requirements	Credits	Semester Taken	Prerequisites
CDLA 111 Basic Operating Procedures	2		
CDLA 112 Safe Operating Procedures	2		
CDLA 113 Advanced Operating Procedures	2		
CDLA 114 Vehicle Maintenance Procedures	2		
CDLA 115 Non- Driving Procedures	2		
CDLA 116 Behind-the-Wheel Procedures	2		
Any course(s) numbered 100 or above	4		
<b>Total Credit Hours Required</b>	<b>16</b>		

# Computer Aided Drafting & Design Technology

Offered at MCC-Business & Technology

A.A.S. Computer Aided Drafting & Design  
Technology ..... 64-65 Credits  
Computer Aided Drafting  
& Design Certificate ..... 13-15 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 or appropriate placement test score
ENGL 215 Technical Writing	3		ENGL 101
EHSS 111 Introduction to Health & Safety for General Industry	1		
HIST 120 United States History to 1865 <b>or</b> HIST 121 United States History Since 1865 <b>or</b> POLS 135 Introduction to Political Science <b>or</b> POLS 136 Introduction to American National Politics <b>or</b> POLS 137 Introduction to State and Local Politics	3		
MATH 120 College Algebra <b>and</b> MATH 130 Trigonometry <b>or</b> MATH 150 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)
SPAN 100 Beginning Occupational Spanish	3		
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
<b>Specific Program Requirements</b>			
EETC 110 Basic Electronics	3		
EETC 152 Engineering Graphics and CADD I	5		MATH 40/40L
EETC 153 Descriptive Geometry	4		EETC 152
EETC 155 Introduction to Residential Architecture	3		EETC 152
EETC 200 Applied Statics & Mechanics	3		MATH 104 or 130
EETC 258 Introduction to Machine Design	3		EETC 152
EETC 265 Introduction to Civil Design	3		EETC 152
EETC 268 Structural Steel Blueprint Reading	3		EETC 152
EETC 269 CADD II	4		EETC 152 or 169
ENGR 101 Introduction to the Profession	1		
<b>Electives</b>			
Choose 12 hours from the following:			
EETC 169 CADD I (3)	12		
EETC 170 CADD I Alternate (3)			
EETC 189 ETEC Internship I (1)			
EETC 190 ETEC Internship II (2)			
EETC 191 ETEC Internship III (3)			
EETC 199a Special Topics in ETEC (1)			
EETC 199b Special Topics in ETEC (2)			
EETC 199c Special Topics in ETEC (3)			
EETC 210 Introduction to Commercial Architecture (3)			
EETC 211 Building Information Modeling (3)			
EETC 270 Parametric Modeling (3)			
EETC 271 Parametric Modeling, Alternate (3)			
Electives must be from the following disciplines: ENGR, ETEC, MATE, SRVY			
<b>Total Credit Hours Required</b>	<b>64-65</b>		

## Computer Aided Drafting and Design Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
EETC 152 Engineering Graphics and CADD I <b>or</b>	5		MATH 40/40L or appropriate placement test score
EETC 169 CADD I,	3		EETC 152
EETC 170 CADD I, alternate	4		EETC 152 or 169
EETC 269 CADD II			
Choose one of the following:			
EETC 211 Building Information Modeling			
EETC 270 Parametric Model			
EETC 271 Parametric Modeling, Alternate	3		EETC 152 or 169
<b>Total Credit Hours Required</b>	<b>13-15</b>		

# Computers

Offered at all Campuses

## Computer Science & Information Systems

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

**Note: This program is under review. Please check with an advisor or counselor for the most up-to-date information.**

A.A.S. Computer Science and Information Systems

CISCO .....	64 Credits
CCNP .....	62 Credits
Security .....	63 Credits
**Database Management .....	63 Credits
**Interactive Digital Media .....	63 Credits
**Networking .....	63 Credits
**Programming .....	63 Credits
**Technical Support .....	63 Credits
CCNA and CCNP Certificate .....	32 Credits
CCNA and Security Certificate .....	27 Credits
Cisco Academy Certificate .....	16 Credits
Cisco and Technology Certificate .....	31 Credits

\*\*Computer Support Technology I Certificate .....

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

**\*\* These emphasis areas and certificates are under construction. Please see an advisor or counselor for more information.**

### A.A.S. Computer Science and Information Systems

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

## Computers

### CCNP Emphasis

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

# Computers

## Security Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition & Reading I	3		ENGL 30 or appropriate placement score
HIST 120	United States History to 1865 or	3		
HIST 121	United States History Since 1865			
MATH 110	Intermediate Algebra or Higher Mathematics course	3		MATH 40/40L or appropriate placement test score
SPDR 100	Fundamentals of Speech or	3		
SPDR 102	Fundamentals of Human Communication			
Two courses from the following list:				
ART 102	Computers in Design I	6		MATH 40/40L or appropriate placement test score (ART 102) MATH 40/40L or appropriate placement test score (ECON 211) ENGL 101 (ENGL 215) MATH 110 or appropriate placement test score (MATH 115)
ECON 210	Macroeconomics			
ECON 211	Principles of Economics II – Microeconomics			
ENGL 215	Technical Writing			
MATH 115	Statistics			
PHIL 200	Logic			
PHIL 203	Ethics			
PSYC 140	General Psychology			
SPDR 103	Interpersonal Communication			
SPDR 133	Intercultural Communications			
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 110	Technology & Information Management	3		
Choose five of the following courses:				
CSIS 111	Microcomputer Hardware Concepts	15		CSIS 110 (CSIS 111) MATH 40/43 or appropriate placement test score (CSIS 123) CSIS 110 or 115 (CSIS 128) CSIS 110 (CSIS 129) CSIS 110 or 115 (CSIS 143) CSIS 110 (CSIS 151) CSIS 110 (CSIS 161) CSIS 110 or 115 (CSIS 162) One Windows based course (CSIS 177)
CSIS 123	Programming Fundamentals			
CSIS 128	Web Development			
CSIS 129	Intro to E-Commerce			
CSIS 143	Database Design and Management			
CSIS 151	Microcomputer Operating Systems Concepts			
CSIS 161	Telecommunications and Network Fundamentals			
CSIS 162	Introduction to Digital Media			
CSIS 177	Database Application and Design with Access			
Emphasis Area				
CSIS 112	Networking Basics: CCNA1	4		CSIS 110 or 115
CSIS 113	Router and Routing Basics: CCNA2	4		CSIS 112
CSIS 170	Information Security, Ethics & Risk Assessment	3		CSIS 110
CSIS 212	Switching Basics & Intermediate Routing: CCNA3	4		CSIS 113
CSIS 213	WAN Technologies: CCNA4	4		CSIS 212
CSIS 272	Network Security I	4		CSIS 213
CSIS 273	Network Security II	4		CSIS 272
<b>Total Credit Hours Required</b>		<b>63</b>		

## Computers

### Cisco Academy Certificate

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

### CCNA and Security Certificate

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

### CCNA and CCNP Certificate

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

### Cisco and Technology Certificate

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

### Database Programming (ACCESS) Certificate

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

# Construction Management

A.A.S. Industrial Tech Construction Management ..... 63 Credits

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

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

# Criminal Justice

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

- A.A.S. Criminal Justice Adult  
Corrections Emphasis ..... 66-68 Credits
- A.A.S. Criminal Justice Juvenile  
Services Emphasis ..... 66-68 Credits
- A.A.S. Criminal Justice Police  
Science ..... 65-69 Credits
- Police Science Certificate-600 Program ..... 38 Credits

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

## A.A.S. Criminal Justice Adult Corrections Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History Since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business or higher numbered course	3		MATH 20/20L or appropriate placement test score
PSYC 140	General Psychology	3		
SOCI 160	Sociology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ECON, HIST, Foreign Language		3-5		
<b>Specific Core Requirements</b>				
CRJU 101	Intro to Criminal Justice	3		
CRJU 122	Procedural Law	3		
CRJU 165	Criminology	3		
CRJU 168	Juvenile Delinquency	3		
CRJU 169	Family Violence and Sexual Abuse	3		
CRJU 223	Criminal Law I <b>or</b>	3		
CRJU 230	Missouri Criminal Law			
<b>Adult Corrections Emphasis</b>				
CRJU 105	American Corrections	3		CRJU 101
CRJU 126	Corrections in the Community	3		
CRJU 162	Correctional Psychology	3		
CRJU 200	Internship in Criminal Justice	3		15 credit hours of CRJU including CRJU 101
CRJU 228	Fundamentals of Probation and Parole	3		
CRJU 233	Principles of Management in Criminal Justice Systems <b>or</b>	3		
CRJU 236	Correctional Administration			
Electives: Any course(s) numbered 100 or above from the following disciplines: CRJU, Foreign Language, HUMS, PSYC, SOCI		9		
<b>Total Credit Hours Required</b>		<b>66-68</b>		

## Social Sciences

### A.A.S. Criminal Justice Juvenile Services Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business or higher numbered course	3		MATH 20/20L or appropriate placement test score
PSYC 140	General Psychology	3		
SOCI 160	Sociology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ECON, HIST, Foreign Language		3-5		
<b>Specific Core Requirements</b>				
CRJU 101	Intro to Criminal Justice	3		
CRJU 122	Procedural Law	3		
CRJU 165	Criminology	3		
CRJU 168	Juvenile Delinquency	3		
CRJU 169	Family Violence and Sexual Abuse	3		
CRJU 223	Criminal Law I <i>or</i>	3		
CRJU 230	Missouri Criminal Law			
<b>Juvenile Services Emphasis</b>				
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		
<b>Total Credit Hours Required</b>		<b>66-68</b>		

## Social Sciences

### A.A.S. Criminal Justice - Police Science

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

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 United States History to 1865 <b>or</b> HIST 121 United States History Since 1865 <b>or</b> POLS 135 Introduction to Political Science <b>or</b> POLS 136 Introduction to American National Politics <b>or</b> POLS 137 Introduction to State and Local Politics	3		
MATH 100 Mathematics for Business or higher numbered course	3		MATH 20/20L or appropriate placement test score
PSYC 140 General Psychology <b>or</b> SOCL 160 Sociology	3		
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ECON, HIST, Foreign Language	3-5		
<b>Police Science Emphasis Requirements</b>			
LWEN 100 Introduction to Public Safety	2		
LWEN 101 Introduction to Law Enforcement	3		LWEN 100
LWEN 111 Law Enforcement Operational Procedures	3		LWEN 101
LWEN 112 Traffic Control and Investigation	3		LWEN 101
LWEN 114 Law Enforcement Report Writing	3		LWEN 100
LWEN 122 Procedural Law for Law Enforcement	3		LWEN 101
LWEN 143 Defensive Tactics for Law Enforcement	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		
<b>Electives</b>			
Any course numbered 100 or above from the following disciplines: BSAD, CRJU, HIST, HUMS, LWEN, POLS, PSYC, SOCL or Foreign Language	9-11		
<b>Total Credit Hours Required</b>	<b>65-69</b>		

### Police Science Certificate - 600 Program

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

Specific Program Requirements	Credits	Semester Taken	Prerequisites
LWEN 100 Introduction to Public Safety	2		
LWEN 101 Introduction to Law Enforcement	3		LWEN 100
LWEN 111 Law Enforcement Operational Procedures	3		LWEN 101
LWEN 112 Traffic Control and Investigation	3		LWEN 101
LWEN 114 Law Enforcement Report Writing	3		LWEN 100
LWEN 122 Procedural Law for Law Enforcement	3		LWEN 100
LWEN 143 Defensive Tactics for Law Enforcement	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		
<b>Total Credit Hours Required</b>	<b>38</b>		

# Dental Assisting

Offered at MCC-Penn Valley

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

Dental Assisting Certificate.....51 Credits

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

Admission to the Dental Assisting Program

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

For more information, go to [www.mcckc.edu/dentalassisting](http://www.mcckc.edu/dentalassisting)

## A.A.S. Dental Assisting

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

## Dental Assisting Certificate

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

# Digital Prepress

*Offered at MCC-Penn Valley*

Digital Prepress Technician Certificate.....24 Credits

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

## Digital Prepress Technician Certificate

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

# Electric Utility Line Technician

A.A.S. INTE Electric Utility Line Technician  
 ..... 65-66 Credits  
 Electric Utility Line Certificate ..... 47-48 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. INTE Electric Utility Line Technician

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

\*minimum requirements

## Electric Utility Line Technician Certificate

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

# Energy Efficiency

## Energy Efficiency Certificate

This certificate is intended to prepare students for entry level jobs in a variety of areas, including retrofitting homes for energy efficiency and managing buildings for improved energy conservation and efficiency.

General Education Requirements	Credits	Semester Taken	Prerequisites
HVAC Job Ready Certificate	23		
HVAC 240    Geo-Thermal Heat Pumps	3		HVAC 136
HVAC 201    Stationary Engineering	3		HVAC 111 and 120
GEOL 224    Energy Management, Efficiency, and Conservation	3		
GEOL 180    Energy and the Environment	3		
BSAD 219    Entrepreneurship	5		
*Includes HVAC 109, 111, 120, 135, 136, 230	3		
<b>Total Credit Hours Required</b>	<b>43</b>		

# Engineering Technology

Offered MCC-Business & Technology

## A.A.S. Engineering Technology

Architecture .....	67-69 Credits
Civil .....	64 Credits
Mechanical/Manufacturing Tech .....	68-70 Credits
Computer & Electronics .....	68-71 Credits
Electronics .....	69-71 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 or electronics fields. Graduates will have a strong background in mathematics, design principles, computer aided design and other technologies relating to the engineering fields. Graduates will assist engineering professionals in the design process and be an integral part of the design team. This program transfers to area universities if the student wishes to pursue a four-year degree in engineering technology or related degree.

## A.A.S. Engineering Technology: Architecture Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
EHSS 111	Introduction to Health & Safety for General Industry	1		
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
HIST 120	U.S. History to 1865 <i>or</i>	3		
HIST 121	U.S. History since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 130	Trigonometry <i>or</i>	3-5		MATH 120 or satisfactory score on placement test MATH 110 or satisfactory score on placement test MATH 130 or 150
MATH 150	PreCalculus			
MATH 180	Analytic Geometry and Calculus I			
<b>Specific Program Requirements for:</b>				
<b>Civil &amp; Mechanical/Manufacturing &amp; Architecture</b>				
EETC 152	Engineering Graphics and CADD I	5		MATH 40/40L or appropriate placement test score
EETC 153	Descriptive Geometry	4		EETC 152
EETC 200	Applied Statics & Mechanics	3		MATH 104 or 130
EETC 268	Structural Steel Blueprint Reading	3		EETC 152
EETC 269	CADD II	4		EETC 152 or 169
ENGR 101	Introduction to the Profession	1		
PHYS 130	General Physics	5		MATH 120 or appropriate placement test score.
<b>Specific Emphasis Requirements</b>				
<b>Architecture</b>				
EETC 155	Introduction to Residential Architecture	3		EETC 152
EETC 170	CADD I, Alternate	3		EETC 152
EETC 210	Introduction to Commercial Architecture	3		EETC 152 and 155
EETC 211	Building Information Modeling	3		EETC 220
EETC 265	Introduction to Civil Design	3		EETC 152
SRVY 135	Elementary Surveying	3		MATH 105, 130 or 150
<b>Total Credit Hours Required</b>		<b>67-69</b>		

# 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 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
EHSS 111	Introduction to Health & Safety for General Industry	1		
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
HIST 120	U.S. History to 1865 <i>or</i>	3		
HIST 121	U.S. History since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
<b>Specific Program Requirements for:</b>				
<b>Civil &amp; Mechanical/Manufacturing g &amp; Architecture</b>				
ETEC 152	Engineering Graphics and CADD I	5		MATH 40/40L or appropriate placement test score
ETEC 153	Descriptive Geometry	4		ETEC 152
ETEC 200	Structural Design	3		MATH 104 or 130
ETEC 268	Structural Steel Blueprint Reading	3		ETEC 152
ETEC 269	CADD II	4		ETEC 152 or 169
ENGR 101	Introduction to the Profession	1		
PHYS 130	General Physics	5		MATH 120 or appropriate placement test score.
<b>Specific Emphasis Requirements Civil</b>				
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
<b>Total Credit Hours Required</b>		<b>64</b>		

## Industrial/Technical

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

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
EHSS 111	Introduction to Health & Safety for General Industry	1		
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
HIST 120	U.S. History to 1865 <i>or</i>	3		
HIST 121	U.S. History since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 130	Trigonometry <i>or</i>	3		MATH 120 or satisfactory score or placement test
MATH 150	PreCalculus	5		MATH 110 or satisfactory score or placement test
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
<b>Specific Program Requirements for:</b>				
<b>Civil &amp; Mechanical/Manufacturing &amp; Architecture</b>				
EETC 152	Engineering Graphics and CADD I	5		MATH 40/40L or appropriate placement test score
EETC 153	Descriptive Geometry	4		EETC 152
EETC 200	Applied Statics & Mechanics	3		MATH 104 or 130
EETC 268	Structural Steel Blueprint Reading	3		EETC 152
EETC 269	CADD II	4		EETC 152 or 169
ENGR 101	Introduction to the Profession	1		
PHYS 130	General Physics <i>or</i>	5		MATH 120 or appropriate placement test score. Enrollment in or completion of MATH 190
PHYS 220	Engineering Physics			
<b>Specific Emphasis Requirements</b>				
<b>Mechanical/Manufacturing</b>				
EETC 258	Introduction to Machine Design	3		EETC 152
EETC 270	Parametric Modeling <i>or</i>	3		EETC 152 or 169
EETC 271	Parametric Modeling, Alternate			
MATE 116	Geometric Dimensioning and Tolerancing Printreading	2		MATE 115
MATE 130	Machining for Related Occupations	5		
MATE 210	Computerized Numerical Control - Lathe <i>or</i>	3		MATE 101 or 130. MATH 103 or concurrent enrollment. MATE 101 or 130. MATH 103 or concurrent enrollment.
MATE 215	Computer Numerical Control - Mill			
MATE 225	Master Cam I	3		CSIS 110, MATE 210 and 215
<b>Total Credit Hours Required</b>		<b>68-70</b>		

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

General Education Requirements (Computer & Electronics, and Electronics)		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
EHSS 111	Introduction to Health & Safety for General Industry	1		
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
HIST 120	U.S. History to 1865 <i>or</i>	3		
HIST 121	U.S. History since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 130	Trigonometry <i>or</i>	3-5		MATH 120 or satisfactory score on placement test
MATH 150	PreCalculus			
MATH 180	Analytic Geometry and Calculus I	5		MATH 110 or satisfactory score on placement test MATH 130 or 150
Specific Program Requirements		Credits	Semester Taken	Prerequisites
<b>Computer &amp; Electronics Engineering Technology</b>				
CHEM 111	General College Chemistry I <i>or</i>	5		MATH 120 or satisfactory score on placement test MATH 130
PHYS 130	General Physics I <i>or</i>			
PHYS 220	Engineering Physics I			
CSIS 123	Programming Fundamentals	3		Enrollment in or completion of MATH 190
CSIS 223	Object-Oriented Programming	3		MATH 40/40L or placement test
ETEC 152	Engineering Graphics & CADD I	5		MATH 110 and CSIS 123
ETEC 110	Basic Electronics	3		MATH 40/40L
ETEC 111	Microcomputer Hardware Repair	3		MATH 103
ETEC 118	AC Circuit Analysis	4		ETEC 110 or ETEC 110
ETEC 130	Digital Electronics	3		ETEC 110 or ETEC 110
ETEC 220	Analog Devices	4		ETEC 118
ETEC 230	Microcontroller Architecture	4		ETEC 130
ETEC 240	Design Project or	3		ETEC 270
ETEC 275	Build Project			
ENGR 101	Introduction to the Profession	1		ETEC 220
Electives- choose one		3-4		MATH 141 and CSIS 223
CSIS 271	Data Structures & Algorithm Analysis			
ETEC 212	Computer Integrated Manufacturing & Robotic Control			
INTE 271	Programmable Logic Controllers I			INTE 110 and 275
<b>Total Credit Hours Required</b>		<b>68-71</b>		

## Industrial/Technical

### A.A.S. Engineering Technology: Electronics Emphasis

General Education Requirements (Computer & Electronics, and Electronics)		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
EHSS 111	Introduction to Health & Safety for General Industry	1		
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
HIST 120	U.S. History to 1865 <i>or</i>	3		
HIST 121	U.S. History since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 130	Trigonometry <i>or</i>	3-5		MATH 120 or satisfactory score on placement test
MATH 150	PreCalculus			
MATH 180	Analytic Geometry and Calculus I	5		MATH 130 or 150
<b>Specific Program Requirements</b>				
<b>Electronics Engineering Technology</b>				
CHEM 111	General College Chemistry I <i>or</i>	5		MATH 120 or placement test, or two units of high school algebra and CHEM 107 or high school chemistry. Enrollment in or completion of MATH 190
PHYS 220	Engineering Physics I			
CSIS 123	Programming Fundamentals	3		MATH 40/40L or placement test
CSIS 223	Object-Oriented Programming	3		MATH 110 and CSIS 123
ETEC 152	Engineering Graphics & CADD I	5		MATH 40/40L
ETEC 110	Basic Electronics	3		MATH 103
ETEC 111	Microcomputer Hardware Repair	3		
ETEC 118	AC Circuit Analysis	4		ETEC 110 or INTE 110
ETEC 130	Digital Electronics	3		ETEC 110 or INTE 110
ETEC 212	Computer Integrated Manufacturing & Robotic Control	4		
ETEC 220	Analog Devices	4		ETEC 118
ETEC 230	Microcontroller Architecture	4		ETEC 130
ETEC 240	Design Project <i>or</i>	3		ETEC 270
ETEC 275	Build Project			
ENGR 101	Introduction to the Profession	1		ETEC 260
<b>Total Credit Hours Required</b>		<b>69-71</b>		

# Environmental Health & Safety Technology

Offered at MCC-Business & Technology

A.A.S. Envir. Health & Safety Tech.....	69-72 Credits
Envir. Health & Safety Tech Cert.....	33 Credits
A.A.S. Health & Safety.....	64-67 Credits
Health & Safety Specialist Certificate .....	30 Credits
A.A.S. Environmental.....	69-71 Credits
Environmental Specialist Certificate .....	30 Credits
Green Manufacturing Certificate .....	18 Credits

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

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

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology <i>or</i>	5-6		BIOL 100 or CHEM 105 (BIOL 109)
BIOL 102	Environmental Science <i>or</i>			
BIOL 108	Introductory Anatomy and Physiology <i>or</i>			
BIOL 109	Anatomy and Physiology			
BSAD 221	Business Communications <i>or</i>	3		ENGL 30 or appropriate placement test score (BSAD 221, ENGL 119) ENGL 101 (ENGL 215)
ENGL 119	Introduction to Report Writing <i>or</i>			
ENGL 215	Technical Writing			
CHEM 105	Introductory Chemistry <i>or</i>	5		MATH 20 or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
CHEM 111	General College Chemistry I			
CSIS 115	Intro to Microcomputer Applications	3		
GEOL 103	Environmental Geology	5		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Math I	3		MATH 40/40L (MATH 103)
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104, 110 & GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5		
<b>Specific Program Requirements</b>				
EHSS 101	Hazardous Material Management and Emergency Response	3		
EHSS 110	Properties and Hazards of Hazardous Materials	3		
EHSS 200	Safety and Health Regulations and Standards	3		
EHSS 202	Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 205	Principles of Industrial Hygiene <i>or</i>	3		EHSS 200 and CHEM 102, 105 or 111 (EHSS 205) EHSS 200 (EHSS 218)
EHSS 218	Industrial Process and Hazard Control			
EHSS 210	Incident and Accident Investigation <i>or</i>	3		EHSS 200 (EHSS 210)
EHSS 211	Workers Compensation Legislation for EHS			
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
EHSS 217	Concepts of Waste Minimization, Recycling and Pollution Prevention <i>or</i>	3		EHSS 203 (EHSS 217)
EHSS 230	Waste Management			
EHSS 220	Air Quality Management <i>or</i>	3		EHSS 203 (EHSS 220)
EHSS 225	Water Quality Management			
<b>Total Credit Hours Required</b>		<b>69-72</b>		

## Industrial/Technical

### Environmental Health and Safety Technology Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
BSAD 221	Business Communications <i>or</i>	3		ENGL 30 or appropriate placement test score (BSAD 221) ENGL 101 (ENGL 215)
ENGL 119	Introduction to Report Writing <i>or</i>			
ENGL 215	Technical Writing			
EHSS 101	Hazardous Material Management and Emergency Response Operations	3		
EHSS 110	Properties and Hazards of Hazardous Materials	3		
EHSS 200	Safety and Health Regulations and Standards	3		
EHSS 202	Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 205	Principles of Industrial Hygiene	3		EHSS 200 and CHEM 102, 105 or 111
EHSS 210	Incident and Accident Investigation <i>or</i>	3		EHSS 200 (EHSS 210)
EHSS 211	Workers Compensation Legislation for EHS			
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
EHSS 217	Concepts of Waste Minimization, Recycling, and Pollution Prevention <i>or</i>	3		EHSS 203 (EHSS 217)
EHSS 230	Waste Management			
<b>Total Credit Hours Required</b>		<b>33</b>		

### A.A.S. EHSS Health and Safety

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 108	Introductory Anatomy and Physiology <i>or</i>	5-6		
BIOL 109	Anatomy and Physiology			
BSAD 221	Business Communications <i>or</i>	3		ENGL 30 or appropriate placement test score (BSAD 221, ENGL 119) ENGL 101 (ENGL 215)
ENGL 119	Introduction to Report Writing <i>or</i>			
ENGL 215	Technical Writing			
CHEM 105	Introductory Chemistry <i>or</i>	5		MATH 20 or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
CHEM 111	General College Chemistry I			
CSIS 115	Intro to Microcomputer Applications	3		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Math I* <i>or</i>	3		MATH 40/40L (MATH 103) MATH 110 or appropriate placement test score (MATH 120)
MATH 120	College Algebra			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 & 110 & GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSOC, SOCI, SPDR		3-5		
Specific Program Requirements				
EHSS 101	Hazardous Material Management and Emergency Response	3		
EHSS 110	Properties and Hazards of Hazardous Materials	3		
EHSS 200	Safety and Health Regulations and Standards	3		
EHSS 202	Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203	Environmental Regulations	3		
EHSS 204	Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 205	Principles of Industrial Hygiene	3		EHSS 200, either CHEM 102, 105 or 111
EHSS 210	Incident and Accident Investigation	3		EHSS 200
EHSS 211	Workers Compensation Legislation for EHS	3		
EHSS 213	EHS Program Development and Management	3		EHSS 200 and 203
EHSS 218	Industrial Process and Hazard Control	3		EHSS 200
<b>Total Credit Hours Required</b>		<b>64-67</b>		
*minimum requirements				

Health and Safety Specialist Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
BSAD 221 Business Communications	3		Satisfactory ASSET score or ENGL 30 (BSAD 221)
EHSS 101 Hazardous Material Management and Emergency Response Operations	3		
EHSS 110 Properties and Hazards of Hazardous Materials	3		
EHSS 200 Safety and Health Regulations and Standards	3		
EHSS 202 Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203 Environmental Regulations	3		
EHSS 204 Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 205 Principles of Industrial Hygiene <i>or</i> EHSS 218 Industrial Process and Hazard Control	3		EHSS 200, either CHEM 102, 105 or 111 (EHSS 205) EHSS 200 (EHSS 218)
EHSS 210 Incident and Accident Investigation <i>or</i> EHSS 211 Workers Compensation Legislation for EHS	3		EHSS 200
EHSS 213 EHS Program Development and Management	3		EHSS 200 and 203
<b>Total Credit Hours Required</b>	<b>30</b>		

A.A.S. EHSS Environmental

General Education Requirements	Credits	Semester Taken	Prerequisites
BIOL 101 General Biology <i>or</i> BIOL 102 Environmental Science	5		
BSAD 221 Business Communications <i>or</i> ENGL 119 Introduction to Report Writing <i>or</i> ENGL 215 Technical Writing	3		ENGL 30 or appropriate placement test score (BSAD 221, ENGL 119) ENGL 101 (ENGL 215)
CHEM 105 Introductory Chemistry* <i>or</i> CHEM 111 General College Chemistry I	5		MATH 20 or two units of high school algebra and CHEM 107 or high school chemistry (CHEM 111)
CSIS 115 Intro to Microcomputer Applications	3		
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
GEOL 103 Environmental Geology	5		
HIST 120 United States History to 1865 <i>or</i> HIST 121 United States History Since 1865 <i>or</i> POLS 135 Introduction to Political Science <i>or</i> POLS 136 Introduction to American National Politics <i>or</i> POLS 137 Introduction to State and Local Politics	3		
MATH 103 Technical Math I* <i>and</i> MATH 104 Technical Math II* <i>or</i> MATH 120 College Algebra <i>and</i> MATH 130 Trigonometry	6		MATH 40/40L (MATH 103) MATH 103 (MATH 104) MATH 110 or appropriate placement test score (MATH 120) MATH 120 or appropriate placement test score (MATH 130)
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104, 110 & GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR	3-5		
<b>Specific Program Requirements</b>			
EHSS 101 Hazardous Material Management and Emergency Response	3		
EHSS 110 Properties and Hazards of Hazardous Materials	3		
EHSS 200 Safety and Health Regulations and Standards	3		
EHSS 202 Transportation and Storage of Hazardous Materials	3		EHSS 203
EHSS 203 Environmental Regulations	3		
EHSS 204 Emergency Preparedness and Planning	3		EHSS 200 and 203
EHSS 213 EHS Program Development and Management	3		EHSS 200 and 203
<i>The student must complete three of the four following classes:</i> EHSS 217 Concepts of Waste Minimization, Recycling, and Pollution Prevention EHSS 220 Air Quality Management EHSS 225 Water Quality Management EHSS 230 Waste Management	9		EHSS 203 (EHSS 217) EHSS 203 (EHSS 230)
<b>Total Credit Hours Required</b>	<b>69-71</b>		

## Industrial/Technical

### Environmental Specialist Certificate

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

### Green Manufacturing Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSOF 100	Introduction to Personal Computing	1		
EHSS 101	Hazardous Material Management & Emergency Response Operations	3		
EHSS 111	Introduction to Health & Safety for General Industry	1		
EHSS 217	Concepts of Sustainability, Recycling and Pollution Prevention	3		Prerequisites: EHSS 203
INTE 124	Employment Strategies for Technical Careers	3		
MATE 100	Introduction to Manufacturing Technology and Related Industry	3		
MATE 117	Processes & Quality	4		
<b>Total Credit Hours Required</b>		<b>18</b>		

# Fire Science Technology

Offered at MCC-Blue River

A.A.S. Fire Science Technology ..... 73-75 Credits  
 Fire Science Certificate ..... 31 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

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History Since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Mathematics I	3		MATH 40/40L
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech <b>or</b>	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
Electives from one of the following: ECON, HIST or Foreign Language		3-5		
Specific Program Requirements				
EMS 150	Emergency Medical Technician-Basic	8		Student must be 18 years old by the end of the course
FSTE 169	Fire Prevention	3		
FSTE 170	Hazardous Materials Awareness and Operations	3		
FSTE 172	Firefighting Tactics and Strategy	3		
FSTE 179	Fire Fighter I	6		
FSTE 183	Incident and Disaster Management	3		
FSTE 189	Fire Fighter II	5		FSTE 179
FSTE 192	Suppression and Detection Systems	3		
FSTE 193	Fire Service Law	3		
FSTE 200	Fire Service Supervision	3		
FSTE 201	The Fire Service Manager	3		FSTE 200
FSTE 202	Fire Service Administration	3		FSTE 200 and 201
FSTE 203	Managing in Today's Fire Service	3		FSTE 200, 201 and ENGL 101
FSTE 107	Fire Science Physical Fitness I	2		Enrollment in Fire Academy
FSTE 108	Fire Science Physical Fitness II	2		FSTE 107
FSTE 109	Fire Science Physical Fitness III	2		FSTE 108
<b>Total Credit Hours Required</b>		<b>73-75</b>		

## Fire Science Certificate

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 169	Fire Prevention	3		
FSTE 170	Hazardous Materials Awareness and Operations	3		
FSTE 179	Fire Fighter I	6		
FSTE 189	Fire Fighter II	5		FSTE 179
FSTE 107	Fire Science Physical Fitness I	2		Enrollment in Fire Academy
FSTE 108	Fire Science Physical Fitness II	2		FSTE 107
FSTE 109	Fire Science Physical Fitness III	2		FSTE 108
<b>Total Credit Hours Required</b>		<b>31</b>		

# Foreign Language Interpreting

*Offered at MCC-Maple Woods*

Foreign Language  
Interpreting Certificate ..... 15 Credits

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

## Foreign Language Interpreting Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
FLIN 100 Introduction to Interpreting	3		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
<b>Total Credit Hours Required</b>	<b>15</b>		

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

# Game Development

Offered at JCCC . Coordinated at all campuses.

A.A.S. Game Development ..... 66-68 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 Prerequisite not Listed in Req Courses- can take at JCCC	Credits	Semester Taken	Prerequisites
CDTP 135 Desktop Photo Manipulation I: Photoshop *	1		
Specific Prerequisite not Listed in Req Courses- Can take at JCCC or MCC	Credits	Semester Taken	Prerequisites
CSIS 123 Programming Fundamentals	3		MATH 40 or appropriate score on placement test
Specific Program Requirements- Must be taken at JCCC	Credits	Semester Taken	Prerequisites
ANI 120 Conceptual Art for Animation	1		
ANI 145 Introduction to 3D Animation *	3		
CIS 235 Object-Oriented Programming using C++ * or CIS 250 Introduction to 3D Animation *	4		
CS 200 Concepts of Programming Algorithms using C++	4		
ENGL 140 Writing for Interactive Media *	3		
ENGL 150 Digital Narratives *	3		
GAME 101 Computer Game Creations	4		
GAME 200 Game Design	3		
GAME 102 The Business of Games	3		
GAME 140 Game Programming I- 2D *	4		
GAME 180 Artificial Intelligence for Games	3		
GAME 230 Game Programming II- 3D *	4		
GAME 110 Flash Gaming or GAME 255 Mobile Game Programming *	4		
GAME 250 Game Programming III- Capstone *	4		
MATH 191 Math & Physics for Games I * or PHYS 191 Math & Physics for Games I *	4		
Game Electives	3-4		
Game Electives- must choose from courses taken at JCCC	Credits	Semester Taken	Prerequisites
CIM 140 Interactive Media Assets *	4		
ANI 245 Character Animation *	3		
CIS 243 Object-Oriented Analysis and Design *	4		
CIS 262 Project Management *	3		
MUS 156 MIDI Music Composition	3		
GAME 110 Flash Gaming	4		
GAME 255 Mobile Game Programming *	4		
* Prerequisite/corerequisite required			
Specific Programs Requirement- Must be taken at MCC	Credits	Semester Taken	Prerequisites
ENGL 101 Composition & Reading I	3		ENGL 30 or satisfactory score on the ASSET test
ENGL 127 Mythology	3		
MATH 120 College Algebra or	3		MATH 110 or satisfactory score on placement test
MATH 150 Precalculus or	5		MATH 110 or satisfactory score on placement test
MATH 175 Calculus for Business and Social Sciences or	3		MATH 120 or satisfactory score on placement test
MATH 180 Analytic Geometry and Calculus I or	5		MATH 130 or MATH 150
MATH 190 Analytic Geometry and Calculus II or	5		MATH 180
MATH 210 Analytic Geometry and Calculus III	5		MATH 190 or appropriate score on placement test
Social Science/Economics Elective	3		
Physical Education Elective	1		
<b>Total Credit Hours Required</b>	<b>66-68</b>		

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

Physical Education Electives that will transfer from MCC to JCCC:

DANC 100 DANC 111, EMTP 102, HUSC 108, PHED 105, PHED 106, PHED 107, PHED 108, PHED 109, PHED 110, PHED 113, PHED 114, PHED 117, PHED 118, PHED 119, PHED 120, PHED 121, PHED 122, PHED 123, PHED 126, PHED 127, PHED 128, PHED 129, PHED 130, PHED 131, PHED 135, PHED 136, PHED 137, PHED 140, PHED 141, PHED 143, PHED 144, PHED 145, PHED 146, PHED 147, PHED 157, PHED 158, PHED 159, PHED 165, PHED 166, PHED 167, PHED 168, PHED 173, PHED 174, PHED 179, PHED 180.

# Game Programming

*Offered at JCCC*

Game Programming Advanced Cert.....29 Credits

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

## Game Programming Advanced Certificate

Specific Prerequisite not Listed in Req Courses- can take at JCCC	Credits	Semester Taken	Prerequisites
CS 200 Concepts of Programming Algorithms Using C++	4		
Specific Prerequisite not Listed in Req Courses- Can take at JCCC or MCC	Credits	Semester Taken	Prerequisites
CSIS 123 Programming Fundamentals	3		MATH 40 or appropriate score on placement test
MATH 120 College Algebra or	3		MATH 110 or appropriate score on placement test
MATH 150 Precalculus	5		MATH 110 or appropriate score on placement test
Specific Prerequisite Requirement- Must be taken at JCCC	Credits	Semester Taken	Prerequisites
GAME 101 Computer Game Creations	4		
GAME 200 Game Design	3		
GAME 110 Flash Gaming	4		
GAME 140 Game Programming I -2D *	4		
GAME 255 Mobile Game Programming *	4		
GAME 180 Artificial Intelligence for Games *	3		
GAME 230 Game Programming II- 3D *	4		
MATH 191 Math & Physics for Games I * or	4		
PHYS 191 Math & Physics for Games I *			
* Prerequisite/Corequisite required			
<b>Total Credit Hours Required</b>	<b>29</b>		

# Geographic Information Systems

Offered at MCC-Maple Woods and MCC-Longview

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

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

## Geographic Information Systems Certificate

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

# Graphic Design

Offered at MCC-Penn Valley

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

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

## A.A.S. Graphic Design

General Education Requirements		Credits	Semester Taken	Prerequisites
ART 102	Computers in Design I	3		
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business or higher	3		MATH 20 or 20L or appropriate placement test score
SPDR 100	Fundamentals of Speech <i>or</i>	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
Any ART History course		3		
Specific Program Requirements				
ART 100	Art Fundamentals I	3		
ART 103	Design Foundations	3		
ART 110	Drawing I	3		
ART 115	Orientation to Graphic Communications	3		
ART 123	Color Theory	3		ART 103 or concurrent enrollment
ART 139	Photography I	3		
ART 160	Graphic Design I	3		ART 202 or concurrent enrollment
ART 202	Computers in Design II	3		ART 102
ART 244	Digital Photography	3		ART 102
ART 245	Web Design	3		ART 102 and ART 244
ART 250	Printmaking <i>or</i>	3		
ART 254	Silk Screen Printing I			
ART 260	Graphic Design II	3		ART 160
ART 264	Art Portfolio – Graphic Design	3		ART 260
ART 281	Introduction to Digital PrePress - File Preparation	3		ART 102 and 115
ART	Elective	3		
<b>Total Credit Hours Required</b>		<b>63</b>		
<i>Recommended Art Electives:</i>				
ART 157	History of Graphic Design			
ART 165	Cartooning			
ART 170	Ceramics I			
ART 220	Painting I			
ART 230	Sculpture			
ART 242	Photography II			
ART 246	Advanced Web Design			
ART 250	Printmaking			
ART 254	Silk Screen Printing I			
ART 255	Silk Screen Printing II			
ART 265	Graphic Design Internship			
ART 270	Illustration			
ART 280	Special Studies			
ART 283	Advanced Prepress			
ART 282	Digital Prepress - Advanced Color Correction			

# Grounds and Turf Management

Offered at MCC-Longview

A.A.S. Grounds & Turf Management .....	63 Credits
Grounds Maintenance Certificate .....	18 Credits
Horticulture Certificate (JCCC) .....	29 Credits
Sustainability Certificate (JCCC) .....	29 Credits

This program leads to an Associate in Applied Science degree and a certificate of proficiency in Grounds Maintenance and prepares students for jobs in the groundskeeping and turf management industry. The Horticultural and Sustainability certificates are offered through Johnson County Community College. Students must be accepted into the program by both MCC and JCCC. The student is awarded the certificate from JCCC upon successful completion of all requirements. It is the student's responsibility to check with an MCC counselor or advisor before enrollment in the certificate programs.

## A.A.S. Grounds & Turf Management

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 104	General Botany	5		
BIOL 202	Ecology	5		BIOL 101 or 104 or 106
CHEM 107	Preparatory General Chemistry	5		MATH 110 (or equivalent score on placement test) or one unit of High School Algebra
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 100	Mathematics for Business	3		MATH 20 or 20L or appropriate placement test score
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
<b>Specific Program Requirements</b>				
AGBS 100	Introduction to Urban Agribusiness	3		
AGBS 106	Landscape Design and Maintenance	3		
AGBS 107	Deciduous Trees and Shrubs	3		
AGBS 109	Pest Management/Turf and Ornamental	3		
AGBS 115	Soil Fertility and Fertilizers	3		
AGBS 135	Turfgrass Management I	3		
AGBS 145	Irrigation and Installation	3		
<i>12 hours from the courses listed below:</i>				
AGBS 108	Evergreens and Herbaceous Plants	12		AGBS 106 (AGBS 206)
AGBS 140	Turfgrass Management II			
AGBS 151	Special Topics in Horticulture I			
AGBS 152	Special Topics in Horticulture II			
AGBS 153	Special Topics in Horticulture III			
AGBS 200	Occupational Internship			
AGBS 206	Advanced Landscape Design and Maintenance			
<b>Total Credit Hours Required</b>				

## Industrial/Technical

### Grounds Maintenance Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
AGBS 100 Introduction to Urban Agribusiness	3		
AGBS 106 Landscape Design and Maintenance	3		
AGBS 107 Deciduous Trees and Shrubs	3		
AGBS 115 Soil Fertility and Fertilizers	3		
AGBS 135 Turfgrass Management I	3		
AGBS Elective	3		
<b>Total Credit Hours Required</b>	<b>18</b>		

### Horticulture Certificate

*Offered at Johnson County Community College  
Coordinated through MCC-Longview*

Specific Program Requirements <i>Must be taken at MCC-Longview</i>	Credits	Semester Taken	Prerequisites
AGBS 135 Turfgrass Management I	3		
AGBS 206 Advanced Landscape Design & Maintenance	3		
Specific Program Requirements <i>Must be taken at Johnson County Community College</i>			
HORT 135 Landscape Design	3		
HORT 205 Plant Propagation	3		
HORT 214 Woody Plants I, Deciduous	3		
HORT 215 Woody Plants II, Evergreen	3		
HORT 220 Herbaceous Plants	3		
HORT 225 Plant Problems*	3		HORT 214 and 220
Electives <i>May be taken at Metropolitan Community College or Johnson County Community College</i>			
Complete 9 credit hours of electives from the following: <u>May be taken at JCCC:</u>			
SPD 128 Business and Professional Speech	6		
HORT 160 Garden Center Operations			
HORT 255 Landscape Pest Control			
HORT 260 Soils			
<u>May be taken at MCC:</u>			
BSAD 135 Small Business Management			
BSAD 150 Introduction to Business			
<b>Total Credit Hours Required</b>	<b>29</b>		

\*Prerequisite/corequisite required

## Industrial/Technical

### Sustainable Agriculture Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
ENTR 142	Fast Track Business Plan	3		
ENTR 180	Opportunity Analysis	2		
HMGT 165	Food Industry Compliance & Safety	3		
HMGT 167	Local Food Production	3		
HORT 245	Commercial Crop Production	3		
HORT 260	Horticulture Soils	3		
HORT 272	Sustainable Agriculture Fall Practicum	2		
HORT 274	Sustainable Agriculture Spring Practicum	2		
HORT 276	Sustainable Agriculture Summer Practicum	2		
<b>Specific Program Requirements: Must be Taken at MCC</b>				
BSAD 219	Entrepreneurship	3		
AGBS 109	Pest Management/Turf and Ornamental	3		
<b>Total Credit Hours Required</b>		<b>29</b>		

# Health Information Technology

Offered at MCC-Penn Valley

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

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

## Admission to the Program

Since enrollment is limited, students must apply for admission to the Health Information Technology program and meet the following requirements. Students must begin the program in the fall semester. Enrollees may be full- or part-time students. For more information, go to [www.mcckc.edu/hite](http://www.mcckc.edu/hite)

## A.A.S. Health Information Technology

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

## Coding Specialist Certificate

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

# Heating, Ventilation, Air Conditioning & Refrigeration

Offered at MCC-Business & Technology

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

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

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

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

## Industrial/Technical

### Heating, Ventilation and Air Conditioning Certificate

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

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

Specific Program Requirements	Credits	Semester Taken	Prerequisites
HVAC 109 Electricity for HVAC/R Technicians	4		
HVAC 111 Principles of Heating, Ventilation and Air Conditioning	3		
HVAC 120 Fundamentals of Refrigeration	4		
HVAC 135 Residential Heating and Air Conditioning I	4		HVAC 109 (or take concurrently), HVAC 111, 120 and 230 (or take concurrently)
HVAC 136 Residential Heating and Air Conditioning II	4		HVAC 135
HVAC 230 Sheet Metal Layout and Fabrication	4		
<b>Total Credit Hours Required</b>	<b>23</b>		

# Hospitality Management

Offered at Johnson County Community College  
Coordinated at MCC

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

This program leads to an Associate in Applied Science degree with three options: Chef Apprenticeship, Hotel and Lodging, and Food and Beverage. It provides an overview of the various departmental functions, the position of the industries in the American economic system, and the functions and

limitations of those types of establishments. Students must be accepted into the program by both MCC and Johnson County Community College. The student is awarded the degree from JCCC upon successful completion of all requirements.

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

## A.A.S. Hospitality Mgmt. Chef Apprenticeship

Specific Program Requirements <i>Must be taken at one of the MCC campuses</i>	Credits	Semester Taken	Prerequisites	
CSIS _____ Computer Science Elective	1			
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score	
HUMN ____ Humanities Elective	3		See Courses section of this catalog for individual course prerequisites.	
MATH 100 Mathematics for Business or higher	3		MATH 20 or 20L or appropriate placement test score	
PSYC 140 General Psychology	3			
SPDR 100 Fundamentals of Speech <b>or</b>	3		ENGL 30 or appropriate placement test score (SPDR 102)	
SPDR 102 Fundamentals of Human Communication <b>or</b>				
SPDR 103 Interpersonal Communications				
<b>Specific Program Requirements</b> <i>Must be taken at Johnson County Community College</i>				
HMEC 151 Nutrition and Meal Planning	3		See JCCC course descriptions in the Courses section of this catalog for individual course prerequisites.	
HMGT 120 Food Service Sanitation	1			
HMGT 121 Perspectives of Hospitality Management	3			
HMGT 123 Professional Cooking I*	3			
HMGT 128 Supervisory Management*	3			
HMGT 220 American Regional Cuisine*	3			
HMGT 223 Fundamentals of Baking	3			
HMGT 226 Garde-Manger*	3			
HMGT 228 Advanced Hospitality Management*	3			
HMGT 230 Professional Cooking II*	3			
HMGT 231 Advanced Food Preparation*	4		<b>Humanities Electives that will transfer from MCC to JCCC:</b> 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, SPDR 114, SPDR 128	
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		<b>Computer Electives that will transfer from MCC to JCCC:</b> CSOF 100, CSOF 101, CSOF 102, CSOF 103, CSOF 104, CSOF 106, CSIS 115	
HMGT _____ Hospitality Program Elective	3			
<b>Hospitality Program Electives</b>				
HMGT 126 Food Management	HMGT 221	Design & Facilities Management		
HMGT 130 Hospitality Law	HMGT 240	Advanced Baking*		
HMGT 132 Seminar in Housekeeping Operations	HMGT 248	Confectionery Arts		
HMGT 150 Sem: Food Service Sales & Marketing	HMGT 250	Introduction to Catering		
HMGT 203 Hotel Sales & Marketing	HMGT 256	Casino Management		
HMGT 207 Hospitality Human Resource Management	HMGT 265	Front Office Management		
	HMGT 268	Hospitality Managerial Accounting*		
<b>Total Credit Hours Required</b>		<b>75</b>		
<b>Computer Elective</b> must be one of the following: CSOF 100, 101, 102, 103, 104, 106, CSIS 115				
<b>Humanities Elective</b> must be one of the following: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 128, 142, 150, 151, 165, 167, 220, 221, 222, 223, FREN 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, 203, SPDR 114, 128				
<b>*Hospitality Program Electives at JCCC:</b>				
HMGT 126 Food Management	*HMGT 130	Hospitality Law		
HMGT 132 Seminar in Housekeeping Operations	HMGT 150	Seminar in Food Service Sales and Marketing		
HMGT 203 Hotel Sales and Marketing*	HMGT 207	Hospitality Human Resource Management*		
HMGT 221 Design and Facilities Management*	HMGT 240	Advanced Baking*		
HMGT 248 Confectionery Arts	HMGT 250	Introduction to Catering		
HMGT 256 Casino Management	HMGT 265	Front Office Management		
HMGT 268 Hospitality Managerial Accounting*				

## Social Sciences

### A.A.S. Hospitality Management Food and Beverage

Specific Program Requirements <i>Must be taken at one of the MCC campuses</i>		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
MATH 100	Mathematics for Business or higher	3		MATH 20 or 20L or appropriate placement test score
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech <b>or</b>	3		ENGL 30 or appropriate placement test score (SPDR 102)
SPDR 102	Fundamentals of Human Communications <b>or</b>			
SPDR 103	Interpersonal Communications			
Computer Elective		1		See Courses section of this catalog for individual course prerequisites.
Humanities Requirement		3		
Specific Program Requirements <i>Must be taken at Johnson County Community College</i>				
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		
<b>Total Credit Hours Required</b>		<b>66</b>		

**Computer Elective** must be one of the following: CSOF 100, 101, 102, 103, 104, 106, CSIS 115

**Humanities Elective** must be one of the following: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 142, 150, 151, 165, 220, 221, 222, 223, FREN 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 140, 145, MUSI 108, PHIL 100, 101, 200, 201, SPDR 114, 128

**\*Hospitality Electives at JCCC:**

HMGT 130 Hospitality Law  
 HMGT 203 Hotel Sales and Marketing\*  
 HMGT 223 Fundamentals of Baking  
 HMGT 250 Introduction to Catering  
 HMGT 256 Casino Management  
 HMGT 275 Seminar in Hospitality Management: Internship

\*Prerequisite/corequisite required

## Social Sciences

### A.A.S. Hospitality Management Hotel and Lodging

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

**Computer Elective** must be one of the following: CSOF 100, 101, 102, 103, 104, 106, CSIS 115.

**Humanities Elective** must be one of the following: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 142, 150, 151, 165, 220, 221, 222, 223, FREN 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 133, 134, 140, 145, MUSI 108, PHIL 100, 101, 200, 201, SPDR 114, 128

**Hospitality Electives at JCCC:**

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

\*Prerequisite/corequisite required

## Social Sciences

# Human Services

*Offered at MCC-Longview*

A.A.S. Human Services  
 Drug Addiction Services ..... 65-67 Credits  
 A.A.S. Human Services Generalist..... 62 Credits  
 A.A.S. Human Services  
 Mental Health Services..... 64-66 Credits  
 Drug Addiction Services Certificate ..... 30 Credits  
 Mental Health Technician Certificate ... 23 Credits  
 Youth Care Services ..... 63-65 Credits

Youth Development  
 Worker Certificate ..... 12-14 Credits  
 Youth Work Certificate ..... 33 Credits

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

### A.A.S. Human Services Drug Addiction Services

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology <i>or</i>	3-5		
BIOL 132	Human Nutrition			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
PSYC 162	Correctional Psychology	3		PSYC 140
PSYC 148	Group Processes	3		PSYC 140
SOCI 160	Sociology	3		
ANTH 110	Cultural Anthropology <i>or</i>	3		
SOSC 171	Comparative Ethnic and Cultural Studies			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
CRJU 275	Alcohol and Drug Addiction <i>or</i>	3		
HUMS 275	Alcohol and Drug Addiction			
CRJU 280	Addiction Counseling with Special Populations <i>or</i>	3		
HUMS 280	Addiction Counseling with Special Populations			
CRJU 285	Addiction Client Management <i>or</i>	3		
HUMS 285	Addiction Client Management			
CSIS 110	Technology and Information Management <i>or</i>	3		
CSIS 115	Introduction to Microcomputer Applications			
HUMS 100	Introduction to Human Services	3		
HUMS 163	Therapeutic Activities and Recreation	3		
HUMS 168	Introduction to Practicum	1		
HUMS 172	Aging, Alcoholism and Medications	1		
HUMS 175	Spirituality in Addiction Recovery	1		
HUMS 176	Addiction Management	1		
HUMS 177	Positive Dependency	1		
HUMS 178	Women's Issues in Addiction	1		
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168
HUMS 202	Human Services Practicum II	3		HUMS 201
HUMS 203	Colloquia I	1		HUMS 201 corequisite
HUMS 204	Colloquia II	1		HUMS 202 corequisite
HUMS 210	Interviewing and Interpersonal Communications	3		PSYC 162
HUMS 220	Social Welfare	3		HUMS 100
<b>Total Credit Hours Required</b>		<b>65-67</b>		

## Social Sciences

### A.A.S. Human Services Generalist

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

### Mental Health Technician Certificate

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

## Social Sciences

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

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 101	General Biology <i>or</i>	3-5		
BIOL 132	Human Nutrition			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
PSYC 140	General Psychology	3		
PSYC 162	Correctional Psychology	3		PSYC 140
PSYC 148	Group Processes	3		PSYC 140
SOCI 160	Sociology	3		
SOSC 171	Comparative Ethnic and Cultural Studies	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements				
CRJU/ SOCI 169	Family Violence and Sexual Abuse	3		
CRJU 230	Criminal Law II	3		
CSIS 110	Technology and Information Management <i>or</i>	3		
CSIS 115	Intro to Micro Computer Appls			
HUMS 100	Introduction to Human Services	3		
HUMS 163	Therapeutic Activities and Recreation	3		
HUMS 168	Introduction to Practicum I	1		HUMS 100
HUMS 171	Crisis Intervention	1		HUMS 100 or PSYC 140
HUMS 190	Community Mental Health	3		
HUMS 201	Human Services Practicum I	3		HUMS 100 and 168 and approval of the coordinator
HUMS 202	Human Services Practicum II	3		HUMS 201 and approval of the coordinator
HUMS 203	Human Services Colloquia I	1		HUMS 201 corequisite
HUMS 204	Human Services Colloquia II	1		HUMS 202 corequisite
HUMS 210	Interviewing and Interpersonal Communications	3		PSYC 162
HUMS 220	Social Welfare	3		HUMS 100
HUMS/ CRJU 275	Alcohol and Drug Addiction	3		
<b>Total Credit Hours Required</b>		<b>64-66</b>		

## Social Sciences

### A.A.S. Human Services Youth Care Services

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

### Drug Addiction Services Certificate

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

## Social Sciences

### Youth Development Worker Certificate

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

### Youth Work Certificate

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

# Industrial Technologies

Offered at MCC-Business & Technology

- A.A.S. Indus. Tech. Industrial Electrical ..... 62-64 Credits
  - Industrial Electrical Certificate ..... 32 Credits
  - Programmable Logic Controller Certificate ..... 33 Credits
- A.A.S. Indus. Tech.
  - Industrial Maintenance ..... 64-66 Credits
    - Industrial Maintenance Certificate ..... 32 Credits
    - Welding TIG/MIG Job Ready Certificate ..... 18 Credits
    - Welding Job Ready Certificate ..... 18 Credits
    - Millwright Certificate ..... 33 Credits
- A.S.S. Indus. Tech. Millwright ..... 67-69 Credits
- A.A.S. Indus. Tech. Multi-craft ..... 67-69 Credits

- A.A.S. Indus. Tech. Stationary Engineer 67-69 Credits
  - Stationary Engineer Certificate ..... 33 Credits
- A.A.S. Instrumentation & Controls ..... 63-64 Credits
  - Instrumentation & Controls Certificate ..... 32-33 Credits

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

## A.A.S. INTE Industrial Electrical

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History Since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103	Technical Mathematics I* <b>and</b>	6		MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
MATH 104	Technical Mathematics II*			
MATH 120	College Algebra <b>and</b>			
MATH 130	Trigonometry			
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (Except 104,110 or GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5 or 6-9 see emphasis area		
*minimum requirements				
<b>Industrial Electrical (General Education Requirements 3-5)</b>				
CSOF 100	Introduction to Personal Computing	1		
EHSS 111	Introduction to Health & Safety for General Industry	1		
INTE 110	Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115	Blueprint Reading, Electrical	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	3		
INTE 142	National Electric Code	3		INTE 110
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 225	Industrial Electrical Print Reading	3		INTE 115
INTE 271	Programmable Logic Controller I	3		INTE 110 and 175
INTE 273	Variable Speed Motors and Drives	3		INTE 175 and 271
INTE 272	Programmable Logic Controller II	3		INTE 115 and 271
INTE 277	Program Logic Controller Troubleshooting	3		INTE 115 and 271
INTE 225	Industrial Print Reading	3		INTE 115
INTE 275	Electric Motor Controls II	3		INTE 175
INTE 276	Electrical Troubleshooting	3		INTE 275
Electives: CHEM, CSIS, INTE, MATE, PHYS		6		
<b>Total Credit Hours</b>		<b>62-64</b>		

## Industrial/Technical

### AAS INTE – Industrial Maintenance

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History Since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103	Technical Mathematics I* <b>and</b>	6		MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
MATH 104	Technical Mathematics II*			
MATH 120	College Algebra <b>and</b>			
MATH 130	Trigonometry			
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (Except 104,110 or GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5 or 6-9 see emphasis area		
*minimum requirements				

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

### AAS INTE – Multi-craft Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Mathematics I and	6		
MATH 104	Technical Mathematics II <b>or</b>			
MATH 120	College Algebra and	6		
MATH 130	Trigonometry			
SPDR 100	Fundamentals of Speech	3		
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG, (EXCEPT 104 OR 110), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5		
<b>Specific Program Required</b>				
CSOF 100	Intro to Personal Computing	1		MATH 103 or concurrent enrollment
EHSS 111	Intro to Health & Safety for General Industry	1		INTE 110
HVAC 111	Principles of Heating, Ventilation, & Refrigeration	3		
INTE 110	Industrial Electrical Principles	3		
INTE 115	Electrical Print Reading	3		
INTE 124	Employment Strategies for Technical Careers	3		HVAC 109 and INTE 115
INTE 140	Fundamentals of Industrial Maintenance	3		INTE 110 and 175
MATE 115	Blueprint Reading for the Trades	3		
MATE 130	Machining for Related Occupations	5		
Electives: Choose from the following disciplines: EHSS, HVAC, INTE, MATE		24		INTE 225 and INTE 272
<b>Total Credit Hours Required</b>		<b>67-69</b>		

AAS INTE – Stationary Engineer

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History Since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103	Technical Mathematics I* <b>and</b>	6		MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
MATH 104	Technical Mathematics II*			
MATH 120	College Algebra <b>and</b>			
MATH 130	Trigonometry			
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (Except 104,110 or GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5 or 6-9 see emphasis area		
*minimum requirements				

**Stationary Engineer (General Education Requirements 3-5)**

CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
HVAC 109	Electricity for HVAC/R Technicians	4		
HVAC 111	Principles of Heating, Ventilation and Air Conditioning	3		
HVAC 120	Fundamentals of Refrigeration	4		
HVAC 201	Stationary Engineering	3		HVAC 111 and 120
HVAC 221	Commercial Refrigeration	4		HVAC 109 and 120
HVAC 230	Design and Distribution	4		
INTE 110	Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115	Blueprint Reading, Electrical	3		INTE 110
INTE 124	Employment Strategies for Technical Careers	3		
INTE 150	Fundamentals of Hydraulics	3		
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 270	Instrumentation & Process Controls	3		INTE 225 & 272
INTE 271	Programmable Logic Controller I	3		INTE 110 and 175
Electives: CHEM, CSIS, INTE, MATE, PHYS		3		
<b>Total Credit Hours Required</b>		<b>67-69</b>		

**Millwright (General Education Requirements 3-5)**

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

## Industrial/Technical

### AAS INTE – Instrumentation & Controls

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
ENGL 215	Technical Writing	3		ENGL 101
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 120	College Algebra <b>and</b>	5-6		MATH 110 or appropriate placement score MATH 120 or appropriate placement or score MATH 110 or appropriate placement score
MATH 130	Trigonometry <i>or</i>			
MATH 150	Precalculus			
SPAN 100	Beginning Occupational Spanish	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement score
Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSIS 123	Programming Fundamentals	3		MATH 40/40L or appropriate placement score
EHSS 111	Intro to Health & Safety for General Industry	1		
ETEC 110	Basic Electronics	3		Completion of or concurrent enrollment in MATH 103 or higher
ETEC 111	Microcomputer Hardware Repair	3		CSIS 110
ETEC 118	AC Circuit Analysis	4		ELTE 110 or INTE 110
ETEC 130	Digital Electronics			Completion of or concurrent enrollment ELTE 110 or INTE 110
ETEC 220	Analog Devices	4		ELTE 118
ETEC 230	Microcomputer Architecture	4		ELTE 130
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 225	Industrial Electrical Print Reading	3		INTE 115
INTE 270	Instrumentation & Process Control	3		INTE 225 and INTE 272
INTE 271	Programmable Logic Controllers I	3		INTE 110 and INTE 175
INTE 272	Programmable Logic Controllers II	3		INTE 115 and INTE 271
INTE 277	Programmable Logic Controller Troubleshooting	3		INTE 115 and INTE 271
<b>Total Credit Hours Required</b>		<b>63-64</b>		

### Millwright Certificate

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

### Industrial Maintenance Certificate

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

## Industrial/Technical

### Stationary Engineer Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSIS 115 Introduction to Microcomputer Applications	3		
EHSS 100 Introduction to Environmental Health & Safety	3		
HVAC 109 Electricity for HVAC/R Technicians	4		
HVAC 111 Principles of Heating, Ventilation and Air Conditioning	3		
HVAC 120 Fundamentals of Refrigeration	4		
HVAC 201 Stationary Engineering	3		HVAC 111 and 120
HVAC 221 Commercial Refrigeration	4		HVAC 109 and 120
HVAC 230 Design and Distribution	3		
INTE 110 Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115 Blueprint Reading, Electrical	3		INTE 110
INTE 124 Employment Strategies for Technical Careers	3		
INTE 150 Fundamentals of Hydraulics	3		
INTE 175 Electric Motor Controls I	3		HVAC 109 and INTE 115
INTE 271 Programmable Logic Controller I	3		INTE 110 and 175
INTE 270 Instrumentation & Controls	3		INTE 225 and INTE 272
<b>Total Credit Hours Required</b>	<b>32-33</b>		

### Industrial Electrical Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSOF 100 Introduction to Personal Computing	1		
EHSS 111 Introduction to Health and Safety in General Industry	1		
INTE 110 Industrial Electrical Principles	3		MATH 103 or concurrent enrollment
INTE 115 Blueprint Reading, Electrical	3		INTE 110
INTE 142 National Electric Code	3		INTE 110
INTE 175 Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 225 Industrial Print Reading	3		INTE 115
INTE 271 Programmable Logic Controller I	3		INTE 110 and 175
INTE 273 Variable Speed Motors and Drives	3		INTE 175 and 271
<u>Any 3 of the following:</u>			
INTE 272 Programmable Logic Controller II	9		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 Print Reading			INTE 115
Electives: CHEM, CSIS, INTE, MATE, PHYS	3		
<b>Total Credit Hours Required</b>	<b>32</b>		

### Welding Job Ready Certificate

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

### Welding TIG/MIG Job Ready Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
INTE 122 Welding Layout and Fabrication	3		
INTE 151 Industrial Rigging	3		
INTE 170 TIG Welding, GTAW	3		
INTE 171 MIG Welding, GMAW	3		INTE 170
MATE 115 Blueprint Reading for the Trades	3		
MATH 103 Technical Math I	3		MATH 20/20L or appropriate score on placement test to MATH 103R
<b>Total Credit Hours Required</b>	<b>18</b>		

## Industrial/Technical

### Instrumentation & Controls Certificate

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

### INTE Programmable Logic Controller Certificate

Specific Program Requirements		Credits	Semester Taken	Prerequisites
CSOF 100	Introduction to Personal Computing	1		
INTE 110	Industrial Electrical Principles	3		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	3		CSOF 100 or CSIS 115
ETEC 130	Digital Electronics	3		Completion of or concurrent enrollment in ETEC 110 or INTE 110
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 CSOF 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
<b>Total Credit Hours Required</b>		<b>33</b>		

# Apprenticeships- Industrial Technologies

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
- A.A.S. Indus. Tech. Bricklayer ..... 63-65 Credits
- A.A.S. Indus. Tech  
Construction Carpentry..... 63-66 Credits
- A.A.S. Indus. Tech  
Construction Cement Masons ..... 63-66 Credits
- A.A.S. Indus. Tech  
Construction Ironworking..... 65-67 Credits
- A.A.S. Indus. Tech  
Construction Laborer..... 63-65 Credits
- A.A.S. Indus. Tech Glaziers..... 63-66 Credits

- A.A.S. Indus. Tech. Inside Wiring  
3 & 5-year program..... 63-65 Credits
- A.A.S. Indus. Tech. Maintenance Electrician  
..... 64-66 Credits
- A.A.S. Indus. Tech. Painter..... 63-65 Credits
- A.A.S. Indus. Tech. Plumbing ..... 63-65 Credits
- A.A.S. Indus. Tech. Sheet Metal..... 63-65 Credits
- A.A.S. Lineman Tech/Cable Splicer ..... 63 Credits
- A.A.S. Industrial Mechanic ..... 65-67 Credits
- A.A.S. Industrial Welder ..... 65-67 Credits
- A.A.S. Industrial Pipefitter/Sprinkler Fitter .....  
..... 63-65 Credits

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History Since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103	Technical Mathematics I* <b>and</b>	6		MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
MATH 104	Technical Mathematics II*			
MATH 120	College Algebra <b>and</b>			
MATH 130	Trigonometry			
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, FOREIGN LANGUAGE, GEOG (Except 104, 110 or GIS Courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR		3-5 or 6-9 see emphasis area		

\*minimum requirements

Specific Program Requirements		Credits	Semester Taken	Prerequisites
<b>Bricklayer (General Education Requirements 3-5)</b>				
BSAD 109	Principles of Supervision	3		
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
INTE 151	Industrial Rigging	3		
SRVY 135	Elementary Surveying	3		MATH 130
Bricklaying Apprenticeship (Credit by Certification*)		30		
<b>Total Credit Hours</b>		<b>63-65</b>		
* Federally approved bricklaying apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.				

Specific Program Requirements		Credits	Semester Taken	Prerequisites
<b>Construction Carpentry (General Education Requirements 6-9)</b>				
BSAD 109	Principles of Supervision	3		
CSIS 115	Introduction to Microcomputer Applications	3		
EHSS 100	Introduction to Environmental Health and Safety	3		
INTE 151	Industrial Rigging	3		
Carpentry Apprenticeship (Credit by Certification*)		30		
<b>Total Credit Hours</b>		<b>63-66</b>		
* Federally approved carpentry apprenticeship program that contains a minimum 450 clock hours of classroom instruction and 6000 clock hours of on-the-job training. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.				

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<b>Construction Cement Masons (General Education Requirements 6-9)</b>			
BSAD 109	Principles of Supervision	3	
CSIS 115	Introduction to Microcomputer Applications	3	
EHSS 100	Introduction to Environmental Health and Safety	3	
SRVY 135	Elementary Surveying	3	MATH 130
Cement Masons Apprenticeship (Credit by Certification*)		30	
<b>Total Credit Hours</b>		<b>63-66</b>	

\* 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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

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

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

<b>Construction Laborer (General Education Requirements 3-5)</b>			
BSAD 109	Principles of Supervision	3	
CSIS 115	Introduction to Microcomputer Applications	3	
EHSS 200	Safety and Health Regulations and Standards	3	
EHSS 205	Principles of Industrial Hygiene	3	EHSS 200 and either CHEM 102, 105 or 111
SRVY 135	Elementary Surveying	3	MATH 130
Construction Laborer Apprenticeship (Credit by Certification*)		30	
<b>Total Credit Hours</b>		<b>63-65</b>	

\* 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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

<b>Glaziers (General Education Requirements 6-9)</b>			
BSAD 109	Principles of Supervision	3	
CSIS 115	Introduction to Microcomputer Applications	3	
EHSS 100	Introduction to Environmental Health and Safety	3	
SRVY 135	Elementary Surveying	3	MATH 130
Glazier Apprenticeship (Credit by Certification*)		30	
<b>Total Credit Hours</b>		<b>63-66</b>	

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

<b>Industrial Maintenance Electrician (General Education Requirements 6-9)</b>			
EHSS 100:	Introduction to Environmental, Health & Safety	3	
INTE 124:	Employment Strategies for Technical Careers	3	
INTE 225:	Industrial Electrical Print Reading	3	
INTE 272:	Programmable Logic Controller II or	3	INTE 115 AND INTE 271
INTE 277:	Programmable Logic Controller Troubleshooting		
INTE 276:	Electrical Troubleshooting	3	INTE 275
Industrial Maintenance Electrician Apprenticeship*		30	
<b>Total Credit Hours Required</b>		<b>63-65</b>	

\*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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

<b>Inside Wiring - 3 year program (General Education Requirements 3-5)</b>			
CSIS 115	Introduction to Microcomputer Applications	3	
INTE 271	Programmable Logic Controller I	3	INTE 110 and 175
INTE 275	Electric Motor Controls II	3	INTE 175
INTE 276	Electrical Troubleshooting	3	INTE 275
INTE 277	Programmable Logic Controller Troubleshooting	3	INTE 115 and 271
Electrical Apprenticeship		30	
<b>Total Credit Hours</b>		<b>63-65</b>	

\* 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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

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<b>Inside Wiring - 5 year program (General Education Requirements 3-5)</b>			
CSIS 115	Introduction to Microcomputer Applications	3	
Electrical Apprenticeship		42	
<b>Total Credit Hours</b>		<b>63-65</b>	

\* 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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

<b>Painter (General Education Requirements 3-5)</b>			
BSAD 109	Principles of Supervision	3	
CSIS 115	Introduction to Microcomputer Applications	3	
EHSS 100	Introduction to Environmental Health and Safety	3	
EHSS 200	Safety and Health Regulations & Standards	3	
INTE 151	Industrial Rigging	3	
Painter Apprenticeship (Credit by Certification*)		30	
<b>Total Credit Hours</b>		<b>63-65</b>	

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

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

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

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

\* 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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

## AAS INTE – Lineman Technician/Cable Splicer

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101: Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120: United States History to 1865 or HIST 121: United States History Since 1865 or POLS 135: Introduction to Political Science or POLS 136: Introduction to American National Politics or POLS 137: Introduction to State and Local Politics	3		
SPDR 100: Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
MATH 103: Technical Mathematics I and MATH 104: Technical Mathematics II or MATH 120: College Algebra and MATH 130: Trigonometry	6		MATH 40/40L or appropriate placement test score (MATH 103), MATH 103 (MATH 104), MATH 110 or appropriate placement test score (MATH 120), MATH 120 or appropriate placement test score (MATH 130)
SPAN 100: Beginning Occupational Spanish	3		
Specific Program Requirements	Credits	Semester Taken	Prerequisites
LINE 106: Safety and Accident Prevention	3		
INTE 110: Industrial Electrical Principles	3		MATH 103
INTE 120: INTE Internship I	3		
INTE 124: Employment Strategies for Technical Careers	3		
INTE 220: INTE Internship II	3		
Technician/Cable Splicer Apprenticeship*	30		
<b>Total Credit Hours Required</b>	<b>63</b>		

\*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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

## Industrial/Technical

### AAS INTE – Industrial Mechanic

Specific Program Requirements	Credits	Semester Taken	Prerequisites
EHSS 100: Introduction to Environmental, Health & Safety	3		
INTE 124: Employment Strategies for Technical Careers	3		
INTE 150: Fundamentals of Hydraulics	3		
INTE 151: Industrial Rigging	3		
MATE 130: Machining for Related Occupations	5		
Industrial Mechanic Apprenticeship*	30		
<b>Total Credit Hours Required</b>	<b>65-67</b>		

\*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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

### AAS INTE – Industrial Welder

Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSIS 110: Technology & Information Management	3		
LINE 106: Safety and Accident Prevention	3		
INTE 124: Employment Strategies for Technical Careers	3		
INTE 151: Industrial Rigging	3		
MATE 130: Machining for Related Occupations	5		
Industrial Welders Apprenticeship*	30		
<b>Total Credit Hours Required</b>	<b>65-67</b>		

\*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. Transcribed upon completion of 15 hours of MCC coursework and documentation of certificate and/or journeyman card for the appropriate craft.

### AAS INTE – Industrial Pipefitter/Sprinkler Fitter

Specific Program Requirements	Credits	Semester Taken	Prerequisites
CSIS 110: Technology & Information Management	3		
LINE 106: Safety and Accident Prevention	3		
INTE 124: Employment Strategies for Technical Careers	3		
INTE 150: Fundamentals of Hydraulics	3		
INTE 151: Industrial Rigging	3		
Industrial Pipefitter/Sprinkler Fitter Apprenticeship*	30		
<b>Total Credit Hours Required</b>	<b>63-65</b>		

\*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. Transcribed 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. Interior Merchandising.....	68 Credits
Interior Design Retail Sales/Manufacturers Representative Certificate .....	30 Credits
Interior Products Sales Representative Certificate .....	17 Credits
Interior Design Advanced Certificate.....	31 Credits
Interior Design Merchandising Entrepreneurship Certificate .....	31 Credits

This program leads to an Associate in Applied Science degree. Associates degrees are offered in interior design, interior merchandising and interior entrepreneurship. Certificates are offered in interior products sales representative and interior design retail sales/manufacturers representative. Students must be accepted into the program by both MCC and JCCC. The student is awarded the degree or certificate from JCCC upon successful completion of all requirements. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

## A.A.S. Interior Design

Specific Program Requirements <i>Must be taken at one of the MCC campuses</i>	Credits	Semester Taken	Prerequisites
ART 150 History of Art I	3		
BSAD 221 Business Communications	3		
ECON 110 Introduction to Economics <b>or</b> ECON 210 Macroeconomics	3		MATH 40/40L or appropriate placement test score (ECON 210)
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
MATH 100 Mathematics for Business	3		MATH 20/20L or appropriate placement test score
Elective: Physical Education or Health (see below)	1		See Courses section of this catalog for individual course prerequisites.
Specific Program Requirements <i>Must be taken at Johnson County Community College</i>			
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		
<b>Total Credit Hours Required</b>	<b>68</b>		

# Human Sciences

## A.A.S. Interior Entrepreneurship

Specific Program Requirements <i>Must be taken at one of the MCC campuses</i>		Credits	Semester Taken	Prerequisites
ART 150	History of Art I	3		
BSAD 221	Business Communications	3		Satisfactory ASSET score or completion of ENGL 30
ECON 110	Introduction to Economics <b>or</b>	3		MATH 40/40L or appropriate placement test score (ECON 210)
ECON 210	Macroeconomics			
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
MATH 100	Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
Elective:	Physical Education or Health (see below)	1		See Courses section of this catalog for individual course prerequisites.
Business/Marketing/Entrepreneurship Electives at MCC or JCCC**		9		
Specific Program Requirements <i>Must be taken at Johnson County Community College</i>		Credits	Semester Taken	Prerequisites
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		
<b>Total Credit Hours Required</b>		<b>68</b>		

**\*\*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 221 Retail Management

**\*Recommended Interior Electives at JCCC:**

ITMD 127	Elements of Floral Design	ITMD 150	Asian Rugs and Carpets
ITMD 140	Window Treatments*	ITMD 175	Advanced Floral Design*
ITMD 143	Accessory Fundamentals*	ITMD 213	Lighting Design and Planning*
ITMD 145	Upholstered Furniture*	ITMD 225	Interior Textiles II*
ITMD 147	Lighting Basics*	ITMD 250	20th Century Designers
ITMD 148	History of Asian Furniture and Design	ITMD 295	Field Study: Design and Merchandising*
ITMD 149	Casegoods*	ITMD 296	Interior Design: The Orient (travel for credit)*

**Health, Physical Education and Recreation Elective** must be one of the following: DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

\*Prerequisite/corequisite required

# Human Sciences

## A.A.S. Interior Merchandising

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

\*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 112 Retailing Principles
- BSAD 205 Marketing

**Health, Physical Education and Recreation Elective** must be one of the following: DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

## Human Sciences

### Interior Design Retail Sales/Manufacturers Representative Certificate

Specific Program Requirements <i>Must be taken at one of the MCC campuses</i>	Credits	Semester Taken	Prerequisites
BSAD 112 Retailing Principles	3		
MATH 100 Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
Specific Program Requirement <i>Must be taken at Johnson County Community College</i>			
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		
<b>Total Credit Hours Required</b>	<b>30</b>		
<p><b>*Prerequisite/corequisite</b>  <b>*Recommended Electives:</b>                      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*</p>			

### Interior Products Sales Representative Certificate

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

## Human Sciences

### Interior Design Advanced Certificate

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

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

\*Prerequisites/corequisites required

### Interior Design & Merchandising Entrepreneurship Certificate

Specific Program Requirements <i>Must be taken at one of the MCC campuses</i>	Credits	Semester Taken	Prerequisites
BSAD 219 Planning and Growing an Entrepreneurial Venture	3		
MATH 100 Mathematics for Business or higher	3		MATH 20/20L or appropriate placement test score
Specific Program Requirement <i>Must be taken at Johnson County Community College</i>			
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 <i>Must be taken at Johnson County Community College</i>			
ITMD 127 Elements of Floral Design	1		
ITMD 175 Advanced Floral Design*	1		
ITMD 140 Window Treatments*	1		
ITMD 145 Upholstered Furniture*	1		
ITMD 147 Lighting Basics*	1		
Additional Recommended ENTR Coursework <i>Must be taken at Johnson County Community College</i>			
ENTR 195 Franchising*	3		
ENTR 220 Entrepreneurial Marketing*	2		
ENTR 131 Financial Management for Small Business*	2		
<b>Total Credit Hours Required</b>	<b>31</b>		

# International Studies

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

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

# Manufacturing Technology

Offered at MCC-Business & Technology

## A.A.S. Manufacturing Technology

CNC .....	62-66 Credits
Manual .....	63-67 Credits
Manufacturing Technology Certificate .....	40 Credits
Manufacturing Computer Numerical Control Operator Certificate .....	22-24 Credits
Manufacturing Technology Welding & Fabrication Job Ready Certificate .....	17-19 Credits
Manufacturing Technology Career Certificate .....	12 Credits

This Manufacturing Technology NIMS Certified program, leads to an Associate in Applied Science degree or certificates of proficiency. Requirements for the Manufacturing Technology degree, and certificates are listed below.

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

## A.A.S. Manufacturing Technology: CNC Emphasis

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 United States History to 1865 <b>or</b> HIST 121 United States History Since 1865 <b>or</b> POLS 135 Introduction to Political Science <b>or</b> POLS 136 Introduction to American National Politics <b>or</b> POLS 137 Introduction to State and Local Politics	3		
MATH 103 Technical Math I* <b>and</b> MATH 104 Technical Math II* <b>or</b> MATH 120 College Algebra <b>and</b> MATH 130 Trigonometry	6		MATH 40/40L or appropriate placement test score (MATH 103) MATH 103 (MATH 104) MATH 110 or appropriate placement test score (MATH 120) MATH 120 or appropriate placement test score (MATH 130)
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ECON, ENGL, Foreign Language, GEOG (except 104, 110 and GIS Courses), PHIL, PSYC, SOSC	3-5		
<b>Specific Program Requirements</b>			
CSOF 100 Introduction to Personal Computing	1		
EHSS 111 Introduction to Health and Safety for General Industry	1		
INTE 124 Employment Strategies for Technical Careers	3		CSOF 100 or CSIS 115
MATE 100 Introduction to Manufacturing Technology <b>and</b>	3		
MATE 101 Machining and Tooling I	4		MATE 100
MATE 114 Metrology	2		
MATE 115 Blueprint Reading for the Trades	3		
MATE 116 Geometric Dimensioning and Tolerancing Printreading	3		MATE 115
MATE 117 Processes & Quality	4		
MATE 201 Basic Metallurgy	3		
<b>Specific Emphasis Requirements: CNC</b>			
MATE 130 Machining for Related Occupation	5		
MATE 131 NIMS Level I Credentials Job Planning, Benchwork & Layout	1		MATE 100, 101, 102, 115 and MATH 103
MATE 136 NIMS Level I Credentials CNC Milling <b>or</b> MATE 137 NIMS Level I Credentials CNC Turning	1		MATE 220
MATE 138 NIMS Level I Credentials Drill Press	1		MATE 100, 101, 102, 115 and MATH 103
MATE 210 Computerized Numerical Control- Lathe	3		MATE 101 or 130 & MATH 130 or concurrent enrollment
MATE 215 Computerized Numerical Control- Mill	3		MATE 101 or 130 & MATH 130 or concurrent enrollment
MATE 220 Advanced Computer Numerical Control- Lathe Mill	4		MATE 225 and MATH 104
MATE 225 Master Cam I	3		CSOF 100 and MATE 210 or 215
MATE 226 Master Cam II	3		MATE 225
<b>Total Credit Hours Required</b>	<b>62-66</b>		

\*minimum requirements

## Industrial/Technical

### A.A.S. Manufacturing Technology: Manual Emphasis

General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120	United States History to 1865 <i>or</i>	3		
HIST 121	United States History Since 1865 <i>or</i>			
POLS 135	Introduction to Political Science <i>or</i>			
POLS 136	Introduction to American National Politics <i>or</i>			
POLS 137	Introduction to State and Local Politics			
MATH 103	Technical Math I* <i>and</i>	6		MATH 40/40L or appropriate placement test score (MATH 103) MATH 103 (MATH 104) MATH 110 or appropriate placement test score (MATH 120) MATH 120 or appropriate placement test score (MATH 130)
MATH 104	Technical Math II* <i>or</i>			
MATH 120	College Algebra <i>and</i>			
MATH 130	Trigonometry			
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
General Education Electives: Any course(s) numbered 100 or above from the following disciplines: ART, ECON, ENGL, Foreign Language, GEOG (except 104, 110 and GIS Courses), PHIL, PSYC, SOSC		3-5		
<b>Specific Program Requirements</b>				
CSOF 100	Introduction to Personal Computing	1		
EHSS 111	Introduction to Health and Safety for General Industry	1		
INTE 124	Employment Strategies for Technical Careers	3		CSOF 100 or CSIS 115
MATE 100	Introduction to Manufacturing Technology <i>and</i>	3		
MATE 101	Machining and Tooling I	4		MATE 100
MATE 114	Metrology	2		
MATE 115	Blueprint Reading for the Trades	3		
MATE 116	Geometric Dimensioning and Tolerancing Printreading	2		MATE 115 or ETEC 152
MATE 117	Processes & Quality	4		
MATE 130	Machining for Related Occupations	5		
MATE 201	Basic Metallurgy	3		
<b>Specific Emphasis Requirements: Manual</b>				
MATE 102	Machining and Tooling II	5		MATE 100, 101
MATE 103	Machining and Tooling III	3		MATE 102
MATE 104	Machining and Tooling IV	3		MATE 103 or concurrent enrollment
MATE 131	NIMS Level I Credentials Job Planning, Benchwork & Layout	1		MATE 100, 101, or MATE 130, MATE 115 and MATH 103
MATE 138	NIMS Level I Credentials Drill Press	1		MATE 101 or 130, and MATH 103 or concurrent enrollment
MATE 210	Computerized Numerical Control- Lathe	3		MATE 101 or 130, and MATH 103 or concurrent enrollment
MATE 215	Computerized Numerical Control- Mill	3		
<b>Choose 1 of the following 4:</b>				
MATE 132	NIMS Level I Credentials Milling <i>or</i>	1		MATE 100, 101, 102, 115 and MATH 103 MATE 100, 101, 102, 115 and MATH 103 MATE 100, 101, 102, 115 and MATH 103 MATE 100, 101, 102, 115 and MATH 103
MATE 133	NIMS Level I Credentials Lathe-Chucking <i>or</i>			
MATE 134	NIMS Level I Credentials Lathe-Turning <i>or</i>			
MATE 135	NIMS Level I Credentials Surface Grinding			
<b>Total Credit Hours Required</b>		<b>64-66</b>		

## Industrial/Technical

### Manufacturing Technology Certificate

General Education Requirements	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
SPDR 100 Fundamentals of Speech	3		English 30 or appropriate placement test score
Specific Program Requirements			
MATE 100 Introduction to Manufacturing Technology	3		
MATE 101 Machining and Tooling I	4		MATE 100
MATE 102 Machining and Tooling II	5		MATE 100 and 101
MATE 114 Metrology	2		
MATE 115 Blueprint Reading for the Trades	3		
MATE 116 Geometric Dimensioning and Tolerancing Printreading	2		MATE 115
MATE 210 Computerized Numerical Control-Lathe	3		MATE 101 or 103; MATH 103 or concurrent enrollment
MATE 215 Computerized Numerical Control-Mill	3		MATE 101 or 103; MATH 103 or concurrent enrollment
MATE 225 Master Cam I	3		CSOF 100, MATE 210 or 215
MATH 103 Technical Math I* <i>and</i> MATH 104 Technical Math II* <i>or</i> MATH 120 College Algebra <i>and</i> MATH 130 Trigonometry	6		MATH 40 or 40L or appropriate placement test score (MATH 103) MATH 103 (MATH 104) MATH 110 or appropriate placement test score (MATH 120) MATH 120 or appropriate placement test score (MATH 130)
<b>Total Credit Hours Required</b>	<b>40</b>		

### Manufacturing Computer Numerical Control Operator Certificate

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

### Manufacturing Technology Career Certificate

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

### Welding & Fabrication Job Ready Certificate

Specific Program Requirements	Credits	Semester Taken	Prerequisites
INTE 122 Welding Layout and Fabrication	3		
INTE 167 Welding I SMAW	3		
INTE 168 Welding II SMAW	3		INTE 167
MATE 100 Intro to Manufacturing Technology <i>and</i> MATE 101 Machining and Tooling I <i>or</i> MATE 130 Machining for Related Occupations	5-7		MATE 100
MATE 115 Blueprint Reading for the Trades	3		
<b>Total Credit Hours Required</b>	<b>17-19</b>		

# Medical Transcription

Offered at MCC-Penn Valley

Medical Transcription Certificate .....30 Credits

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

Admission to the Program  
Enrollment is limited. Students must apply for admission.  
For more information, go to [www.mcckc.edu/mtrn](http://www.mcckc.edu/mtrn)

## Medical Transcription Certificate

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

# Mortuary Science

Offered at Kansas City Kansas Community College  
Coordinated at MCC

## A.A.S. Mortuary Science ..... 78 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 <i>Must be taken at one of the MCC campuses</i>		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: BIOL 101, 104, 106, 108, 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 or appropriate placement test score
ENGL 102	Composition and Reading II	3		ENGL 101
MATH 100	Mathematics for Business	3		
PHIL	Ethics or Philosophy	3		See Courses section of this catalog for individual course prerequisites.
PSYC 140	General Psychology	3		
SPDR 100	Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Specific Program Requirements <i>Must be taken at Kansas City Kansas Community College</i>				
HUDV 101	Strategies for Academic Excellence/Lifelong Learning	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		
PSYC 115	The Grieving Process	3		
<b>Total Credit Hours Required</b>		<b>78</b>		

# Music Technology

Offered at Kansas City Kansas Community College  
Coordinated at MCC

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

This program leads to a program of Associate in General Studies with an emphasis in Music Technology. The degree is for students wishing to pursue employment in a technology-related aspect of the music business.

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

## A.A.S. Music Technology

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

\* If Applied Piano is used to satisfy piano requirement, a different instrument must be chosen for this requirement.

# Practical Nursing

Offered at MCC-Penn Valley

Practical Nursing Certificate ..... 48-53 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 National League for Nursing Accrediting Commission can be contacted as a resource for information on the nursing program. The League's address is 350 Hudson St., New York, NY 10014; phone (212) 989-9393.

For more information, go to [www.mcckc.edu/pvnursing](http://www.mcckc.edu/pvnursing)

## Practical Nursing Certificate

General Education Requirements		Credits	Semester Taken	Prerequisites
BIOL 108	Introduction Anatomy and Physiology or	5-10		BIOL 109: BIOL 100 or CHEM 105 BIOL 210: BIOL 110
BIOL 109	Anatomy and Physiology or			
BIOL 110	Anatomy and BIOL 210 Physiology			
Specific Program Requirements		Credits	Semester Taken	Prerequisites
PNUR 100	Personal and Vocational Concepts	1		Biology 108 or Biology 109 Admission to the PN Program
PNUR 103	Fundamentals of Practical Nursing II	10		PNUR 100
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		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
<b>Total Credit Hours Required</b>		<b>48-53</b>		

# Professional Nursing

Offered at MCC-Penn Valley

## A.A.S. Professional Nursing

A.A.S. Professional Nursing ..... 70-76 Credits

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

For more information, go to [www.mcckc.edu/pvnursing](http://www.mcckc.edu/pvnursing)

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

# LPN-ADN Bridge Program

## LPN-ADN Bridge Program

..... 74-80 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 (HESI 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 Statutes 1986. Copies of this law are available from the Missouri State Board of Nursing. For more information, go to [www.mcckc.edu/bridge](http://www.mcckc.edu/bridge)

### Accreditation

- The nursing program is approved by the Missouri State Board of Nursing and is accredited by The National League of Nursing Accrediting Commission.
- The Missouri State Board of Nursing can be contacted at 3605 Missouri Boulevard, P.O. Box 656, Jefferson City, MO 65102-0656; telephone (573) 751-0681
- The National League for Nursing Accrediting Commission can be contacted at 350 Hudson St., New York, NY 10014; phone (212) 989-9393.

## LPN-ADN Bridge Program

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

Prerequisite Courses:				
BIOL 100	Introduction to Cell Biology <b>or</b>	3-5	MATH 20/20L or appropriate placement test score	
CHEM 105	Introductory Chemistry for Health Sciences			
BIOL 109	Antomy and Physiology	6-10	BIOL 100 or CHEM 105 (BIOL 109) BIOL 100 or CHEM 105 and BIOL 110 (BIOL 110 & 210)	
BIOL 110	Human Anatomy <b>and</b>			
BIOL 210	Human Physiology			
PSYC 140	General Psychology	3		
BIOL 208	Microbiology	5	BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 101, 104, 106, 108, 109 or 110	
PSYC 243	Human Lifespan Development	4	PSYC 140	
General Education Requirements		Credits	Semester Taken	Prerequisites
ENGL 101	Composition and Reading I	3		ENGL 30 or appropriate placement test score
<i>The student must complete one of the following courses:</i>				
HIST 120	United States History to 1865 <b>or</b>	3		
HIST 121	United States History since 1865 <b>or</b>			
POLS 135	Introduction to Political Science <b>or</b>			
POLS 136	Introduction to American National Politics <b>or</b>			
POLS 137	Introduction to State and Local Politics			
<i>Students transferring one of these courses from out of state will be required to complete POLS 153 The Missouri Constitution.</i>				
SOCI 160	Sociology	3		
SPDR 100	Fundamentals of Speech <b>or</b>	3		ENGL 30 or appropriate placement test score
SPDR 102	Fundamentals of Human Communication			
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, SPDR 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		Admission to the nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, RNUR 234, RNUR 238, PSYC 243, BIOL 208; or admission to LPN Bridge program
<b>Total Credit Hours Required</b>		<b>74-80</b>		

# Occupational Education

*Offered at all Campuses*

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

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

## A.A.S. Occupational Education

General Education Requirements	Credits	Semester Taken	Prerequisites
BIOL 101 General Biology <i>or</i> CHEM 107 Preparatory General Chemistry <i>or</i> PHYS 101 Introductory Physics	5		MATH 104 (PHYS 112) MATH 110 (CHEM 107)
ENGL 101 Composition and Reading I	3		ENGL 30 or appropriate placement test score
HIST 120 United States History to 1865 <i>and</i> HIST 121 United States History Since 1865 <i>or</i> <i>Two of the following:</i> POLS 135 Introduction to Political Science POLS 136 Introduction to American National Politics POLS 137 Introduction to State and Local Politics	6		
MATH 119 College Mathematics <i>or</i> MATH 120 College Algebra	3		MATH 110 (MATH 119) MATH 110 (MATH 120)
SPDR 100 Fundamentals of Speech	3		ENGL 30 or appropriate placement test score
Any course numbered 100 or higher from the following disciplines: ART, ANTH, ECON, ENGL, Foreign Language, GEOG (except 104 or 110 and GIS courses), HIST, HUMN, MSCM, MUSI, PHIL, POLS, PSYC, SIGN, SOSC, SOCI, SPDR	3-5		
<b>Specific Program Requirements</b>			
<b>Technical Education:</b>			
Must focus on a specific occupational area (Any combination of formal college coursework, occupational certification or CBEX)	24		
<b>Professional Education:*</b>			
New Teacher Institute	3		
Development and Assessments of Vocational/Technical Curriculum	3		
Principles of Teaching Technology and Industrial Education	2		
<i>Three of the following:</i> Occupational Analysis Coordination of Cooperative Education Vocational Guidance Vocational Education for Handicapped Students Philosophy of Vocational Education Educational Psychology	9		
<b>Total Credit Hours Required</b>	<b>64-66</b>		

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

# Occupational Therapy Assistant

Offered at MCC-Penn Valley

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

Certified occupational therapy assistants work under the supervision of a registered occupational therapist to provide care to individuals with varying physical and/or emotional challenges to obtain their maximum level of independence with self-care, and daily living and job skills. The occupational therapy assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. ACOTE's telephone number is (301) 652-AOTA.

Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT), 800 S. Frederick Ave., Suite 200, Gaithersburg, MD 20877-4150; phone, (301) 990-7979. After successful completion of the exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice, however, state licenses are usually based on the results of the NBCOT Certification Examination.

For more information, go to

[www.mcckc.edu/occupationaltherapy](http://www.mcckc.edu/occupationaltherapy)

## A.A.S. Occupational Therapy Assistant

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

## Social Sciences

# Paralegal Practice

*Offered at MCC-Penn Valley*

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

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

### A.A.S. Paralegal Practice

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

# Paramedic

Offered at MCC-Penn Valley

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

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

Admission to the Paramedic Program

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

For more information, go to [www.mcckc.edu/EMT](http://www.mcckc.edu/EMT)

## A.A.S. Paramedic

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

## Paramedic Certificate

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

# Photovoltaics

This certificate is intended to prepare students for entry-level jobs in photovoltaics design, installation, and sales. It will also prepare students for the NABCEP Entry Level PV Installer Exam.

## Photovoltaics Certificate

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	3		Completion of or concurrent enrollment in MATH 103
INTE 115	Electrical Blueprint Reading	2		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	Introduction to Health and Safety for General Industry <i>or</i>	1		
EHSS 112	Introduction to Health and Safety for Construction			
GEOL 185	Photovoltaic Systems	3		
GEOL 225	Solar/Photovoltaic Design and Installation	3		GEOL 185, INTE 142, and either HVAC 109 or INTE 110
GEOL 180	Energy and the Environment	5		
INTE 271	PLC I	3		INTE 110 and INTE 175
<b>Total Credit Hours Required</b>		<b>33</b>		

# Physical Therapist Assistant

Offered at MCC-Penn Valley

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

This program leads to an Associate in Applied Science degree, and prepares students to assist physical therapists in treating patients with physical disabilities at various health care facilities.

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

For more information, go to

[www.mcckc.edu/physicaltherapy](http://www.mcckc.edu/physicaltherapy)

## A.A.S. Physical Therapist Assistant

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

# Polysomnography/Sleep Technology

Offered at Johson County Community College. Coordinated at MCC

A.A.S. Polysomnography/Sleep Tech..... 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

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		
<b>Total Credits at JCCC</b>	<b>39</b>		
* 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	Credits	Semester Taken	Prerequisites
ENGL 101 Composition and Reading I	3		ENGL 30 or satisfactory score on the ASSET test
CHEM 105 Introductory Chemistry ^	5		
BIOL 108 Introductory Anatomy and Physiology ^ or	5		
BIOL 110 Human Anatomy ^ and			
BIOL 210 Human Physiology ^			BIOL 100 and BIOL 110 or CHEM 105
MATH 110 Intermediate Algebra ^ or			MATH 40 or MATH 40L or satisfactory score on placement test
MATH 120 College Algebra or higher			MATH 110or satisfactory score on placement test
BIOL 150 Medical Terminology ** or	2		
HITE 103 Medical Terminology for Health Records **	3		
Communications Elective	3		
Humanities Elective	3		
Social Science/Economics Elective	3		
<b>Total Credits at MCC</b>	<b>27-33</b>		
<b>Total Program Credit Hours</b>	<b>66-72</b>		
** or satisfactory completion of a health related degree or certificate			
<b>Communication electives that will transfer from MCC to JCCC:</b> BSAD 221, ENGL 102, ENGL 175, SPDR 100, 102, 103, 133.			
<b>Social Science and Economics Electives that will transfer from MCC to JCCC:</b> ANTH 100, ANTH 110, ECON 210, ECON 211, GEOG 111, GEOG 112, HUSC 162, POLS 136, POLS 137, PSYC 140, SOCI 160, SOCI 162, SOCI 163, SOCI 170			
<b>Humanties Electives that will transfer from MCC to JCCC:</b> ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 221, 222, 223, FREN 203, SPAN 203, 204, HIST 120, 121, 133, 134, 140, HUMN 140, 145, MUSI 108, PHIL 100, 101, 200, 201, 203, SPDR 114, 128.			

# Radiologic Technology

Offered at MCC-Penn Valley

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

This program leads to an Associate in Applied Science degree and prepares students for entry-level jobs as radiologic technologists in a hospital or outpatient setting. Graduates are eligible to take the national certifying exam given by the American Registry of Radiologic Technologists.

## Admission to the Program

Enrollment in this program is limited. Students must submit their transcripts and application for admission to the program coordinator by January 1. The application form may be obtained from the program coordinator, the counseling department, or the office of the division of life science.

For more information, go to [www.mcckc.edu/radiology](http://www.mcckc.edu/radiology)

## A.A.S. Radiologic Technology

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

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

**Health, Physical Education and Recreation Elective** must be one of the following: DANC 100, 111, EMTP 102, HUSC 108, PHED 105, 106, 107, 108, 109, 110, 113, 114, 117, 118, 119, 120, 121, 122, 123, 126, 127, 128, 129, 130, 131, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 157, 158, 159, 165, 166, 167, 168, 173, 174, 179, 180

\*Prerequisite/corequisite required.

# Respiratory Care

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

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

This program, offered under the auspices of Johnson County Community College (JCCC), leads to an Associate in Applied Science degree and qualifies the student for the National Board for Respiratory Care examination process. Additional program information may be acquired from the counseling office at MCC-Penn Valley and from the academic director at JCCC. Students must be accepted into the program by both MCC and JCCC. The student is awarded the degree from JCCC upon successful completion of all requirements. It is the student's responsibility to check with an MCC counselor or advisor before enrollment.

### Eligibility

To be considered for admission to the program, a student must complete all required college courses in English, mathematics, and science with a minimum grade of C and must have minimum overall college GPA of 2.0.

### Admission to the Program

The number of MCC students admitted to the program is limited. In order to be certain that they will be considered for admission to the class, which begins its specialized course work in June, an MCC student must complete the application process by the previous October 15. Applications are not considered until all required material has been submitted. If openings remain for MCC students after the initial applications have been reviewed, students who have missed the deadline will be considered if their applications are completed by February 15. Further information is available in the counseling office at MCC-Penn Valley and from the academic director at JCCC.

Selection of students for the program is determined by the ranking of applications according to the interview score, the overall college GPA, and the GPA in prerequisite courses. Further information is available from the Director of the Respiratory Care Program at JCCC.

Note: All English, mathematics, and science courses must be completed successfully before the student is eligible for the clinical courses at JCCC. Students may make application, however, if coursework will be completed by the clinical year.

## A.A.S. Respiratory Care

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

<sup>^</sup> Indicates prerequisite courses, which must be completed prior to the clinic year at Johnson County Community College. The elective courses must be completed for the AAS degree, which establishes eligibility for the National Board for Respiratory Care examinations.

\*\*HC 101 is not a required course for the degree but is strongly encouraged. See the program application packet for details on how this course may be used to meet clinic-year eligibility requirements.

**Economic and Social Science Elective** must be one of the following: ANTH 100, 110, ECON 210, 211, GEOG 111, 112, HUSC 162, POLS 136, 137, PSYC 140, SOCI 160, 162, 163, 170

**Communications Elective** must be one of the following: SPDR 100, 102, 103, 133, ENGL 102, 175, BSAD 221

**Humanities Elective** must be one of the following: ART 108, 150, 151, 159, ENGL 120, 121, 122, 124, 127, 128, 142, 150, 151, 165, 167, 220, 221, 222, 223, FREN 203, HIST 120, 121, 133, 134, 140, HUMN 140, 145, MUSI 108, PHIL 100, 101, 200, 201, 203, SPAN 203, SPDR 114, 128

# Solar Thermal

## Solar Thermal Certificate

This certificate is intended to prepare students for entry level jobs in solar heating design, installation, and sales.

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 <i>or</i>	3		Completion of or concurrent enrollment in MATH 103
HVAC 109	Electricity for HVAC/R Technicians	4		
INTE 115	Electrical Blueprint Reading	3		INTE 110
INTE 142	National Electrical Code	3		INTE 110
INTE 271	PLC I	3		INTE 110 and INTE 175
HVAC 111	Principles of HVAC	3		
HVAC 120	Fundamentals of Refrigeration	4		
HVAC 201	Stationary Engineering	3		HVAC 111 and 120
EHSS 111	Introduction to Health and Safety for General Industry <i>or</i>	1		
EHSS 112	Introduction to Health and Safety for Construction			
INTE 175	Electric Motor Controls I	3		HVAC 109 or INTE 115
INTE 260	Pipefitting Fundamentals	3		HVAC 201
GEOL 186	Solar Water and Space Heating	3		
GEOL 226	Solar Thermal Design and Installation	3		GEOL 186 and INTE 260
GEOL 180	Energy and the Environment	5		
<b>Total Credit Hours Required</b>		<b>43</b>		

# Veterinary Technology

Offered at MCC-Maple Woods

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

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

Admission to the Program

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

Call the program office (816) 604-3235 for more information  
For more information, go to [www.mcckc.edu/veterinary](http://www.mcckc.edu/veterinary)

## A.A.S. Veterinary Technology

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

# 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.mccckc.edu](http://www.mccckc.edu).

## Course Numbering

A course's number indicates something about its purpose and level of difficulty. At MCC, the following course numbering system is used.

- 1-99 These courses assist students in mastering the information and skills needed for being successful in college. Credits from these courses do not meet any degree or certificate requirements.
- 100-199 These are general courses ordinarily offered as first-year or freshman classes by most colleges and universities.
- 200-299 These are courses ordinarily offered as second-year or sophomore classes by most colleges and universities



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

## ◆ Agribusiness/Grounds and Turf 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.

## ◆ Anthropology

*MCC-Longview*

Melissa Eaton

### **ANTH 100 General Anthropology**

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

Survey of physical and cultural anthropology. Concentrates on concepts of culture, social institutions and organization: economy, politics, family, religion, law, language, human evolution, human sexuality and archeology.

### **ANTH 110 Cultural Anthropology**

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

Survey of cultural anthropology. Concentrates on concepts of culture, social institutions and organization: economy, politics, family, religion, law, language, kinship, and contemporary applications of anthropological methods. Requirement Designation: Human Diversity

## ◆ Apparel and Textiles

*MCC-Penn Valley*

Sheryl Farnan

### **APTX 40 Fundamentals of Apparel Construction**

1 credit. 1 hour. (Lecture 1 hour.)

Introduction of basic apparel construction tools and terminology. It is recommended that students entering the program with no prior apparel construction experience take this course before enrolling in APTX 112.

### **APTX 100 Introduction to Apparel Studies**

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

Survey of the components of the apparel industry, including manufacturing, retailing, textiles, and product development, with specific focus on career development.

### **APTX 111 Aesthetics and Design for Apparel and Textiles**

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

Elements and principles of design. Examination of aesthetic factors relating to apparel and promotional retail settings affecting product development and consumer decisions.

### **APTX 112 Apparel Construction**

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

Selection and use of equipment and commercial patterns. Construction of clothing for the individual. Fabric selection, basic fitting, and sewing techniques. APTX 40 recommended for students entering program with no prior clothing construction experience.

### **APTX 113 Advanced Clothing Construction**

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

Prerequisite: APTX 111 and APTX 112.

The construction of a tailored garment. Identification and treatment of figure difficulties and fitting techniques.

### **APTX 118 Costume History - Ancient Mesopotamia Through the Nineteenth Century**

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

Survey of history of dress from ancient times through the nineteenth century. Emphasis on connections of dress to political, social, and technological aspects of culture.

### **APTX 119 Visual Merchandising**

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

Prerequisites: APTX 100 and APTX 111.

Application of aesthetic elements and design principles to effectively merchandise product assortments for retail, wholesale and industry tradeshow settings. Course culminates in student production of PANACHE student fashion showcase.

### **APTX 211 Pattern Design - Flat Pattern**

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

Prerequisite: APTX 113.

Basic principles and methods of 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.)

Prerequisites: APTX 113, APTX 211, or concurrent enrollment.

Basic principles and methods of pattern design through draping. Development of basic slopers in full scale sizes. Exploration of draping techniques and process of developing a draping plan to execute original designs.

### **APTX 216 Experimental Design**

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

Prerequisites: APTX 211 and APTX 215.

Examine diverse sources of inspiration, design process, creative development and technical execution of apparel through a combination of flat pattern and draping. Students will explore shape, silhouette and surface design with emphasis on the use of traditional as well as non-traditional and recycled materials.

### **APTX 217 Twentieth Century Costume History**

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

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 workplace criteria and complete an internship portfolio project detailing their experience.

### **APTX 220 Merchandising I**

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

Prerequisites: APTX 100 and MATH 100.

Application of merchandising principles for both manufacturing and retail firms. Study process of budget and assortment planning, development, and presentation of apparel and related products.

### **APTX 221 Merchandising II - Global Issues**

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

Prerequisite: APTX 220.

Examination of global trade and sourcing relevant both manufacturing and retail firms. Emphasis will be placed on the relationships of business, labor and government relevant to trade and consumption.

### **APTX 225 Pattern Design - CAD**

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

Prerequisites: APTX 211 and APTX 215.

Basic principles and methods of pattern design through computer aided design methods. Development of basic slopers in full scale sizes. Exploration of pattern design techniques and process through use of industry level computer software applications.

### **APTX 240A Special Topics in Apparel and Textiles Studies**

1 credit. 1.5 hours. (Lecture 0.5 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 240B Special Topics in Apparel and Textiles Studies**

2 credits. 2 hours. (Lecture 1 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 240C Special Topics in Apparel and Textiles Studies**

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

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

### **APTX 251 Apparel Design Production**

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

### **APTX 275 Design Portfolio Presentation**

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

## **◆ Art**

### **MCC-Blue River**

DeAnna Skedel

### **MCC-Longview**

D. Kim Lindaberry  
James Smith

### **MCC-Maple Woods**

Jennie Frederick

### **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 Sketchbook**

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

### **ART 108 Survey of Art**

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

### **ART 110 Drawing I**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Development of fundamental drawing skills and techniques using various media. Observation and compositional aspects of drawing.

### **ART 111 Drawing II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Prerequisite: ART 110.  
Drawing skills in various techniques while developing various styles of expression through a variety of media and subject matter.

### **ART 112 Drawing III**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Prerequisite: ART 111.  
Individual projects to help students strengthen their styles and techniques. Introduction of new media for exploration. Increased observation and compositional aspects of drawing.

### **ART 113 Drawing IV**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Prerequisite: ART 112.  
Exploration of a variety of subject matter for personally expressive and compositional aspects of drawing. Individual projects.

**ART 115 Orientation to Graphic Communications**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Study of the graphic communications industry and production methods from design through bindery. Emphasis on current trends for the professional preparation for careers in graphic communications.

**ART 123 Color Theory**

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

**ART 130 Fashion Illustration I**

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

**ART 131 Fashion Illustration II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Prerequisite: ART 130.  
Principles of fashion drawing with emphasis on media and reproduction techniques.

**ART 139 Photography I**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Use of cameras and basic processes and principles of black and white photography. Introduction to the use of photographic equipment, dark room procedures, and materials. Students introduced to historical and contemporary developments in photography. (Students furnish their own 35mm camera.)

**ART 141 Beginning Jewelry Making I**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
This course is a basic introduction to the terms, tools, and techniques involved in creating jewelry and other wearables as they relate to the human form. Fabrication, construction, and casting will be explored. This course will introduce the student to non-ferrous metals, tool usage, and application in metalworking. Students will learn about the properties of various metals, tool usage, and techniques/processes and apply this knowledge to the construction/fabrication of wearable and sculptural forms relating to the body. This includes applying basic technical skills to 3D design problems, introduction to metal history and safety are integrated into the course subject matter.

**ART 142 Fiber**

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

**ART 147 Jewelry Making II**

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

**ART 150 History of Art I**

3 credits. 3 hours. (Lecture 3 hours.)  
Historical events and their 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 160 Graphic Design I**

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

**ART 164 Lettering**

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

**ART 165 Cartooning**

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

**ART 170 Ceramics I**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Students will be introduced to the fundamental principles, styles and forms of ceramics. Primarily working with hand-building techniques, students will learn the importance of texture, form, and unity of design. Students will also be introduced to rudimentary pottery wheel techniques.

**ART 171 Ceramics II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Prerequisite: ART 170.  
Advanced synthesis of form and development of skills and techniques in ceramics including decoration and glazing. Studio experience concentration in pottery wheel techniques and glazing.

**ART 172 Ceramics III**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Prerequisite: ART 171.  
Advanced and individual projects exploring the problems, methods and techniques of production ceramic ware. Emphasis on skill building, research in slip casting processes and glazing techniques. Individual skill building on wheel thrown and/or hand building procedures.

**ART 173 Ceramics IV**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)  
Prerequisite: ART 172.  
Advanced and individual projects under the direction of the instructor. Emphasis on skill building, research in glazing techniques, and knowledge of kiln firing. Individual skill building in wheel-thrown and/or hand-building and/or slip-casting procedures.

### **ART 202 Computers in Design II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 102.

Advanced projects and tools are explored using the computer as a design tool utilizing layout, drawing, and image-editing software. Students develop advanced skills with the software and improved graphic design aesthetics. Photoshop, Illustrator and InDesign is the software used.

### **ART 204 3D Computer Animation II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 104.

Students will explore advanced concepts of the art of 3D computer animation in this course. They will further develop their understanding of animation as they explore in greater detail the processes of character development, storyboard development, modeling, materials, lighting, effects, actions, lip-syncing, keyframing, camerawork, rendering, and compositing.

### **ART 205 Pre-Hispanic Art History**

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

Survey of the art and architecture of Mesoamerica and South America prior to the arrival of the Spanish. Part I of the course will explore the civilization of the Olmec, the Zapotec, Teotihuacan, the Maya, the Aztec, as well as other ancient Civilizations of Central America and Mexico. Part II will highlight the art and architecture of South America, including civilizations in Ecuador, Peru and Bolivia.

### **ART 212 Life Drawing I**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 110 or equivalent.

In this course, students will explore the human form using live models. Assignments will cover a variety of drawing styles and media.

### **ART 213 Life Drawing II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 212.

Further study of the figure with emphasis on proportion and action of basic anatomical structure. Development of skills in various media.

### **ART 214 Life Drawing III**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 213.

Advanced study of drawing the figure from models. Introduction to new media and the study of various processes for the development of a personal style.

### **ART 215 Watercolor Painting**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 110.

Experimentation in watercolor medium techniques and brushwork. Projects will stress composition, theme development, and technique.

### **ART 216 Life Drawing and Portraiture IV**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 213.

Advanced study of drawing the figure from models. Introduction to new media and the study of various processes for the development of a personal style.

### **ART 220 Painting I**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 110 or equivalent.

This course will introduce basic principles of design and pictorial composition. Students will execute a series of paintings on various themes.

### **ART 221 Painting II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 220.

Advanced study of painting styles, pictorial composition, design and color theory through the production of a series of exercises and paintings.

### **ART 222 Painting III**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 221.

Advanced color theory, use of media, and pictorial composition will be exhibited through a self directed plan of study and production of paintings.

### **ART 223 Painting IV**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 222.

Self directed projects geared to enhance creative awareness and expression. Projects will concentrate on developing advanced skills in composition, handling media, tools and color.

### **ART 230 Sculpture I**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Introduction to the principles and styles of three-dimensional forms. Exploration of natural, abstract and synthetic sculptural forms through the use of traditional materials including clay, plaster, wood, fiber, plastic, and metal. Students will be introduced to the conceptual sculptural methods of addition, reduction, and substitution.

### **ART 231 Sculpture II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 230.

Advanced exploration of sculptural methods and techniques. Emphasis on exploring sculptural materials, forms, and imagery as a means of self-expression and communication.

### **ART 232 Sculpture III**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 231.

Advanced exploration of sculptural processes and forms through the study of traditional and contemporary concepts, media, and techniques. Projects will involve working with a variety of issues from figure modeling to environmental or site-specific aspects of sculpture.

### **ART 233 Sculpture IV**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 232.

Development of aesthetic judgment and creative skills through individual selection of creative projects using student's choice of media under guidance of instructor.

### **ART 239 Photography II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 139.

Development of advanced photographic techniques in black and white photography. Optional introduction to color processes. Increased emphasis on formal issues of image making in relation to content.

### **ART 241 Special Projects in Art**

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

### **ART 242 Photography III**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 239.

Individual student projects developing visual communication of imagery. Further studies in black and white photographic processes and techniques. Color photo option.

**ART 243 Photography IV**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 242.

Use of student-generated projects to develop abilities of individual students. Professional competence in use of photographic equipment and materials.

**ART 244 Digital Photography**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 102.

Exploration of photographic techniques and themes using the computer, digital camera, and scanners. The industry standard software for image editing will be utilized.

**ART 245 Web Design**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 102.

Concept and message development, design and production, publishing of web sites, visual design, color, typography, and digital graphics for the web will be stressed. Text-editing, web-authoring, and image-editing software will be used.

**ART 246 Advanced Web Design**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 245.

Advanced site management, visual design, tools for creating tables and forms, implementing style sheets, adding behaviors and animation; designing with HTML, image-editing software, Dreamweaver and Flash.

**ART 250 Printmaking**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Introduction to a variety of traditional contemporary printmaking processes, including on and off press techniques. Historical styles of printmaking and application to current trends. Exploration of relief, lithography, serigraphy, and intaglio printing techniques.

**ART 254 Silk Screen Printing I**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Screen printing techniques from paper stencil to photographic processes.

**ART 255 Silk Screen Printing II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 254.

Advanced screen printing in photography techniques with emphasis on two three color printing.

**ART 256 Silk Screen Printing III**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 255.

Advanced problem solving techniques in fine arts and commercial screen-printing.

**ART 260 Graphic Design II**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 160.

Advanced graphic design concepts which include analyzing client needs, idea and execution processes, defining successful elements of good visual communication, defining and analyzing trends of the graphic design industry. Explore these concepts through advanced projects utilizing traditional and computer tools.

**ART 261 Graphic Design III**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 101, 202, and 260.

Advanced problem solving in corporate identify designs which include trademark, magazine, point-of-purchase and other designs.

**ART 263 Art Portfolio**

3 credits. 6 hours. (Laboratory 6 hours.)

Selection, revamping, and mounting of student work for the professional portfolio.

**ART 264 Art Portfolio-Graphic Design**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 260 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.

**Art 265 Graphic Design Internship**

3 credits. 15 Internship.

Prerequisite: Art 160 and approval of instructor.

Students will learn job-interviewing skills and gain real world experience with the opportunity to utilize learned graphic design skills. The experience will involve duties associated with entry-level graphic design.

**ART 270 Illustration**

3 credits. 6 hours. (Lecture 1 hour. Laboratory 5 hours.)

Prerequisite: ART 102, 103, and 110.

Illustration techniques involving research and visual problem solving. Emphases on research, style, media, clients and presentation with advertising and story illustrations.

**ART 280 Special Studies**

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

Individual projects involving media and techniques chosen by the student with the advice of the instructor.

**ART 281 Introduction to Digital Prepress - File Preparation**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: ART 102 and ART 115.

Introduction to the digital prepress process that follows a digital file from proper design techniques through output and contract proof. Emphasis on proper use of fonts, graphics and page layout applications to achieve predictable, accurate results.

**ART 282 Digital Prepress-Advanced Color Correction**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: ART 102 and ART 115.

Learn advanced color correction techniques that will turn almost any image into quality artwork. Focus on color theory, image quality, and color calibration to achieve predictable, high quality results. Also learn proper scanning and image capture techniques for line-art, grayscale and color originals. Students are encouraged to take ART 281 and ART 282 concurrently.

**ART 283 Advanced Prepress**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: ART 115, ART 202, ART 281 and ART 282.

Analysis of digital prepress files for proper construction. Emphasis on prevention for preparation and troubleshooting problem files.

**ART 285 Variable Data Publishing**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: ART 202, 281, and 282.

An overview of variable data publishing technology. The course will focus on merging data and images to digitally print personalized products for data driven communications. Students are encouraged to take ART 283 and ART 285 concurrently.

**ART 290 Digital Prepress Internship**

3 credits. 14 hours. (Field Studies 14 hours.)

Prerequisite: ART 283 and ART 285.

Cooperative work experience in digital prepress.

## ◆ Automotive Technology

### MCC-Longview

Paul Damminga, Gary McDaniel, David Patience, Roy Perrodin,  
Edward Schaufler

#### **AUTO 100 Automotive Internship I**

3 credits. 15 hours. (Field Studies 15 hours.)

Prerequisite: One semester of automotive course work.

Cooperative on-the-job training in the automotive industry under college supervision.

#### **AUTO 101 Automotive Internship II**

3 credits. 15 hours. (Field Studies 15 hours.)

Prerequisite: AUTO 100.

Cooperative on-the-job training.

#### **AUTO 103 Fundamentals to Automotive Technology**

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

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

#### **AUTO 105 Cooperative Work Experience I**

3 credits. 40 hours. (Field Studies 40 hours.)

Prerequisite: Be a member of one of the corporate programs, maintain a c average.

Cooperative on-the-job training.

#### **AUTO 106 Cooperative Work Experience II**

3 credits. 40 hours. (Field Studies 40 hours.)

Prerequisite: Be a member of one of the corporate programs, maintain a c average.

Cooperative on-the-job training.

#### **AUTO 107 Cooperative Work Experience III**

3 credits. 40 hours. (Field Studies 40 hours.)

Prerequisite: Be a member of one of the corporate programs, maintain a c average.

Cooperative on-the-job training.

#### **AUTO 108 Cooperative Work Experience IV**

3 credits. 40 hours. (Field Studies 40 hours.)

Prerequisite: Be a member of one of the corporate programs, maintain a c average.

Cooperative on-the-job training.

#### **AUTO 120 MIG and Structural Welding**

3 credits. 5 hours. (Lecture 2 hours. Laboratory 3 hours.)

Prerequisite: Accepted into the articulation program for Auto Collision Repair.

Welding of metal in modern automobiles including oxyacetylene, and GMAW (MIG).

#### **AUTO 125 Structural Analysis and Damage Repair**

6 credits. 12 hours. (Lecture 3 hours. Laboratory 9 hours.)

Prerequisite: Accepted into the articulation program for Auto Collision Repair.

The analysis, measure, and repair of frames and unibody structures of automobiles and light trucks.

#### **AUTO 130 Nonstructural Analysis and Damage Repair**

6 credits. 12.5 hours. (Lecture 3 hours. Laboratory 9.5 hours.)

Prerequisite: Accepted into the articulation program for Auto Collision Repair.

The analysis of the condition and the repair or replacement of nonstructural components of automobiles and light trucks.

#### **AUTO 135 Plastics and Adhesives**

3 credits. 5 hours. (Lecture 2 hours. Laboratory 3 hours.)

Prerequisite: Accepted into the articulation program for Auto Collision Repair.

Analysis and repair of panels and structures using plastic fillers, fiberglass, structural adhesives, and bonding agents.

#### **AUTO 140 Automotive Painting**

4 credits. 10 hours. (Lecture 1 hour. Laboratory 9 hours.)

Prerequisite: Acceptance into the articulation program for Auto Collision Repair.

Analysis, preparation, and performance of paint applications on modern automobiles and light trucks.

#### **AUTO 141 Automotive Refinishing**

4 credits. 10 hours. (Lecture 1 hour. Laboratory 9 hours.)

Prerequisite: Accepted into the articulation program for Auto Collision Repair.

Analysis, preparation, and performance of paint repair and refinishing applications on modern automobiles and light trucks.

#### **AUTO 150 Automotive Power Plants**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

History, theory of operation, diagnosis, and repair of automotive gasoline and diesel engines. Covers the basic and special tools required to properly overhaul or rebuild. Includes head and valve service, piston and ring service, block and bearing service. Special emphasis on measuring and diagnosis.

#### **AUTO 160 Diagnosis and Repair**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

Prerequisite: AUTO 150, 166, and 176.

A lecture laboratory approach to the use of diagnostic equipment pertaining to driveability with an emphasis on ignition, fuel, starting and charging systems, and efficient engine operation.

#### **AUTO 166 Automotive Electrical Systems**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

A study of theory, construction, modern automotive electrical systems. Use of test equipment in trouble shooting and maintenance of batteries, starters, alternators, lighting, chassis wiring, ignition systems and accessories.

#### **AUTO 170 Automotive Braking Systems**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

History, theory of operation, and current service procedures on drum and disc brakes systems. Includes power assist systems and anti-lock brake systems.

#### **AUTO 172 Automotive Suspension and Steering**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

History, theory and service of front and rear suspension and steering systems. Includes steering gear, rack and pinion steering, power assist and power assist. Extensive coverage of four-wheel alignment, tire and wheel balance.

#### **AUTO 174 Automotive Power Trains**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Theory of operation and service procedures of power trains including constant velocity joints, manual transmissions and transaxles, differentials and clutches.

#### **AUTO 176 Emission & Fuel Control System**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

Prerequisite: AUTO 150 and 166.

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

### **AUTO 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 Air Conditioning**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Theory of operation, diagnosis, and repair of various types of automotive air conditioners, and includes refrigerant reclaiming equipment.

### **AUTO 272 Automatic Transmissions**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

Theory of operation, testing and diagnosis, disassembly and reassembly.

### **AUTO 277 Specialized Electronics Training**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

Prerequisites: AUTO 166 and class member of a General Motors ASEP class.

Solid-state electronic principles and applications on devices as utilized on late model General Motors computer equipped vehicles. Includes GM certifications.

### **AUTO 278 Electronic Engine Control**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

Prerequisites: AUTO 166 and be a student in the Ford Motor Co.

Asset program. Solid-state electronic principles and applications on devices as utilized on late model Ford Motor company's computer-equipped vehicles. Includes Ford certifications.

### **AUTO 279 Automotive Electronic Systems**

6 credits. 8 hours. (Lecture 4 hours. Laboratory 4 hours.)

Prerequisite: AUTO 166.

Solid-state electronic principles and applications on devices as utilized on late model computer-equipped automobiles.

## **◆ Basic Skills**

### ***MCC-Blue River***

#### **BASK 13B Spelling**

2 credits. 2 hours. (Lecture 2 hours.)

The student will identify auditory and visual-centered spelling problems and become proficient in spelling skills.

#### **BASK 13C Spelling**

3 credits. 3 hours. (Lecture 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***

Lisa Bonneau

Mehdi Borhan

Shari Harden

Todd Martin

### ***MCC-Maple Woods***

Rani Duggal

Larry Reichard

Paul Smith

Kenneth Snell

Cammie Snow

### ***MCC-Longview***

Brian Mitchell

Eugene Fenster

Keet Kopecky

Greg Loftin

Patricia Mann

Stephen Reinbold

### ***MCC-Penn Valley***

David Belt

Mahmoud Bishr

Todd Bowdish

Gene Cota

Terrence Davin

Nancy Harrington

Steven Lewis

### **BIOL 100 Introduction to Cell Biology**

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

Prerequisite: MATH 20 or satisfactory score on the placement test.

Fundamental concepts preparatory to the study of physiology and microbiology with emphasis on the cell and subcellular structures.

**BIOL 101 General Biology**

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

**BIOL 102 Environmental Science**

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

**BIOL 104 General Botany**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
Biological principles and their application to the plant kingdom. Microscopic and gross examination of anatomy of plants. Life cycles and ecological relationships.

**BIOL 106 General Zoology**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
Systematic survey of the major animal phyla. Microscopic and gross examination of representative animal types. Anatomy and physiology, natural history, life cycles, ecological relationships, and genetics.

**BIOL 108 Introductory Anatomy and Physiology**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
An introductory view of structure and function in the human body and mechanisms of homeostasis

**BIOL 109 Anatomy and Physiology**

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

**BIOL 110 Human Anatomy**

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

**BIOL 118 Introduction to Biology**

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

**BIOL 120 Bioethics**

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

**BIOL 121 Directed Project**

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

**BIOL 132 Human Nutrition**

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

**BIOL 137 Introduction to Pathophysiology**

4 credits. 4 hours. (Lecture 4 hours.)  
Prerequisites: BIOL 110 and 210, or BIOL 108 or 109 or 109.  
Causes, signs, symptoms, and pathological changes in structure and function of the human body in common diseases. Selected diagnostic and treatment procedures. Some general public health aspects.

**BIOL 150 Medical Terminology**

2 credits. 2 hours. (Lecture 2 hours.)  
Basic vocabulary of medical terms stressing prefixes, suffixes, and roots, with application to each system of the body.

**BIOL 198 Service-learning in Biology**

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)  
This is an experiential learning opportunity that links concepts and principles of biology to real-world application through community service. Includes 40-hours of on-task service to a community organization, agency, or public service provider per credit hour. The community service placement agency and service assignment will vary, dependent on the disciplinary course topic and learning objectives.

**BIOL 202 Ecology**

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

**BIOL 204 Genetics**

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

**BIOL 208 Microbiology**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
Prerequisites: BIOL 100 or CHEM 105 or higher, plus one of the following courses: BIOL 101, BIOL 104, BIOL 106, BIOL 108, BIOL 109, OR BIOL 110.  
Growth, physiology, and genetics of microorganisms. Fundamental concepts of immunology, virology, bacteriology, mycology, and parasitology. Aspects of host-parasite relationships and control of microorganisms by physical and chemical agents.

**BIOL 210 Human Physiology**

5 credits. 7 hours. (Lecture 4 hours. Laboratory 3 hours.)  
Prerequisite: BIOL 110 and either BIOL 100 or CHEM 105.  
Functions of the human body as revealed by cells, tissues, organs, and systems in terms of underlying physicochemical processes.

**BIOL 211 Field Biology**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
Prerequisite: BIOL 101, 104 or 106.  
Flora and fauna of selected biomes including field observation, identification, classification, and ecological relationships. Students must be prepared to camp out while in the field.

**BIOL 214 Principles of Genetics**

4 credits. 6 hours. (Lecture 3 hours. Laboratory 3 hours.)  
Prerequisites: BIOL 101 or BIOL 104 or BIOL 106.  
Basic principles of heredity in animals, plants, and microorganisms. Mendelian and other principles of transmission genetics and cytogenetics. Molecular genetics of gene structure and function. Introduction to population genetics.

**BIOL 220 Special Topics in Biology**

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

### **BIOL 238 International Human Ecology**

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

### **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 Canady	Theodore Dinges	James Moes
	Zach McNeil	Kimberly Luken
	Randy Kidd	

### **MCC-Penn Valley**

Diane Enkleman

### **BSAD 100 Introduction to Accounting**

3 credits. 3 hours. (Lecture 3 hours.)  
Introduction to the steps of the accounting cycle. Practical background in accounting for professional offices and/or merchandising businesses.

### **BSAD 101 Accounting Principles I**

3 credits. 3 hours. (Lecture 3 hours.)  
Practice and application of the accounting principles involved in the process of preparing financial statements in accordance with the Generally Accepted Accounting Principles. Includes accounting procedures for cash, accounts receivable, inventory, depreciation and payroll.

### **BSAD 102 Accounting Principles II**

3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: BSAD 101 or two years of high school accounting.  
Practice and application of the accounting principles involved in partnerships and corporations. Departmentalization, budgeting, and statement analysis.

### **BSAD 103 Business English**

3 credits. 3 hours. (Lecture 3 hours.)  
Apply the English concepts and critical thinking skills to business writing and workplace applications via the Internet. Review of fundamentals of grammar, sentence structure, punctuation, and capitalization.

### **BSAD 105 Human Resources Management**

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

### **BSAD 109 Principles of Supervision**

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

### **BSAD 113 Special Problems in Business**

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

### **BSAD 120 Organizational Behavior**

3 credits. 3 hours. (Lecture 3 hours.)  
Course investigates the impact that individuals, groups, and organizational structures have on behavior in the workplace. The student will develop individual competencies with emphasis in business environments. The acquired competencies can be applied toward improving individual and organizational effectiveness.

### **BSAD 127 Management Internship I**

3 credits. 15 hours. (Field Studies 15 hours.)  
On-the-job experience approved by the coordinator.

### **BSAD 128 Management Internship II**

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

### **BSAD 150 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 General Ledger Accounting Systems, PC**

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

### **BSAD 154 Managerial Accounting**

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

### **BSAD 155 Accounting Applications Using Spreadsheets**

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

### **BSAD 161 Professional Development and Business Careers**

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

**BSAD 185 Customer Service**

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

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

**BSAD 190 Office Management**

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

Organization and control of administrative office operations, staff and resources. Students will examine and apply functions and principles of management, leadership, problem solving, appraising, job design and analysis, and diversity practices.

**BSAD 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 201 Cost Accounting**

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

Prerequisite: BSAD 102.

Basic principles of cost accounting applied to job, process, and standard cost methods. Budget control and analysis of profits.

**BSAD 202 Intermediate Accounting I**

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

Prerequisite: BSAD 102.

Practice and application of financial reporting accounting in accordance with the generally accepted accounting. Principles. Includes financial statements and related disclosures, asset measurement, income determination, valuation of liabilities and investments.

**BSAD 204 Business Management**

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

Principles and practices of business management developed around the framework of the functions of planning, organizing, and controlling. Specific topics covered includes: managerial ethics, group dynamics, employee motivation, communications, decision-making, leadership and management styles, productivity, and organizational effectiveness.

**BSAD 205 Marketing**

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

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

**BSAD 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 Institute 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 215 Entrepreneurship Theory & Practice**

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

Provides a structure for understanding entrepreneurship as both a discipline and a process. Non-entrepreneurs will benefit by discovering how to function more effectively in entrepreneur-led organizations. Entrepreneurial students will benefit by learning how strategy, marketing, finance, legalities, and cash flow impact opportunities in terms of execution and growth, and how to position a new firm for success.

**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: Appropriate placement test score or completion of ENGL 30.

Business Communications identifies the scope and structure of communications within a business environment. The areas of study include writing processes involving a wide variety of business correspondences. Current methods of communication by technology are covered with direct applications utilizing Internet, Email, PowerPoint presentations, electronic files, employee and data privacy, resumes and interviewing techniques. Emphasis is placed on formal reports within the APA and MLA formats/ structures.

### **BSAD 224 Entrepreneurship Experience**

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

BSAD 225, the Entrepreneurship Experience combines classroom lecture and the opportunity to further develop specific business skills as student teams work to assess and resolve problems of small businesses in the local area. Students will perform the research necessary to provide guidance and solutions to the small business challenges presented by the client. High quality written communication and presentation skills will be expected for all published and created work.

### **BSAD 252 Individual Income Tax**

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

Prerequisite: BSAD 101.

Principles of the Internal Revenue Code as applied to individual returns. Forms required from the employer and the individual. Preparation of individual tax form 1040 and accompanying schedules.

### **BSAD 254 Business Law I**

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

Identification and discussion of principles of law related to business transactions. Topics covered include: contracts, agency, employment, negotiable instruments, personal property, and bailments.

### **BSAD 255 Business Law II**

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

Identification and discussion of principles of law related to business transactions. Topics include: sale of goods, partnerships, corporations, real property, security devices, bankruptcy, and estates.

### **BSAD 270 Legal Environment of Business**

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

Provides a survey of laws that are important to persons as citizens of the United States and as participants in its economic system.

## **◆Chemistry**

### ***MCC-Blue River***

Donald Miller

### ***MCC-Longview***

Moira Frey

Robert Smith

### ***MCC-Maple Woods***

Nelson Borys

### ***MCC-Penn Valley***

Douglas Martin

Michael Sweetland

### **CHEM 101 Survey of Chemistry**

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)

Survey of the principles of chemistry and the role and significance of chemistry in the modern world.

### **CHEM 105 Introductory Chemistry for Health Sciences**

5 credits. 7 hours. (Lecture 4 hours. Laboratory 3 hours.)

The principles of general, organic, and biological chemistry for health science students.

### **CHEM 107 Preparatory General Chemistry**

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)

Prerequisite: MATH 110 (or equivalent score on placement test) or one unit of high school algebra.

Introduction to the elementary principles of chemistry with emphasis on chemical calculations.

### **CHEM 111 General College Chemistry I**

5 credits. 7 hours. (Lecture 4 hours. Laboratory 3 hours.)

Prerequisite: MATH 120 (or equivalent score on placement test) or two units of high school algebra and CHEM 107 or high school chemistry. Introduction to the understanding of atoms and molecules: their qualitative and quantitative reactions and interactions.

### **CHEM 112 General College Chemistry II**

5 credits. 7 hours. (Lecture 4 hours. Laboratory 3 hours.)

Prerequisite: CHEM 111.

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

### **CHEM 205 Introductory Organic Chemistry for Health Sciences**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)

Prerequisite: CHEM 105 or CHEM 111.

Basic concepts of organic and biological chemistry for health science students.

### **CHEM 221 Organic Chemistry I**

5 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

Prerequisite: CHEM 112.

Nomenclature, reactions, stereochemistry, and physical properties of alkanes, alkenes, alkynes, and alkyl halides. Exploration of the mechanisms and kinetics of organic reactions. Introduction to the chemical literature and to infrared, NMR, and mass spectroscopy.

### **CHEM 222 Organic Chemistry II**

5 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

Prerequisite: CHEM 221.

Nomenclature, reactions, stereochemistry, physical properties, and spectroscopy of aromatic compounds, alcohols, ethers, aldehydes, ketones, amines, carboxylic acids, and their derivatives. Further explorations of the mechanisms and kinetics of organic reactions. Introduction to biochemical compounds.

## **◆Child Growth and Development**

### ***MCC-Penn Valley***

Linda Bell

Mary Svoboda-Chollet

### **CDCG 101 Fundamentals of Early Care and Education**

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

Prerequisite: ENGL 30 or appropriate placement test score, or concurrent enrollment.

This introductory course focuses on an overview of the field of early childhood care and education. The wide variety of types of early childhood program is explored, as are the characteristics and needs of young children. The preparation of environment and curriculum are examined, as are instructional and guidance techniques. Strategies for observation, documentation, and assessment are discussed. Teacher certification, ethics, and communication skills are detailed.

This course covers the eight (8) subject areas of the Child Development Associate (CDA) credential. The guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards are followed in this course.

### **CDCG 110 Child Health, Safety and Nutrition**

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

Prerequisite: ENGL 30 or appropriate placement test score.

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

### **CDCG 113 Child Growth and Development I**

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

Prerequisites: CDCG 101 and ENGL 30 or appropriate placement test score.

This course explores knowing and understanding young children's characteristics and needs; the multiple 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 teachers role in curriculum and instruction for young children. The purpose and characteristics of curriculum models past and present will be examined. Curriculum adaptation to accommodate diverse learners will be examined. Play as an overriding component of early childhood curriculum will be stressed. Development of activity plans, lesson plans based on developmentally appropriate practice for children at varying ages and stages will be required. The guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards are followed in this course.

### **CDCG 132 Learning Environments I**

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

Prerequisite: ENGL 30 or appropriate placement test score.

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

### **CDCG 149 Child Development Internship I**

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

Prerequisites: CDCG 113 and ENGL 101.

This course will engage students in a practical understanding of an early care and education environment and a practical understanding of methods of observing children. Students will actively interact with children in these settings. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards.

### **CDCG 201 Language Development**

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

Prerequisites: CDCG 113, CDCG 132 and ENGL 101.

This course is an in-depth study of the basic use of tools and materials that stimulate imagination, reasoning, concept formation and communications through language development. The guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards are followed in this course.

### **CDCG 213 Child Growth Development II**

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

Prerequisites: CDCG 149 or concurrent enrollment.

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

### **CDCG 217 Literature for Children**

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

Prerequisite: ENGL 30 or appropriate test scores.

This course is a survey and history of literature appropriate for young children (birth through age 8). Criteria for selection and evaluation of 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 an early-care and education center. Licensing, curriculum, and parent involvement will be included. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

### **CDCG 236 Learning Environments II**

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

Prerequisites: CDCG 213.

Students will gain knowledge of how to adapt early care and education curriculum and environments to meet the needs of all children, including those with special needs. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) Standards.

### **CDCG 255 Child Development Internship II**

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

Prerequisites: CDCG 236 or concurrent enrollment.

A supervised internship providing opportunities to gain teaching experience in early care and education settings. The course requires the planning of activities and designing of lessons for various educational levels and needs. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association for the Education of Young Children (NAEYC) standards.

### **CDCG 260 Education of the Exceptional Child**

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

Prerequisites: CDCG 149.

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

### **CDCG 262 Families, Early Care, and Communities**

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

Prerequisite: ENGL 30 or appropriate test score.

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

### **CDCG 270 Portfolio Design**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Student must be in the final semester of their Associates degree in Applied Science (AAS).

This Portfolio Design course documents a student's competency in early care and education and will include a variety of artifacts from various courses taken throughout the Associates of Applied Science Program. This course prepares students to transfer to four-year institutions. This course follows the guidelines of Kansas and Missouri Core Competencies for Early Child Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

### **CDCG 271 Special Topics in Child Growth and Development**

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

Guided readings and discussion in Child Growth and Development. Topics and materials will vary by instructor each semester. Specific reading list activities and writing assignments to be determined by instructor. This course is intended to go into more detail and research beyond the material covered in the Child Growth and Development courses. The guidelines of Kansas and Missouri Core Competencies (K&MCC) for Early Care and Education Professionals and the National Association for the Education of 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.

## **◆ Commercial Drivers License Class A**

### **CDLA 111 Basic Operating Procedures**

2 credits. 2 hours. (Lecture 2 hours.)

This course introduces the student to the basic elements of trucking industry: regulations governing trucking, qualifications of drivers, and inspection standards for safe vehicle operations. Students will become familiar with the various parts of the Federal Motor Carrier Safety Regulation (FMCSR) that pertain to the vehicle, the driver and safe operation of a commercial motor vehicle on the nation's roads and highways.

### **CDLA 112 Safe Operating Procedures**

2 credits. 2 hours. (Lecture 2 hours.)

The focus of this class is on safe operating procedures of the tractor-trailer in roadway/highway operations. Instruction will focus on proper backing techniques, shifting skills, communication practices, hazard awareness, speed and space management, as well as introducing the student to the hours of service regulations.

### **CDLA 113 Advanced Operating Procedures**

2 credits. 2 hours. (Lecture 2 hours.)

This course exposes the student to the advanced skills required for safely operating a tractor-trailer in a variety of traffic situations. Subjects such as skid control and recovery, emergency maneuvers & procedures, and extreme driving conditions will be covered. The student will also be exposed to the topics of health & fatigue, map reading, and trip planning as they relate to the professional over the road truck driver.

### **CDLA 114 Vehicle Maintenance**

2 credits. 2 hours. (Lecture 2 hours.)

This course focuses on introducing the entry-level student driver to the various aspects of vehicle maintenance. Instruction will center on the different types of maintenance, the driver's role in the vehicle inspection process, and provide a detailed description of the major vehicle systems. Student drivers will be provided an overview concerning how to diagnose and report malfunctions. In addition students will review the SafeStat web site and the role it plays in monitoring truck company performance. A discussion of the Environmental Protection Agency (EPA) and Occupational Health & Safety (OSHA) will provide students with a more comprehensive understanding of how these agencies impact trucking.

### **CDLA 115 Non-Driving Procedures**

2 credits. 2 hours. (Lecture 2 hours.)

Through this course student drivers will be prepared to handle the non-driving responsibilities related to trucking including documentation and handling of cargo, driver finances, truck technology and life on the road. Training will focus on ensuring the safety of the driver, the vehicle, its cargo and other road users. A hands on driving segment on situational awareness will ensure that the entry-level driver is well prepared to begin a career in the trucking industry.

### **CDLA 116 Behind-the-Wheel Procedures**

2 credits. 4 hours. (Laboratory 4 hours.)

The focus of this class is on operating the tractor-trailer in various environments. The student will receive a total of 60 hours of one-on-one hands on driving training. The student will perform a minimum of 25 hours of backing exercise and a minimum of 35 hours of on road driving practice. The course will focus on the development of the knowledge, skills, and abilities necessary for becoming a first seat, entry-level driver.

## **◆ Computer Science Information Systems**

### ***MCC-Blue River***

Melissa Napper  
***MCC-Longview***  
Cynthia Herbert  
Dennis Jirkovsky  
Gary Johnson

### ***MCC-Business & Technology***

Ed McCarty  
***MCC-Maple Woods***  
Gary May  
Dempsey Yearry

### ***MCC-Penn Valley***

Edward Durant  
Jerry Macke

### **CSIS 103 Document Processing I**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Introduction to simple tabulations, basic business letters, simple reports, centering and basic document layout. Keyboarding using a personal computer.

### **CSIS 104 Document Processing II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: CSIS 103.

Advanced practice in formatting, paginating, and creating business letters, tabulation, manuscripts, reports, and rough drafts using the computer.

### **CSIS 110 Technology and Information Management**

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

Introduces information management technology and its impact on social and political environments and life-long learning. Students will investigate how computers and other information technology are ethically applied to today's changing society. Lecture, demonstration, and hands-on experience will introduce hardware, operating systems, application software and Internet concepts with emphasis on communications and problem solving. Keyboarding skills are highly recommended.

### **CSIS 111 Microcomputer Hardware Concepts**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110.

This course introduces the student to maintenance, upgrading, setup, and expansion of personal computer hardware. Students will explore microcomputer architecture, functions, and components as well as methods and procedures for installation, troubleshooting, and modifications of computer systems.

### **CSIS 112 Networking Basics: CCNA1**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisites: CSIS 110 or CSIS 115.

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

### **CSIS 113 Router and Routing Basics: CCNA2**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisites: CSIS 112.

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

### **CSIS 115 Introduction to Microcomputer Applications**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Introduction to operation of computer software packages. Specific hands-on work with word processor, spreadsheet, database, and presentation software applications. Keyboarding experience and basic computer skills are recommended.

### **CSIS 116 Desktop Publishing**

3 credits. 5 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: CSIS 103 or CSIS 115.

Concepts and applications of desktop publishing. Hands-on experience with functions of current desktop publishing software on a personal computer.

### **CSIS 123 Programming Fundamentals**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MATH 40/43 or appropriate score on placement test.

Introduction to the principles of good design and the characteristics common to all programming languages. Experience writing code in a particular programming language, and compare to other common programming languages. Write well structured, procedural programs based on problem solving strategies.

**CSIS 128 Web Development**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110 or CSIS 115.

An in-depth introduction to the creation of web pages for an Internet site. Create individual web pages that use all the basic components, then build a web site that follows good design and navigation principles. Interactive and multimedia features will be added to the site. Issues concerning the Internet will be discussed.

**CSIS 129 Introduction to E-Commerce**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110.

Introduction to electronic commerce (e-commerce) from software driven, hands-on perspective. Introduces theory and practice of conducting business over the Internet and World Wide Web. Examines business strategies, technologies, and integration for e-commerce. Examines e-commerce stores that incorporate advertising, marketing, branding, and business efficiency goals. Explores methods how to populate a store catalog, create site-wide navigation links and publish a store.

**CSIS 141 Discrete Structures Comp Science I**

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

Prerequisite: MATH 120 or MATH 150.

Mathematical logic, sets, relations, functions, mathematical induction, Boolean algebra, algebraic structures. The theory inducted will be applied to appropriate of computer science.

**CSIS 143 Database Design and Management**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110 or CSIS 115.

Introduction to database design and management. Topics include terminology and concepts, data modeling, database design, relational databases, database query languages, distributed databases, physical database design, security and implementation. Aspects of privacy and ethical issues are discussed. Integrates database theory with a practical hands-on approach.

**CSIS 144 Introduction to SQL with ORACLE**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 115.

In-depth, hands-on experience with ORACLE database management system (DBMS). The student will use SQL to develop skills in retrieving data; inserting, deleting, and updating records; and creating tables, records, and other database objects. Basic relational database design and management concepts will be discussed.

**CSIS 151 Microcomputer Operating Systems Concepts**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110.

This course covers fundamental concepts and terminology of both command line and graphical user interface operating systems for microcomputers. The student will master management and optimization of files and be able to install device drivers as well as compare and contrast major operating systems.

**CSIS 161 Telecommunications and Network Fundamentals**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110.

This course covers fundamentals of communications, data transmission hardware, protocols, communications software, and local area networks. It will present students with a foundation in technical terms and vocabulary that will enable them to deal effectively with users and providers of communications services. Hands-on activities will give the student experience using modems and configuring communications software to access other computers, networks, BBSs, information providers, and the Internet.

**CSIS 162 Introduction to Digital Media**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: CSIS 110 or CSIS 115.

An overview of digital media technology on the PC. The course focuses on four major themes: (1) the nature of digital media, (2) its hardware components, (3) its common software applications, and (4) the actual production of simple programs. Students will be introduced to instructional design concepts, screen design strategies, and navigation techniques, producing digital media components, and actual development of simple digital media programs.

**CSIS 170 Information Security, Ethics and Risk Assessment**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110.

The proliferation and development of telecommunication network technology is examined as gateways or invitations to intrusion. Ways of investigating the management of risk and security of data and data systems are presented as a function of design through recovery and protection. The course assesses the information security environment within which organizations function today. Ethical issues such as monitoring employee computer use and proper limitations on the use of customer data are also discussed.

**CSIS 171 LAN Novell Network**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

This course teaches the fundamental skills needed to effectively manage a network including setup of users, directories and securities. Network utilities are taught through hands-on training and team projects. Students will create logic scripts and menus, and learn how to effectively monitor and maintain a network.

**CSIS 172 LAN Windows Server**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 161.

Fundamental skills necessary to effectively manage a network including setup of users, directories, and securities. Individual and team projects involving hands-on use of network utilities. Creation of logon scripts and user profiles. Effectively monitor and maintain a network.

**CSIS 174 Technologies Used on Local Area Networks**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 171.

This course teaches the basic concepts of data communications, networking, and connectivity including terminology, topologies, Open Systems Interconnection (OSI) Model, and popular vendor-defined protocol suites.

### **CSIS 175 Service and Support of Local Area Networks**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: CSIS 171.

This hands-on course teaches experienced network administrators how to install, maintain, and troubleshoot networks. The course covers installation and upgrade procedures for the latest versions of network operating system software.

### **CSIS 177 Database Application and Design with Access**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: One Windows based course.

Recommend CSIS 123 as corequisite for those planning to take CSIS 277. In-depth, hands-on experience with Access relational database management software. The student will develop skills in table, query, form and report creation utilizing the graphical user interface provided in Access. Efficient database design and data management strategies along with data normalization will be emphasized.

### **CSIS 178 Internetworking with TCP/IP**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 172 or equivalent background strongly recommended.

This course teaches the fundamental skills needed to effectively set up, configure, and support Transmission Control Protocol/Internet Protocol (TCP/IP) on popular network operating systems.

### **CSIS 180 Current Topics**

1-4 credits. 1-4 hours. (Lecture 1-4 hours.)

Technical and applicational implications of innovations in hardware and software. Approval of instructor.

### **CSIS 212 Switching Basics and Intermediate Routing: CCNA3**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisites: CSIS 113.

This is the third of four courses leading to the Cisco Certified Network Associate (CCNA) designation. The course focuses on the following: Variable Length Subnet Masking (VLSM); Intermediate routing protocols such as RIP v2, single-area OSPF, and EIGRP; Command-line interface configuration of switches; Ethernet switching; Virtual LANs (VLANs); Spanning Tree Protocol (STP); VLAN Trunking Protocol (VTP). Students will also be required to apply lessons from CCNA 1 and 2 to a network and should be able to explain how and why a particular strategy is used.

### **CSIS 213 WAN Technologies: CCNA4**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisites: CSIS 212.

This is the last of four courses leading to the Cisco Certified Network Associate (CCNA) designation. The course focuses on the following topics: Advanced IP addressing techniques; Network Address Translation (NAT); Port Address Translation (PAT); Dynamic Host Configuration Protocol (DHCP); WAN technology and terminology; PPP; ISDN; DDR; Frame Relay and Network management. Students will be required to apply information from CCNA 1, CCNA 2, and CCNA 3 to a network and should be able to explain how and why a particular strategy is used.

### **CSIS 215 Advanced Microcomputer Applications**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 115.

Implementation and in-depth use of microcomputer software packages. Specific hands-on work with word processor, spreadsheet, database, and presentation software applications.

### **CSIS 216 Advanced Routing: CCNP1**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisites: CSIS 213.

CCNP 1: Advanced Routing is the first of four courses leading to the Cisco Certified Network Professional (CCNP) designation. CCNP 1 introduces students to scaling IP networks. Students learn to use VLSM, private addressing, and NAT to optimize IP address utilization. The majority of the course content related to learning how to implement the RIPv2, EIGRP, OSPF, IS-IS, and BGP routing protocols. In addition, the course details the important techniques used for route filtering and route redistribution.

### **CSIS 217 Implementing Secure Converged Wide-area Networks: CCNP2**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: CSIS 213.

Implementing Secure Converged Wide-area Networks: CCNP2 is the second of four courses leading to the Cisco Certified Network Professional (CCNP) designation. CCNP2 introduces students to providing secure enterprise-class network service for teleworkers and branch sites. Students will learn how to secure and expand the reach of an enterprise network with focus on VPN configuration and securing network access. Topics include: teleworker configuration and access, frame-mode MPLS, site-to-site IPSEC VPN, Cisco EZVPN, strategies used to mitigate network attacks, Cisco device hardening and IOS firewall features.

### **CSIS 218 Multilayer Switching: CCNP3**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: CSIS 213.

CCNP 3: Multilayer Switching is the third of four courses leading to the Cisco Certified Network Professional (CCNP) designation. CCNP 3 introduces students to the deployment of the state-of-the-art campus LANs. The course focuses on the selection and implementation of the appropriate Cisco IOS services to build reliable scalable multilayer-switched LANs. Students will develop skills with VLANs, VTP, STP, inter-VLAN routing, multilayer switching, redundancy, Cisco AVVID solutions, QoS issues, campus LAN security, and emerging transparent LAN services. This hands-on lab-oriented course stressed the design, implementation, operation, and troubleshooting of switched and routed environments.

### **CSIS 219 Network Troubleshooting: CCNP4**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: CSIS 213.

CCNP4: Network Troubleshooting is the last of four course leading to the Cisco Certified Network Professional (CCNP) certification. CCNP: 4 teaches students about troubleshooting network problems. The course focuses on the documenting and baselining a network, troubleshooting methodologies and tools, and Layer 1 to 7 troubleshooting.

### **CSIS 221 Introduction to Computer Architecture**

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

Prerequisite: CSIS 123 and MATH 120.

Data representation, number systems, Boolean algebra, sequential logic, inter-register transfer and other micro-operations, computer organization and design, computer software, and input and output organization.

### **CSIS 223 Object-Oriented Programming**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MATH 110 and CSIS 123.

Introduction to object-oriented programming for students with procedural background. Data encapsulation, information hiding, built-in classes and libraries, inheritance, polymorphism, simple graphical user interfaces, user-defined classes and event-driven programming. Basic object-oriented design, maintainable software, software reuse, class hierarchies, design patterns and Universal Modeling Language. Uses object-oriented language.

### **CSIS 228 Advanced Web Development**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 128.

Building on the topics discussed in CSIS 128, this course provides in-depth coverage of HTML and client-side scripting, with an introduction to current web development topics. Topics include DHTML, e-commerce, security, web database programming, server-side scripting, XML, and web site architecture and configuration.

### **CSIS 233 Web-Centric Programming**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MATH 110 and CSIS 223.

Develop sophisticated GUI programs that work in a World Wide Web or intranet environment. Programs deal with database, multimedia, hypertext, network operating system, client/serve and n-tier configurations, security and privacy.

### **CSIS 241 Discrete Structures for Computer Science II**

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

Prerequisite: MATH 141 and CSIS 223.

Lattice structures and graph theory, algorithms and complexity, recurrence relations, introduction to computability theory and abstract machines. The theory introduced will be applied to appropriate areas of computer science.

### **CSIS 244 ORACLE Database Programming**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 123 and CSIS 144.

In-depth hands-on experience utilizing the programming language of ORACLE relational database management software package. Students will write and manage PL/SQL program units, including error handling and database triggers. Object types and manipulation, and large objects will also be studied.

### **CSIS 250 Assembler Programming**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110 and CSIS 123.

Assembler language programming with disk files, various data formats, and debugging techniques.

### **CSIS 251 Advanced Microcomputer Operating Systems Concepts**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 151.

This covers the advanced concepts and features of a command line and graphical user interface operating systems for microcomputers.

### **CSIS 262 Advanced Digital Media Design and Development**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 162.

This course expands upon the theories, concepts and practical applications presented in Introduction to Multimedia. Students will learn how to create and edit more complex audio elements, learn to use authoring tools, create an optical media based multimedia application and discuss the most current issues facing multimedia developers.

### **CSIS 263 Digital Video Production**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 162.

This course expands on the theories and concepts covered in Introduction to Multimedia (CSIS 162), focusing on the creation of digital video. The student will use modern video lighting, recording, digitizing, and editing equipment to create video productions suitable for distribution via multimedia CD-ROM, and discuss the issues facing the digital video developer.

### **CSIS 265 Graphical User Interface Programming**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 223.

This course is designed for programmers to write programs for operating systems that support Graphical User Interfaces. Topics include graphical user interface concepts, message-driven architecture, multitasking, and threads, dynamic linking and the application programmer interface library. These topics will be discussed from an Object-Oriented design perspective.

### **CSIS 269 Securing Wireless Networks**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: CSIS 113.

This introductory course to Wireless LANs focuses on the design, planning, implementation, operation and troubleshooting of Wireless LANs. It covers a comprehensive overview of technologies, security, and design best practices with particular emphasis on hands on skills in the following areas: Wireless LAN setup & troubleshooting; 802.11 (a, b, and g) technologies, products & solutions; Radio Technologies; WLAN applications and site surveys; Resilient WLAN products, design, installation, configuration and troubleshooting; WLAN security; Vendor interoperability strategies; Emerging wireless technologies

### **CSIS 271 Data Structures and Algorithm Analysis**

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

Prerequisite: MATH 141 and CSIS 223.

An introduction to data organizations, strings, stacks, queues, linear lists, linked-lists, heaps, and trees. These topics will be integrated with the notion of abstract data types. Students will develop skills in the use of abstraction, specification, and program construction using modules. Algorithms used to implement data structures will be introduced and their efficiency analyzed.

### **CSIS 272 Network Security**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: CSIS 213.

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 277 Database Programming with Access and Advanced Access Features**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 123 and CSIS 177.

In-depth, hands-on experience utilizing the programming language of Access (Visual Basic for Access), a relational database management software package. This "object-oriented" language assists developers to use the full power of the database management package. Student will also learn to use several advanced features (of the constantly growing number of features) of the Access database management system.

### **CSIS 281 Support Technologies**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 111, 151, and 161.

Learn concepts and techniques related to computer support staff. Topics will include user needs analysis and assessment, troubleshooting, product evaluation strategies, and computer facilities management.

### **CSIS 290 Computer Science/Information Systems Field Project**

3-5 credits. 6-10 hours. (Field Studies 6-10 hours.)

Actual or simulated on-the-job work experience in the area of degree emphasis.

### **CSIS 291 Computer Support Practicum**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: Concurrent enrollment or completion of CSIS 111, 151, 161 and 281.

This course provides an environment to apply computer skills to the process of supporting computer hardware, software, and human resources in a business setting. Through actual or simulated on-the-job work experience, the instructor will assist students to integrate the principles and techniques learned in prior coursework.

### **CSIS 293 Computer Science/Information Systems Major Field Project**

6 credits. 12 hours. (Field Studies 12 hours.)

Actual or simulated on-the-job work experience in the area of degree emphasis.

## **◆ Computer Software**

*Offered at all campuses*

### **CSOF 80 Beginning Keyboarding**

1 credit. 2 hours. (Laboratory 2 hours.)

Introduction to the keyboard. Keying by touch.

### **CSOF 100 Introduction to Personal Computing**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

This course provides a basic introduction to the personal computer. Through the use of lecture, demonstration and hands-on experience, the student will be introduced to microcomputer hardware, operating systems, and several applications, including word processing, spreadsheet and database.

### **CSOF 101 Introduction to Word Processing**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

Prerequisite: Keyboarding proficiency minimum of 35 wpm.

An introduction to word processing.

### **CSOF 102 Introduction Spreadsheet Applications**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

An introduction to spreadsheet applications.

### **CSOF 103 Introduction to Database**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

Introduction to database.

### **CSOF 104 Introduction to Microcomputer Operating Systems**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

An introduction to microcomputer operating systems.

### **CSOF 106 Introduction to Presentation Software**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

This course is a hands-on introduction to presentation software. Learn how to design and create computerized presentations using popular presentation software packages.

### **CSOF 107 Assistive Technology for Computer Applications**

1 credit. 1 hour. (Lecture 0.5 hour. Laboratory 1 hour.)

This course demonstrates assistive technology and how it can assist individuals with disabilities in fulfilling their educational and career goals. Students who take this course, can either focus on their own assistive technology needs or obtain an overview of assistive technology that can be used in their own career field.

### **CSOF 108 Introduction to Internet**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

This course is a hands-on introduction to the Internet. The student will learn how to gain access to the Internet and use it to send and receive mail, access forums on topics of interest and access other computer systems.

## **◆ Construction Management**

*MCC Business & Technology*

### **CSMG 110 Problem Solving/Decision Making**

1 credit. 1 hour. (Lecture 1 hour.)

Topics include information to help the supervisor understand that effective decision-making is a vitally important management skill. Processes are examined to assist the supervisor in performance decision-making.

### **CSMG 120 OSHA and Site Security**

1 credit. 1 hour. (Lecture 1 hour.)

The Occupational Safety and Health Act will be studied and interpreted. The student will learn to recognize and avoid dangerous conditions and understand theft prevention techniques for the construction job site.

### **CSMG 130 Cost Awareness/Production Control**

1 credit. 1 hour. (Lecture 1 hour.)

Students will study conditions that must be met if production is to be under control. Participants will be able to use the Short Interval Production Schedule (SIPS) and will recognize factors that affect both the productivity of their work crews and the workers.

### **CSMG 140 Beginning Print Reading**

2 credits. 2 hours. (Lecture 2 hours.)

Participants will learn print reading for construction including how to use symbols, work drawings, survey plats, electrical plans and all other drawings related to construction, as well as the relationship of specifications to drawings.

### **CSMG 150 Construction Management Leadership**

2 credits. 2 hours. (Lecture 2 hours.)

Students will develop and understanding of leadership and motivation as it relates to the construction trades. Core areas of concentration will be resources, supervisory role, teams and leadership skill development.

### **CSMG 160 Construction Project Management**

2 credits. 2 hours. (Lecture 2 hours.)

Students will explore the techniques used to manage a construction project for which they are responsible and accountable.

### **CSMG 170 Communication for Construction Management**

2 credits. 2 hours. (Lecture 2 hours.)

Students will understand communication as it relates to the construction industry. The importance of good communication skills in the workplace will be the focus of this course.

### **CSMG 180 General and Specialty Contractor Dynamics**

2 credits. 2 hours. (Lecture 2 hours.)

Students will explore all construction systems and the contractual relationships between the general and subcontractors on a construction job-site.

### **CSMG 205 Intermediate Print Reading**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: CSMG 140.

Participants will learn how to read prints for energy saving structures. Steel-frame structures and reinforced concrete structures. Site plans, 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**

Gary Hacker

**MCC-Longview**

Rick Turner

**MCC-Penn Valley**

Karen Curls

**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 Delinquency**

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

Definitions of delinquent behavior. Theories of causation. Development of the juvenile court. Function of detention, intake, and probation. Community-based and institutional programs. Procedures for processing juveniles and treatment trends.

**CRJU 169 Family Violence and Sexual Abuse**

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

Introduction to concepts related to interpersonal violence. Categories of abuse studied are spousal, child, sibling, ritual, elderly, gay and lesbian. The course emphasizes legal, social and psychological aspects of abuse.

**CRJU 200 Internship in Criminal Justice**

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

Prerequisite: The student must complete 15 hours of Criminal Justice including CRJU 101 before taking this course.

This course provides students with opportunities to gain practical work experience under the supervision of professionals with experience in the criminal justice or legal field.

**CRJU 201 Criminal Justice Practicum I**

3 credits. 3 hours. (Field Studies 3 hours.)

Prerequisite: The student must complete 5 credit hours of Criminal Justice including CRJU 101 before taking this course.

This course provides students with opportunities to gain practical work experience under the supervision of professionals with experience in the criminal or legal field.

**CRJU 202 Criminal Justice Practicum II**

3 credits. 3 hours. (Field Studies 3 hours.)

Work in a correctional institution or social agency. Exploration of an area of special interest or need. Exploration of a special problem and development of a written proposal for its solution.

**CRJU 203 Criminal Investigation I**

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

This course will present an introduction to modern criminal investigations. This course presents theory of investigation, procedures at a crime scene, collection and preservation of physical evidence, sources of information, questioning of witnesses and suspects, preliminary and follow-up investigations, and case and case trial preparation.

**CRJU 204 Criminal Investigations II**

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

Prerequisite: CRJU 203.

This course will present to the student techniques and information for investigating deaths, sex crimes, assaults, stealing, robbery, property crimes, burglary, bombs, and arson. Examine evidence, collection, and crime laboratory analysis procedures will also be presented.

**CRJU 215 Juvenile Law**

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

Introduction to juvenile law, jurisdiction over and disposition of the juvenile offender, court processing, adjudicatory process, and the Uniform Juvenile Court Act.

**CRJU 223 Criminal Law I**

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

Introduction to criminal law. Classification and analysis of crimes and criminal acts. Criminal law as a means of preservation and protection of life and property.

**CRJU 224 Criminal Evidence**

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

Prerequisite: CRJU 101.

Nature, types, and degrees of criminal evidence; rules governing admissibility, competency, and relevancy. Presentation of physical and other material evidence, direct and circumstantial evidence, hearsay rules, and exceptions.

**CRJU 228 Fundamentals of Probation and Parole**

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

Historical development of probation and parole from early correctional procedures through modern approaches. Pre-sentence investigation, conditions of probation, and suspended sentences. Pre-release programs, parole conditions, role of probation, and parole conditions, role of probation, and parole personnel.

**CRJU 230 Missouri Criminal Law**

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

This course will study the Revised Statutes of Missouri and relevant Federal Statutes relating to general code provisions, justifications, homicide, assaults, kidnapping, sexual offenses, drug offenses, robbery, arson, burglary, stealing, armed criminal action, offenses against public order.

**CRJU 233 Principles of Management in Criminal Justice Systems**

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

Problems of police administration, functional organization, fundamentals of staff and field operation, planning, budget analysis, recruitment, training assignment, and disciplinary methods. Cooperation with other agencies.

**CRJU 236 Correctional Administration**

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

Current administrative and management patterns and functions in correctional agencies and institutions. Concepts of staffing classification, training, budgeting, record keeping, and public relations.

**CRJU 244 Group and Individual Counseling in Corrections**

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

Prerequisite: CRJU 105.

This course introduces students to basic principles of human behavior and techniques for changing attitudes and behaviors within a group or individual settings. Counseling settings will focus on correctional facilities both traditional and community-based and correctional populations.

## **CRJU 248 Constitutional Law**

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

U.S. Supreme Court rulings that affect law enforcement. Major constitutional decisions, federal statutes, interstate rules, and cases involving constitutional amendments affecting law enforcement jurisdiction and civil liberties.

## **CRJU 275 Alcohol and Drug Addiction**

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

Exploration of the field of alcohol and drug use, biological, physical, psychological, and social causation theories with particular attention directed toward local and national initiatives in alcohol and drug abuse.

## **CRJU 280 Addiction Counseling with Special Populations**

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

Cultural, racial, age, and gender differences in patterns of substance abuse. The potential for developing appropriate treatment for special population groups. Theory and treatment techniques for minority populations of addicted clients.

## **CRJU 285 Addiction Client Management**

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

Case management procedures utilized with addicted clients. Assessment, planning, evaluation, and record keeping employed in addiction treatment. Case presentation techniques. Ethical issues. Case management and recovery.

## **◆ Dance**

*MCC-Longview*

*MCC-Penn Valley*

### **DANC 100 General Dance**

2 credits. 4 hours. (Laboratory 4 hours.)

A studio survey of movement principles common to most forms of dance, including but not limited to ballet, modern dance, jazz, and ethnic dance. Designed for the student who is interested in finding out more about these disciplines before taking a specific technique or style.

### **DANC 111 Modern Dance I**

2 credits. 4 hours. (Laboratory 4 hours.)

Prerequisite: DANC 100 or previous modern dance classes; KCMO Magnet Arts Magnet experience qualifies.

A studio course for beginning students covering basic principles of contemporary modern dance. Students will also learn about the history and vitality of this unique American dance form.

### **DANC 121 Ballet I**

2 credits. 4 hours. (Laboratory 4 hours.)

A studio course for beginning students covering basic principles of contemporary ballet. Students will also learn about the history and variety of this classical dance form.

### **DANC 122 Ballet II**

2 credits. 4 hours. (Laboratory 4 hours.)

A studio course for intermediate students covering intermediate principles of contemporary ballet. Students will also learn about the history and variety of this classical dance form.

## **◆ Dental Assisting**

*MCC-Penn Valley*

Rose Gupta

Hema Udupa

### **DENA 100 Introduction to Dental Assisting**

1 credit. 1 hour. (Lecture 1 hour.)

This course is a pre-requisite for admission to the Dental Assisting Program.

Dental terminology, roles of dental assistant, scope of dentistry

### **DENA 101 Body Structure and Function**

2 credits. 2 hours. (Lecture 2 hours.)

Admission to Dental Assisting Program is required. Basic anatomy and physiology for the Dental Assistant.

### **DENA 102 Head and Neck Anatomy**

2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)

Prerequisite: Admission to the Dental Assisting Program.

Admission to Dental Assisting Program is required. Utilizes a systems approach to the gross anatomy of the head and neck with emphasis on the maxilla and mandible and oral tissues, neuromuscular and circulatory function, supporting structures and the temporomandibular joint and also study of oral embryology and histology.

### **DENA 103 Dental Anatomy**

2 credits. 4 hours. (Laboratory 4 hours.)

Admission to Dental Assisting Program is required. Introduces to students a detailed study of crown and root morphology of both primary and permanent dentition. Eruption Schedule and Numbering System.

### **DENA 104 Dental Emergencies and Pharmacology**

1 credit. 1 hour. (Lecture 1 hour.)

Admission to Dental Assisting Program is required. An overview of emergencies common to the dental office setting. Students will gain knowledge in emergency drugs, allergic reactions and drug related emergencies. Also emphasized are specific medical conditions related to treatment, management of medical emergencies, pharmacology related to dental.

### **DENA 105 Dental Materials I**

2 credits. 4 hours. (Laboratory 4 hours.)

Admission to Dental Assisting Program is required. Basic knowledge and manipulation of waxes, temporary crowns, custom trays, alginate materials, impression materials, bite registration materials, cements, varnishes, bases and liners.

### **DENA 108 Oral Microbiology and Infection Control**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Admission to Dental Assisting Program is required. An overview of microbiological aspects of health and disease with emphasis on sterile process and disinfection techniques.

### **DENA 110 Chairside Assisting I**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)

Admission to Dental Assisting Program is required. Dental terminology and responsibilities of a dental assistant in the dental operator to include patient preparation and utilization of rubber dam, matrix, anesthetic, fluoride, wedge, amalgam and composite procedure and coronal polishing techniques.

### **DENA 115 Dental Radiology I**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prerequisite: DENA 102.

Radiography history, characteristics of radiation production, film composition, x-radiation terminology, effects of radiation exposure, and protection. Exposing, processing, and mounting of radiographs taken on a radiographic manikin.

**DENA 125 Clinical Experience I**

2 credits. 6 hours. (Clinical 6 hours.)

Prerequisite: Admission to the Dental Assisting Program and completion of CPR for healthcare workers.

Clinical experience in operative and preventive dental procedures utilizing four-handed dentistry in the clinic at the University of Missouri-Kansas City School of Dentistry.

**DENA 126 Dental Assistant Seminar I**

1 credit. 1 hour. (Lecture 1 hour.)

Prerequisite: DENA 101, 102, 105, 110, 115, and 125.

Practice and preparation for Dental Assisting National Board (DANB).

**DENA 205 Dental Materials II**

3 credits. 6 hours. (Laboratory 6 hours.)

Prerequisite: DENA 105.

Advanced manipulation of dental cements, amalgam, esthetic restoratives (composites), alginate, gypsum products, sealants and various impressions materials.

**DENA 210 Chairside Assisting II**

5 credits. 9 hours. (Lecture 1 hour. Laboratory 8 hours.)

Prerequisite: DENA 110.

Specialty area of dentistry to include orthodontics, periodontics, prosthodontics, oral surgery, endodontics, pediatric dentistry and geriatric dentistry. Includes procedures, instruments and current concepts for assisting in these areas.

**DENA 215 Dental Radiology II**

2 credits. 4 hours. (Laboratory 4 hours.)

Prerequisite: DENA 115.

Radiographic techniques, procedures, and infection control emphasized. Practical experience in exposing, processing and mounting radiographs taken on patients at the University of Missouri-Kansas City School of Dentistry and in private practice offices (general and specialty).

**DENA 225 Dental Office Management**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Prerequisite: Enrollment in the Dental Assisting Program.

Principles of business management in the dental office. Control of the appointment book, filing, financial management, insurance forms, supply inventory, and recall systems by conventional and computerized methods. Dental computer applications and use. Hands-on experience in private practice offices and/or clinic DENA 250.

**DENA 230 Oral Pathology**

1 credit. 2 hours. (Laboratory 2 hours.)

Prerequisite: DENA108 and 110.

An overview of diseases of the human body, including basic cell tissues, with specific emphasis on diseases of the face and mouth.

**DENA 250 Clinical Experience II**

4 credits. 16 hours. (Clinical 16 hours.)

Prerequisite: DENA 125.

Advanced clinical experience in front office, at chairside, and in radiographic and laboratory assisting techniques in general and specialty dental offices and clinics.

**DENA 260 Dental Assisting Seminar**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: DENA 125.

Preparation for the Dental Assisting National Board Examination (DANB) and for successful employment. Clarification of prior material by discussion and dialogue between students and instructors. Preparation of personal resume and job application. Demonstrate interview techniques.

**DENA 270 Expanded Functions in Restorative Dentistry**

1 credit. 2 hours. (Laboratory 2 hours.)

Prerequisite: Student must meet one of the following:

1.) Certified dental or orthodontic assistant through the Dental Assisting National Board, Inc. 2.) Graduate of an ADA-accredited dental assisting or dental hygiene program. 3.) Completion of DENA 106 Basic Dental Techniques and successful completion of Basic Skills Mastery Exam given by the Missouri Dental Assistants Association.

Dental restorative materials with emphasis on placing and carving amalgam and composite restorations and palliative care of dental emergencies.

**DENA 271 Expanded Functions in Orthodontics**

0.5 credit. 1 hour. (Laboratory 1 hour.)

Prerequisite: Student must meet one of the following: 1.) Certified dental or orthodontic assistant through the Dental Assisting National Board, Inc. 2.) Graduate of an ADA-accredited dental assisting or dental hygiene program. 3.) Completion of DENA 106 Basic Dental Techniques and successful completion of Basic Skills Mastery Exam given by the Missouri Dental Assistants Association.

Orthodontic procedures with emphasis on impressions, bending archwires, placement and removal of orthodontic bands and brackets, and palliative care of orthodontic emergencies.

**DENA 272 Expanded Functions in Periodontics**

0.5 credit. 1 hour. (Laboratory 1 hour.)

Prerequisite: Student must meet one of the following: 1.) Certified dental or orthodontic assistant through the Dental Assisting National Board, Inc. 2.) Graduate of an ADA-accredited dental assisting or dental hygiene program. 3.) Completion of DENA 106 Basic Dental Techniques and successful completion of Basic Skills Mastery Exam given by the Missouri Dental Assistants Association.

Periodontal procedures with emphasis on air-brasive coronal polishing and placement of periodontal dressings.

**DENA 273 Expanded Functions in Prosthetic Dentistry**

1 credit. 2 hours. (Laboratory 2 hours.)

Prerequisite: Student must meet one of the following: 1.) Certified dental or orthodontic assistant through the Dental Assisting National Board, Inc. 2.) Graduate of an ADA-accredited dental assisting or dental hygiene program. 3.) Completion of DENA 106 Basic Dental Techniques and successful completion of Basic Skills Mastery Exam given by the Missouri Dental Assistants Association.

Prosthodontic procedures with emphasis on prosthodontic impression techniques, cementation of dental appliances, extr-oral adjustment of fixed and removable prostheses, placement of soft-tissue liners.

**◆ Economics**

**MCC-Blue River**

**MCC-Longview**

**MCC-Maple Woods**

Hossein Bahmaie

Jill Kingsbury

**MCC-Penn Valley**

**ECON 110 Introduction to Economics**

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

General education approach to the study of economics.

Economics as a description of economic life. The economic problem. Economic systems. The market economy and its operations. That national economy. Fiscal policy. The role of money and banking. Monetary policy. Standard economic theory. Dissenting economic theory.

### **ECON 210 Macroeconomics**

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

Prerequisite: MATH 40 or 40L of satisfactory score on the placement test.

A basic examination of the principles of economics that apply to the economic system in the aggregate. Topics include opportunity costs, gains from trade, demand and supply, determination of aggregate output, employment, 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 40L of satisfactory score on the placement test.

A basic examination of the microeconomic behavior of individual consumers, firms, and markets in the domestic and world economy. Topics include opportunity costs, gains from trade, demand and supply, production, market structures, and externalities and public goods.

## **◆ Education**

**MCC-Blue River**

**MCC-Longview**

**MCC-Maple Woods**

Barbara Eubank

Russell Powlas

**MCC-Penn Valley**

Carrie Pickerel-Brooks

### **EDUC 131 The Paraprofessional Educator**

2 credits. 2 hours. (Lecture 2 hours.)

This course will assist students in understanding the career of a paraprofessional educator. Emphasis is placed on the most typical classroom placements for paraprofessionals - special education and ELL classrooms - and the skills required to serve as a support to the lead instructor. The growth, expansion, and new requirements of the career will be detailed. Professionalism in terms of ethics, teamwork, goal sharing, collaboration, and continued career growth will be promoted.

### **EDUC 160 Literacy Instruction for Paraprofessionals**

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

Prerequisite: ENGL 101. This course focuses on helping paraprofessionals work with students on key reading and writing skills. Emphasis is placed on teaching student explicit, systematic approaches to skills based on state standards. Key reading (phonemic awareness, fluency, comprehension and vocabulary) and writing elements are addressed. Students will develop a variety of assessment, instructional, and remediation skills to be used in the classroom.

### **EDUC 162 Math Instruction for Paraprofessionals**

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

Prerequisite: MATH 100 or higher.

This course will assist student in understanding mathematical concepts and relationships commonly needed for paraprofessionals in elementary school programs. A review of basic math concepts and procedures will be provided. The class will then proceed to elaborate on teaching techniques and student learning needs. Emphasis will be placed on State and the National Council of Teachers of Mathematics (NCTM) Standards.

### **EDUC 190 Art for Elementary Teachers**

3 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prepares students to include art in their elementary classrooms.

Creative learning activities are provided to promote visual awareness in children pre-K through grade 8. Emphasis is placed on the development and motivation of children through creative art projects. Art production, curriculum integration, criticism, aesthetics, and the evaluation of art works are included.

### **EDUC 200 Foundations of Education**

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

Prerequisite: ENGL 101.

This course is designed to examine the historical, philosophical, sociological, political, economic and legal foundations of the American public education system. Students will explore the nature of school environments, design and organization of school curricula, and characteristics of effective schools and instruction in grades P-12. Educational structures, practices and projections for the future will be studied.

### **EDUC 201 Teaching Profession With Field Experience**

3 credits. 32.5 hours. (Lecture 2.5 hours. Field Studies 30 hours.)

Prerequisite: ENGL 101.

This course provides students an opportunity to observe teaching and learning for thirty (30) hours or more in P-12 classrooms. The student is introduced to the requirements for teacher preparation and certification. Students will examine characteristics of effective teaching. The course is designed to assist the student in determining if a career in teaching is an appropriate goal.

### **EDUC 205 Physical Education for Elementary Teachers**

2 credits. 2 hours. (Lecture 2 hours.)

Theory and practice of physical education activities for elementary school children and ways to integrate these activities throughout the curriculum.

### **EDUC 210 Music for Elementary Teachers**

2 credits. 2 hours. (Lecture 2 hours.)

A professional music educational skills course designed to focus on basic music teaching for elementary teachers, grades pre-K through grade eight. The professional portfolio will be expanded to include a collection of elementary music artifacts that can provide evidence of professional competency. Strategies and techniques for integrating music throughout the elementary curriculum are stressed. There will be opportunity for micro-teaching.

### **EDUC 215 Children's Literature for Elementary Teachers**

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

A survey and history of literature appropriate for children from pre-K through grade eight. Criteria for selection and evaluation of children's literature is included. Techniques for using literature in the elementary classroom are emphasized. Micro-teaching opportunities are provided.

### **🌐 EDUC 235 Diversity Issues in Education**

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

This course will survey the major social and psychological processes involved in diversity and human relations, and the way these processes impact teaching, learning, and other human interactions. The course will cover theories of multicultural education, as well as use an experiential model for making the theoretical knowledge relevant in the individual educator's life.

### **EDUC 238 Classroom Management**

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

The student will develop strategies for successfully managing classroom environments. Focus is on educator as guide/facilitator with a range and variety of choices of management plans. Emphasis will be placed on student recognizing the developmental appropriateness of a management plan for varying classroom settings. Student will be charged with identifying personal philosophy of management, and a theoretical management plan that will be congruent with beliefs and values and is supportive of professional ethics, laws, school policy, student achievement, and human dignity.

### **EDUC 239 Internship in Paraprofessional Education**

3 credits. 90 hours. (Field Studies 3 hours.)

Prerequisite: The student must complete 15 credit hours of Education courses before taking this course.

The student must complete 15 credit hours of Education courses before taking this course. This course provides student with opportunities to gain practical work experience under the supervision of a certified classroom teacher and a school administrator. Student must complete 90 clock hours in a PreK-12 classroom setting.

### **EDUC 270 Educational Psychology**

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

Prerequisite: PSYC 140.

This course is designed to help students relate the application of psychological principles to teaching, learning and assessment, and the education practice in P-12 classrooms. It will focus on the learner and the learning process, teacher characteristics and classroom processes that increase student motivation. Student diversity and appropriate instructional strategies for students with special needs will also be introduced.

### **EDUC 280 Technology for Teachers**

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

Prerequisite: ENGL 101.

In this course students will learn how to integrate instructional technology into the P-12 classrooms. Students will study a variety of software program and telecommunication tools. The focus will also be on social, ethical, legal and human issues surrounding the use of technology.

### **EDUC 285 Education of Exceptional Learners**

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

Prerequisite: EDUC 270.

This survey course is an introduction to exceptional learners and their education in grades P-12. Students will attain knowledge, skills, and dispositions that will enable them to work effectively with exceptional learners in general education or special education.

### **EDUC 299 Special Topics in Paraprofessional Education**

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

Guided readings and discussion in Paraprofessional Education.

Topics and material will vary by instructor each semester. Specific reading list activities and writing assignments to be determined by instructor. This course is intended to go into more detail and research beyond the material covered in the teacher education and/or paraprofessional educator courses.

## **◆ Electric Utility Line Technician**

*MCC-Business & Technology*

Susan Blaser

### **LINE 104 Pole Climbing Skills**

5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)

This course introduces the student to proper and safe methods of wood pole climbing. The student must master climbing wood pole structures with the use of all 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.)

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 106 Safety and Accident Prevention**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

The student will learn the hazards and safe work practices of an electrical line technician. The student will learn CPR, First Aid and OSHA rules and regulations associated with the utility industry.

### **LINE 210 Pole Framing and Construction Specifications**

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

Prerequisites: LINE 104 and 106.

This will give the student a working knowledge of the line construction specifications and knowledge of pole framing on the ground and aerial framing. The student will be able to recognize the different types of materials used for the different types of construction by sight and definition. They will also be introduced to the different sizes and types of overhead and underground conductors.

### **LINE 215 Setting and Replacing Poles**

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

Prerequisites: LINE 104 and 106.

The student will learn the basic principles in setting and replacing poles. There will be an emphasis on the 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: INTE 110, and LINE 106 and 210.

The student will gain a thorough knowledge of transformer theory and installation. Single-phase and three-phase configurations with different types of connections will be included. Topics will include: over voltage and over current protection, equipment grounding, cutout protection, proper cover-up techniques, lightning arrestor application and installation, basic troubleshooting practices and current and potential transformers use and safety.

### **LINE 241 Conductor Installation and Metering**

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

Prerequisite: LINE 237.

The student will gain extensive knowledge of single and three-phase watt-hour meters; meter locations; and the different types of copper and aluminum conductors. The student will also gain practical experience in the sizing, 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 241.

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 application/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 250.

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 and 106.

This course reinforces to the student the proper and safe methods of wood pole climbing. The student must master climbing wood pole structures 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.

## **◆ Emergency Medical Services**

**MCC-Penn Valley**

William Bishop

Michael Peters

Harold Kenyon

### **EMS 100 Basic Emergency Patient Care**

1 credit. 1 hour. (Lecture 1 hour.)

Overview of the Emergency Medical Services system. Current cardiopulmonary resuscitation skills, including adult, child, and infant resuscitation according to American Heart Association standards. Medical, traumatic, and environmental emergencies review. (Successful completion of the course qualifies the student for the Basic Life Support Course Certification.)

### **EMS 110 First Responder**

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

Overview of the Emergency Medical Services system. Recognizing the mechanisms of injury. Patient assessment and management techniques. Patient packaging techniques for evacuation.

### **EMS 150 Emergency Medical Technician - Basic**

8 credits. 11 hours. (Lecture 5 hours. Laboratory 4 hours. Clinical 2 hours.)

Prerequisite: The student must be 18 years old by the end of the course and must hold a high school diploma or GED.

Basic life support and emergency care. Signs, symptoms and procedures of field management for emergency medical situation. Clinical observations. Successful completion makes student eligible to take the National Registry of Emergency Medical Technicians examination for EMT-Basic. (State licensure as an EMT-Basic is the responsibility of the student after successful completion of the Nation Registration.)

### **EMS 200 Introduction to Paramedic Care**

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

Prerequisite: BIOL 108, or BIOL 109, or BIOL 110 & 210, admission to the Paramedic Program, and Missouri licensed EMT or equivalent from another state.

This course introduces the student to the roles and responsibilities of the Paramedic, as well as the legal and ethical issues encountered. It also includes an orientation to the pathophysiology related to advanced prehospital care. Assessment, management and care of airway and breathing problems.

### **EMS 206 Paramedic Pharmacology**

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

Prerequisite: EMS 200.

This course introduces the students to the medications used in the prehospital management of medical and traumatic emergencies, as well as the methods and techniques of administration.

### **EMS 212 Emergency Cardiology**

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)

Prerequisite: Admission to the EMT-Paramedic program and EMS 206.

This course is designed to enable the student to perform assessments and advanced life support interventions for patients suffering from cardiac emergencies. Skills include physical examination, electrocardiographic monitoring, electrical therapy and appropriate medication administration. The student will also receive training through the American Heart Association's Advanced Cardiovascular Life Support (ACLS) course.

### **EMS 218 Medical Emergencies**

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

Prerequisite: EMS 212.

This course will introduce the student to the assessment and management of cases involving non-traumatic medical emergencies.

### **EMS 224 Trauma Management**

2.5 credits. 3.5 hours. (Lecture 1.5 hours. Laboratory 2 hours.)

Prerequisite: EMS 218.

This course prepares the student for management of trauma victims in the prehospital setting. Students will also complete a Basic Trauma Life Support course.

### **EMS 230 Care of Women and Children**

2.5 credits. 3 hours. (Lecture 2 hours. Laboratory 1 hour.)

Prerequisite: EMS 224.

This course covers 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 preceding coursework with the realities of patient care in the clinical and field setting. Challenging the student to think critically 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-Maple Woods***

***MCC-Longview***

Randall Forchee

***MCC-Penn Valley***

Dan Justice

### **ENGR 101 Introduction to the Profession**

1 credit. 1 hour. (Lecture 1 hour.)

Information relative to fields of engineering, necessary preparations and working conditions.

### **ENGR 104 Programming for Engineers and Scientists**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MATH 120 and MATH 130, or MATH 150.

The C++ programming language and MATLAB will be introduced and used to solve engineering problems and present data graphically.

### **ENGR 113 Engineering Design Microcomputer Applications**

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

Prerequisite: MATH 110.

Introduction to software tools (computer aided design drafting, word processing, spreadsheets) with application to professional engineering practice. Principles of engineering design. A semester long group project designed and built by students in an integral part of the course.

### **ENGR 121 Metallurgy for Engineers**

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

Prerequisites: CHEM 111.

Introduction to the structure and properties of metals and alloys. Introduction to processes used to modify the structure and properties of metallic materials, including alloying, deformation and heat treating.

### **ENGR 215 Engineering Statistics and Computation**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: MATH 190.

An introduction to statistical methods in engineering dealing with basic probability, statistical distribution functions, confidence intervals, significance tests, and sampling. Limited treatment of curve-fitting and time-series analysis. Structured programming in Matlab.

### **ENGR 223 Thermodynamics and Heat Transfer**

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

Prerequisite: MATH 190 and PHYS 220.

Properties of pure substance, work and heat, the first law of thermodynamics, the second law of thermodynamics, entropy, irreversibility, exergy (availability), and some power and refrigeration cycles. Introduction to heat transfer, thermal conduction, convective heat transfer, and thermal radiation.

### **ENGR 229 Statics**

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

Prerequisite: MATH 190 and PHYS 220.

Resultants of force systems, including couples in two and three dimensions, centroids, equilibrium of force systems, friction, and vector methods, moments of inertia, shear and bending moment diagrams.

### **ENGR 230 Dynamics**

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

Prerequisite: ENGR 229.

Principles of kinematics, kinetics, and moments of inertia.

Engineering applications and vector methods.

### **ENGR 233 Circuit Analysis I**

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

Prerequisite: PHYS 221 or concurrent enrollment in PHYS 221.

DC Steady-state Circuit analysis, Node and Mesh analysis, Independent and Dependent Sources, Capacitors and Inductors, Op-Amps, Transient analysis, AC Analysis.

### **ENGR 240 Mechanics of Materials**

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

Prerequisite: ENGR 229.

Introduction to the techniques of determining stresses and strains in mechanical and structural components.

## **◆ Engineering Technology**

***MCC-Business & Technology***

William Allyn

Joseph Roche

### **ETEC 110 Basic Electronics**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: Completion of or concurrent enrollment in MATH 103.

This course is an introductory course for the individual who is moving into an industrial maintenance or related activity. Behavior of electricity, sources of electricity, Ohms' and Watts' laws, electrical power distribution, transformers, electrical safety, electrical measurements and basic components are covered.

**ETEC 111 Microcomputer Hardware Repair**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSIS 110.

This course introduces the student to maintenance, upgrading, setup, and expansion of personal computer hardware. Students will explore microcomputer architecture, functions, and components as well as methods and procedures for installation, troubleshooting, and modifications of computer systems. Emphasis will be on the use of microcomputer hardware and software used in an industrial setting.

**ETEC 118 AC Circuit Analysis**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: ETEC 110 or INTE 110.

This course covers AC circuits, complex numbers, inductance, capacitance, RL and RC circuits, RC time constants and transients, resonance, transformers, relays, and switches.

**ETEC 130 Digital Electronics**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: Completion of or concurrent enrollment in ETEC 110 or INTE 110.

The course covers basic digital gates, logic circuits, timers, counters, shift registers, 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.)

Prerequisites: MATH 40/43.

Introduction to engineering communications and basic computer aided drafting/design (CADD). Emphasis on technical sketching, orthographic projection, drawing layout, drafting and CADD standards and conventions, dimensioning, sectioning, annotation and basic design principles. Foundation for computer aided drafting/design including file management, basic drawing commands, basic editing commands, layering, blocks and wblocks, dimensioning, polylines, hatching and plotting.

**ETEC 153 Descriptive Geometry**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prerequisite: ETEC 152.

Graphic solutions of spatial relationships between points, lines, angles, planes and solids. Includes mechanical, architectural and civil problems and concepts. Determining true length, angle, visibility, bearing, slope, intersections, parallelism and perpendicularity using CADD and technical sketching.

**ETEC 155 Introduction to Residential Architectural Drafting**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: ETEC 152.

Introduction to residential architectural design and drafting. Course includes residential construction materials and methods, building codes, site selection, home styles, foundation plan, 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, Alternate**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: ETEC 152.

An introduction to computer aided drafting/design using a selected CADD package. Topics will be based on the CADD package selected.

**ETEC 189 ETEC Internship I**

1 credit. 5 hours. (Field Studies 1 hour.)

Prerequisite: ETEC 152.

This course is designed to give the student real world experience in an engineering department of an engineering or architectural office. The student will strengthen design techniques as well as the soft skills required of modern industry under the supervision of a mentor.

**ETEC 190 ETEC Internship II**

2 credits. 10 hours. (Field Studies 2 hours.)

Prerequisite: ETEC 152.

This course is designed to give the student real world experience in the an engineering department of an engineering or architectural office. The student will strengthen design techniques as well as the soft skills required of modern industry under the supervision of a mentor.

**ETEC 191 ETEC Internship III**

3 credits. 15 hours. (Field Studies 15 hours.)

Prerequisites: ETEC 152.

This course is designed to give the student real world experience in an engineering department of an engineering or architectural office. The student will strengthen design techniques as well as the soft skills required of modern industry under the supervision of a mentor.

**ETEC 199 Special Projects in ETEC**

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.)

Prerequisites: ETEC 152 and 155.

Introduction to commercial architecture and structures. Topics include commercial structure types, site considerations, foundation plans, structures, construction materials and methods, cost estimating and environmentally friendly design practices. An emphasis will be placed on building systems and building system planning.

**ETEC 211 Building Information Modeling**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: ETEC 152.

This course will introduce the student to the technology of Building Information Modeling. Building design, layout and components will be created. Levels, views detailing, scheduling, elevations and sections will be covered.

### **ETEC 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, clippers, 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 Structural Steel Blueprint Reading**

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

Prerequisite: ETEC 152.

Introduction to structural steel and structural steel blueprints.

Topics include steel as a material, structural steel shapes, drawing types, connection methods and fabrication methods. The AISC Manual of Steel Construction will be introduced and used in reference to structural members and drawings.

### **ETEC 269 Computer Aided Design II**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prerequisite: ETEC 152 or ETEC 169.

Advanced computer aided drafting and design (CADD). Advanced dimensioning and tolerancing techniques, attributes, advanced drawing aids, file management and basic customization. Effective use of model space, paper space and viewports. An introduction to three-dimensional wire frames, surface models, solid models and rendering tools.

### **ETEC 270 Parametric Modeling**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: ETEC 152 or 169.

An in-depth introduction to three-dimensional parametric modeling. A current release of an industry parametric modeler will be used to produce three-dimensional part files, assemblies, presentations and orthographic production documents. Students will work on individual and group projects to solve simulated industry design problems.

### **ETEC 271 Parametric Modeling, Alternate**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: ETEC 152 or ETEC 169.

An in-depth introduction to three-dimensional parametric modeling. A current release of an industry parametric modeler will be used to produce three-dimensional part files, assemblies, presentations and orthographic production documents. Students will work on individual and group projects to solve simulated industry design problems.

### **ETEC 275 Build Project**

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

Prerequisite: ETEC 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.

## **◆ English**

### ***MCC-Blue River***

Theresa Hannon  
Richard Higgason  
Richard L. Nunez  
Robyn McGee  
Emily Morgan  
David Smith

### ***MCC-Penn Valley***

Craig Bartholomaeus  
William Hodgkinson  
Christine Howell  
Anita Leverich  
Larry McCloud  
Lisa Spaulding  
Lane VanHam

### ***MCC-Longview***

Zoe Albright  
Kurt Canow  
Anne Dvorak  
Morssie Edgerson  
Diana Grahn  
Terri Lowry  
Casey Reid  
Dawnielle Robinson-Walker  
Jan Rog  
Pat McKeown-Sparks  
Erik Sullivan

### ***MCC-Maple Woods***

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

**ENGL 28 Basic Writing Skills I**

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

Students will work toward writing clear, correct, and effective sentences and paragraphs; incorporating their use in extended pieces of writing.

**ENGL 30 Basic Writing Skills II**

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

Prerequisites: ENGL 28 or satisfactory score on placement test.

Students will work toward understanding and utilizing the conventions of Standard American English, sentence structure, and writing focused, adequately supported and mechanically sound paragraphs and essays.

**ENGL 101 Composition & Reading I**

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

Prerequisite: ENGL 30 or appropriate placement test score.

Focus on instruction in the composing process that includes exploration of ideas through reading, methods of writing development, and use of writing conventions. Instruction takes students from 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 a satisfactory score on the English placement test.

Focus on instruction in composing process that includes exploration of ideas through reading, methods of writing development, and use of writing conventions. Instruction takes students from 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 109 Introduction to the Electronic Library**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

A hands-on exploration of electronic technology that teaches students information-seeking strategies and critical thinking skills needed for information literacy.

**ENGL 111A 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 129B Directed Reading**

2 credits. 2 hours. (Independent Study 2 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 129C Directed Reading**

3 credits. 3 hours. (Independent Study 3 hours.)

Directed reading in a field chosen by the student with the advice and direction of the instructor. In-depth investigation of a particular author, genre, or area of literature.

**ENGL 198 Service-learning in English**

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

This is an experiential learning opportunity that links concepts and principles of English to real-world application through community service. Includes 40-hours of on-task service to a community organization, agency, or public service provider per credit hour. The community service placement agency and service assignment will vary, dependent on the speech or drama course topic and learning objectives.

**ENGL 201 Creative Writing I**

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

Prerequisite: ENGL 101.

Various types of imaginative writing such as fiction, poetry, play and/or scripts, creative non-fiction.

**ENGL 202 Creative Writing II**

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

Prerequisite: ENGL 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 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 150. Representative works of the later Renaissance, the Neoclassical period, the Romantic period, Realism, Naturalism, and the contemporary period and their significance to the 21st century reader.

**ENGL 256 World Masterpieces**

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

World masterpieces of prose, drama, and poetry as embodiments of views of the human condition.

** ENGL 260 African-American Literature**

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

Survey of African-American literature from various genres and historical periods. Students will examine the artistic responses of male and female writers to the social, political, and cultural forces that help shape the African-American experience. Requirement Designation: Human Diversity

**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 Latino communities and the American mainstream. Requirement Designation: Human Diversity

### **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. Requirement Designation: Human Diversity

### **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. Requirement Designation: Human Diversity

### **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. Requirement Designation: Human Diversity

### **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 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, skimming, 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. The topics will include clean air, clean water, hazardous waste, hazard communication, fall protection, recordkeeping, confined space, respiratory protection, and chemical protective clothing.

### **EHSS 101 Hazardous Material Management and Emergency Response Operations**

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

This course provides a review of hazardous waste operations, handling, and regulations for facilities and hazardous waste sites. In addition, medical monitoring programs, engineering controls, respiratory protection, personal protective equipment, sampling, air monitoring equipment, hazardous waste documentation, and incident command system (ICS) will be covered.

### **EHSS 110 Properties and Hazards of Hazardous Materials**

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

This course covers the recognition and communication of the physical hazards (flammability, corrosivity, reactivity, toxicity) of hazardous materials based on the nine DOT hazard classes and EPA's definition of characteristic hazardous waste.

### **EHSS 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 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, 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 respiratory protection, protective clothing, medical monitoring, fall protection, confined space, lock out/tag out, recordkeeping and compliance techniques.

### **EHSS 202 Transportation and Storage of Hazardous Materials**

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

Prerequisite: EHSS 203.

A presentation of detailed information required for the handling, transportation, and storage of hazardous materials. Methods are given for the preparation of hazardous materials prior to shipment. The distinction and regulatory differences between hazardous waste and hazardous material handling and shipment are presented in relation to different types of transportation.

### **EHSS 203 Environmental Regulations**

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

This course provides a comprehensive overview of EPA and other environmental regulations and guidelines. Subject areas included in this course are: EPA history, specific regulations regarding surface water, air drinking water, pollution prevention, hazardous waste, Superfund, and Community Right-to-Know.

### **EHSS 204 Emergency Preparedness and Planning**

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

Prerequisite: EHSS 200 and EHSS 203.

This course will provide a broad coverage of proactive and regulatory approaches to emergency planning. Analysis techniques, methods of auditing, and conducting hazards assessments are covered. Incident prevention and life and cost savings are emphasized. Subject materials are presented for students working in industry as well as the public sector of emergency planning and incident response. Environmental health and safety liabilities are addressed in terms of incident prevention and proper management.

### **EHSS 205 Principles of Industrial Hygiene**

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

Prerequisite: EHSS 200 and CHEM 102, 105 or 111.

This course is presented to provide the fundamentals of hazards control and industrial hygiene to environmental health and safety management students. Information is given in key areas that cover hazard recognition, hazard evaluation, hazards control, industrial hygiene, governmental regulations, and employee training.

### **EHSS 210 Incident and Accident Investigation**

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

Prerequisite: EHSS 200.

Fundamentals and techniques of investigating accidents and incidents.

### **EHSS 211 Workers Compensation Legislation for EHS**

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

Prerequisite: EHSS 200.

This course is designed to provide EHS students a comprehensive study of legislation and standards designed to protect the worker.

### **EHSS 213 EHS Program Development and Management**

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

Prerequisite: EHSS 200 and 203.

This course is designed to merge all the former EHS courses into a cohesive and comprehensive unit. This course outlines the principles of program development and implementation for all EHS type programs including training, emergency preparedness, waste minimization, workers compensation, air and water quality, and compliance. This course will cover the development of materials, techniques and procedures in the implementation of EHS programs and their application in a variety of occupational settings.

### **EHSS 217 Concepts of Waste Minimization, Recycling and Pollution Prevention**

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

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 Process and Hazard Control**

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

Prerequisite: EHSS 200.

This course is presented to provide an overview of health and safety variables involved in common processes used in industry today. The EHS student is provided with information from the perspective of controlling and managing mechanical, electrical and chemical hazards associated with processes and the by-products from those processes. Students will work together to address common problems in process control and become aware of potential liabilities that employers endure in today's industrial climate.

### **EHSS 220 Air Quality Management**

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

Prerequisite: EHSS 203.

This course serves as an introduction to all aspects of air pollution control and maintaining air quality. Major areas of study will include: nature and origin of air pollution, air pollution control methods and strategies, dispersion modeling, assessing/monitoring air quality and air quality programs and requirements.

### **EHSS 225 Water Quality Management**

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

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.

## **◆ Fire Science Technology**

*MCC-Blue River*

Doug Hobbs     Rusty Sullivan

### **FSTE 101 Introduction to the Fire Service**

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

Prerequisite: Acceptance into the Public Safety Center of Excellence.

This course focuses on the introduction to the fire service. Psychological and sociological aspects of firefighting, community involvement, and ethics will be discussed and applied. The student will also be introduced to basic firefighting equipment and skills.

### **FSTE 107 Fire Service Physical Fitness I**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Prerequisite: Admission to the Fire Academy.

First in a series of classes designed to develop the students 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 Chiefs 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**

2 credits. 3 hours. (Lecture 1 hour. 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**

2 credits. 3 hours. (Lecture 1 hour. 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 test in the allotted time.

### **FSTE 169 Fire Prevention**

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

Prerequisites: Involvement in fire prevention activities approved by the instructor.

This course is designed to teach fire prevention by identifying conditions that could cause fire; corrective actions and cooperation skills between the fire department and community.

### **FSTE 170 Hazardous Materials Awareness and Operations**

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

This course is designed to provide instruction in the handling of hazardous materials in an emergency situation. Upon successful completion of this program and the state exam, the student will become state certified in hazardous materials awareness and operations.

### **FSTE 172 Firefighting Tactics and Strategy**

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

This course is designed to prepare a fire officer to be able to provide strategies and tactics at a structure fire, fully utilizing available resources in a safe and efficient manner.

### **FSTE 179 Fire Fighter I**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 6 hours.)

This course is designed to instruct the student in all phases of basic firefighter techniques. The student will be eligible for state certification upon completion of the course and successful completion of the state certification exam.

### **FSTE 183 Incident and Disaster Management**

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

This course describes how emergency and disaster incidents should be managed by immersing the student in the incident and unified management systems. It also provides the student with a detailed look at disaster mitigation planning.

## **FSTE 189 Fire Fighter II**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 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 Suppression and Detection Systems**

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

This course will provide the student with basic information concerning water and its use as a tool for combating fire, especially in fixed extinguishing systems. It will also provide information on other types of fixed extinguishing systems, as well as how all fixed systems detect the fires they are built to extinguish.

## **FSTE 193 Fire Service Law**

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

As with all parts of society, the fire service is becoming increasingly embroiled in litigation and potential litigation. This course will lay the ground work for fire service managers to provide service to its citizens with knowledge of potential legal problems that need to be avoided.

## **FSTE 200 Fire Service Supervision**

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

This course will involve the student in learning proper methods of leadership and supervision as it pertains to today's first line service supervisor. It will encompass basic supervisory techniques and help the student to apply them to their special problems in supervising in today's fire service.

## **FSTE 201 The Fire Service Manager**

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

Prerequisites: FSTE 200.

This course is the second of three courses designed to provide information fire personnel in the areas of supervision, management and administration. It shows the history of general management principles, and how they fit in today's fire service. It also provides basic information on the information on the variety of areas that a fire service manager may become a part of as a manager.

## **FSTE 202 Fire Service Administration**

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

Prerequisites: FSTE 200 & 201.

This is the third course in the fire service management series. It delves into the needs of the fire department organization as a whole. It discusses the needs of all parts of the department, as well as how the department fits in to the larger governance structure. It also discusses the need to provide better information and service to the citizens it serves.

## **FSTE 203 Managing in Today's Fire Service**

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

Prerequisite: FSTE 200 and 201, and ENGL 101.

The student shall have also completed a minimum of 45 credit hours of course work in the Fire Science Program. This course is an internship. The student will meet with various members of a fire department management team. The student will choose an area of the organization and provide an in-depth report on its functions, process, and operations. It will compare and contrast this area with studies accomplished in class as well as other organizations of similar size. This report will form the backbone of this student's final evaluation.

## **◆ Foreign Language**

**MCC-Blue River**

Jennifer Rogers

**MCC-Longview MCC-Maple Woods**

Carol Kuznacik

Mary Ann Blitt

Chad Montuouri

**MCC-Penn Valley**

Ruth Heath

## **◆ ARABIC ◆**

### **ARAB 101 Elementary Modern Arabic I**

4-5 credits. 4-5 hours. (Lecture 4-5 hours.)

A practical beginning course in speaking and understanding modern Arabic. Proper pronunciation, words and structures used in daily conversation. Social conventions and Arabic culture necessary for interpersonal communication with native speakers of contemporary Arabic.

### **ARAB 102 Elementary Modern Arabic II**

4-5 credits. 4-5 hours. (Lecture 4-5 hours.)

Prerequisite: ARAB 101D or ARAB 101E.

A continuation of Elementary Modern Arabic I. Complete basic elements of Arabic grammar, increase vocabulary, gain added facility in speaking and reading Arabic.

## **◆ CHINESE ◆**

### **CHIN 101D Elementary Chinese I**

4-5 credits. 4-5 hours. (Lecture 4-5 hours.)

An introduction to Chinese. Course develops basic communication skills: Listening, reading, writing, and speaking. Informal study of the culture of Chinese-speaking countries.

### **CHIN 102 Elementary Chinese II**

4-5 credits. 4-5 hours. (Lecture 4-5 hours.)

A continuation of Elementary Chinese I. Elements of Chinese grammar, increasing vocabulary, and gain added facility in speaking and reading Chinese. Informal study of the culture of Chinese-speaking countries.

## **◆ FRENCH ◆**

### **FREN 101 Elementary French I**

5 credits. 5 hours. (Lecture 5 hours.)

An introduction to French. Develop basic communication skills (listening, reading, writing, and speaking). Informal study of the culture of French-speaking countries.

### **FREN 102 Elementary French II**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisite: FREN 101.

Grammar essentials. Develop communication skills (listening, reading, writing, and speaking). Informal study of the culture of French-speaking countries.

### **FREN 203 Intermediate French I**

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

Prerequisite: FREN 102.

Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. French is the language of instruction.

### **FREN 204 Intermediate French II**

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

Prerequisite: FREN 203.

A continuation of French 203. Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. French is the language of instruction.

◆ **GERMAN** ◆

**GERM 101 Elementary German**

5 credits. 5 hours. (Lecture 5 hours.)

Introduction to speaking, reading, and writing German.

**GERM 102 German II**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisite: GERM 101.

Grammar essentials. Introduction to German culture and history.

**GERM 204 Intermediate German II**

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

Prerequisite: GERM 203.

Continuation of GERM 203. Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. German is the language of instruction.

◆ **SPANISH** ◆

**SPAN 100 Beginning Occupational Spanish**

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

An introduction to Spanish. Course develops basic communication skills specifically tailored to a particular degree or occupation.

**SPAN 101 Elementary Spanish I**

5 credits. 5 hours. (Lecture 5 hours.)

An introduction to Spanish. Course develops basic communication skills: Listening, reading, writing, and speaking. Informal study of the culture of Spanish-speaking countries.

**SPAN 102 Elementary Spanish II**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisite: SPAN 101 or SPAN 111.

Grammar essentials. In addition, course develops communication skills: Listening, reading, writing and speaking. Informal study of the culture of Spanish-speaking countries.

**SPAN 107 Spanish Composition & Conversation: Topics in Culture**

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

Prerequisite: SPAN 102.

Students will improve their communication skills and knowledge of Spanish-speaking cultures through in-class discussions and written compositions. Requirement Designation: Human Diversity

**SPAN 111 Accelerated Elementary Spanish I**

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

Prerequisite: Prior elementary Spanish at the college level or two years high school Spanish.

An accelerated elementary Spanish course for students who may need to brush up on the basics before continuing onto Elementary Spanish II. Students will enhance communication skills (listening, reading, speaking, and writing) while reviewing Spanish grammar. Informal study of culture of selected Spanish-speaking countries.

**SPAN 203 Intermediate Spanish I**

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

Prerequisite: SPAN 102.

Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. Spanish is the language of instruction

**SPAN 204 Intermediate Spanish II**

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

Prerequisite: SPAN 203.

Continuation of SPAN 203. Advanced grammar. Continued development of communication skills with emphasis on reading, writing and speaking. Spanish is the language of instruction.

**SPAN 207 Spanish Composition and Conversation**

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

Prerequisite: SPAN 203.

Students will improve their communication skills and knowledge of Spanish-speaking cultures through in-class discussions and written compositions. Requirement Designation: Human Diversity

**SPAN 209 Introduction to Hispanic Literature**

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

Prerequisites: SPAN 204.

An introduction to literature in written Spanish from various genres and historical periods. Selected texts will introduce students to major writers as well as provide insights into the cultural, political and social contexts of Latin America and Spain.

**SPAN 212 Spanish Immersion I**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: SPAN 101.

Students will broaden their language skills while at the same time experiencing a new culture through a total immersion program in a Spanish-speaking country. Special emphasis will be placed on spoken communication while expanding listening, reading and writing skills. Students will be tested and placed into the appropriate level of instruction. All classes are conducted in Spanish by native Spanish speakers. Requirement Designation: Human Diversity

**SPAN 214 Spanish Immersion II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: SPAN 212.

Students will broaden their language skills while at the same time experiencing a new culture through a total immersion program in a Spanish-speaking country. Special emphasis will be placed on spoken communication while expanding listening, reading and writing skills. Students will be tested and placed into the appropriate level of instruction. All classes are conducted in Spanish by native Spanish speakers. Requirement Designation: Human Diversity

**SPAN 216 Spanish Immersion III**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: SPAN 214.

Students will broaden their language skills while at the same time experiencing a new culture through a total immersion program in a Spanish-speaking country. Special emphasis will be placed on spoken communication while expanding listening, reading and writing skills. Students will be tested and placed into the appropriate level of instruction. All classes are conducted in Spanish by native Spanish speakers. Requirement Designation: Human Diversity

**SPAN 218 Spanish Immersion IV**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: SPAN 216.

Students will broaden their language skills while at the same time experience a new culture through a total immersion program in a Spanish-speaking country. Special emphasis will be placed on spoken communication while expanding listening, reading and writing skills. Students will be tested and placed into the appropriate level of instruction. All classes are conducted in Spanish by native Spanish speakers. Requirement Designation: Human Diversity

## ◆ 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*

Benjamin Wolfe

*MCC-Longview*

Carl Priesendorf

Victor Méledge-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 variability.

### **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. Requirement Designation: Human Diversity

### **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.

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 Information Systems**

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

Prerequisites: GEOG 120, GEOG 220.

Applications in Geographic Information Systems. Data collection, incorporation of local and global data, and analysis of spatial information that can be used to investigate major application areas, national GIS policy.

### **GEOG 228 Administrative Issues in GIS**

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

Prerequisites: GEOG 120.

Addresses issues unique to a GIS operation such as implementation issues, decision making procedures, strategies for success, legal issues, involvement of management, NCGIA Guidelines, marking within an organization, strategic planning, and industry outlook.

### **GEOG 230 Geographic Information Systems Internship**

1-3 credits. 225-675 hours. (Lecture 0.5 hour. Field Studies 225-675 hours.)

Prerequisites: GEOG 120 and GEOG 220.

Internship in a Geographic Information System facility. Experience real-workplace requirements, complete assigned tasks by hosting facility such as GIS data entry, data retrieval, GPS field work, documentation, or general GIS facility duties. Arranged meetings with instructor includes work ethics, expectations, challenges, evaluation.

## **◆ Geology**

*MCC-Blue River*

Benjamin Wolfe

*MCC-Longview*

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 185 Solar/Photovoltaic Systems**

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

Solar radiation as applied to photovoltaic technology, photovoltaic system component selection, and introduction to safe design and installation of photovoltaic systems.

### **GEOL 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 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.

### **GEOL 225 Solar/Photovoltaic Design and Installation**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
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.

### **GEOL 226 Solar Thermal Design and Installation**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Design, installation and maintenance of solar thermal systems, with special emphasis on residential domestic hot water.

## **◆ 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 113 Orientation**

1 credit. 1 hour. (Lecture 1 hour.)  
Comparison of the academic and social demands of college; utilization of campus services and facilities; utilization of college information resources; and exploration and identification of college opportunities to enhance and prepare for current and future life roles.

### **GUID 114 Educational Options**

1 credit. 1 hour. (Lecture 1 hour.)  
Exploration of the rights and responsibilities of students in the college setting; demonstration of self-advocacy, negotiation, and problem solving skills; design and implementation of action plans; and identification of personal learning styles, strengths, and compensatory strategies.

### **GUID 115 Stress, Strength, and Satisfaction**

2 credits. 2 hours. (Lecture 2 hours.)  
In-depth examination of sources of personal stress in a changing world. Extended self-assessment of external and internal stressors and useful coping strategies. Application and evaluation of coping strategies/lifestyle choices with an emphasis on recognition of individual strengths. Specific training in healthy practices to promote increased quality of life.

### **GUID 116 Stress Management**

1 credit. 1 hour. (Lecture 1 hour.)  
Examination of sources of personal stress in a changing world. Self-assessment of external and internal stressors and useful coping strategies. Application and evaluation of new coping strategies/ life choices to more effectively manage stress.

### **GUID 150 Career Planning & Employment Strategies**

3 credits. 3 hours. (Lecture 3 hours.)  
Exploration of factors affecting career choice. Identification and discussion of individual values, interests, and abilities related to occupations. Overview of the world as it relates to career, academic planning and job seeking strategies including resumes, cover letter and interviewing techniques. Learn research techniques for exploring occupations and employment opportunities.

### **GUID 152 Employment Strategies**

1 credit. 1 hour. (Lecture 1 hour.)  
Overview of the job search process. Research techniques for exploring employment opportunities. Identification of personal criteria for job satisfaction. Development of job search strategies including resumes, cover letters and interviewing techniques.

### **GUID 199 Special Topics in Guided Studies**

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)  
Guided readings, discussions, and activities related to college adaptation, resilience, and success. Topics and material will vary by instructor each semester. Specific readings and activities to be determined by instructor.

## **◆ Health Information Technology**

*MCC-Penn Valley*

Kealia Ann Folk

Jennifer Scott

### **HITE 101 Introduction to the Health Information Technology Profession**

2 credits. 2 hours. (Lecture 2 hours.)  
Orientation to the health information management profession and the supporting professional organization. History and evolution of health care delivery, facilities, and practitioners. Supervisory functions of the medical record department.

### **HITE 102 Health Records Systems, Analysis and Control**

3.5 credits. 4.5 hours. (Lecture 2.5 hours. Laboratory 2 hours.)  
Content, storage, retrieval, control, and retention of medical records, especially hospital records. Forms design and control, microfilming, and computer applications for medical record departments.

### **HITE 103 Medical Terminology for Health Records**

3 credits. 3 hours. (Lecture 3 hours.)  
Professional language of medicine. Analysis of medical terms by roots and combining forms. Disease processes, diagnostic and operative procedures for each system of the body. Selected medical specialties.

### **HITE 106 Health Care Statistics**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: HITE 102.

Vital health statistics, their uses and values. Abstracting and analysis of data from medical records, collection of data from other sources, and methods of presenting the information.

### **HITE 108 Legal Aspects of the Health Information Technology Profession**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: HITE 102.

Legal principles applied to the health care professions.

Confidentiality of the medical record, informed consent, the medical record as a legal document, release of clinical information, response to subpoena, and testimony.

### **HITE 109 Directed Practice I**

2.5 credits. 5 hours. (Laboratory 2 hours. Field Studies 3 hours.)

Prerequisite: BIOL 108 and HITE102.

Supervised on-the-job training in a medical records department.

Supervised discussion of clinical experiences.

### **HITE 110 Pharmacology**

1.5 credits. 2 hours. (Lecture 1 hour. Laboratory 1 hour.)

Prerequisite: BIOL 108 and HITE 103.

Introduction to basic pharmacology with a body systems approach to disease.

### **HITE 200 Introduction to Classification Systems**

1 credit. 1 hour. (Lecture 1 hour.)

Classification systems used to organize clinical data in health care.

ICD-9-CM classification system will be discussed.

### **HITE 201 Quality Management**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: HITE 108.

Methods of assessing and improving quality in a health care setting.

Concept of continuous quality improvement. Compliance with guidelines of regulatory and accrediting agencies.

### **HITE 202 Classification Systems, Nomenclatures, Indexes, and Registers I**

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)

Prerequisite: HITE 200.

Study of nomenclatures and classification systems used for coding and indexing diagnoses and procedures with special emphasis on ICD-9-CM.

### **HITE 203 Directed Practice II**

2 credits. 4 hours. (Laboratory 1 hour. Field Studies 3 hours.)

Prerequisite: BIOL 108, HITE 202 and HITE 210 or BIOL 108, and concurrent enrollment in HITE 202 and 210.

Supervised learning experience in a medical records department under the direction of a credentialed professional involving a variety of procedures including coding and abstracting health information, medical transcription, and release of information. Supervised discussion of clinical experiences.

### **HITE 206 Specialized Health Records Systems**

2 credits. 2 hours. (Lecture 2 hours.)

Overview of specialized health care systems with an emphasis on record maintenance, requirements of accrediting and regulating agencies and specialized health information registries.

### **HITE 207 Classification Systems, Nomenclatures, Indexes, and Registers II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: BIOL 108 and HITE 202.

Nomenclatures and classification systems for coding and indexing diagnoses and procedures with emphasis on specialized health care facilities. Impact of DRGs on the coding function.

### **HITE 208 Directed Practice III**

2 credits. 4 hours. (Laboratory 2 hours. Field Studies 2 hours.)

Prerequisite: HITE 203.

Supervised on-the-job instruction about health record systems in specialized health care facilities. Supervised discussion of directed practice experiences.

### **HITE 210 Classification Systems and Nomenclatures for Ambulatory Care**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: HITE 200 and BIOL 108 or concurrent enrollment in BIOL 108.

Outpatient coding, classification and payment systems. Assignment of CPT-4 codes to procedures and services. Common outpatient procedures. Role of health information technologist in ambulatory coding and billing.

### **HITE 211 Organization and Administration in Health Information**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: HITE 201, 202, and 203.

General principles of management and organization as applied to health information settings. Budget development and control, personnel, recruitment and retention, performance appraisal, and progressive discipline. Office design, productivity monitoring, work simplification, job analysis and job descriptions, and quality management.

### **HITE 212 Introduction to Medical Insurance & Office Procedures**

1.5 credits. 2 hours. (Lecture 1 hour. Laboratory 1 hour.)

Prerequisites: HITE 103, HITE 202, HITE 210, BIOL 108.

An overview of medical office systems and administrative procedures, with emphasis on insurance billing, compliance with regulatory agencies, and technology tools, including medical transcription.

## **◆ Heating, Ventilation and Air Conditioning**

### ***MCC-Business & Technology***

Richard Decker

Mike Thorne

Jess Harding

### **HVAC 109 Electricity for HVAC/R Technicians**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Advanced AC and DC theory, control relays, motors, compressors. Assembly and use of all major HVAC components. Construction and use of wiring diagrams.

### **HVAC 111 Principles of Heating, Ventilation, and Air Conditioning**

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

Introduction to the basic elements of heating, ventilation, and air conditioning systems. Heat laws, psychometrics, heating and cooling load estimating, design, and distribution.

### **HVAC 120 Fundamentals of Refrigeration**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)  
Basic principles of refrigeration and their application in domestic refrigeration. Development of manipulative skills required for the installation, maintenance, and servicing of domestic equipment.

### **HVAC 135 Residential Heating A/C I**

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)  
Prerequisite: HVAC 109, 111, and 120 (or take concurrently).  
Installation of residential systems; tools, equipment, uniform mechanical code. Troubleshooting and servicing standard efficiency units.

### **HVAC 136 Residential Heating and Air Cooling II**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)  
Prerequisite: HVAC 135.  
Maintenance and trouble analysis of high efficiency residential equipment. Diagnostic analysis of complex electrical troubles. Maintenance of gas air conditioning equipment.

### **HVAC 201 Stationary Engineering**

3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: HVAC 111 and 120.  
Principles and safe operation of low pressure and high pressure boilers. The course will prepare students for the basic licensing examination for stationary engineering.

### **HVAC 211 Design and Estimating**

3 credits. 3 hours. (Lecture 3 hours.)  
Prerequisite: HVAC 111.  
Design and function of air conditioning ductwork. Calculations for proper distribution. Construction and installation of duct systems for residential and commercial heating and cooling.

### **HVAC 221 Commercial Refrigeration**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)  
Prerequisite: HVAC 120 and 109.  
The refrigeration cycle applied to commercial uses. Sizing, selection, installation, and servicing of commercial and industrial refrigeration equipment.

### **HVAC 230 Sheet Metal Layout and Fabrication**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)  
Study of the design, installation, balancing, and selection of components for air distribution systems. Lab work includes planning, layout, and fabrication of duct work.

### **HVAC 235 Systems Installation**

3 credits. 4 hours. (Lecture 0 hour. Laboratory 2 hours.)  
Prerequisites: HVAC 136 and 230.  
Installation of residential HVAC systems including building code review, sizing, selection and installation practices.

### **HVAC 240 Geo-Thermal & Air Source Heat Pumps**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisite: HVAC 136.  
Installation and service of Geo-Thermal and Air Source Heat Pumps. Troubleshooting and maintenance.

### **HVAC 250 Co-Op Workstudy**

3 credits. 7 hours. (Lecture 1 hour. Field Studies 6 hours.)  
Must have a minimum of 15 credit hours in HVAC courses.  
Advanced student gets on-the-job experience supervised by area employers. Objectives are directed by classroom sessions and job activities.

### **HVAC 291 Special Topics**

1-3 credits. 1-3 hours. (Lecture 1-3 hours.)  
Problem solving related to climate control technology with emphasis on research and/or laboratory projects.

### **HVAC 292 Special Topics**

2 credits. 2 hours. (Lecture 2 hours.)  
Problem solving related to climate control technology with emphasis on research and/or laboratory projects.

### **HVAC 293 Special Topics**

3 credits. 3 hours. (Lecture 3 hours.)  
Problem solving related to climate control technology with emphasis on research and/or lab projects.

## **◆ History**

### ***MCC-Blue River***

Sharon Bagg  
William Worley

### ***MCC-Longview***

Priscilla Jackson-Evans  
Patricia McGovern  
David Miller  
Randall Moore  
Elliot Schimmel

### ***MCC-Maple Woods***

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. Requirement Designation: Human Diversity

### **HIST 133 Foundations of Western Civilization**

3 credits. 3 hours. (Lecture 3 hours.)  
Survey of Western Civilization through the classical civilizations of Greece and Rome, the Middle Ages to the Renaissance. Brief comparative summaries of Near Eastern and Oriental civilizations. This course will satisfy either Humanities or Social Science AA degree requirements.

### **HIST 134 Modern Western Civilization**

3 credits. 3 hours. (Lecture 3 hours.)  
Survey of European history from the renaissance to the present. Emphasis on Renaissance and Reformation, the emergence of the modern state, industrialism, nationalism, and the problems caused by war, revolution and imperialism in the 20th and 21st centuries. Relationship of European civilization to the developments of the non-European world. This course will satisfy either Humanities or Social Science AA degree requirements.

## **HIST 140 African American History**

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

The historical experience of people of African civilization, to European contact, enslavement and freedom in the New World Diaspora (Latin America, the Caribbean, and North America). The cultural, social, political, and economic dimensions of African American history will be explored, as will the accomplishments and unique perspectives of African Americans. Requirement Designation: Human Diversity

## **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. Requirement Designation: Human Diversity

## **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, or taken concurrently.

This course offers students an introduction to becoming a professional in the field of human sciences with an emphasis in child growth and development. The course follows the guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals and the National Association of the Education of Young Children (NAEYC) standards.

### **HUSC 120 Competency Documentation**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Students must have evidence of completing the 120-clock hour formal training required to receive the Child Development Associate (CDA) credential.

The CDA Competency Documentation Course prepares students for the National Child Development Associate (CDA) examination. Methods of documenting competencies in the eight concept areas required by National CDA Office. The guidelines of Kansas and Missouri Core Competencies for Early Care and Education Professionals (K&MCC) and the National Association for the Education of Young Children (NAEYC) standards are followed in this course.

### **HUSC 236 Spec Topics in Human Science**

1-3 credits. 1-3 hours. (Independent Study 1-3 hours.)

Guided readings and discussion in Human Sciences. Topics and materials will vary by instructor each semester. Specific reading list activities and writing assignments to be determined by instructor. This course is intended to go into more detail and research beyond the material covered in the human sciences courses.

## ◆ **Human Services**

*MCC-Longview*

Bruce Hall

### **HUMS 100 Introduction to Human Services**

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

This is the introductory course in the field of human services. Students are invited to explore how factors such as poverty, race, gender, mental health, ethnicity, sexual orientation, and disability have affected the ability of individuals and groups to function in society. In addition, students will examine the nature of cross-cultural competence when serving diverse client populations. Course includes examination of strengths-based interventions with diverse client populations facing multiple barriers to physical, psychological, and social well-being.

### **HUMS 126 Corrections in the Community**

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

Community correctional problems. Diversion, halfway programs, pre-release 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 providers.

### **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-Maple Woods*

*MCC-Longview*

*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. Requirement Designation: Human Diversity

## **🌐 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. Requirement Designation: Human Diversity

## **🌐 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. Requirement Designation: Human Diversity

### **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 Seminar 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*

Gene Johnson

Tim Gill

### **INTE 110 Industrial Electrical Principles**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: Completion of or concurrent enrollment in MATH 103 and INTE 115.

This course is an introductory course for the individual who is moving into an industrial maintenance or related activity. Behavior of electricity, sources of electricity, Ohms and Watts laws, electrical power distribution, transformers, electrical safety, electrical measurements and basic components are covered.

### **INTE 115 Electrical Print Reading**

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

Prerequisites: INTE 110.

This course is designed to teach the student to read and interpret electrical blueprints commonly found in residential, commercial and industrial maintenance settings. Topics include blueprint layout, symbols, projections, dimensions, tolerances, clearances, assembly and bill of material.

### **INTE 120 Industrial Technologies Internship I**

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

This course is designed to give the student real world experience in the industrial technologies field. The student will perfect techniques and job responsibilities learned in prior courses under the direction of a mentor.

### **INTE 122 Welding Layout and Fabrication**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Learning layout skills for welding fabrication of structural steel and piping systems. Topics include: laying out angles with a steel square and piping system components such as bolt holes for flanges, two- and three-piece 90-degree turns, header and branch, concentric reducers.

**INTE 124 Employment Strategies for Technical Careers**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: CSOF 100 or CSIS 115.

This course prepares the student to use strategies for successful career goal setting, job seeking, obtaining, maintaining and terminating employment in technical areas. Topics include conducting a job search, preparing a resume and cover letter, and participating in job interviews.

**INTE 131 Special Problems and Projects**

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

Independent study in Industrial Technologies related areas under the supervision of the faculty member.

**INTE 140 Fundamentals of Industrial Maintenance**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

This course is designed to present the fundamentals of the care and maintenance on a wide range of industrial equipment, including chain and gear drives, couplings and fluid power equipment. Lubricants and lubrication will be covered. The replacement of seals and bearings will be covered. Correct application and selection of tools.

**INTE 142 National Electric Code (NEC)**

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

Prerequisite: INTE 110.

The course is designed to present the requirements of the National Electric Code. Topics include requirements, codes, wiring requirements, conduit, hazardous locations, overcurrent protection, motor protection, installations and safety.

**INTE 150 Fundamentals of Hydraulics**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

An introduction to fluid power. Topics include the physics of fluid power, safety, hydraulic pumps, actuators, pressure and flow measurement and regulation, basic maintenance, motors, coolers, and system operation.

**INTE 151 Industrial Rigging**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

The course is designed to present the safe and correct ways to rig and hoist equipment. Topics include fiber and wire rope, rope fundamentals, wire rope maintenance, cranes, braking, grounding, center of gravity, nets, slings, hooks and ladders.

**INTE 167 Welding I SMAW**

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

Learn basic shielded metal arc welding of flat, horizontal, vertical and overhead carbon steel plates and cutting with oxy-fuel equipment. Also covered: basic welding theory included coated electrode specs, welding power sources, polarities, duty cycles, cutting gases, gas cylinders, gas regulators, basic weld joints and weld joint preparation.

**INTE 168 Welding II SMAW**

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

Prerequisite: INTE 167.

The course is designed to cover advanced SMAW techniques commonly used in the welding industry. Various types of V groove joints are taught. Different kinds of electrodes are taught and used. The course has an introduction to the technique for pipe welding using the SMAW process.

**INTE 170 TIG Welding, GTAW**

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

The course is designed to cover Gas Tungsten Arc Welding known as T.I.G. or Heliarc. Techniques and procedures used in the welding of carbon steel sheet metal, plate, and pipe will be taught with emphasis on x-ray quality welds. Lectures on power sources, T.I.G. equipment, types of shielding gas, non-consumable electrodes, filler metals, and weld defects will be covered. Emphasis on shop safety and oxy-fuel safety will be stressed.

**INTE 171 MIG Welding, GMAW**

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

Course is designed to cover Gas Metal Arc Welding. This industrial GMAW (MIG) class studies many welding operations. Learn techniques for welding fillets and open-butt, single-vee-groove joints in all positions as well as using oxy-fuel equipment and safety procedures. Study power sources, metal transfer modes and joint design.

**INTE 175 Electric Motor Controls I**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: HVAC 109 or INTE 115.

The course is designed to present the fundamentals of electrical motor control components, circuits and systems. Topics include electrical control symbols, power distribution, control transformers, solenoids and relays, motor starters, pilot devices, timers and sequencers, dc and ac motor principles, proximity sensors and troubleshooting.

**INTE 220 Industrial Technologies Internship II**

3 credits. 3 hours. (Lecture 0 hour.)

This course is designed to give the student real world experience in the industrial technologies field. The student will perfect techniques and job responsibilities learned in prior courses under the direction of a mentor.

**INTE 225 Industrial Electrical Print Reading**

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

Prerequisite: INTE 115.

This course introduces the student to industrial prints. The student will become familiar with electrical schematics, wiring diagrams, one-line diagrams and P&IDs (Process & Instrumentation Diagrams). Upon completion of this class, the student will be able to demonstrate the ability to use these prints to maintain, troubleshoot and install electrical systems in the workplace. They will be able to determine safety hazards and proper procedures for guarding against those hazards.

**INTE 260 Pipe Fitting Fundamentals**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: HVAC 201.

Fundamentals of commercial and residential plumbing. Modern and historical plumbing materials and methods will be covered. Hardware and fixture use and installations. Drain and pipe installations and repair. Pipe cutting, threading, braising and welding. Drain and pipe cleaning. Sink, drain and heater replacement. General codes.

**INTE 270 Instrumentation and Process Controls**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: INTE 225 and INTE 272.

The course is designed to provide the individual with an ability to understand the various control schemas found in industrial settings. The course covers pressure, temperature, level, and 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 or concurrent enrollment.

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 and 271. This course is designed to provide the individual with the skills needed to study process control, motion control, addressing Input/Outputs and intercommunications. Topics include: advanced instruction sets for applications, analog, stepper, searching, on-line editing, cross referencing and ControlLogix software.

### **INTE 273 Variable Speed Motors and Drives**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: INTE 175 and 271.

The course will cover the theory and application of AC and DC Motors and their uses in industry. Theory and application of the various methods to control the speed of AC and DC electric motors using solid state devices will also be covered including thyristor and transistor controlled circuits, three phase triggered circuits, variable phase, frequency and voltage circuits.

### **INTE 275 Electric Motor Control II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: INTE 175.

Installation and maintenance of electrical control equipment, timing devices, solenoids, limit switches, electrical power distribution, reduced voltage motor starting, overcurrent protection and preventative maintenance are covered.

### **INTE 276 Electrical Troubleshooting**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: INTE 275.

The course is designed to present the systematic approaches to electrical troubleshooting. An emphasis is placed on electrical and electromechanical controls. Discussions of trouble analysis will be followed by the student analyzing various introduced troubles into control systems. Replacement of components are covered.

### **INTE 277 Programmable Logic Controller Troubleshooting**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prerequisites: INTE 110, INTE 175, and CSOF 100 or concurrent enrollment.

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 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 PLCs.

## **◆ Land Surveying**

*MCC-Longview*

David Gann

### **SRVY 135 Elementary Surveying**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: MATH 105, 130, or 150.

Introduction to the care and use of optical surveying instruments; Transits, Total Stations and Auto Levels. Use of cloth tapes, steel tapes and electronic distance machines. Reduction of slope measurements to horizontal and vertical components. Measurement, field data reduction and adjustment of a closed traverse. Horizontal and Vertical curves, earthwork, and coordinates. Extensive field work, field notes and electronic data collection. Introduction to systematic and random errors.

### **SRVY 137 Subdivision Planning and Layout**

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

Prerequisite: SRVY 135 and DRAF 152.

Physical elements of designing land subdivisions including traffic circulation, sewer and drainage systems, soils and earthwork, grading considerations, erosion control, lot and block arrangement, topography and existing land use factors, geometric analysis; laws and codes affecting land subdivisions; environmental considerations; site analysis procedures.

### **SRVY 235 Advanced Surveying**

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

Prerequisite: SRVY 135.

This course is a continuation of surveying skills introduced in SRVY 135 with an emphasis on advanced techniques beyond plane surveying such as geodetic control networks, practical astronomy, state plane coordinates, photogrammetry, and the US Public Land Surveys System.

### **SRVY 236 Boundary Control and Legal Principles**

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

Prerequisite: SRVY 135.

A study of the legal principles of land boundaries, section corners, area; interpretations of land descriptions, identification of land parcels; legal principles of boundary locations, and the United States land survey system.

### **SRVY 237 Evidence and Procedures for Boundary Location**

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

Prerequisite: SRVY 135.

A study of the land survey practice of retracement and creation of new parcels as it relates to; the lot survey, the sectional survey, the water boundary survey. Further, standard business practice will be discussed.

### **SRVY 240 Analysis of Survey Measurements I**

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

Prerequisite: SRVY 135 and MATH 115.

Introduction to the nature of surveying instruments and their use. Analysis of the effect that instruments and observers have on measurements. Explanation of random error propagation and estimates of uncertainty. Introduction to adjustment of data.

### **SRVY 242 Analysis of Survey Measurements II**

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

Prerequisites: SRVY 240.

This course is a continuation of analytical skills introduced in SRVY 240, Analysis of Survey Measurements I as they apply to adjustments of horizontal, GPS and level networks. Emphasis will also be placed on Coordinate transformation, advanced curve fitting and blunder detection in survey networks.

### **SRVY 244 Fundamentals of GPS Surveying**

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

Prerequisite: SRVY 135.

The purpose of this course is to introduce the student and practitioner to the modern practices of satellite surveying with an emphasis on its origins in physical geodesy.

## **◆ Law Enforcement**

*MCC-Blue River*

Butch Roll

### **LWEN 100 Introduction to Public Safety**

2 credits. 2 hours. (Lecture 2 hours.)

Students will review the history of law enforcement and be introduced to career requirements and opportunities within the law enforcement community.

### **LWEN 101 Introduction to Law Enforcement**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: LWEN 100.

Philosophical and historical background of law enforcement. Organization, purpose and functions of law enforcement personnel on the local, state and federal levels. The respective roles of personnel in law enforcement, career requirements and opportunities in these fields.

### **LWEN 111 Law Enforcement Operational Procedures**

3 credits. 5 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: LWEN 101.

This course will present to the student the duties, responsibilities, and techniques of modern law enforcement patrol activities. Types of patrol, vehicle stops, field interview, community policing, and procedures for handling various types of calls for service.

### **LWEN 112 Traffic Control & Investigation**

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

Prerequisite: LWEN 100.

This course will present fundamentals of traffic control and accident investigation. Regulation, control, and enforcement of traffic laws and municipal ordinances will be presented and discussed. Procedures for response, evaluating, protecting and investigating accident scenes will be integrated into the course.

### **LWEN 114 Law Enforcement Report Writing**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: LWEN 100.

This course will present to the student the methods of writing various types of law enforcement reports. Field interview techniques, interview environment, and the steps used to achieve a successful interview will be presented. Written reports will cover a variety of criminal offenses or incidents, and will require the use of interview skills and investigative efforts in order to gather information necessary to complete a law enforcement report.

### **LWEN 122 Procedural Law for Law Enforcement**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: LWEN 101.

This course presents the fundamental concepts of constitutional law as applied to law enforcement. Rules of evidence, admissions and confessions, Miranda, arrest procedures, and search and Seizure issues will be taught. A review of relevant case law and how it affects contemporary law enforcement practices will also be presented.

### **LWEN 143 Defensive Tactics for Law Enforcement**

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 and 203.

This course will present to the student the appropriate methods to be utilized in the investigation of County and Municipal offenses. This course will also give the student practical knowledge to deal with Crisis Intervention.

### **LWEN 230 Missouri Statutory Law**

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

Prerequisite: LWEN 101.

This course will present to the student definition and practical application of the Missouri Criminal Statutes. Difference between criminal and civil matters will also be discussed. Students will gain knowledge of juvenile justice procedures.

# ◆ Manufacturing Technology

## MCC-Business & Technology

Gene Giarratano

Penny Tepesch

### **MATE 100 Introduction to Manufacturing Technology and Related Industry**

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, drawings, measurement and layout and an introduction to basic shop equipment. A brief introduction to CNC concepts will also be covered.

### **MATE 101 Machining and Tooling I**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prerequisite: MATE 100.

This course is designed to introduce the student to basic manual machining techniques utilizing band machines, drill presses, lathes, and milling machines.

### **MATE 102 Machining and Tooling II**

5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)

Prerequisites: MATE 100, 101.

This course is designed to introduce the student to advanced techniques in the operation of lathes, milling machines, and grinders as well as metal finishing and heat treating processes.

### **MATE 103 Machining and Tooling III**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MATE 102.

This course is designed to teach the student advanced techniques in the operation of lathes, milling machines, and grinders. The student will be introduced to automated manufacturing, quality control techniques, and electromachining processes.

### **MATE 104 Machining and Tooling IV**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MATE 103 or concurrent enrollment.

This course is designed to teach the student advanced techniques in the operation of lathes, milling machines, and grinders. The student will be introduced to nontraditional machining techniques, cutter grinding, and other machining processes.

### **MATE 105 Manufacturing Internship I**

3 credits. 3 hours. (Field Studies 3 hours.)

Prerequisite: MATE 102.

This course is designed to give the student real world experience in a manufacturing environment. The student will perfect machining and tooling techniques and job responsibilities learned in prior courses under the direction of a mentor.

### **MATE 111 Special Problems and Projects**

1-3 credits. 1-3 hours. (Independent Study 1-3 hours.)

Independent study in Machine Tool related areas under the supervision of a faculty member.

### **MATE 114 Metrology**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

The student will develop the technical competency to use, read and care for measuring devices in inspection and manufacturing settings.

### **MATE 115 Blueprint Reading for the Trades**

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

The student will learn to read and interpret blueprints commonly found in the skilled trades. Topics include drawings, drafting procedures, print reading procedures for the skilled trades, and machining specifications. This course is designed for students in the skilled trades and specific focus will be placed on the manufacturing industry.

### **MATE 116 Geometric Dimensioning and Tolerancing Printreading**

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

Prerequisites: ETEC 152 or MATE 115.

Geometric Dimensioning and Tolerancing (GD&T) is a method for stating and interpreting design requirements. GD&T is an international system of symbolic language and is simply another tool available to make engineering drawings a better means of communication from design through manufacturing and inspection. GD&T begins with basic principles and builds on these principles with applications-oriented concepts, complex material is presented in a "building-block" approach.

### **MATE 117 Processes and Quality**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Individuals seeking employment in manufacturing and related occupations should be aware of processes and rigorous quality standards required in technical careers. This course will prepare the student for Six Sigma Green Belt certification upon completion of the course.

### **MATE 130 Machining for Related Occupations**

5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)

This course is designed to introduce the student to common machining practices. The student will learn layout, measuring tools, benchwork, machine setup and operation required to operate saws, drill presses, lathes and mills. This course is designed for the student pursuing degrees that require a knowledge of machining.

### **MATE 131 NIMS Level I Credentials - Job Planning, Benchwork & Layout**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

Prerequisites: MATE 100, MATE 101, or MATE 130, MATE 115 and MATH 103.

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.

### **MATE 132 NIMS Level I Credentials Milling**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.

A student receives NIMS Level I Credentials in Milling upon successful completion of the performance test and theory exam. NIMS documents the skills of individual through the consortium developed skill standard.

### **MATE 133 NIMS Level I Credentials Lathe - Chucking**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.

A student receives NIMS Level I Credentials in Lathe-Chucking upon successful completion of the performance test and theory exam. NIMS documents the skills of individual through the consortium developed skill standards.

**MATE 134 NIMS Level I Credentials Lathe - Turning**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)  
Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.

A student receives NIMS Level I Credential in Lathe - Turning upon successful completion of the performance test and theory exam. NIMS documents the skills of the individual through the consortium developed skill standards.

**MATE 135 NIMS Level I Credentials Surface Grinding**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)  
Prerequisites: MATE 100, MATE 101, MATE 102, MATE 115 and MATH 103.

A student receives NIMS Level I Credential Surface Grinding upon successful completion of the performance test and theory exam. NIMS documents the skills of the individual through the consortium developed skill standards.

**MATE 136 NIMS Level I Credentials CNC Milling**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)  
Prerequisite: MATE 220.  
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.

**MATE 137 NIMS Level I Credentials CNC Turning**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)  
Prerequisite: MATE 220.  
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.

**MATE 138 NIMS Level I Credentials Drill Press**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)  
Prerequisites: MATE 100, 101, 102, 115 and MATH 103.  
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.

**MATE 201 Basic Metallurgy**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisite: MATE 101.  
Metallurgy covers all aspects of metallurgical engineering, which include the three areas of extractive, mechanical, and physical metallurgy. Properties of ferrous and nonferrous metals.

**MATE 205 Manufacturing Internship II**

3 credits. 3 hours. (Field Studies 3 hours.)  
Prerequisite: MATE 102.  
This course is designed to give the student real world experience in a manufacturing environment. The student will perfect machining and tooling techniques and job responsibilities learned in prior courses under the direction of a mentor.

**MATE 210 Computerized Numerical Control - Lathe**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisites: MATE 101 or 130, and MATH 103 or concurrent enrollment.  
This course is designed to provide training on computer numerical controlled lathe turning centers. The student will process, program, verify and trouble shoot CNC lathe programs. Set-up and operations are covered and CAD/CAM programming will be introduced.

**MATE 215 Computer Numerical Control Mill**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisites: MATE 101 or 130, and MATH 103 or concurrent enrollment.

This course is designed to provide training on computer numerical controlled milling centers. The student will process, program, verify and troubleshoot CNC mill programs. Set up and operation are covered and CAD/CAM programming will be introduced.

**MATE 220 Advanced Computer Numerical Control - Mill/Lathe**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)  
Prerequisites: MATE 225 and MATH 104.  
This course is designed to cover advanced CNC programming techniques taking the student beyond standard code practices. Pre-set tooling and parametric (macro) programming with probing examples are covered. CAD/CAM will be used to produce CNC lathe and mill projects.

**MATE 225 Master Cam I**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisites: CSOF 100, and MATE 210 or 215.  
This course is designed as an introduction to Master Cam software. Menu screens and configuration of the software will be covered working thru 2-D projects on the lathe and mill.

**MATE 226 Master Cam II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisites: MATE 225.  
This course is designed for the experienced Master Cam user wanting to explore 3-Dimensional frame creation and surface modeling. The course focus will be on 3-D surface creation, surface machining, construction planes, drawing organization and four and five axis machine procedures.

**MATE 227 Master Cam III**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Prerequisites: MATE 226.  
This course is designed for the advanced Master Cam user. The student will learn advanced techniques for the lathe and four and five-Axis mill. Advanced topics will include four and five-Axis programming, Solids, IGES files, High Speed Function and Surface Creation.

**◆ Mass Communications**

*MCC-Blue River  
MCC-Maple Woods*

*MCC-Longview  
MCC-Penn Valley*

**MSCM 112 Introduction to Mass Communication**

3 credits. 3 hours. (Lecture 3 hours.)  
Historical study of content, structure, and control of modern communications in American society. Provides criteria for evaluating media content relative to the nature and consequence of news, entertainment, and advertising.

**MSCM 113 Basic Radio Production**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)  
Principles and techniques of developing, producing and directing various types of radio programs in the areas of public service, commercial spots, news and sports. Basic operation of radio production equipment.

### **MSCM 114 Radio Production II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MSCM 113.

Advanced study of production of various types of radio programs in the areas of public service, commercial spots, news and sports. Advanced operation of radio production equipment.

### **MSCM 115 Television Production I**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisites: MSCM 112 or concurrent enrollment.

Effective and creative use of television studio. Practical experience in non-technical areas like scripting and program development, and technical areas including lighting, audio, graphics, camera operation, switcher and special effects generator.

### **MSCM 116 Television Production II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MSCM 115.

Pre-production (concept development), production (camera shooting), and post-production (editing), combining remote productions and studio productions into final product.

### **MSCM 118 Introduction to Public Relations I**

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

Prerequisite: MSCM 112 or concurrent enrollment.

History and practices of public relations. Writing various forms of public relations materials and examining field and case studies.

Topics will include unethical public relations practices, and the relationship of public relations to the press and to society.

### **MSCM 200 Media Internship I**

3 credits. 15 hours. (Field Studies 15 hours.)

Prerequisite: Six credits in MSCM.

Practical experience working at a local media outlet.

### **MSCM 203 Media Internship II**

3 credits. 15 hours. (Field Studies 15 hours.)

Prerequisites: MSCM 200.

Students will continue to gain practical experience by working with a local media outlet.

### **MSCM 299 Editing Techniques**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Introduction to the equipment and techniques of editing three-quarter videotape with practical hands-on experience.

## **◆ Mathematics**

### ***MCC-Blue River***

George Green  
Tristan Londré  
Eric Parsons  
Rebecca Schuering  
Cheryl Winter  
Sarah Parsons

### ***MCC-Longview***

John Church  
Kenneth Eichman  
Sharon Hamsa  
Beth Henkle  
Le Ann Lotz-Todd  
Diane Bailey  
Jason Pallett  
Kristi Rottinghaus  
Suzanne Smith  
Janet Wyatt

### ***MCC-Maple Woods***

Audrey Battrum  
Kimberly Christensen  
Terry Hobbs  
Saeeda Irfan  
Bob Morgan  
Robert Skrukud  
Andrea Vorwark

### ***MCC-Penn Valley***

Tim Chappell  
Nic LaHue  
Gregory Mitchell

### ***MCC-Business & Technology***

Kimball Marsh

### **MATH 20 Basic Mathematical Operations**

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

Review of all basic mathematical operations. Fractions, decimals, proportions, and percentages. Elementary geometry (perimeter, area and volume).

### **MATH 20L Basic Mathematics/Lab**

3 credits. 5 hours. (Lecture 2 hours. Laboratory 3 hours.)

Review of basic mathematical operations. Fractions, decimals, proportion, and percentages. Elementary geometry (perimeter, area and volume)

### **MATH 40 Introductory Algebra**

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

Prerequisite: MATH 20 or MATH 20L, or a satisfactory score on the math placement test.

Review of all operations and properties of real numbers with special attention to work with signed numbers. Solutions of linear equations and inequalities in one variable, using and manipulation formulas. Properties of exponential numbers, definition and basic operations with polynomials and solution of polynomial equations by factoring. Basic operations and simplification of rational expressions. Graphing linear equations in two variables.

### **MATH 40L Introductory Co-Laboratory Algebra**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: MATH 20 or MATH 20L, or an acceptable score on the math placement test.

Review of operations and properties of the Real Number System. Operations on polynomials, exponents, and rational expressions. Solving and graphing linear equations. Applications are emphasized throughout the course.

### **MATH 100 Mathematics for Business**

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

Prerequisites: MATH 20 or 20L, or an acceptable score on math placement test.

Application of arithmetic and mathematical processes to the solution of practical problems in general business, retailing, accounting, consumer credit, and personal finance.

### **MATH 102 Technical and Business Math**

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

Prerequisites: Math 20 or 20L or equivalent placement criteria. Applications of unit conversions, ratios, percents, algebra, geometry to basic electricity, mixture ratios, pressure, hydraulics, compression, comparing specifications. Applications of percents in consumer credit and personal finance.

### **MATH 103 Technical Mathematics I**

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

Prerequisite: MATH 40 or MATH 40L or appropriate score on placement exam.

Algebraic expressions, linear equations and systems of linear equations, functions, exponents, graphical analysis, Quadratic equations, factoring common factors and difference of squares, unit conversions, percents, tolerances, clearance, and inference, mean, median, mode.

### **MATH 103R Technical Mathematics I with Review**

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

Prerequisite: MATH 20 or 20L or appropriate score on placement test to MATH 103R.

A review of basic math operations including decimals, fractions, percents, and order of operations. Algebraic expressions, linear equations and systems of linear equations, functions, exponents, graphical analysis, quadratic equations, factoring common factors and difference of squares, unit conversions, percents, and tolerances, clearance, interference, mean, median and mode.

### **MATH 104 Technical Mathematics II**

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

Prerequisite: MATH 103.

Applied geometry including complex, multi-step problems, complex numbers, solutions of right and oblique triangles, ratio and proportion, radian measure, exponential and logarithmic functions (graphical approach) and practical applications.

### **MATH 105 Algebra and Trigonometry for Land Surveyors**

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

Prerequisite: MATH 40 or 40L or equivalent score on placement exam.

Review of order of operations, scientific notation, rounding and significant digits. Review of basic area and volume formulas with applications to more general shapes. Quadratic and linear functions including piecewise definitions. Distance formula, midpoint formula, equations of circles. Map reading, contours and elevation. Classification of angles and triangles. Right triangle trigonometry. Conversions between radians and degrees/minutes/seconds and decimal degrees. Law of sines, law of cosines, arc length, vectors, and bearing. For all topics there will be an emphasis on applications appropriate to the study of land surveying.

### **MATH 110 Intermediate Algebra**

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

Prerequisite: MATH 40 or 40L, or a satisfactory score on the math placement test.

Functions and their graphs, systems of linear equations, application problems, inequalities, absolute value equations. Rational exponents, radicals, quadratic functions and equations, ratios and proportions.

### **MATH 110R Intermediate Algebra with Review**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisites: Satisfactory score on the math placement test.

A combination of the topics in MATH 40 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 satisfactory score on Math placement test.

Descriptive statistics, ungrouped and grouped data, elementary probability, discrete and continuous statistical inference, significance and distribution measures, regression and correlation analysis.

### **MATH 119 College Mathematics**

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

Prerequisite: MATH 110.

A course designed for students seeking a liberal arts education. The objective of this course is to provide students with a mathematical experience that will include topics from algebra, geometry, probability, and statistics. This course has a strong emphasis on applications.

### **MATH 120 College Algebra**

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

Prerequisite: MATH 110 or satisfactory score on the math placement test.

A study of various types of equations and inequalities, functions and their inverses, theory of higher degree equations, systems of equations, determinants, logarithms and exponentials, and applications.

### **MATH 120R College Algebra with Review**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisite: MATH 110 or satisfactory score on the math placement test.

A combination of topics in Intermediate Algebra and College Algebra. A study of various types of equations and inequalities, functions and their graphs, inverse functions, systems of equations, determinants, logarithms and exponential applications.

### **MATH 130 Trigonometry**

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

Prerequisite: MATH 120, or satisfactory score on the placement test.

Plane geometry is strongly recommended. Angle based trigonometric functions and their inverses, multiple angle formulas, identities, conditional equations, radian measure, arc length, angular velocity, function graphing, logarithms, and tables. Solution of triangles.

### **MATH 135 Number Systems for Elementary Teachers**

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

Prerequisite: MATH 119 or above.

Designed for elementary school teachers. A constructive development of the real number system beginning with the system of whole numbers; concepts from elementary number theory; applications of quantitative systems to problems in discrete mathematics.

### **MATH 136 Geometry, Probability, and Statistics for Elementary Teachers**

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

Prerequisite: MATH 119 or higher.

Designed for elementary school teachers. A development from informal geometric concepts to elements of the Euclidean deductive system; groups of congruence transformations, similarity transformations and symmetries; coordinate systems and vectors.

### **MATH 141 Discrete Structures for Computer Science I**

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

Prerequisite: MATH 120 or 150.

Mathematical logic, sets, relations, functions, mathematical induction, Boolean algebra, algebraic structures. The theory introduced will be applied to appropriate areas of computer science.

### **MATH 150 PreCalculus**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisite: MATH 110 or satisfactory score on the math placement test.

A study of various types of algebraic equations and inequalities, functions and their inverses, theory of higher degree polynomial equations, systems of equations, determinants, logarithms, exponentials and applications. A study of trigonometric functions and their inverses, formulas and identities, conditional equations, radian measure, arc length, angular velocity, function graphing and solution of triangles.

### **MATH 175 Calculus for Business and Social Science**

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

Prerequisite: MATH 120 or an appropriate placement test score.

Quadratic, polynomial, rational exponential, and logarithmic functions used in differential and integral calculus application in business, economic and social science.

### **MATH 180 Analytic Geometry and Calculus I**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisite: MATH 130 or 150.

A study of plane analytic geometry, limits, continuity, the derivative for functions of a single variable, differentials, indefinite and definite integrals, the Fundamental Theorem of Calculus, and applications of the derivative and integral.

### **MATH 190 Analytic Geometry and Calculus II**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisite: MATH 180.

A study of the calculus of elementary transcendental functions; integration by parts, by trigonometric substitution, by partial fraction and by miscellaneous substitutions; improper integrals; L' Hospital's Rule; conic sections; the transformation of axes, infinite series, parametric and polar equations and their derivatives; and graphs, area, and arc length in polar coordinates.

### **MATH 196 Special Topics I**

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

Mathematical topics of special interest.

### **MATH 210 Analytic Geometry and Calculus III**

5 credits. 5 hours. (Lecture 5 hours.)

Prerequisite: MATH 190, or an appropriate score on the math placement test.

A study of analytic geometry in three dimensions, functions of more than one variable and their calculus, directional and partial derivatives, vector functions and their calculus, two- and three-dimensional applications, multiple integrals, and line integrals.

### **MATH 230 Differential Equations**

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

Prerequisite: MATH 190.

Solution and application of ordinary differential equations including the nth order non-homogeneous linear cases. Laplace transform, and power series methods.

### **MATH 241 Discrete Structures for Computer Science II**

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

Prerequisite: MATH 141 and CSIS 223.

Lattice structures and graph theory, algorithms and complexity, recurrence relations, introduction to computability theory, and abstract machines. The theory introduced will be applied to appropriate areas of computer science.

## **◆ Medical Transcription**

*MCC-Penn Valley*

### **MTRN 101 Medical Transcription I**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)

Prerequisite: ENGL 101 and CSIS 115.

Introduction to the transcription of medical reports using correct terminology, punctuation and format.

### **MTRN 112 Medical Transcription II**

5 credits. 10.7 hours. (Lecture 2 hours. Laboratory 2 hours. Clinical 6.7 hours.)

Prerequisite: HITE 103 and MTRN 101, and concurrent enrollment in MTRN 113.

Development of transcription skills including medical vocabulary, punctuation, monitoring for quality, and productivity. Selection of word processing and dictation equipment.

### **MTRN 113 Terminology for Health Records II**

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

Prerequisite: BIOL 108, HITE 103, and MTRN 101.

Advanced study of medical terms including those used in specialties such as radiology, pathology, cardiology, obstetrics, neurology, and surgery.

## **◆ Music**

### **MCC-Blue River**

Rebecca Johnson

### **MCC-Maple Woods**

Jim Murray III

### **MCC-Longview**

Cathy Hardy-Parcell

### **MCC-Penn Valley**

Clarence Smith

### **MUSI 101 Mixed Chorus I**

1 credit. 3 hours. (Laboratory 3 hours.)

Open to all students interested in group singing. Performance of various types of choral music in public.

### **MUSI 102 Mixed Chorus II**

1 credit. 3 hours. (Laboratory 3 hours.)

Open to all students interested in group singing. Performance of various types of choral music in public.

### **MUSI 103 Band I**

1 credit. 4 hours. (Laboratory 4 hours.)

Open to all students interested in playing in an instrumental ensemble. Performance of various types of instrumental music in public.

### **MUSI 104 Band II**

1 credit. 4 hours. (Laboratory 4 hours.)

Open to all students interested in playing in an instrumental ensemble. Performance of various types of instrumental music in public.

### **MUSI 105 Orchestra I**

1 credit. 4 hours. (Laboratory 4 hours.)

Open to all students who play violin, viola, cello or bass interested in group performance. Performance of various types of orchestra music in public.

### **MUSI 106 Orchestra II**

1 credit. 4 hours. (Laboratory 4 hours.)

Open to all students who play violin, viola, cello or bass interested in group performance. Performance of various types of orchestra music in public.

### **MUSI 107 Fundamentals of Music**

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

This course will introduce students to fundamental concepts of music notation and ear training through the use of scales, key signatures, intervals, chords, and chord progressions. This course is designed for the general student and the student preparing for music theory.

### **MUSI 108 Music Appreciation**

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

This course will introduce the student to the aesthetics of music through the study of musical eras including the Middle Ages through 20th century and music genres through vocal and instrumental mediums.

### **MUSI 110 Music Theory I**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

This course will introduce students to beginning concepts of music notation and ear training through the use of intervals, scales, triads, seventh chords and their inversions, chord progressions in major and minor keys, and non-harmonic tones including suspensions, appoggiatura, and passing tones. Practical application will include sight-singing, ear training, and keyboard skills.

### **MUSI 111 Music Theory II**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: MUSI 110.

This course is a continuation of Music Theory I and will introduce students to secondary triads, secondary sevenths, and secondary dominants and all their inversions, non-harmonic tones including suspensions, pedal tones, and added sixths, and modulation by secondary dominants to closely related keys.

### **MUSI 112 Class Piano I**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Prerequisite: Some experience with note reading in at least one clef and with rhythmic notation is recommended.

A practical approach to keyboard techniques including harmonization, transposition, and sight reading.

### **MUSI 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. Requirement Designation: Human Diversity

### **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: One of the following: MUSI 107, 112, 130, or 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. Requirement Designation: Human Diversity

### **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.)

Prerequisite: 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 with a minimum grade of C.

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*

Theresa Chop

Amber Jenkins

### **OTHA 100 Introduction to Occupational Therapy**

2 credits. 2 hours. (Lecture 2 hours.)

Introduction to the history, philosophy, and practice of occupational therapy. Exploration of diversity and the role it plays in health care.

### **OTHA 102 Documentation Guidelines**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Formal admission to the Occupational Therapy Assistant program.

Guidelines for documentation of occupational therapy services.

### **OTHA 103 Clinical Conditions**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Formal admission into the Occupational Therapy Assistant Program.

Etiology, clinical process and prognosis of common diseases and illnesses. Effect of disease or illness on an individual's performance and the impact this has on the person, family and society.

### **OTHA 106 Therapeutic Interventions I**

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)

Prerequisite: Formal admission to the Occupational Therapy Assistant program.

Basic therapeutic interventions, techniques, applications and legislation pertinent to OT practice. Learn OT's role in promoting health and wellness.

### **OTHA 116 Level I Fieldwork I**

1 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

Prerequisite: Formal admission to the Occupational Therapy Assistant program.

Introduction to the role, policies, and procedures of fieldwork.

Directed experience in a specified community setting.

### **OTHA 118 Assistive Technology**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Prerequisite: BIOL 109, EMTP 102, and OTHA 100, 102, 103, 106, and 116.

Hands-on introduction to high tech assistive technology and augmentative communication.

### **OTHA 120 Pediatrics**

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

Prerequisite: BIOL 109, EMPT 102, and OTHA 100, 102, 103, 106 and 116.

Occupational therapy practice as it relates to individuals from birth to early adolescence. Study of normal growth and development.

### **OTHA 121 Level I Fieldwork II**

0.5 credit. 1 hour. (Clinical 1 hour.)

Prerequisite: BIOL 109, EMPT 102, and OTHA 100, 102, 103, 106, and 116; concurrent enrollment in OTHA 120.

Directed experience in a specified community setting.

### **OTHA 130 Analysis of Physical Performance**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: BIOL 109, EMPT 102, and OTHA 100, 102, 103, 106, and 116.

Analysis and evaluation of the components of physical performance and their relationship to functional activities.

### **OTHA 154 Applied Neurology**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisites: BIOL 109 or BIOL 110 Human Anatomy, and BIOL 210 and admission to OTHA or PTHA program.

Foundations of neuroscience for practice as a rehabilitation professional. Anatomy and function of the nervous system. Correlation of clinical problems with pathology of the nervous system. Cross-listed with PTHA 154.

### **OTHA 173 Special Topics**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Concurrent enrollment in PTA or OTA programs or completion of an Associate's or advanced degree in physical therapy or occupational therapy.

A study of advanced topics relevant to the current practice of rehabilitation. Cross-listed as PTHA 173.

### **OTHA 201 Mental Health**

2.5 credits. 3 hours. (Lecture 2 hours. Laboratory 1 hour.)

Prerequisite: OTHA 118, 120, 121, 130 and 154.

Occupational therapy assessment and treatment techniques in the mental health setting.

### **OTHA 202 Physical Dysfunction**

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

Prerequisite: OTHA 118, 120, 121, 130 and 154.

Occupational therapy assessment and treatment used with the physically and cognitively challenged population.

### **OTHA 203 Gerontology**

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

Prerequisite: OTHA 118, 120, 121, 130 and 154.

Concepts and process of aging. The role of occupational therapy with the elderly.

### **OTHA 208 Therapeutic Interventions II**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Prerequisite: OTHA 118, 120, 121, 130 and 154.

Advanced therapeutic interventions and techniques used to enhance functional ability and independence in daily life tasks and occupations.

### **OTHA 212 Level I Fieldwork III**

2 credits. 4 hours. (Clinical 4 hours.)

Prerequisite: OTHA 118, 120, 121, 130 and 154.

Directed experience in specified community settings.

### **OTHA 217 Fieldwork Seminar**

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

Prerequisite: OTHA 118, 120, 121, 130 and 154.

Preparation for full-time clinical practice, the national certification process, state licensure, and future employment.

### **OTHA 222 Level II Fieldwork**

12 credits. 40 hours. (Field Studies 40 hours.)

Prerequisite: OTHA 201, 202, 203, 208, 212, and 217.

Directed clinical experience in different practice areas of occupational therapy.

## **◆ Paralegal**

*MCC-Penn Valley*

Gordon Wells, Jr.

### **PARA 100 Introduction to Paralegal Practice**

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

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 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.)

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. 1.5 hours. (Field Studies 1.5 hours.)

Prerequisite: PARA 100, PARA 126, PARA 176, PARA 177, 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 roles. 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***

Dennis Lowden

***MCC-Longview***

Michael Connelly

Douglas Washer

***MCC-Penn Valley***

***MCC-Maple Woods***

### **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.

Requirement Designation: Human Diversity

## **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*

John O'Connell

*MCC-Maple Woods*

*MCC-Longview*

*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 principles 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 perceived 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 109 or BIOL 110 & BIOL 210. 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*

Gwen Robertson

Pam Stockman

### **PTHA 151 Introduction to Physical Therapy**

2 credits. 2 hours. (Lecture 2 hours.)

Introduction to the education and roles of the physical therapist and physical therapist assistant as members of the health care team. Overview of physical therapy practice, terms and current issues. Effective interaction with others related to implementation of the physical therapy plan of care.

### **PTHA 152 Physical Therapy Fundamentals I**

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)

Prerequisite: Formal acceptance into the program.

Basic patient care skills utilized by the physical therapist assistant in carrying out the plan of care established by the physical therapist. Theory and application of basic treatment modalities used in physical therapy, including indications and contraindications. Field trips.

### **PTHA 153 Kinesiology**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prerequisites: BIOL 109 and PTHA 152 and PTHA 160.

Discussion of anatomy and function of the musculoskeletal system. Analysis of various activities. Application of data collection techniques to monitor effectiveness of physical therapy interventions as outlined in the plan of care established by the supervising physical therapist.

### **PTHA 154 Applied Neurology**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisites: BIOL 109 or BIOL 110 Human Anatomy, and BIOL 210 and admission to OTHA or PTHA program.

Foundations of neuroscience for practice as a rehabilitation professional. Anatomy and function of the nervous system. Correlation of clinical problems with pathology of the nervous system. Cross-listed with OTHA 154.

### **PTHA 155 Rehabilitation**

4 credits. 5 hours. (Lecture 3 hours. Laboratory 2 hours.)

Prerequisite: PTHA 162.

Introduction to the underlying theory, principles, and application of interventions involved in physical rehabilitation. Field trips as required.

### **PTHA 158 Therapeutic Exercise**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prerequisite: PTHA 162.

Introduction to the theory and principles of application of therapeutic exercise including patient instruction, manual techniques and equipment commonly used by the physical therapist assistant in carrying out the plan of care as established by the supervising physical therapist. Field trips as required.

### **PTHA 159 Orthopedic Pathology**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisites: BIOL 109 and PTHA 152 and PTHA 160.

Orthopedic pathologies commonly seen in physical therapy practice: diagnostic tests, signs and symptoms, physiologic factors and common interventions associated with the physical therapy plan of care.

### **PTHA 160 Medical Diseases**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisites: Formal acceptance into the program.

Medical diseases commonly seen in physical therapy practice; diagnostic tests, signs and symptoms, physiologic factors, and common interventions associated with the physical therapy plan of care.

### **PTHA 161 Physical Therapy Fundamentals II**

4 credits. 5.5 hours. (Lecture 2.5 hours. Laboratory 3 hours.)

Prerequisites: BIOL 109 and PTHA 152 and PTHA 160.

Introduction to the theory and practical application of documentation, patient care skills, and selected modalities, including indications and contraindications.

### **PTHA 162 Clinical Experience I**

2 credits. 5 hours. (Clinical 5 hours.)

Prerequisite: PTHA 153, 154, 159, and 161 and EMTP 102.

Supervised clinical experience in the practical application of techniques and procedures covered in all previous PTHA courses. Assisting physical therapists in treatment of patients in a variety of clinical settings.

### **PTHA 164 Pediatrics and Gerontology**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: PTHA 162.

Specialized information related to the treatment of pediatric and older adult populations.

### **PTHA 170 Clinical Experience II**

2 credits. 5 hours. (Clinical 5 hours.)

Prerequisite: PTHA 162 and concurrent enrollment in PTHA 155, 158, 164, and 171.

Supervised clinical experience in the practical application of techniques and procedures covered in all previous PTHA courses. Assisting physical therapists in treatment of patients in a variety of clinical settings..

### **PTHA 171 Clinical Seminar**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: PTHA 162.

This course contains information on current professional issues and values, administrative policies and procedures, and related clinical topics associated with the practice of physical therapy. Service learning projects required.

### **PTHA 172 Clinical Experience III**

12 credits. 40 hours. (Clinical 40 hours.)

Prerequisite: Completion of all other required courses in the PTHA program.

Practical application of principles learned in the prior didactic semester. Experience rotating internships in selected clinical sites under the supervision of a physical therapist.

### **PTHA 173 Special Topics**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Concurrent enrollment in PTA or OTA programs or completion of an Associate of advanced degree in physical therapy or occupational therapy.

This course presents specialized topics in physical therapy and the administration of health care.

## ◆ Physics

*MCC-Blue River*

*MCC-Longview*

D.J. Box

Anne Nienhueser

Deanna Poudel

*MCC-Penn Valley*

John Hawkins

*MCC-Maple Woods*

Cynthia Sexton-Proctor

### **PHYS 101 Introductory Physics**

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)

A survey of physics with emphasis on mechanics, heat, light, sound, electricity, magnetism, and atomic physics. Emphasis on the concepts of physics.

### **PHYS 104 Foundations of Physical Science**

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)  
Fundamental principles and concepts of classical and modern physics, astronomy, chemistry and earth science, and their relationships.

### **PHYS 106 General Astronomy**

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)  
A survey of astronomy with emphasis on the scientific method, observation, tools of observation, and the models, physical principles, and processes that help describe and predict astronomical phenomena.

### **PHYS 112 Technical Physics**

5 credits. 6 hours. (Lecture 4 hours. Laboratory 2 hours.)  
Prerequisite: MATH 104.

Principles of mechanics, thermodynamics, sound, electricity, magnetism, light, and nuclear physics with emphasis on applications to technology.

### **PHYS 130 General Physics I**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
Prerequisite: MATH 130.

Algebraic and trigonometric introduction to the principles of mechanics, heat, and sound with an emphasis on problem solving and applications in technical and health careers.

### **PHYS 131 General Physics II**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
Prerequisite: PHYS 130.

Algebraic and trigonometric introduction to the principles of electricity and magnetism, light and geometrical optics, and atomic physics with an emphasis on problem solving and applications in technical and health careers.

### **PHYS 220 Engineering Physics I**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
Prerequisite: Enrollment in or completion of MATH 190.

Calculus-based introduction to the principles of mechanics, heat, and sound with an emphasis on problem solving and applications in engineering and science careers.

### **PHYS 221 Engineering Physics II**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)  
Prerequisite: PHYS 220 and enrollment in or completion of MATH 210.

Calculus-based introduction to the principles of electricity and magnetism, light and geometrical optics, and modern physics with an emphasis on problem solving and applications in engineering and science careers.

## **◆ Political Science**

**MCC-Lonview**

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.)  
Principles of constitutional and political theory. Federal and Missouri constitutions and political processes in selected contemporary states.

### **POLS 136 Introduction to American National Politics**

3 credits. 3 hours. (Lecture 3 hours.)  
Principles of political science. Examination of the development, organization, and function of the national government. Its relationship to the cultural, economic, and social institutions of the United States, Federal and Missouri constitutions.

### **POLS 137 Introduction to State and Local Politics**

3 credits. 3 hours. (Lecture 3 hours.)  
Surveys the theory of politics and government in America at the State and Local levels with special attention to Missouri. Includes US, Missouri constitution.

### **POLS 138 Practicum in Public Administration**

1-6 credits. 1-5 hours. (Field Studies 1-6 hours.)  
Prerequisite: Completion of POLS 135, 136, or 137 with a minimum grade of B.

Field work in a public agency/legislative office in an entry-level position to obtain exposure to public service. The credit for this course will vary depending upon the hours spent working for the agency and agreement between instructor and student.

### **POLS 153 The Missouri Constitution**

1 credit. 1 hour. (Lecture 1 hour.)  
Directed study of the Missouri Constitution. This course fulfills the state constitution requirement.

### **POLS 234 Introduction to International Relations**

3 credits. 3 hours. (Lecture 3 hours.)  
This course acquaints students with the core concepts, processes, issues, and analytical tools of international relations. The course details the actors in international relations, how foreign policy is made, and the role of power. The course examines past, contemporary, and future problems in the international system, including military 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

Jennifer Dunlap

Cora Franklin

Diane Graftenine-Beedle

Sharon Graves

Sherry Kinney

Betty Reynolds

Stephanie Roehm

### **PNUR 100 Personal and Vocational Concepts**

1 credit. 1 hour. (Lecture 1 hour.)  
Prerequisites: BIOL 108 or 109, and admission to the PN 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.

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.

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 clients 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.

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 credit. 1.5 hours. (Lecture 0.5 hour. Laboratory 1 hour.)

Venous Access and Intravenous Infusion 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**

9 credits. 9 hours. (Lecture 4 hours. Laboratory 1 hour. Clinical 4 hours.)

Prerequisites: Successful completion of all previously attempted courses, PNUR 100, PNUR 102, PNUR 103, PNUR 104, and

### **PNUR 110 Pharmacology.**

This course prepares the student to care for the adult client with needs ranging from simple to complex in a variety of settings. Concepts are presented by body systems, with common diseases and disorders, their causes, symptomatology, and treatments being emphasized. The nursing process is utilized to identify nursing problems and then to implement nursing interventions to meet client needs. Care of the elderly and nutrition are intergrated as theory content and included in clinical applications.

### **PNUR 144 Nursing of the Adult II**

8 credits. 8 hours. (Lecture 3 hours. Laboratory 1 hour. Clinical 4 hours.)

Prerequisite: Prerequisites: PNUR 100, PNUR 102, or equivalent, PNUR 103, PNUR 104, PNUR 110, PNUR 138.

This course prepares the student to care for the adult client with needs ranging from simple to complex in a variety of settings. Concepts are presented by body systems, with common diseases and disorders, their causes, symptomatology, and treatments being emphasized. The nursing process is utilized to identify nursing problems and then to implement nursing interventions to meet clients needs. Pharmacology, nutrition and care of elderly are integrated as theory content and included in clinical application.

### **PNUR 146 Leadership**

3 credits. 6 hours. (Lecture 1.7 hours. Clinical 4.3 hours.)

Prerequisite: Successful completion of all previously attempted courses of the program.

Principles of leadership and management are utilized in the nursing process to meet the needs of the diverse client, family, and health team member. Legal responsibilities of the practical nurse in a leadership role are reviewed.

## **◆ Professional Nursing**

### ***MCC-Penn Valley***

Pamela Anthony	Roger Bidwell	Jennifer Dunlap
Tammie Greathouse	Lee Heath	Shareen Khani
Karen Komoroski	Catherine McClendon	Amy Parrish
Kimberly Ries	Maria Santander	Rosemary Schocklee-Fusaro
Nancy Spangler	Shelli Stufflebeam-Ely	Tammie Willis
Patricia Winberg		

### **RNUR 115 Professional Transition**

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

Prerequisite: Admission to LPN-Bridge Program.

This course facilitates the transition of the Licensed Practical Nurse to the role of Associate Degree Nurse and includes professional and legal/ethical issues. Concepts covered in the course include: nursing process, physical assessment, teaching-learning principles, group dynamics, cultural/ethnic issues, and critical thinking. Community health concepts will be introduced and previously learned nursing content addressed.

### **RNUR 126 Fundamentals of Professional Nursing**

6 credits. 10 hours. (Lecture 4 hours. Clinical 6 hours.)

Prerequisite: Admission to the nursing program; completion of or concurrent enrollment in PSYC 243.

The student will acquire knowledge fundamental to the development of basic skills and attitudes essential for the practice of nursing. The principles of physical, biological, and behavioral sciences and nursing theory serve as the foundation. This first clinical laboratory course is designed to introduce the student to the role of the professional nurse in meeting basic needs common to all clients. Students are prepared to establish the nurse-client relationship through communication skills. Planned clinical experience is designed to allow the student to utilize the nursing process to deliver safe, individualized nursing care according to legal/ethical guidelines.

### **RNUR 131 Essential Nursing Concepts**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Admission to nursing program; completion of or concurrent enrollment in PSYC 243.

The course provides a basis for beginning nursing practice, introducing the student to nursing as a profession with its component parts: professionalism, health care delivery systems, the health care team, and legal/ethical issues. The student is introduced to communication theory, the hierarchy of basic needs, developmental theories, the impact of culture and ethnicity on health practices, and the nurse-client relationship. The fundamental principles of health assessment are also a part of this course. Competency in calculation of medication dosages will be addressed.

### **RNUR 134 Mental Health Nursing**

4 credits. 8 hours. (Lecture 2 hours. Clinical 6 hours.)

Prerequisite: Admission to nursing program; completion of RNUR 131, RNUR 126, PSYC 243; completion of or concurrent enrollment in BIOL 208.

This course is based on the belief that mental health nursing is an integral part of all nursing. It builds upon the foundation of basic knowledge of human behavior which the student receives from the field of psychology. The student will acquire a basic knowledge of the causes, treatment, and prevention of mental disorders across the life span including the impact of environmental forces. Ethical/legal concepts are integrated throughout. Emphasis is placed on application of therapeutic communication techniques, psychiatric assessment skills, and the nursing process. The impact of the therapeutic environment upon the treatment of specific psychiatric populations across the life span will be presented.

### **RNUR 138 Nursing Care of Women and Neonates**

4 credits. 8 hours. (Lecture 2 hours. Clinical 6 hours.)

Prerequisite: Admission to nursing program; completion of RNUR 131, RNUR 126, PSYC 243; completion of or concurrent enrollment in BIOL 208.

This is a sixteen-week nursing course focusing on nursing care of women and neonates. The course is designed to provide a holistic view of women and their health-related self-care practices. While major emphasis is placed upon providing experiences in meeting the basic needs of the family during the childbearing years, women's changing health care requirements throughout her lifetime are also addressed. Communication with women, mothers, and significant others is emphasized. Developmental tasks of neonate, adolescent, and adult are identified. The nursing process is utilized in the clinical setting to determine needs and related interventions for childbearing women, neonates, and support systems. Emphasis is placed on incorporating teaching-learning needs as part of the plan of care for the cultural diverse family.

### **RNUR 141 Adult Nursing I**

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

Prerequisite: Admission to nursing program; completion of RNUR 131, RNUR 126, PSYC 243; completion of or concurrent enrollment in BIOL 208.

Adult Nursing I is the first of three medical-surgical nursing courses and builds upon the basic nursing content and skills learned in Fundamentals of Professional Nursing and Essential Nursing Concepts. Gerontological concepts are presented along with selected medical-surgical problems associated with this population. The nursing process will serve as the framework to integrate the concepts of legal/ethical issues, culture and ethnicity, developmental stages/tasks, and communication. Emphasis is placed on identifying physiological and psychological changes of clients aged 65 and older.

### **RNUR 230 Leadership/Management/Trends**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisites: ENGL 101, SOCI 160, RNUR 234, RNUR 238, SPDR 100 or SPDR 102, HIST 120/121 or POLS 135/136/137 (Constitutional requirement may be taken concurrently.)

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.)

prerequisites: BIOL 208, RNUR 134, RNUR 138, RNUR 141, or taken concurrently: ENGL 101, SOCI 160

This third semester clinical laboratory nursing course is designed to introduce the student to the role of the professional nurse in promoting health care in children and their families. Nursing care will be provided in primary, secondary and tertiary settings. This course stresses the uniqueness of each child and the family unit. Communication is employed to assist the child and family in health maintenance with the goal of independence and autonomy of function. The nursing process will be used as the interactive tool linking all aspects of care for culturally and ethnically diverse clients and their families. Developmental stages/tasks will be stressed in assisting the family unit toward health maintenance.

### **RNUR 238 Adult Nursing II**

5 credits. 9 hours. (Lecture 3 hours. Clinical 6 hours.)

prerequisites: BIOL 208, RNUR 134, RNUR 138, RNUR 141, Prerequisites or taken concurrently: ENGL 101, SOCI 160, each with a grade of "C" or better.

Adult Nursing II is the second of three medical-surgical nursing courses and is the first with a clinical component. This course allows students to utilize previous nursing concepts as they apply their skills to clients in a variety of secondary and tertiary settings. Students assume professional nursing roles in meeting basic needs by demonstrating skills in communication, critical thinking, and the nursing process. Students interact with culturally/ethnically diverse clients and integrate legal/ethical issues into the plan of care. Content regarding medical-surgical disease processes is continued, giving the student the basis of knowledge to assist the client to reach optimal status on the health-illness continuum.

## **RNUR 244 Adult Nursing III**

7 credits. 13 hours. (Lecture 4 hours. Clinical 9 hours.)

Prerequisite: Admission to the nursing program; completion of RNUR 126, RNUR 131, RNUR 134, RNUR 138, RNUR 141, RNUR 234, RNUR 238, BIOL 208.

This is the final of three adult nursing courses and is designed to prepare the student to transition to the role of the professional nurse. Students will expand their knowledge of therapeutic communication and skills related to health care technology.

Concepts from previous nursing courses are integrated to provide comprehensive nursing care to select adult clients and their families experiencing multisystem failure/trauma. Students use the nursing process to organize and manage care in conjunction with other health team members. Critical thinking, developmental stages, cultural/ethnic diversity, and legal/ethical issues are implemented in the care planning process. Clinical laboratory practice occurs in primary, secondary, and tertiary settings with diverse client populations and includes a concentrated practicum which prepares the student to enter the work force. A community health nursing experience is incorporated in theory and clinical practice.

## **◆ Psychology**

### ***MCC-Blue River***

Kimberly Glackin

### ***MCC-Maple Woods***

Julia Bishop  
Robert Williams

### ***MCC-Longview***

Angela Bahner  
Susan Benoit  
Matthew Westra

### ***MCC-Penn Valley***

Monica Gimenez  
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. Requirement Designation: Human Diversity

## **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. Requirement Designation: Human Diversity

## **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*

Judith Taylor

Kimberly Thebeau-Siercks

### **RATE 150 Introduction to Radiologic Technology**

2 credits. 2 hours. (Lecture 2 hours.)

Introduction to the profession of radiologic technology, including the duties of the radiologic technologist in the health care environment.

### **RATE 160 Survey of Radiologic Technology**

6 credits. 10.2 hours. (Lecture 4.2 hours. Clinical 6 hours.)

Prerequisite: Admission to the Radiologic Technology Program.

Orientation to the program and clinical responsibilities. Topics related to basic patient interactions, body mechanics, patient transportation, radiographic terminology, radiographic examinations of the chest and abdomen, methods of radiation protection and types of radiographic equipment will be explored.

### **RATE 162 Image Processing**

2 credits. 2.5 hours. (Lecture 1.5 hours. Laboratory 1 hour.)

Prerequisite: RATE 160, 172, and 173.

Materials and factors relating to acquisition, processing, viewing, and storage of radiographs.

### **RATE 165 Patient Care**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: RATE 160.

This course will explore patient-health professional interactions, basic patient care and management, medico-legal issues, and medical ethics.

### **RATE 170 Radiation Biology and Protection**

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

Prerequisite: RATE 160 with concurrent enrollment in the corresponding semester of clinical experience.

The principles of radiation biology and techniques used to protect the patient and personnel from the effects of exposure to ionizing radiation.

### **RATE 171 Radiographic Exposures I**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: Admission to the program.

Factors which affect radiographic image formation and determine image quality.

### **RATE 172 Radiographic Positioning I**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: RATE 160 concurrent enrollment in RATE 165 and 173.

Anatomy, positioning and image evaluation of the digestive and urinary system, upper and lower limbs.

### **RATE 173 Clinical Practice I**

3 credits. 16 hours. (Clinical 16 hours.)

Prerequisite: RATE 160 concurrent enrollment in RATE 165 and 172.

Performance of patient examination in a clinical setting under the supervision of a Radiologic Technologist.

### **RATE 174 Radiographic Exposures II**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: Completion of: RATE 160, 171, 172, and 173.

Quality control of radiographic images. Technique charts, calibration of equipment, standard exposure systems, and factors used for conversion of techniques for variables in the exposure system. Special techniques used in producing radiographic images.

### **RATE 175 Clinical Practice II**

4 credits. 24 hours. (Clinical 24 hours.)

Prerequisite: RATE 165, 172, and 173 and concurrent enrollment in RATE 176.

Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

### **RATE 176 Radiographic Positioning II**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: BIOL 110 and RATE 165, 172, 173 and concurrent enrollment in RATE 162 and 175.

Anatomy, positioning, and image evaluation of the pelvis, bony thorax, vertebral column, cranium, and facial bones.

### **RATE 178 Clinical Practice III**

4 credits. 20 hours. (Clinical 20 hours.)

Prerequisites: RATE 175 and 176.

Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

### **RATE 278 Imaging Modalities and Pathology**

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

Prerequisite: RATE 279, 280, 281 and concurrent enrollment in RATE 282.

Human disease processes and their relationship to patient examination in the radiology department. Radiographic pathology and imaging modalities.

### **RATE 279 Radiographic Positioning III**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: RATE 176 and 178 and concurrent enrollment in RATE 280, 281, and 285.

Anatomy, positioning and image evaluation of the biliary system, breasts, and temporal bone; procedural adaptations for pediatric and trauma patients and mobile radiographic procedures.

Advanced image evaluation of routine radiographs.

### **RATE 280 Clinical Practice IV**

4 credits. 24 hours. (Clinical 24 hours.)

Prerequisite: RATE 162, 176, 178 and concurrent enrollment in RATE 279, 281, and 285.

Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

### **RATE 281 Radiation Physics**

3 credits. 3.5 hours. (Lecture 2.5 hours. Laboratory 1 hour.)

Prerequisite: RATE 162 and 171.

Application of fundamental physics principles relating to energy, electricity, and magnetism and their relevance to the study of x-ray equipment.

### **RATE 282 Clinical Practice V**

4 credits. 24 hours. (Clinical 24 hours.)

Prerequisite: RATE 279, 280, 281, 285 and concurrent enrollment in RATE 278.

Performance of patient examinations in a clinical setting under the supervision of a radiologic technologist.

### **RATE 283 Final Seminar**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: RATE 174, 279 and 280.

Preparation for the National Registry examination. Simulation of American Registry of Radiologic Technologists examination.

### **RATE 285 Special Procedures**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: RATE 170, 171 and 178 and concurrent enrollment in RATE 279, 280 and 281.

Anatomy, positioning, equipment, and special tasks related to performance of special contrast media studies. Vascular, neurological, lymphatic, skeletal, and pulmonary systems.

## **◆ Reading**

### ***MCC-Blue River***

Mary Simpson

### ***MCC-Maple Woods***

Debra McCarty

### ***MCC-Longview***

Patricia Illing

Ronald Taylor

### ***MCC-Penn Valley***

Vicki Raine

Patricia Vargas

### **READ 10 Foundations for Academic Reading I**

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

Prerequisite: Appropriate placement scores.

Development of fundamental ability to interact independently with printed material so as to comprehend written material applicable to the college environment. Instruction in main idea and supporting details, word recognition, phonetic analysis, and vocabulary development.

### **READ 11 Foundations for Academic Reading II**

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

Prerequisite: Appropriate placement scores or the successful completion of Read 10/30.

Further development of fundamental ability to interact independently with printed material as to comprehend written material applicable to the college environment. Instruction in main idea and supporting details, inference, and organizational patterns, vocabulary development, and textbook strategies.

### **READ 13 Linguistic Comprehension I (Companion for READ 10)**

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

Prerequisite: Placement based on testing.

Development of fundamental comprehension of printed material applicable to the college environment through auditory and visual input. Instruction in main ideas and supporting details, word recognition, structural analysis, and vocabulary development.

### **READ 14A Reading - Vocabulary**

1 credit. 1 hour. (Lecture 1 hour.)

Vocabulary development through word analysis and context clues. Credit for courses numbered under 100 is not applicable to any degree or certificate.

### **READ 14B Reading - Vocabulary**

2 credits. 2 hours. (Lecture 2 hours.)

Vocabulary development through word analysis and context clues. Credit for courses numbered under 100 is not applicable to any degree or certificate.

### **READ 14C Reading - Vocabulary**

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

Vocabulary development through word analysis and context clues.

Credit for courses numbered under 100 is not applicable to any degree or certificate.

### **READ 15 Phonology I**

1 credit. 1 hour. (Lecture 1 hour.)

Prerequisite: Diagnostic testing.

Improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

### **READ 16 Phonology I**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Diagnostic testing.

Improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

### **READ 17 Phonology I**

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

Prerequisite: Diagnostic testing.

Improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

### **READ 18 Linguistic Comprehension II (Companion for READ 11)**

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

Prerequisite: Appropriate placement scores or the successful completion of Read 13/33.

Development of fundamental comprehension of printed material applicable to the college environment through auditory and visual input. Instruction in main ideas and supporting details, and organizational patterns, vocabulary development and textbook strategies.

### **READ 19 Phonology II**

1 credit. 1 hour. (Lecture 1 hour.)

Prerequisite: Successful completion of READ 15, 16, or 17.

Continued improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

### **READ 20 Phonology II**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: Successful completion of READ 15, 16, or 17.

Continued improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

### **READ 21 Phonology II**

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

Prerequisite: Successful completion of READ 15, 16, or 17.

Continued improvement in reading, spelling and pronunciation using multi-sensory information. Structured, incremental sequence of instruction in the sound structure of English words (phonology), including phoneme awareness and phonetic analysis.

### **READ 22 Language Processing**

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

Improvement of reading, spelling, oral and written language comprehension and retention using multi-sensory information. Structured incremental sequence of instruction.

**READ 30 Foundations for Academic Reading I**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: Appropriate placement scores.

Development of fundamental ability to interact independently with printed material so as to comprehend written material applicable to the college environment. Instruction in main idea and supporting details, word recognition, phonetic analysis, and vocabulary development. Lab component.

**READ 31 Foundations for Academic Reading II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: Appropriate placement scores or the successful completion of Read 10/30.

Further development of fundamental ability to interact independently with printed material so as to comprehend written material applicable to the college environment. Instruction in main idea and supporting details, inference, and organizational patterns, vocabulary development and textbook strategies. Lab component.

**READ 38 Linguistic Comprehension II (Companion for READ 31)**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: Appropriate placement scores or the successful completion of Read 13/33.

Further development of fundamental comprehension of printed material applicable to the college environment through auditory and visual input. Instruction in main idea and supporting details, inference, and organizational patterns, vocabulary development, and textbook strategies. Lab component.

**READ 51 Spelling I**

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

Development of adult-level spelling skills by explanation and drill in the fundamentals of spelling. Basic patterns of vowel and consonant sounds, families of structurally similar words, and addition of affixes.

**READ 100 College Reading**

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

Prerequisite: Appropriate placement scores or the successful completion of Read 11/31.

Enhancement of ability to interact independently with printed material at the college level. College level vocabulary and reading comprehension, flexibility in reading rate, critical and analytical reading, text strategies.

**READ 101 Speed Reading**

1 credit. 1 hour. (Lecture 1 hour.)

Prerequisite: Appropriate placement scores or the successful completion of READ 100.

Purpose and methods of speed reading. Guided practice in surveying, scanning, skimming, and developing flexibility of reading rates.

**READ 103 Linguistic Comprehension III (Companion for READ 100)**

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

Prerequisite: Appropriate placement scores or the successful completion of Read 18/38.

Enhancement of ability to comprehend printed material at the college level. College-level vocabulary, critical and analytical reasoning, and text strategies through auditory and visual input.

**READ 108 College Success Skills**

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

Campus orientation, introduction to college environment resources, and campus socialization. Skills for achieving educational goals such as awareness of learning styles, textbook strategies, listening and note taking skills, memory skills, test preparation, and test taking strategies. Life skills such as interpersonal skills, goal setting, time management principles and tools, and stress management.

**READ 114 Advanced College Reading**

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

Prerequisite: Successful completion of READ 100.

Further increase in reading rate and vocabulary. Refinement of reading comprehension and concentration on critical reading.

**READ 124 Study Skills**

1 credit. 1 hour. (Lecture 1 hour.)

A survey of techniques for organizing the learning process; learning styles, goal setting, time management, textbook strategies, note taking skills, memory skills, test preparation, test-taking skills.

**READ 199 Instructional Techniques in Reading and Spelling I**

3 credits. 6 hours. (Lecture 6 hours.)

Trains trainers in multi-sensory concepts, approaches, and instructional methods for improving students' reading and spelling. Phonology of the English language, development of phonemic awareness and phonetic analysis abilities, and Socratic questioning techniques.

**READ 201 Instructional Techniques II**

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

Trains trainers in multi-sensory approaches and Socratic questioning techniques for improving students' reading, spelling, and language comprehension and retention. Basic techniques and standardized procedures of administering and scoring a battery of diagnostic instruments for assessing literacy development.

**◆ Sign Language Interpreting**

*MCC-Maple Woods*

**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. Requirement Designation: Human Diversity

## **Social Science**

*MCC-Blue River*

*MCC-Maple Woods*

*MCC-Longview*

*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.

Requirement Designation: Human Diversity

## **Sociology**

*MCC-Blue River*

*MCC-Maple Woods*

Jessica Halperin

*MCC-Longview*

Tammie May

*MCC-Penn Valley*

dorether Welch

### **SOCI 101 Sex Roles and Sexuality**

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

Sociological, psychological, and physiological perspectives of the contemporary human sexuality, development of sex roles, and on alternatives for personal, interrelational and societal adjustment.

### **SOCI 160 Sociology**

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

Introduction to sociological principles, practices, and concepts with emphasis on groups, culture, personality, society, communication, cities, and social institutions. Family, religion, government, social change, social control, and social progress.

### **SOCI 163 Social Problems**

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

Consider representative social problems with emphasis on delinquency, personality disintegration, alcoholism, and family and racial conflicts.

## **SOCI 164 Sociology of the African-American Family**

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

The Sociology of the African-American Family considers the historical and modern day African-American family in the United States. Emphasis is placed on the influence of the context of their initial immigration to the U.S. as well as on a variety of ongoing historical, social, political, and economic factors that ultimately influenced the African-American family's quality of life in such areas as, for example, social welfare, access to housing, education, legal rights, and employment. Requirement Designation: Human Diversity

### **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. Requirement Designation: Human Diversity

### **SOCI 220 Marriage and Family Living**

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

This course will introduce students to the study of family living in the United States. Attention will be given to the research methods and theoretical framework for understanding family from a sociological perspective. Consideration will also be given to the diversity of family in contemporary society.

## ◆ Speech and Drama

### ***MCC-Blue River***

Dee Mathison  
Anne Mahoney

### ***MCC-Maple Woods***

Ayanna Bridges  
Lynette Jachowicz  
Thomas Daniel Wright

### ***MCC-Longview***

William Cue  
Kathryne Kiser  
Joyce Kuhn

### ***MCC-Penn Valley***

Deborah Craig-Claar  
F. Kim Wilcox

### **SPDR 100 Fundamentals of Speech**

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

Prerequisite: ENGL 30 or satisfactory score on placement test.

Introduction to the theory and practice of public speaking with a focus on the skills related to effective speech preparation and delivery.

### **SPDR 101 Advanced Speech**

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

Prerequisite: SPDR 100.

Further practice in public speaking situations with special emphasis on organization, development of ideas, and mechanics of delivery.

### **SPDR 102 Fundamentals of Human Communication**

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

Prerequisite: ENGL 30 or a satisfactory score on the English placement test.

An introductory course in the process of human communication, covering the basic forms of public speaking as well as topics in interpersonal communication, which may include small group dynamics and interviewing. Practical application of speaking and listening skills.

### **SPDR 103 Interpersonal Communication**

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

Principles and skills of human communication relating to interpersonal communication settings: topics include theoretical elements of interpersonal communication, self-concept, perception, emotions, language, non-verbal communication, development and deterioration of human relations, identity and conflict management and analyses of communication climates.

### **SPDR 106 Theater Appreciation**

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

Theater Application is an overview of theater from the playgoer's perspective. The course will include a discussion of theatre as a composite art form, investigate theatre practices that relate to audiences, and examine the function of the playwright, actor, director, designer, and others in relationship to the creation of a theatrical production.

### **SPDR 110 Argumentation and Debate**

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

Theory, methods, structure, and execution of competitive debate. Participation in competitive debates with other area debate squads.

### **SPDR 112 Oral Interpretation of Literature**

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

Prerequisite: SPDR 100.

Analysis and presentation of literary works to increase appreciation of and skill in reading aloud in individual and group performances.

### **SPDR 114 Theater and the Western World**

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

The study of the history of theatre from ancient Greece to the present. The course will explore the evolution of the many types of theatre activities. This course will include the reading and discussion of plays using the elements of theatre based on Aristotle's "Poetics." Exploration of the creation of theatre as a profession. The connection of modern issues with the themes of play read. Different cultures will be explored through the study of theatre of arts.

### **SPDR 115 Acting in a Video and/or Digital Medium**

3 credits. 4.5 hours. (Lecture 1.5 hours. Laboratory 3 hours.)

This course is an introduction to performance in a video and/or digital medium. Basic performance techniques and test analysis will be explored, culminating in a final performance project.

### **SPDR 116 Children's Theater**

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

This course is an introduction to children's theatre and the various forms of children's theatre based not only on theatrical styles but age levels as well. This class is designed for the adult student actor with emphasis on performance before a live audience. Various imagination games will be employed to help student actors learn how to communicate to a child audience.

### **SPDR 120 Acting I**

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

An introduction to performance on stage. Basic performance techniques and text analysis will be explored, culminating in a final performance project.

### **SPDR 121 Elements of Play Production**

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

Prerequisite: SPDR 100.

Identify and apply the elements of play production necessary to produce a theatrical performance through reading, observation and practical experience.

### **SPDR 122 Theater Practicum**

1 credit. 1 hour. (Laboratory 1 hour.)

Theater Practicum is the practical examination of the performance and production of plays. Different areas will be examined with each course, such as acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

### **SPDR 123 Theater Practicum**

1 credit. 1 hour. (Laboratory 1 hour.)

Theater Practicum is the practical examination of the performance and production of plays. Different areas will be examined with each course, such as acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

### **SPDR 124 Theater Practicum**

1 credit. 1 hour. (Laboratory 1 hour.)

Theater Practicum is the practical examination of the performance and production of plays. Different areas will be examined with each course, such as acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

### **SPDR 125 Theater Practicum**

1 credit. 1 hour. (Laboratory 1 hour.)

Performance and the technical production of plays. A different area each course: acting, scene construction, costuming, makeup, properties, lighting, sound, and theater management.

### **SPDR 126 Summer Theater Workshop**

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

Acting or technical production in one, two, or three productions of a local summer theater.

### **SPDR 128 Introduction to Film**

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

Viewing and analysis of films. History and technical aspects of filmmaking. The visual language of this art form.

### **SPDR 130 Directed Studies in Speech/Theater/Debate**

1-3 credits. 1-3 hours. (Independent Study 1-3 hours.)

Prerequisite: SPDR 100.

An independent study in speech, theatre or debate. Students will work in a professional environment designed to give them professional work experience in a selected program area. Student may also choose to do an independent project under the supervision of a faculty member. Those students selecting work in a professional environment will also be under the supervision of the director or supervisor for the selected work environment.

### **SPDR 133 Intercultural Communications**

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

Students will examine, analyze and discuss how culture (race/ethnicity, gender, etc) and cultural variables (perception, values, beliefs, attitudes, etc) impact communication. Ways of achieving cultural communication competence and reducing conflict will be discussed. Requirement Designation: Human Diversity

### **SPDR 140 Acting II**

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

Prerequisite: SPDR 120.

A continuation and advanced study of the skills taught in SPDR 120 Acting, including various acting exercises and in-depth scene work. More in-depth analysis of the acting process through actual scene work performance from full length plays.

### **SPDR 198 Service-learning in Speech and Drama**

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

This is an experiential learning opportunity that links concepts and principles of speech and/or drama 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.

### **SPDR 228 African Film**

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

A general introduction to contemporary African culture and history through the medium of movies by African filmmakers. Themes include the legacies of colonialism, identity formation, globalization, and the changing sex roles in modern Africa. Requirement Designation: Human Diversity

## **Surgical Technology**

*MCC-Penn Valley*

Shirley Musick

Roger Massey

### **STNU 100 Introduction to Surgical Technology**

2 credits. 4 hours. (Lecture 2 hours.)

Prerequisites: BIOL 108, 150, and acceptance into the program.

Explores historical aspects of surgery, healthcare facilities and organizations, including the roles, duties, and responsibilities of surgical team members. Ethical, legal and moral issues in health care and surgery are addressed with an emphasis on effective communication skills and the impact of transcultural psychosocial outcomes for clients in the surgical setting. Also includes organization and physical layout of the operating room suite.

### **STNU 102 Introduction to Fundamentals I**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)

Prerequisite: BIOL 108, 150, and acceptance into the program.

Applied principles of medical and surgical asepsis in the operating room. Focused on preparation and maintenance to the sterile field, identification, care and handling of instruments, suture, supplies, and equipment. Emphasis is on basic skills of the Surgical Technologist in preparation for and during the operative procedure.

### **STNU 103 Introduction to Fundamentals II**

6 credits. 9 hours. (Lecture 3 hours. Laboratory 5 hours. Clinical 1 hour.)

Prerequisites: STNU 100, 102, and 106.

Duties of the surgical technologist that include maintaining a safe client environment and emphasizes the role of the surgical technologist in the first scrub role. Common surgical techniques and procedures are introduced.

### **STNU 105 Pharmacology for the Surgical Technologist**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisites: STNU 100, 102, and 106.

Metric, apothecary, household and linear systems of measurement. Anesthetic agents and stages of anesthesia are introduced. Emphasis on the use and preparation of drugs and solutions commonly used during operative procedures.

### **STNU 106 Microbiology for the Surgical Technologist**

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

Prerequisites: BIOL 108, BIOL 150, and acceptance to the program.

A study of microorganisms, including the structure, function and pathogenicity, with emphasis on the infectious process, sterilization, disinfection, environmental sanitation, treatment and the immune response

### **STNU 109 Surgical Procedures I**

8 credits. 16 hours. (Lecture 4 hours. Clinical 12 hours.)

Prerequisites: STNU 103.

Diagnosis, pathology and surgical sequence of general surgery, minimally invasive surgery, gynecological and genitourinary surgeries with discussion of post-operative care and complications.

### **STNU 110 Surgical Procedures II**

8 credits. 16 hours. (Lecture 4 hours. Clinical 12 hours.)

Prerequisite: STNU 109.

Pathology and surgical sequence of surgical specialties, including preoperative care and client outcomes for: Ophthalmology, otorhinolaryngology, Head and Neck surgery, Plastic/Reconstructive/Burn, Orthopedics.

### **STNU 111 Career Development for the Surgical Technologist**

2 credits. 2 hours. (Lecture 2 hours.)

Prerequisite: STNU 110.

This course emphasizes skills in developing employability. Included is an exploration of the advanced practice role as a first assistant in the hospital operating room setting as well as other areas of employment. The process of becoming certified and requirements for maintaining certification are explored.

### **STNU 114 Surgical Procedures III**

8 credits. 16 hours. (Lecture 4 hours. Clinical 12 hours.)

Prerequisite: STNU 110.

Pathology and surgical sequence to include post-operative care and complications in: Neuro-, Thoracic, Cardiac, Peripheral Vascular, Pediatric, Geriatric, and Trauma surgery.

# ◆ Veterinary Technology

*MCC-Maple Woods*  
Christopher Morrow

## **VETT 100 Introduction to Veterinary Technology**

2 credits. 2 hours. (Lecture 2 hours.)

Orientation to career opportunities available in veterinary technology. Professional ethics, public relations, and psychological adjustment of the student in terms of understanding the need for physical treatment, and care of animals. Client relations, vaccination programs, regulatory organizations, receptionists duties, breeds and breed characteristics, neutering, puppy care, diets and hospital management.

## **VETT 101 Principles of Animal Science I**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Principles of handling, housing, and management of animals. Basic dietary and sanitation requirements. Restraint and handling, administration of medications, bathing, skin scraping, and basic laboratory tests. Emphasis on animal physiology including the cell, muscle, nervous, respiratory, and cardiovascular systems. Introduction to anesthesia and general animal nursing.

## **VETT 108 Clinical Mathematics for Veterinary Technicians**

1 credit. 1 hour. (Lecture 1 hour.)

Prerequisite: Admissions into the Veterinary Technician Program. Vocabulary. Metric and apothecary conversions. Drug and dosage calculations. Preparation of solutions based on percents, ratios and drugs. Infusion flow rates and constant rate infusion.

## **VETT 110 Principles of Animal Science II**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: VETT 101.

Anesthesia and the physiology of the digestive, urinary, endocrine, and reproductive systems. Blood and specimen collection, basic bandaging, and introduction to surgical preparation and radiographic processing.

## **VETT 111 Sanitation and Animal Care**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Introduction to microorganisms, sanitation, disinfectants, sterilization, and zoonotic diseases and public health problems. Introduction to parasitology and vermin control, specimen preservation, instrument identification, cleaning, and sterilization, sanitary procedures in patient care.

## **VETT 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.

## **VETT 200 Veterinary Hospital Technology I**

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

Prerequisites: VETT 101 and 110.

Administration of anesthetics and surgical assisting, bandaging, casting, blood transfusions, surgical preparations and postoperative procedures, parenteral fluid administration, and intravenous hookups. Introduction to orthopedics, electrocardiography, bone marrow cytology, and pharmacology.

## **VETT 201 Clinical Pathology Techniques I**

4 credits. 7 hours. (Lecture 1 hour. Laboratory 6 hours.)

Introduction to laboratory procedures including preparation of blood smears, cell identification, fecal analysis, and parasitology, urinalysis and urine sediment valuation.

## **VETT 202 Veterinary Anatomy**

5 credits. 7 hours. (Lecture 3 hours. Laboratory 4 hours.)

Prerequisite: BIOL 101 or 106 and VETT 101 and 110.

Basic principles of anatomy using a systemic approach. Physiology as it relates to anatomy and applicable pathology involving the animal body systems. Comparison of the animal species using the cat for dissection.

## **VETT 203 Laboratory Animal Technology**

2 credits. 3 hours. (Lecture 1 hour. Laboratory 2 hours.)

Prerequisite: VETT 101, 110, and 201.

Restraint and handling of laboratory animals and birds. Blood collection, restraint, identification, medicating, anesthesia, and specimen collection. Technical skills for laboratory animal research.

## **VETT 209 Equine Medicine and Management**

3 credits. 4 hours. (Lecture 2 hours. Laboratory 2 hours.)

Prerequisite: VETT 212.

Breeds and types of horses and their use. A study of conformation as it relates to soundness, horse psychology, fitting, conditioning, first aid and restraint, parasites and their control, farm management for safety, nutrition, mare care, breeding, foaling, hoof soundness, equine diseases and their prevention.

## **VETT 210 Veterinary Hospital Technology II**

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

Prerequisite: VETT 200.

Introduction of anesthetics, surgical assisting, bandaging, casting, blood transfusions, surgical preparations, and post-operative care. Administration of parenteral fluid and emergency treatments. Introduction to ophthalmology and dermatology.

## **VETT 211 Clinical Pathology Techniques II**

5 credits. 8 hours. (Lecture 2 hours. Laboratory 6 hours.)

Prerequisite: VETT 201.

Theory and performance in hematologic, urinalysis, clinical chemistry, and parasitology. Introduction to simple immunologic tests, blood coagulation tests, and bone marrow evaluation. Emphasis on hematology and hemoparasites.

## **VETT 212 Large Animal Technology**

4 credits. 6 hours. (Lecture 2 hours. Laboratory 4 hours.)

Prerequisite: VETT 101 and 110.

Techniques necessary to assist the veterinarian in a large animal or mixed practice and in research facilities. Bovine, porcine, 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.

## Officers of the District

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- Stephanie Zerkel-Humbert, English  
MCC-Maple Woods  
B.S.E., University of Arkansas At Little Rock  
M.A., University of Arkansas At Little Rock

## Emeriti\*

Although several retired faculty members and administrators served in more than one capacity during their years with the institution, they are listed here according to the function and the unit to which they were assigned at the time of their retirement.

- Joseph H. Anway (1973-1998), Business  
MCC-Longview  
A.A., Graceland College  
B.S., Central Missouri State University  
M.A., Central Missouri State University  
Spec. In Bus. Adm., Central Missouri State University
- Bruce Appel (1989-2006), Outreach Counselor  
MCC-Longview  
M.A., University of Missouri–Kansas City  
Ed.S., University of Missouri–Kansas City
- Rita K. Austin (1969-1986), Foreign Language  
MCC-Longview  
A.B., New York State College For Teachers  
A.M., University of Kansas
- Harold E. Baggerly (1964-1995), Engineering  
MCC-Longview  
B.S., University of Kansas  
M.S., University of Kansas
- Melanie A. Bailey (1973-2005), Director, Educational Opportunity Center  
Administrative Center  
B.S., University of Kansas–Lawrence  
M.Ed., Howard University–Washington, D.C.  
Ed.S., University of Missouri–Kansas City
- John W. Banks (1969-1986), Office Systems  
MCC-Maple Woods  
B.S., Central Missouri State University  
M.A., University of Northern Iowa
- Nancy J. Banks (1990-2000), Nursing  
MCC-Penn Valley  
B.S., In Ed., Southwest Missouri State University  
B.S.N., Avila College  
M.S.N., Kansas University
- Edith Bartholomew (1957-1985), English  
MCC-Penn Valley  
A.B., Wheaton College  
A.M., Northwestern University
- Edward Beasley (1968-1993), History  
MCC-Penn Valley  
B.A., Lincoln University  
M.A., Emporia State University  
Ph.D., University of Missouri–Kansas City
- Pamela Beers (1994-2004), Practical Nursing  
MCC-Penn Valley–Pioneer Campus  
Diploma, Providence Hospital School of Nursing  
B.S., St. Mary College
- James Q. Beisel (1973-2004), Business  
MCC-Longview  
B.S., Kansas State University, Agriculture  
B.S., Kansas State University, Business Administration  
M.B.A., University of Kansas
- Michael E. Benson (1972-1997), Criminal Justice  
MCC-Penn Valley  
A.A., Kansas City, Kansas Community College  
B.S., Central Missouri State University  
M.A., University of Missouri – Kansas City  
M.S.E., Central Missouri State University

- Milton Benz (1974-1990), Business  
MCC-Penn Valley  
B.S.C., University of North Dakota At Grand Forks  
M.B.A., Central Missouri State University
- Lewis E. Berg (1957-1986), Mathematics  
MCC-Maple Woods  
A.B., De Pauw University  
M.A., Syracuse University
- Patricia A. Berge Langsdorf (1971-2004), Office Systems  
MCC-Maple Woods  
A.B., University of Kentucky  
M.A., University of Missouri-Kansas City
- Dale R. Biagi (1965-1998), Geology & Geography  
MCC-Longview  
A.A., Kaskaskia College  
B.S., Illinois State University  
M.S., Illinois State University
- Jack Bitzenburg (1986-2004), President  
MCC-Business & Technology  
B.S., Central Missouri State University  
M.S., Central Missouri State University
- Sarah F. Bivins (1972-2001), Human Sciences  
MCC-Penn Valley  
B.S., Tuskegee Institute  
M.S., University of Wisconsin
- Aldine Blankenship (1951-1979), Office Systems  
MCC-Penn Valley  
A.A., Northeast Junior College  
A.B., University of Northern Colorado  
M.A., University of Northern Colorado
- Sheryl L. Blasco (1966-1994), Data Processing  
MCC-Penn Valley  
B.S., Emporia State University  
M.P.A., California State University
- Ann E. Boehm (1983-1989), Psychology  
MCC-Penn Valley  
B.A., College of St. Catherine  
M.Ed., St. Louis University  
M.A., University of Missouri-Kansas City  
Ph.D., University of Missouri-Kansas City
- Eleanor Smith Bowie (1971-2002), Director of Title II Project  
MCC-Penn Valley  
B.A., St. Augustine's College  
M.A., North Carolina Central University
- Stephen Brainard (1970-1998), President  
MCC-Maple Woods  
B.S., State University of New York  
M.S., Syracuse University  
Ph.D., University of Missouri-Columbia
- Loree D. Breed (1970-1986), English  
MCC-Longview  
B.A., Avila College  
M.A., University of Missouri-Kansas City  
M.Ph., University of Kansas
- Ronald L. Brink (1969-1998), Speech and Theater  
MCC-Maple Woods  
*Chair, Communications*  
B.A., Missouri Valley College  
M.A., University of Denver  
Ph.D., University of Missouri-Kansas City
- Beverlye J. Brown (1988-2008), Associate Vice Chancellor  
and Assistant to the Chancellor  
Administrative Center  
B.S., Birmingham-Southern College  
M.A., University of Alabama  
Ed. D., University of Missouri-Columbia
- Joan Nance Brown (1964-1994), Mathematics  
MCC-Longview  
B.S., Harding College  
M.A., University of Kansas
- Suzanne Brown (1984-1994), Health Information Technology  
MCC-Penn Valley  
B.S., Texas Woman's University  
M.S., Texas Woman's University
- Robert S. Buchanan (1971-1993), English  
MCC-Maple Woods  
A.B., University of Missouri-Columbia  
M.A., University of Missouri-Columbia
- George A. Bunch (1956-1989), Social Science  
MCC-Penn Valley  
B.S., Northwest Missouri State University  
M.S., University of Kansas
- Walter M. Burks (1970-1981), Social Science  
MCC-Maple Woods  
A.B., Rockhurst College  
A.M., University of Missouri-Kansas City  
Ph.D., University of Missouri-Kansas City
- Wilma J. Burnett (1973-1997), Office Systems  
MCC-Penn Valley  
B.S., Southwest Missouri State University  
M.S., Central Missouri State University
- Aaron C. Butler (1974-1982), Business  
MCC-Maple Woods  
A.B., Pittsburg State University  
M.B.A., Harvard University  
Ed.D., Harvard University
- Carol Y. Byrd (1996-2001), Associate Dean of Nursing  
MCC-Penn Valley  
Nursing Diploma, St. Margaret Hospital  
B.S.N., Avila College  
M.S.N., University of Missouri-Kansas City  
Ph.D., University of Missouri-Kansas City
- Jeremiah Cameron (1963-1989), English  
MCC-Penn Valley  
A.B., University of Indiana  
A.M., University of Chicago  
Ph.D., Michigan State University
- Patrick R. Capranica (1965-1995), Social Science  
MCC-Longview  
B.S., Pittsburg State University  
M.S., Pittsburg State University
- Kenneth M. Carter (1975-1992), Automotive Technology,  
Heavy Equipment  
MCC-Longview  
A.A.S., MCC-Longview
- Clydia A. Case (1971-2002), Counselor  
MCC-Blue River  
B.A., Eastern Kentucky University  
M.Ed., Xavier University  
Ph.D., University of Missouri-Kansas City
- Vernon L. Case (1967-1993), Data Processing  
MCC-Penn Valley  
B.A., William Jewell College  
M.B.A., University of Missouri-Kansas City
- Gregory A. Christy (1981-1992), Drafting  
MCC-Longview  
B.S., Central Missouri State University  
M.S., Central Missouri State University
- Lynda W. Clark (1989-2005), Business  
MCC-Maple Woods  
B.S., Central State University, Oklahoma  
M.Ed., Central State University, Oklahoma  
Ph.D., University of Oklahoma
- Susan W. Clark (1985-2004), Reading  
MCC-Longview  
B.S.Ed., University of Delaware  
M.Ed., University of Delaware  
Ph. D., University of Missouri-Kansas City
- John P. Coleman (1969-1988), Art  
MCC-Longview  
B.F.A., Kansas City Art Institute  
M.F.A., Kansas City Art Institute
- Frank Dean Cone (1993-2003), Education  
MCC-Maple Woods  
B.S.Ed., Missouri Valley College  
M.Ed.Spec., Central Missouri State University  
Ed.D., University of Missouri-Columbia
- Omar G. Conrad (1965-1995), Geology  
MCC-Maple Woods  
B.S., University of Kansas  
M.S., University of Kansas  
M.A., Dallas Theological Seminary
- Harvey J. Cooke (1968-1995), Business  
MCC-Penn Valley  
*Chair, Business*  
B.S., Emporia State University  
M.S., Emporia State University
- William Patrick Coyne (1970-2000), Automotive  
Technology  
MCC-Longview  
B.S., Pittsburg State University  
M.S., Pittsburg State University
- Linda F. Crabtree (1983-2005), District Director,  
Professional Development and Instructional Support  
Administrative Center  
B.S., University of Missouri-Kansas City  
M.S., Central Missouri State University  
Ed.D., University of Missouri-Columbia
- Betty L. Craft (1975-2000), Office Systems  
MCC-Longview  
B.B.A., Washburn University of Topeka
- William David Crim (1964-1991), Mathematics  
MCC-Penn Valley  
B.S.E.E., University of Missouri-Columbia  
M.S., New Mexico Highlands University  
M.S.E.E., University Missouri-Columbia
- Bruce D. Culley (1971-2008), Business  
MCC-Maple Woods  
B.S., University of Kansas  
M.S., University of Kansas
- Darlene Cummings-Hill (1972-1995), Nursing  
MCC-Penn Valley  
R.N., General Hospital and Medical Center  
B.S.N., University of Kansas  
M.A., University of Missouri-Kansas City  
M.S.N., University of Missouri-Kansas City
- Desmond U. Daniels (1969-1998), Music, Physical  
Fitness  
MCC-Maple Woods  
B.A., Huston Tillotson College  
M.Mus.Ed., University of Kansas  
Ed.D., Nova University
- Orville L. Darby (1956-1982), Economics  
MCC-Longview  
B.A., Wichita State University  
M.A., University of Colorado
- Donald H. Day (1974-1986), Electronics  
MCC-Maple Woods  
B.S.E.E., Finlay Engineering College
- Thomas E. Dewey (1969-2000), Counselor  
MCC-Penn Valley  
B.S., Pittsburg State University  
M.S., Pittsburg State University
- Richard Diklich (1972-2002), Automotive Technology  
MCC-Longview  
B.S., Pittsburg State University
- M. Albert Dimmit Sr. (1990-2000), History  
MCC-Penn Valley  
B.S., Kansas State University  
M.A., Kansas University  
Ph.D., Kansas University
- Marilyn Donatello (1982-2006), Dean of Student Services  
MCC-Maple Woods  
B.S., University of Tennessee-Chattanooga  
M.A., University of South Florida
- Donald S. Doucette (1994-2008), Vice Chancellor,  
Education and Technology  
Administrative Center  
B.A., Cornell University  
M.A., Arizona State University  
Ph.D., Arizona State University
- Lawrence Downs (1969-1986), Architecture  
MCC-Longview  
B.Arch., Washington University  
M.A., University of Missouri-Kansas City
- Perry A. Doyle Jr. (1966-1998), Physics  
MCC-Maple Woods  
A.B., William Jewell College  
M.S., University of Missouri-Rolla

- Richard W. Drumm (1983-1999), District Director Human Services and Risk Management  
Administrative Center  
B.A., Long Island University  
M.A., New York University
- 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
- Sylvia L. Edwards (1987-2006), English  
MCC-Longview  
B.A., Hastings College  
M.A., Fort Hays State University
- Mattie J. Eley (1973-2002), Practical Nursing  
MCC-Penn Valley/Pioneer  
R.N., General Hospital and Medical Center  
B.S.N., University of Kansas  
M.Ed., University of Missouri–Columbia  
M.S.N., Bishop Clarkson College of Nursing and Health Sciences
- Price Ellis (1969-1995), History  
MCC-Penn Valley  
B.S., Central Missouri State University  
M.S., Central Missouri State University
- John K. Enenbach (1969-1995), Criminal Justice  
MCC-Penn Valley  
B.A., Wichita State University  
J.D., University of Missouri–Kansas City
- William J. Engel Jr. (1969-1995), Business  
MCC-Longview  
B.S., Rockhurst College  
M.B.A., University of Missouri–Kansas City  
Ed.D., Nova University
- Mary Lou Eubank (1980-2000), Computer Science/  
Information Systems  
MCC-Longview  
A.A., MCC-Longview  
B.S.B.A., Central Missouri State University
- James D. Everett (1995-2005), District Director, Technical Education  
MCC-Business & Technology  
A.A.S., MCC-Maple Woods  
B.A., MidAmerica Nazarene  
M.Ed., MidAmerica Nazarene  
Ed.D., University of Missouri–Columbia
- William Fairbanks (1987-2009), Automotive  
*Chair, Technology and Business*  
MCC-Longview  
B.S.Ed., Pittsburg State University
- Luis M. Flores, Jr. (1973-2001), Psychology  
MCC-Longview  
A.B., University of The Philippines  
M.S., Kansas State University
- Edwin Matthew Flynn (1961-1995), Speech and Theater  
MCC-Penn Valley  
A.B., University of Missouri–Columbia  
A.M., University of Missouri–Columbia
- Judith Flynn, (1974-2006), Reading  
MCC-Penn Valley  
A.A., Metropolitan Community College  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City
- Ellen P. Forrest (1971-2000), Associate Vice Chancellor and Assistant to the Chancellor  
Administrative Center  
B.A., Marymount Manhattan College  
M.A., Fordham University
- William L. Foster (1987-1999), Associate Director, Occupational and Continuing Education  
MCC-Administrative Center  
B.S.E., University of Arkansas  
M.Ed., University of Arkansas
- Thomas R. Garrett (1966-1989), Counselor  
MCC-Longview  
A.S., Flat River Junior College  
B.S., University of Missouri–Columbia  
M.Ed., University of Missouri–Columbia
- John M. Gazda (1957-1993), English  
MCC-Penn Valley  
B.A., University of Kansas  
M.A., University of Kansas  
Ph.D., University of Kansas
- W. Andrew Geoghegan Jr. (1973-2003), Psychology  
MCC-Longview  
B.A., College of William and Mary  
M.A., University of Missouri–Kansas City
- Gary F. Gibson (1968-1992), Business  
MCC-Maple Woods  
B.S.B.A., University of Missouri–Columbia  
M.Ed., University of Missouri–Columbia
- Wayne E. Giles (1983-2005), Chancellor  
Administrative Center  
B.S., Southern Illinois University  
M.S., Southern Illinois University  
Ph.D., St. Louis University
- Kenneth W. Gillespie (1971-1998), District Director, Physical Plant  
Administrative Center  
B.S., Central Missouri State University  
M.S., Central Missouri State University
- Louis E. Gillham (1965-1993), Counselor  
MCC-Maple Woods  
B.S., Southwest Missouri State University  
M.S., Central Missouri State University
- Carole R. Gilmore (1990-2008), Foreign Language  
MCC-Penn Valley  
B.A., University of Missouri–Columbia  
M.A., University of Missouri–Columbia
- Florence W. Goldman (1976-1986), Reading  
MCC-Longview  
B.S.Ed., Temple University  
M.Ed., University of Illinois  
Ph.D., University of Missouri–Kansas City
- Marvin Goldstein (1962-1999), Mathematics  
MCC-Longview  
B.S., University of Oklahoma  
M.A., University of Oklahoma
- Charles M. Gosselin (1970-1998), Associate Dean of Instructional Technology  
MCC-Penn Valley  
B.S., Rockhurst College  
M.S., University of Missouri–Kansas City
- Ronald E. Greathouse (1969-2000), Vice Chancellor, Administrative Services  
Administrative Center  
B.S., Pittsburg State University  
M.S., Pittsburg State University
- Cheryl S. Grosser (1989-2005), English  
MCC-Blue River  
*Chair, Humanities*  
B.A., University of Illinois  
M.A., University of Illinois  
M.Phil., University of Kansas
- Radhey Gupta (1974-2003), Mathematics  
MCC-Longview  
B.Sc., Agra University  
M.Sc., Agra University  
M.S., Ohio State University  
Ph.D., Ohio State University
- Martha Haehl (1987-2008), Mathematics  
MCC-Penn Valley  
B.S., Rockhurst College  
M.A., University of Kansas
- Richard L. Hair (1973-2000), Sociology  
MCC-Longview  
B.S., Rockhurst College  
M.A., University of Notre Dame  
M.Ed., Xavier University
- Dorothy Hamilton (1973-1986), Nursing  
MCC-Penn Valley  
B.A., Point Loma Nazarene College  
M.A., Point Loma Nazarene College
- Cecil N. Hammonds (1959-1996), District Director, Management Systems  
Administrative Center  
B.S., University of Missouri–Kansas City  
M.S., University of Kansas  
Ph.D., Louisiana State University
- Barbara M. Hankins (1971-1997), Art  
MCC-Longview  
B.F.A., University of Kansas  
M.F.A., University of Kansas  
Ed.D., Nova University
- Paul Harding, (1989-2005), Heating/Air Conditioning  
MCC-Business & Technology  
A.A.S., MCC-Business and Technology
- Lillian Harrington (1972-1988), Speech and English  
MCC-Penn Valley  
A.B., Benedictine College  
M.A., Catholic University of America
- Kenneth G. Hartman (1993-2005), Political Science  
MCC-Longview  
B.A., Wake Forest University  
M.A., University of Texas At Austin
- Elbert C. Heath (1972-1999), Physics  
MCC-Penn Valley  
A.A., Graceland College  
B.S., Central Missouri State University  
M.S., University of Missouri–Rolla
- Charles F. Henry (1984-1994), District Director, High Technology Training Resource Center  
Administrative Center  
B.S., Northeast Missouri State University  
M.A., Central Missouri State University
- Joan Henson (1996-2008), Mathematics  
MCC-Penn Valley  
B.A., Molloy Catholic College For Women  
M.S., Adelphi University
- John F. Herbst (1966-1988), Dean of Instructional Support Services  
MCC-Penn Valley  
A.B., Benedictine College  
M.L.S., Case Western Reserve University
- David E. Herron (1965-1992), Mathematics  
MCC-Longview  
B.S., Central Missouri State University  
M.A., Central Missouri State University
- Donald J. Herzog (1971-2000), English  
MCC-Longview  
B.S., Wisconsin State University At Lacrosse  
M.A., Kansas State University  
Ed.D., University of Kansas
- Karen Herzog (1971-1999), Dean of Instruction  
MCC-Penn Valley  
B.S.L., Ozark Christian College  
M.A., Kansas State University  
Ph.D., University of Kansas
- Juanan Hill (1992-2008), Applied Language  
MCC-Penn Valley  
M.A., University of Kansas
- Julia Hill (1975-1992), Recruitment Coordinator  
MCC-Penn Valley  
B.S., Lincoln University  
M.S., University of Southern California  
Ed.D., Nova University

- Thomas J. Hillenbrand (1988-2002), English  
MCC-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
- 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
- Robert W. Jensen (1982-2004), District Director, Financial  
Services  
Administrative Center  
B.S., University of Kansas  
M.S., University of Missouri-Kansas City
- Mary Ellen Jenison (1989-2006), Director, Able Program  
MCC-Longview  
A.A., MCC-Longview  
B.A., Avila College  
M.A., University of Missouri-Kansas City
- Ashley L. Johnson (1975-1989), Assistant to the President  
MCC-Maple Woods  
B.A., Valparaiso University  
M.S., Indiana University
- Elbert B. Johnson (1982-1993), Economics  
MCC-Longview  
B.A., University of Missouri-Kansas City  
M.A., University of Missouri-Kansas City  
Ph.D., University of Iowa
- Jane B. Jones (1966-1984), Biology  
MCC-Penn Valley  
A.A., Junior College of Kansas City  
B.A., University of Missouri-Kansas City  
M.A., University of Missouri-Kansas City
- John A. Kaczynski (1966-2001), Dean of Instruction  
MCC-Longview  
A.S., Flint Community College  
A.B., University of Michigan-Flint  
M.S., University of Arizona  
Ph.D., University of Missouri-Kansas City
- James E. Karasiewicz (1979-2005), English  
MCC-Maple Woods  
*Chair, Communications Division*  
B.A., State University College of New York, Buffalo  
M.A., State University College of New York, Brockport  
Ph.D., Kansas State University
- Michael K. Keele (1973-2003), District Director, Marketing  
Services  
Administrative Center  
B.S., Central Missouri State University  
M.A., Webster University
- Leon H. Keens (1964-1995), English, History  
MCC-Maple Woods  
B.A., University of Kansas  
M.A., University of Kansas  
M.A., University of Missouri-Kansas City
- Kennard D. Kelly (1969-1989), Criminal Justice  
MCC-Maple Woods  
B.A., Kansas Wesleyan University  
J.D., University of Nebraska
- Margaret S. Kelly (1969-1996), Computer Science/  
Information Systems  
MCC-Longview  
B.S., Kansas State University  
M.B.A., University of Missouri-Kansas City
- Patricia A. Kemner (1970-1990), Biology  
MCC-Longview  
B.A., University of Missouri-Columbia  
M.S., University of Missouri-Kansas City
- Maureen Kennedy (1981-2010), Counselor  
MCC-Penn Valley  
B.A., Fontbonne College, St. Louis, Mo  
M.Ed., University of Missouri-Columbia
- Richard Kimberly (1990-2003), Business  
MCC-Blue River  
B.S., University of Wisconsin-Madison  
M.B.A., University of Wisconsin-Oshkosh  
Ed.S., University of Wisconsin-Stout  
Ph.D., Texas A & M University
- Harry A. King (1973-1980), Social Science  
MCC-Maple Woods  
A.A., Junior College of Kansas City  
B.A., University of Missouri-Kansas City  
M.A., University of Missouri-Kansas City
- Karen Kistner (1970-1997), District Director,  
Occupational Systems  
Administrative Center  
B.S., University of Kansas  
M.S., Emporia State University  
Ed.D., Nova University
- Harold B. Koch (1966-2000), Psychology  
MCC-Penn Valley  
*Chair, Social Science*  
B.A., University of Missouri-Kansas City  
M.A., University of Missouri-Kansas City  
Ph.D., University of Missouri-Kansas City
- Carl H. Koenig (1980-2002), Computer Science/  
Information Systems  
MCC-Maple Woods  
B.S.Ed., Wayne State University  
M.S.Ed., University of Kansas  
Ph.D., University of Kansas
- Irene G. Korotev (1973-1999), Librarian  
MCC-Maple Woods  
B.A., North Texas State University  
M.A., University of Missouri-Columbia
- Herbert F. Kramer (1956-1991), Mathematics  
MCC-Longview  
B.S., University of Missouri-Columbia  
M.S., University of Missouri-Columbia
- Joann Krekel (1973-1994), Media Specialist  
MCC-Penn Valley  
A.A., MCC-Penn Valley  
B.A., Baker University  
M.S., Central Missouri State University
- Virginia Kruse (1959-1979), Foreign Language  
MCC-Penn Valley  
A.B., University of Kansas  
A.M., University of Kansas
- Marilyn S. Lander (1973-1993), Nursing  
MCC-Penn Valley  
R.N., Tuskegee 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
- Cheryl Smith Lewkowsky (1973-2004), Mathematics  
MCC-Maple Woods  
A.B., William Jewell College  
M.S., Kansas State University
- Orlyn O. Lockard (1966-1989), Drafting and Design,  
Engineering Technology  
MCC-Longview  
B.S.Ed., Central Missouri State University  
M.A., George Peabody College For Teachers  
Ed.S., Central Missouri State University
- A. K. Longfellow (1955-1977), Dean of Students  
MCC-Penn Valley  
B.S., Central Missouri State University  
M.S., University of Kansas
- Wanda F. Lord (1962-1985), Office Systems  
MCC-Penn Valley  
B.S., University of Missouri-Columbia  
M.A., University of Missouri-Kansas City
- Patricia A. Lorenz (1971-2000), Biology  
MCC-Penn Valley  
*Chair, Life Sciences*  
A.A.S., MCC-Penn Valley  
B.S., St. Louis University  
Ph.D., University of Kansas
- L. Doone Loughery (1972-1991), Office Systems  
and Careers  
MCC-Maple Woods  
B.S.Ed., Northeast Missouri State University  
M.A.Bus.Ed., Northeast Missouri State University
- Forrest G. Lowe (1959-1993), Physics  
MCC-Longview  
B.S., Northwest Missouri State University  
M.S., Texas Christian University  
Ed.D., Nova University
- Robert Lowe (1971-1999), District Director,  
Computer Services  
Administrative Center  
B.S., Pittsburg State University

- Opzerine D. Madison (1981-2003), Nursing  
MCC-Penn Valley  
A.A., MCC-Penn Valley  
R.N., General Hospital and Medical Center  
B.S.N., Avila College  
M.A., Central Michigan University
- Carole J. Maltby (1975-2005), Veterinary Technology  
MCC-Maple Woods  
B.S., University of Missouri–Kansas City  
D.V.M., University of Missouri–Columbia
- William J. Mann (1977-1993), Chancellor  
Administrative Center  
B.S., Northern Illinois University  
M.S., Northern Illinois University  
Ed.D., Northern Illinois University
- Carder H. Manning Jr. (1969-1995), Music  
MCC-Penn Valley  
A.A., Junior College of Kansas City  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City
- Daniel L. Mark, (1990-2008)Biology  
MCC-Maple Woods  
B.A., Drake University  
M.A., Drake University  
Ph.D., University of Illinois
- José Martinez (1989-2000), Aviation Maintenance Technology  
MCC-Maple Woods  
B.S., Central Missouri State University
- Stephanie J. Masquelier (1976-2004), Business  
MCC-Longview  
B.S., Virginia Commonwealth University  
M.Ed., Virginia Commonwealth University
- Pamela G. Matthiesen (1986-2009), Computer Science/  
Information Systems  
MCC-Maple Woods  
B.S., Central Missouri State University
- Louise S. McCants (1983-1988), District Director of  
Instructional Services  
Administrative Center  
B.S., Oklahoma State University  
M.S., Oklahoma State University  
Ph.D., Ohio State University
- Johnnie W. McClinton (1971-2001), Dean of Campus Student  
Services  
MCC-Blue River  
B.A., Baylor University  
M.S.Ed., Baylor University  
Ph.D., University of Missouri–Columbia
- Thomas L. McClure (1969-1999), Psychology  
MCC-Maple Woods  
B.S., Purdue University  
M.A., Ball State University
- Michele McGeeney (1994-2008), Reading  
MCC-Maple Woods  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City
- Flin C. McGhee (1966-2000), Chemistry  
MCC-Penn Valley  
*Chair, Physical Science*  
B.S., University of Houston  
M.S., Texas A & M University  
Ph.D., University of Kansas
- Fern Meek (1969-1992), Librarian  
MCC-Longview  
B.S., University of Kansas  
M.L.S., Emporia State University
- Barbara Mehnert (1971-1997), Counselor  
MCC-Longview  
B.A., Vassar College  
M.Ed., University of Pittsburgh  
Ed.D., University of Kansas
- John Michael (1987-2002), District Director, Enrollment  
Services  
Administrative Center  
B.S., Central Missouri State University  
M.S.Ed., Central Missouri State University
- Linda Spotts Michael (1981-2005), Business  
MCC-Maple Woods  
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
- Lauren F. Miller (1972-1997), Philosophy  
MCC-Longview  
*Chair, Social Science*  
B.A., Antioch College  
M.A., University of Pittsburg
- Marjorie A. Miller (1971-2004), Office Systems  
MCC-Longview  
B. S., Pittsburg State University  
M.S., Central Michigan University
- Michael E. Miller (1964-1997), English  
MCC-Longview  
*Chair, Humanities*  
A.A., Junior College of Kansas City  
B.A., University of Kansas  
M.A., University of Kansas  
Ph.D., University of Kansas
- George E. Montag (1976-1985), English  
MCC-Longview  
A.B., University of Cincinnati  
M.Ed., Xavier University  
M.A., Xavier University
- Gerald N. Moore (1971-1997), Electronics  
MCC-Maple Woods  
Diploma, Devry Institute of Technology  
A.A., Metropolitan Community College  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City  
Ph.D., University of Missouri–Kansas City
- Robert L. Morris (1969-2006), Art  
MCC-Penn Valley  
B.F.A.E., Kansas City Art Institute  
M.F.A., University of Kansas
- Thomas F. Morris (1965-1996), English  
MCC-Longview  
B.A., University of Kansas  
M.S., University of Kansas
- Elna B. Morrow (1981-1994), Counselor  
MCC-Longview  
B.A., Alabama State University  
M.S., University of Nebraska–Omaha
- Verle D. Muhrer (1971-2004), Philosophy  
MCC-Penn Valley  
B.A., University of Missouri–Columbia  
M.A., University of Missouri–Columbia
- Stewart E. Nelson (1963-1999), History  
MCC-Maple Woods  
A.B., Park College  
M.A., University of Kansas
- Hilda Ogilvie (1994-2003), Nursing  
MCC-Penn Valley  
B.S.N., University of Kansas  
M.S.N., University of Missouri–Kansas City
- Leon P. Ogilvie (1970-2000), Social Science  
MCC-Maple Woods  
*Chair, Social Science*  
A.A., Junior College of Kansas City  
B.S., Central Missouri State University  
M.A., Louisiana State University  
Ph.D., University of Missouri–Columbia
- Jerome L. Ommen (1971-1993), Counselor  
MCC-Longview  
B.S., Concordia Teachers College  
M.S., Central Missouri State University  
Ph.D., University of Missouri–Kansas City
- Pat Kipp O'Neil (1987-2000), Counselor  
MCC-Blue River  
B.S., Molloy College  
M.A., Hofstra University  
M.A., University of Missouri–Kansas City
- Rebecca M. Owens (1974-2002), Fashion and Human  
Sciences  
MCC-Penn Valley  
*Chair Business and Human Sciences*  
B.S., Northwest Missouri State University  
M.Ed., University of Missouri–Columbia
- Clifford Naysmith (1964-2001), Sociology  
MCC-Maple Woods  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City
- Michael L. Palmer (1982-2006), Business  
MCC-Maple Woods  
B.S., Kansas State University  
M.B.A., Rockhurst College
- Carolyn A. Parks (1994-2008), Surgical Technology  
MCC-Penn Valley  
A.D.N., Illinois Central College  
B.A.N., University of Illinois–Springfield
- Thomas S. Pennington (1990-2005), Computer  
SciencInformation 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  
SciencInformation 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

- John Ream (1987-2009), Assoc. Dean, Student Development  
MCC-Business & Technology  
B.S., Southern Nazarene University  
M.Div., Nazarene Theological Seminary  
M.A., University of Missouri–Kansas City  
Ed.S., University of Missouri–Kansas City
- Harold Reese (1939-1974), English  
MCC-Longview  
B.A., Dakota Wesleyan University  
M.A., Northwestern University
- Barbara Reinwald (1969-2008), Senior Project Associate, Metrosoft  
Administrative Center  
A.A., MCC-Maple Woods  
B.S., Park College  
M.P.A., University of Missouri–Kansas City
- 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
- Juanita L. Ross (1975-2005), Office Systems  
MCC-Maple Woods  
B.S., Bishop College  
M.S., Central Missouri State University
- Ronald G. Rowland (1965-1997), Chemistry  
MCC-Maple Woods  
B.S., Kansas State University  
M.S., Kansas State University
- David E. Sachen (1969-1997), German, Mathematics  
MCC-Maple Woods  
B.S., Rockhurst College  
M.A., University of Kansas
- James H. Sampson (1963-1983), Director of Personnel  
Administrative Center  
A.B., William Jewell College  
A.M., University of Wyoming
- Albert W. Sandring (1990-1995), Drafting  
MCC-Longview  
B.S.M.E., Kansas State University  
M.B.A., University of Missouri–Columbia
- Margaret P. Sandring (1985-1995), Office Systems  
MCC-Longview  
B.S., Central Methodist College  
M.S., Central Missouri State University
- Eugene Schieber (1990-2003), Dean of Technical Education  
MCC-Maple Woods/MCC-Business & Technology  
B.S., Northwest Missouri State  
M.A., Northwest Missouri State  
Ed.Spec., University of Missouri–Kansas City
- Beverly J. Schwaab (1980-1989), Librarian  
MCC-Longview  
A.A., Junior College of Kansas City  
B.A., Baker University  
M.S., Central Missouri State University
- Jean Bartz Scurlock (1957-1986), Chemistry  
MCC-Longview  
A.B., University of Kansas  
A.M., Smith College
- Corrine E. Shaw (1994-2003), Practical Nursing  
MCC-Penn Valley  
A.D.N., Kansas City Kansas Community College  
B.S.N., MidAmerica Nazarene College
- M. Catherine Sheely (1990-2007), English  
MCC-Penn Valley  
B.A., Aquinas College, Michigan  
M.L.A., Baker University
- 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  
Administrative Center  
A.A., North Central Missouri College  
B.S., University of Missouri–Columbia
- James A. Shimel (1980-2006), Manufacturing Technology  
MCC-Business & Technology  
B.S., Finlay Engineering College
- Thomas H. Sicking (1968-1994), English, Journalism  
MCC-Penn Valley  
B.A., University of Missouri–Kansas City  
M.A., University of Missouri–Kansas City  
Ed.D., Nova University
- Dorothy L. Simmons (1981-1991), Nursing  
MCC-Penn Valley  
R.N., General Hospital and Medical Center  
B.S.N., Avila College
- Sue M. Sinton (1973-1992), Nursing  
MCC-Penn Valley  
R.N., St. Joseph Hospital School of Nursing  
B.A., University of Missouri–Kansas City  
M.A., University of Chicago
- Robert A. Slater (1969-1998), English  
MCC-Maple Woods  
B.S., Northeast Missouri State University  
M.F.A., University of Iowa
- 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
- Theda Y. Sorenson (1987-1994), Counseling  
MCC-Longview  
A.A., Hutchinson Community College  
B.A., Sterling College  
M.A., Fort Hays State University
- Helen Y. Speed (1974-2007), Child Growth and Development  
MCC-Penn Valley  
B.S., University of Arkansas At Pine Bluff  
M.A., University of Missouri–Kansas City
- Phyllip P. Standlea (1971-1996), District Director, Instructional Services & Professional Development  
Administrative Center  
B.S., Northwest Missouri State University  
Ph.D., Emporia State University  
M.S., 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
- Suzana Swager (1985-1997), Basic Skills  
MCC-Blue River  
B.A., Southwest Baptist College  
M.S., Central Missouri State University
- Nancy M. Taylor (1983-1993), Business and Office Reentry  
MCC-Longview  
A.A., MCC-Longview  
B.S., Avila College  
M.Ed., Central Missouri State University
- G. Dale Thomas (1987-2001), Dean of Instruction  
MCC-Blue River  
B.S.Ed., Central Missouri State University  
M.S., Emporia State University  
D.A., Idaho State University
- Claude W. Thomson (1971-1995), Management  
MCC-Longview  
B.S., Central Missouri State University  
M.S., Central Missouri State University
- Nancy Thomson (1990-2004), Education  
MCC-Penn Valley  
*Chair, Child Growth and Development Education*  
B.A., Barat College, Illinois  
M.A., College of Holy Names, California  
Ph.D., University of Kansas
- Paul Thomson Jr. (1971-1999), President  
MCC-Blue River  
B.S., Missouri Valley College  
M.S., Southern Illinois University  
Ph.D., Southern Illinois University
- George E. Thornton (1970-1997), Automotive Technology  
MCC-Longview  
A.A.S., MCC-Longview  
B.S.E., Central Missouri State University  
M.S., Central Missouri State University
- Alana Timora (1982-2005), Counselor  
MCC-Maple Woods  
B.S., University of Southern Colorado  
M.A., University of Missouri–Kansas City
- James Tjaden (1988-2008), Travel and Tourism  
MCC-Maple Woods  
*Chair, Math, Science and Computing*  
B.A., Macalester College  
M.A., University of Iowa  
Ed.S., University of Missouri–Kansas City  
Ph.D., University of Missouri–Kansas City
- Helen M. Turner (1969-1993), Art  
MCC-Maple Woods  
B.A., University of Arkansas  
M.Sec.Ed., University of Arkansas
- Allan H. Tunis, Vice Chancellor (1999-2009), Administrative Services  
Administrative Center  
B.S., Wayne State University  
M.S., Wayne State University  
Ed.S., University of Missouri–Kansas City
- Charles Van Middlesworth (1993-2007), Research, Evaluation, and Assessment  
MCC-Administrative Center  
B.A., Northwestern State College  
M.A., Eastern New Mexico  
Ed.D., University of Kansas

Dora Walsh (1994-1999), Practical Nursing  
MCC-Penn Valley  
R.N., Hammersmith, England  
S.C.M., Midwifery, London, England  
B.S.N., Graceland College

Helen G. Weaver (1960-1984), Psychology  
MCC-Penn Valley  
B.A., University of Missouri–Columbia  
M.S., University of Pennsylvania

James K. Weaver (1984-2006), Business  
MCC-Longview  
A.B., Drury College  
M.B.A., Drury College

Karen E. West (1995-2005), Associate Dean  
MCC-Penn Valley  
A.A., El Camino College  
B.A., California State University  
M.A., Pacific School of Religion  
Ed.D., University of Missouri–Columbia

Charles H. Wheat (1970-1997), Aviation Maintenance  
Technology  
MCC-Maple Woods  
A.A.S., Oklahoma State University  
B.S., Oklahoma State University  
M.S., Pittsburg State University

Beverly D. Whitaker (1983-1994), Learning Center/  
Reading  
MCC-Maple Woods  
B.R.E., Northern Baptist Theological Seminary  
B.S., Sioux Falls College  
M.A., University of Missouri–Kansas City

Levora B. Whitmore (1971-1995), Nursing  
MCC-Penn Valley  
*Chair, Nursing*  
B.S.N., University of Kansas  
M.A., University of Missouri–Kansas City

James P. Whitworth (1965-1991), Counseling  
MCC-Maple Woods  
B.S., Missouri Valley College  
M.S., Central Missouri State University

Arthur N. Wilkins (1956-1990), District Director Academic  
Affairs & Research  
Administrative Center  
A.A., Junior College of Kansas City  
A.M., University of Chicago  
Ph.D., Washington University

Jeanné C. Willerth (1985-2004), Computer Science/  
Information Systems  
MCC-Longview  
B.A., Wayne State College  
M.S., University of Missouri–Columbia  
M.S.D., University of Kansas

F. Ula Williams (1993-2005), Sign Language Interpreting  
MCC-Maple Woods  
B.S., Emporia State University  
M.S., University of Kansas

Malcolm T. Wilson (1983-2006), President  
MCC-Blue River  
B.A., Kentucky State University  
M.A., Murray State University

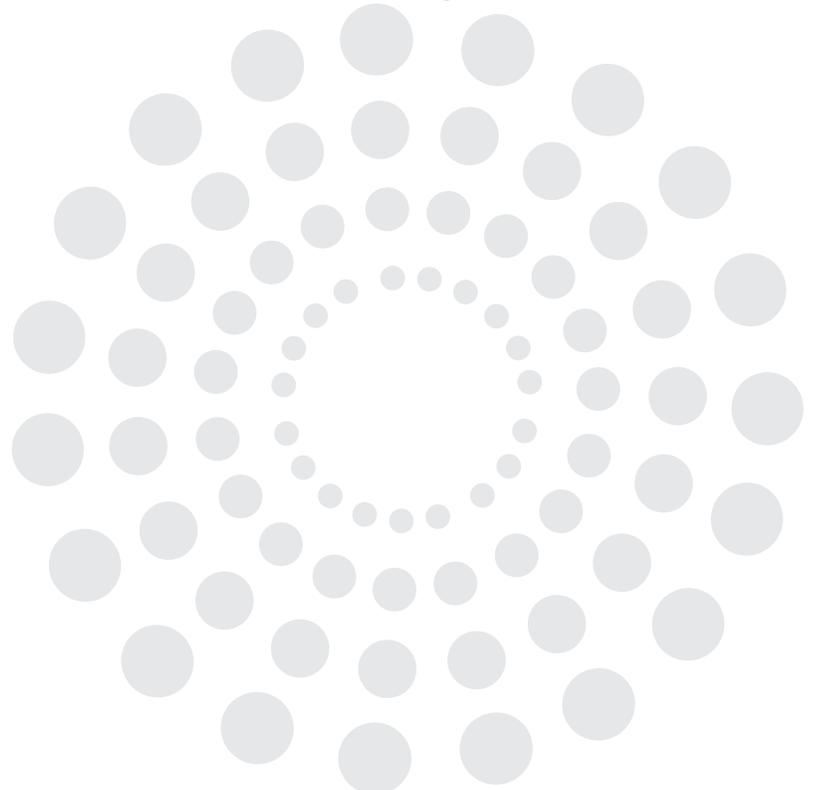
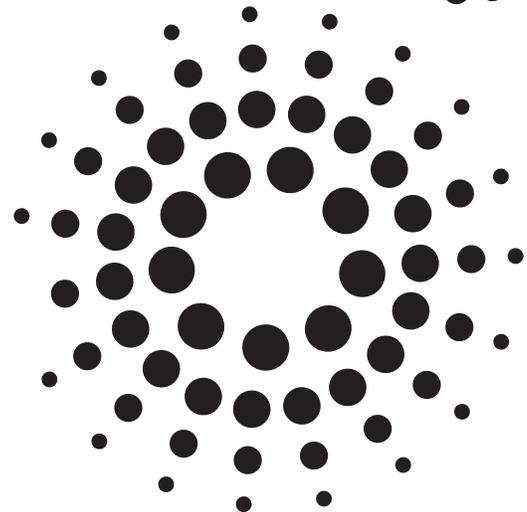
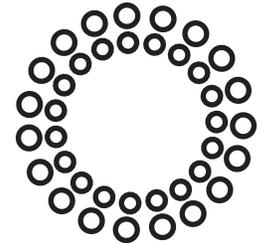
Dorothy M. Wright (1955-1995), Office Systems  
MCC-Penn Valley  
A.A., MCC-Penn Valley  
B.S., Central Missouri State University  
M.A., University of Iowa  
Ed.D., Nova University

Christine A. Yannitelli (1972-2004), Counselor  
MCC-Maple Woods  
B.A., Michigan State University  
M.Ed., University of Missouri–Columbia  
M.A., University of Missouri–Kansas City

Virginia D. Yates (1968-1984), Reading  
MCC-Penn Valley  
B.S., Pittsburg State University  
M.A., University of Missouri–Kansas City

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

Denise Zortman (1993-2007), Librarian  
MCC-Penn Valley  
B.A., Adams State College  
M.A., University of Denver



## Glossary of Academic Terms

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**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.

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

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

**ASSOCIATE IN APPLIED SCIENCE.** The Associate in Applied Science degree prepares students for various career and technical programs.

**ASSOCIATE IN ARTS.** MCC's Associate in Arts degree generally provides the first two years of college work a student might complete at a four-year college or university. The program includes 42 hours of general education courses, as well as enough electives to reach the required 62 credit hours.

**ASSOCIATE IN ARTS TEACHING.** The Associate in Arts Teaching (AAT) degree prepares students to transfer to a four-year college or university offering education degrees in childhood, elementary, middle, and secondary education.

**ASSOCIATE IN COMPUTER SCIENCE.** The Associate in Computer Science (ACS) degree is a program that prepares students to transfer to a four-year college or university. It should not be confused with the Associate in Applied Science degree in Computer Science and Information Systems that prepares students for immediate employment.

**ASSOCIATE IN ENGINEERING.** The Associate in Engineering degree is a program that prepares students to transfer to a four-year college or university offering a Bachelor of Science degree in Engineering or Surveying and Mapping.

**ASSOCIATE IN SCIENCE.** The Associate in Science degree program prepares students to transfer to a four-year college or university to major in either biology or chemistry.

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

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

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

**BUSINESS & LEARNING SOLUTIONS.** MCC Business & Learning Solutions serves businesses and community organizations by offering education, contract training, consulting services, and innovative business solutions. In addition to the programs and services offered across the district, each campus provides a variety of continuing education programs. Additionally, each campus provides community programming.

**CAREER AND TECHNICAL DEGREE PROGRAM.** This is a series of required and elective courses that prepare a student for immediate employment or job advancement. After completing these courses, the student earns an Associate in Applied Science degree.

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

**CAREER AND TECHNICAL PROGRAMS.** MCC offers nearly 70 programs that prepare students for a wide variety of occupations. You have the option of earning an associate in applied science degree or certificate or completing individual courses to build specific job-related skills.

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

**CERTIFICATE PROGRAM.** Students enroll in an integrated series of courses to study a specific occupation. A one-year, full-time program usually includes 30 to 40 credit hours of classes and results in the awarding of a diploma known as a certificate of proficiency. However, some certificate programs include only 12 to 20 credits hours and result in the awarding of a certificate of completion.

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

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

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

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

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

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

**COREQUISITE.** A course requirement that is taken at the same time with another course.

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

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

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

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

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

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

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

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

**CURRICULUM.** A sequence of related courses.

**DEGREE.** This is a title given to a student by a college or university after successful completion of a prescribed course of study. Community colleges traditionally award the associate's degree at the end of a program requiring a minimum of 62 credit hours, while four-year schools award the bachelor's degree for programs requiring at least 124 credit hours. Master's and doctor's degrees are awarded for study beyond the level of bachelor's degree.

**DEVELOPMENTAL COURSE.** A basic skills course numbered below 100 in the college catalog which carries college credit but does not count toward requirements for graduation.

**DIRECTORY INFORMATION.** According to federal law, the college may for a valid reason release without the student's consent what it calls directory information: the student's name, address, telephone listing, electronic mail address, photograph, date and place of birth, major field of study, dates of attendance, grade level, enrollment status (e.g., full-time or part-time), participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards received, and the most recent educational agency or institution attended. According to Public Law 93-380, the Family Educational Rights and Privacy Act of 1974, directory information is the only data that a college is permitted to release without a student's written consent. At the request of a student, the college will withhold directory information as well.

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

**DISTANCE EDUCATION.** An alternative option to classroom. Students attend courses using either local cable television or via the Internet instead of coming to a campus location. For more information visit the Distance Education web site at <http://distance.mcckc.edu>.

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

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

**EDUCATIONAL PLAN.** An educational plan is all coursework that, in the professional judgment of MCC's academic advisors and counselors, contributes to, enhances, or facilitates the pursuit of a student's academic or career goals. Students are strongly encouraged to meet with academic advisors or counselors during pursuit of their educational plan to help ensure its timely completion, and to determine that degree requirements are fulfilled.

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

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

**FEDERAL WORK-STUDY PROGRAM.** This is a federal financial-aid program that allows enrolled students who need financial assistance to earn income by working on campus or for an approved off-campus agency.

**FINANCIAL AID.** This can be a grant, loan or scholarship that helps a student pay tuition or other educational costs. Financial aid may come from governmental, institutional or private sources.

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

**GED.** General Educational Development (high school equivalency).

**GENERAL EDUCATION.** A common core of courses required of all students that provides for the acquisition of core skills and knowledge necessary in a literate citizenry.

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

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

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

	Credit Hours	Grade	Scholarship Points
BIOL 101	5	A	20
ENGL 101	3	C	6
HIST 120	3	B	9
MATH 120	3	D	3
TOTAL	14		38

$$38 \text{ divided by } 14 = 2.7$$

**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.

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

**HYBRID.** Courses in which some portion of classroom instruction is replaced with online activities. These courses require classroom attendance on campus.

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

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

**INTERNATIONAL RESIDENT.** A foreign national who is in the United States on an approved student visa status.

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

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

**KC REACHE.** MCC belongs to KC REACHE, an alliance of Kansas City area colleges and universities. KC REACHE colleges provide awareness of distance learning degree programs and student services tailored for distance students. KC REACHE reciprocal agreements exist for library, career, and testing services. Visit [www.kcreache.org](http://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.

**LEARNING ENHANCEMENTS.** Learning Enhancement courses are proven ways to make your education more effective. There are three kinds of these courses: Writing Intensive, Learning Communities, and Human Diversity. These courses are also degree requirements for the Associate in Arts degree, Associate in Arts Teaching degree, and the Associate in Computer Science. A student must successfully complete a Writing Intensive course and either a Learning Community or a designated Human Diversity course.

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

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

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

**METROLINK.** This is the web-based system that allows you to access your personal and academic information and perform a variety of other transactions over the Internet.

**MINOR.** This is a secondary field of study — such as English, history or math — for a student pursuing a four-year degree.

**NONDISTRICT MISSOURI RESIDENT.** This is a person who lives in Missouri but not within the boundaries of the Metropolitan Community College District, which includes the following school districts: Belton, Blue Springs, Center, Fort Osage, Grandview, Hickman Mills, Independence, Kansas City, Lee's Summit, North Kansas City, Park Hill and Raytown.

**ONLINE COURSES.** Online courses are accessible through the Internet using MCC's Blackboard learning system. Students will perform most, or all, of their course activities using a range of online tools, though some instructors do require a limited number of on-campus visits for testing or laboratory assignments.

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

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

**PORTAL.** The launch page for all of your MCC Web-based applications, which includes Blackboard, Metrolink and a variety of other programs. This system requires users to enter only one user ID and password for all of their MCC related Web applications.

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

**PREREQUISITE.** This is a course that must be completed with a minimum grade of C (or higher if indicated) before a student can begin a subsequent course. Prerequisites are indicated in the course description. All students must meet the prerequisite of any course in which they wish to enroll. In some cases, prerequisites are the previous course(s) in a sequence. In other cases, they may be a demonstration of a prerequisite skill. Students who believe that they have met prerequisites by their academic work at a college or university must provide evidence of meeting the prerequisite prior to enrolling in the course.

**PROGRAM 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](http://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 16.

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

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

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

**TRANSCRIPT.** This is a copy of a student's academic record listing courses taken, grades earned, and honors and degrees received. A student can request that copies bearing the District's seal be sent to educational institutions and other agencies. Transcripts given to students usually lack the official seal.

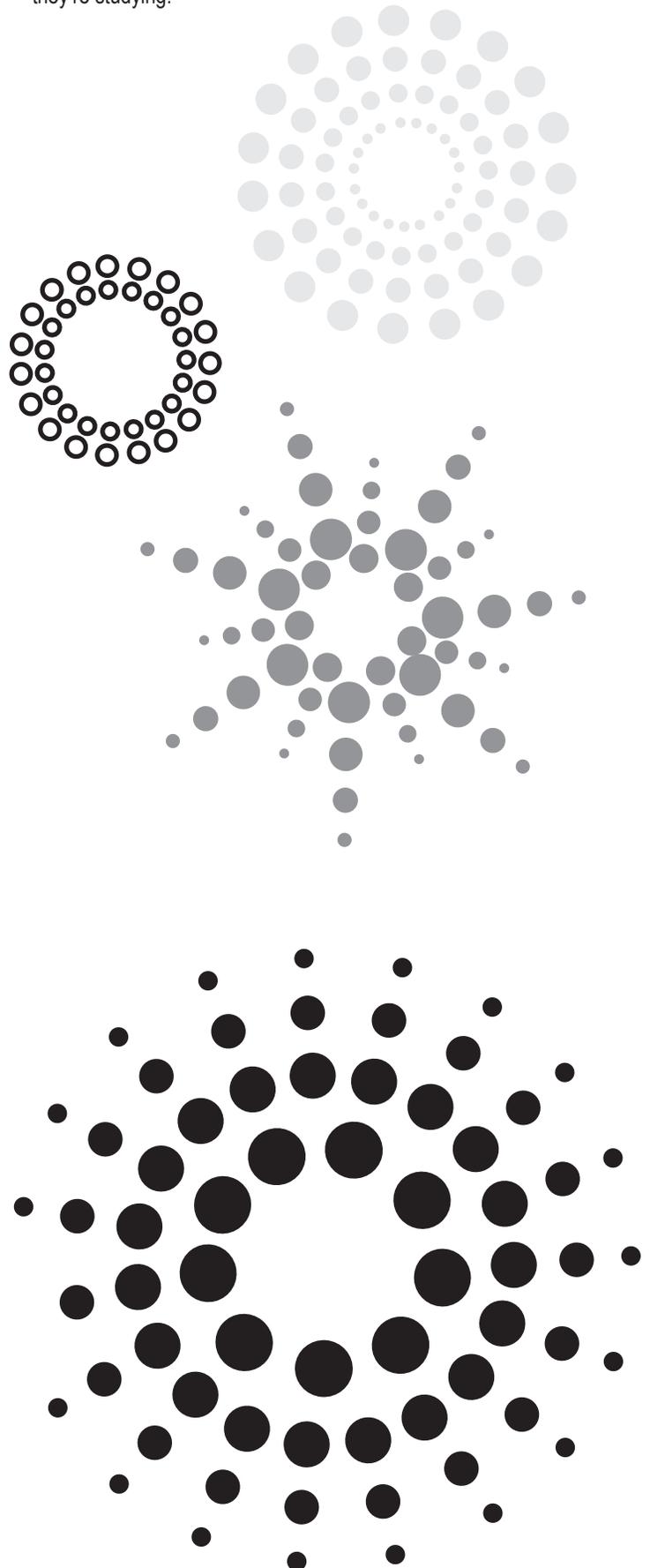
**TRANSFER DEGREE PROGRAM.** This is a series of required and elective courses that prepare students to continue their studies at a four-year college or university. Before transferring, students earn either an Associate in Arts or an Associate in Applied Science degree.

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

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

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

**WORK-STUDY PROGRAM.** This is a federal financial-aid program that allows students who need financial assistance to earn income by working on campus or for an approved off-campus agency. Whenever possible, students' work assignments are related to what they're studying.



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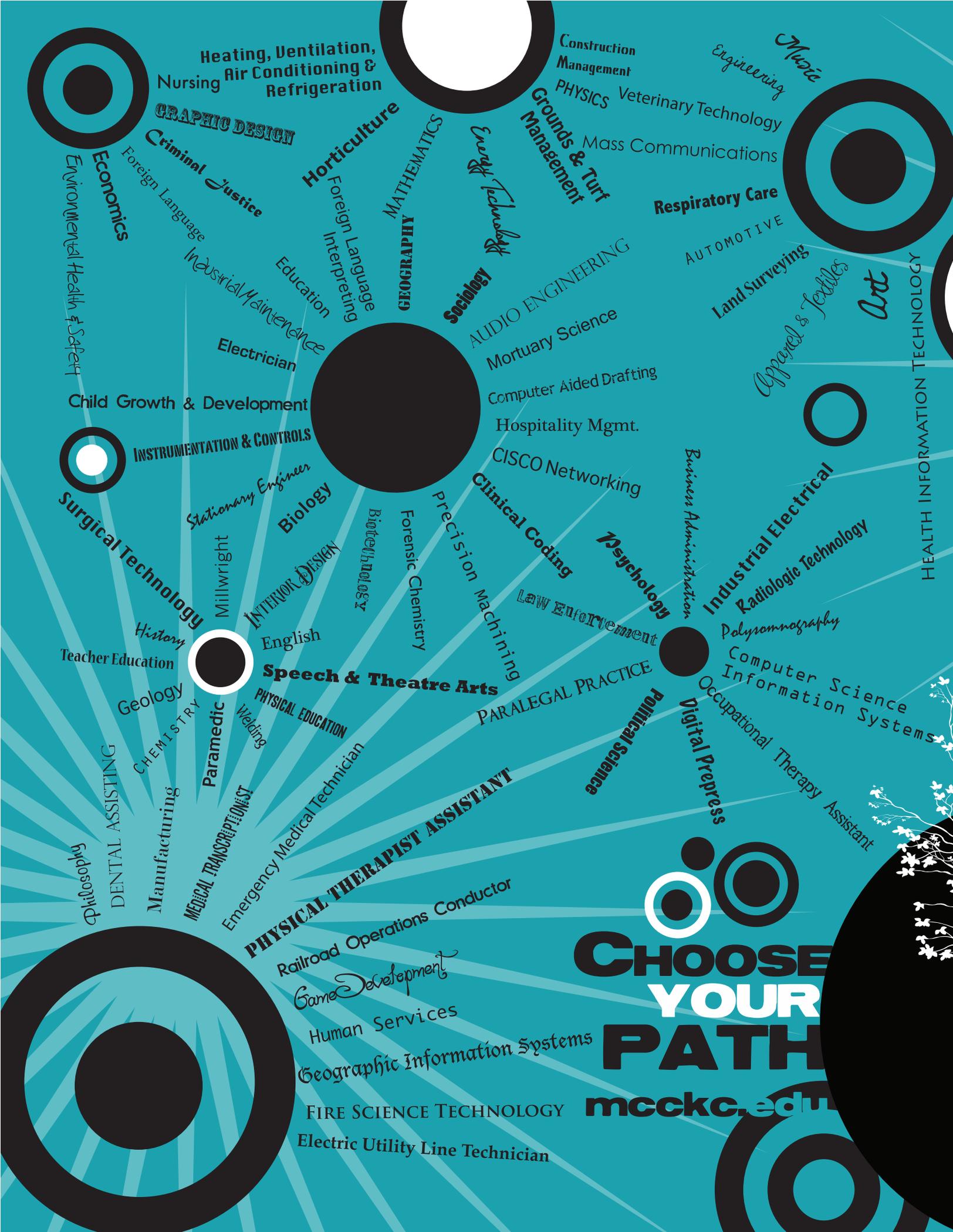
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**INSTRUMENTATION & CONTROLS**

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*Stationary Engineer*  
Biology

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Forensic Chemistry

Precision Machining  
**Clinical Coding**

**Law Enforcement**

**Psychology**

*Business Administration*

**Industrial Electrical**  
Radiologic Technology

**Speech & Theatre Arts**

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Welding

**PARALEGAL PRACTICE**

**Political Science**

**Digital Prepress**

Polymnography  
Computer Science  
Information Systems

*Microbiology*

**DENTAL ASSISTING**

**Manufacturing**

**MEDICAL TRANSCRIPTIONIST**

Emergency Medical Technician  
**PHYSICAL THERAPIST ASSISTANT**

Railroad Operations Conductor  
*Game Development*

Human Services  
Geographic Information Systems

**FIRE SCIENCE TECHNOLOGY**

Electric Utility Line Technician

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