Chancellor's Welcome

St. Louis Community College is the smart choice for your future.

Whether you are a first-time college student, are ready to shift career gears, or need to update your skills, we have a place for you. With 10 college transfer programs and more than 90 career programs in fields like allied health, engineering, technology and business administration, you can prepare for a job that’s in demand. Most of our degrees and certificates can be earned on a full- or part-time basis. You can save money by attending SLCC – it costs about 70 percent less per year to go to SLCC than public four-year institutions in Missouri. More than 80 percent of our career and technical graduates are employed in a related field or continue their education at a four-year institution within six months of graduation; 1,800 SLCC graduates transfer to Missouri four-year colleges and universities each fall.

To strengthen our commitment to providing affordable, accessible and high-quality education to the growing communities we have been proud to serve for more than 40 years, we are building a new campus in Wildwood that will open for classes in fall 2007. Located near the intersection of Route 109 and Manchester Road, the Wildwood campus will meld our tradition of service and excellence with the latest educational delivery systems to provide a foundation on which to build the future of the West County community and its residents.

The St. Louis Community College experience is much more than new buildings and classrooms, however. No matter what campus you attend, you will benefit from faculty who specialize in teaching at the undergraduate level and who hold advanced degrees — master’s, doctoral or advanced licensing degrees in technical fields. Our classes are smaller in size and instructors know your name.

You will have access to the counseling, academic advising and financial aid support you need to succeed. You will attend classes with students just like yourself, no matter who you are. We will help you develop and expand your interests and find ways to contribute your talents and skills to the College and the community. Your student activity fees fund a variety of cultural, educational, athletic events and clubs in which to participate.

Let St. Louis Community College help you get started. We expand minds and change lives every day.

Henry D. Shannon, Ph.D., Chancellor

Mission Statement

St. Louis Community College expands minds and changes lives every day. We create accessible, dynamic learning environments focused on the needs of our diverse communities.
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ABOUT THIS CATALOG

The St. Louis Community College 2007-2008 catalog contains information on entering the College, choosing a program, getting the most out of the collegiate experience, and moving toward a career or advanced study.

The first part of the catalog explains the academic policies, procedures and student services of St. Louis Community College. The second part outlines college transfer and career programs offered. A list of courses and course descriptions is contained in the third section. College personnel are identified in the fourth section.

Courses listed in the transfer and career programs sections may not be offered every semester. A class schedule that lists courses currently being offered and a description of each course is published every semester.

The information in this catalog is current as of April 2007. The College may at any time change policies and procedures outlined in this catalog. For information on policy changes, refer to the Board of Trustees Policy Manual available in the campus libraries and on the College’s Web site. The information in this catalog is not a substitute for Board policies.

This catalog is available in alternate forms. Contact a campus Access office for more information.

NOTICE OF NON-DISCRIMINATION

St. Louis Community College is committed to non-discrimination and equal opportunities in its admissions, educational programs, activities and employment regardless of race, color, creed, religion, sex, sexual orientation, national origin, ancestry, age, disability or status as a disabled or Vietnam-era veteran and shall take action necessary to ensure non-discrimination.

For information contact:

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Downtown Education Center
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314-539-5286

Philishea Ingram
Manager, Student Life
Forest Park
5600 Oakland Ave.
St. Louis, MO 63110-1316
314-644-9136

ACCOMMODATIONS STATEMENT

St. Louis Community College makes every reasonable effort to accommodate individuals with disabilities. If you have accommodation needs, please contact the Access office at the campus where you are registering at least six weeks before the beginning of the class. Event or other public service accommodation requests should be made with the event coordinator or applicable location non-discrimination officer at least two working days prior to the event or public service.

Individuals with speech or hearing impairments may call via Relay Missouri by dialing 711.
### About St. Louis Community College

St. Louis Community College offers a challenging learning environment that points students in directions that lead to success. Since voters in St. Louis City and County established the College in 1962, nearly one million people have attended, enriching their lives and contributing to the economic development of the metropolitan area. Each year, nearly 130,000 students enroll in college transfer and career programs; job skill, personal development and college preparatory classes; and specialized performance programs sponsored by employers.

Associate degrees in Arts, Science, Fine Arts and Applied Science are offered as well as certificates of proficiency and specialization. The College’s Center for Business, Industry & Labor also serves the local business community through assessment, counseling, consulting and training services.

Learning is accessible through four campuses — Florissant Valley, Forest Park, Meramec and the new campus in Wildwood; three education centers in South St. Louis County, downtown St. Louis, and North St. Louis; numerous business, industrial and neighborhood sites throughout the metropolitan area; and via Internet telecourses, satellite downlinks and a telecommunications system.

Governed by a Board of six elected trustees and supported by local taxes, state funds and student fees, the College has an annual budget of more than $150 million. Accreditation is through the Higher Learning Commission of the North Central Association of Colleges and Schools. St. Louis Community College focuses its resources on helping students find the right academic and career pathways. Through its alumni and community partnerships, the College is helping St. Louis become the best place to live and work in the 21st century.

### Economic Value

St. Louis Community College is your best financial investment now — and a great investment for your future. Student fees at SLCC are among the lowest in the area. A large portion of instructional costs is financed by tax revenue; therefore, you pay less for a high-quality academic experience. And graduates of SLCC are the region’s best economic investment.

- For every credit hour an SLCC student completes, the student will earn $166 more per year every year while in the work force.
- Students enjoy an attractive 24.3 percent rate of return on their SLCC educational investment, and recover all costs (including wages foregone while attending classes) in 6.2 years.
- Skills from current and former SLCC students increase earnings in the college’s service area by $28 million directly, and by another $410 million indirectly.
- After leaving the College, the average SLCC student will spend 38 years in the work force. The student who leaves with a two-year college degree will earn $329,854 more than someone with a high school diploma or a GED.
- For every dollar appropriated by the state and local government, student earnings will increase by an average of $1.02 per year, every year through the rest of their working lives. Likewise, for every state dollar appropriated, the college service area will see social savings of 28 cents per year, every year.
- More than 90 percent of SLCC credit and non-credit students are employed full or part time in the community while attending classes.
- The total economic impact of SLCC is more than $3 billion — the equivalent of some 85,000 jobs.
CAMPUS LOCATIONS:
Geographic accessibility to higher education is one of the cornerstones of St. Louis Community College. There are four main campuses strategically located throughout the St. Louis metropolitan area, from the very north in Ferguson at the Florissant Valley campus, to the city’s central corridor at the Forest Park campus, to the southwest at the Meramec campus, to the far west at the Wildwood campus.

In addition, the College has three education centers throughout its service area to better serve increasing and shifting populations. Courses and programs also are offered at numerous area high schools, community centers, libraries, churches, hospitals and museums.

FLORISSANT VALLEY
3400 Pershall Road • St. Louis, MO 63135-1408
314-513-4200
Marcia Pfeiffer, president
www.stlcc.edu/fv/

The Florissant Valley campus, situated on more than 100 acres of rolling, wooded hills in north St. Louis County near I-270 and I-170, is known for excellence in engineering and technology. The campus is the home to Missouri’s only two-year biotechnology program, which is a leader in providing highly skilled workers for this emerging industry. The campus also offers unique programs in chemical technology and deaf communications, and has nationally recognized programs in art and childcare. The childcare program has an on-site Child Development Center, which is a national model, licensed by the state of Missouri and the National Association for the Education of the Young Child. Nearly 6,500 students are enrolled in transfer and career programs at Florissant Valley.
FOREST PARK
5600 Oakland Avenue • St. Louis, MO  63110-1316
314-644-9100
Morris F. Johnson III, president
www.stlcc.edu/fp/

Forest Park is the district’s city campus, conveniently located by U.S. 40 (I-64) across from the world famous St. Louis Zoo, and is adjacent to several other major health, cultural and educational centers, such as the St. Louis Science Center. The campus is recognized for its career programs in allied health and hospitality studies/culinary arts. Forest Park has taken the lead in preparing students for careers in the high-tech field of advanced computer networking with its CISCO Systems Academy. In addition, career and transfer programs are offered in business, information systems, engineering, trade and technical, and the humanities and social sciences.

Drawing from its multi-cultural surroundings, Forest Park’s student body is the definitive diverse population with students hailing from 70 countries and speaking 80 different languages. More than 7,000 students are enrolled in transfer and career programs. The campus attracts more than 100,000 visitors each year for theatrical performances, community meetings and other events.

MERAMEC
11333 Big Bend Road • St. Louis, MO  63122-5720
314-984-7500
Ann Roberts Divine, acting president
www.stlcc.edu/mc/

The Meramec campus, located on 78 park-like acres in Kirkwood, is known for its excellent general transfer program. Meramec’s wide range of career program selections includes architectural technology, interior design, horticulture, occupational therapy assistant and physical therapist assistant. The campus also has the largest fine arts program within the College and is home to the Center for Visual Technology, a graphic arts computer facility that provides state-of-the-art instruction, utilizing the latest computer equipment and the most current software available. Meramec has the largest enrollment of the three campuses with more than 11,500 college-credit students.
The Wildwood campus, located on 66 acres, is the newest campus in the district. It serves one of the fastest-growing areas in the college’s service area. Initially, Associate in Arts degrees in General Transfer Studies and Business Administration as well as continuing education courses are being offered. The campus opened in August 2007 with a 73,000-square-foot building, the first of three planned buildings. It houses high-tech classrooms and labs, offices, student services, lounges, a bookstore, multipurpose rooms and rooms set up to send and receive instruction by interactive television. In an effort to reduce the building’s impact on the environment and community, the campus incorporates design concepts that emphasize state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality, and qualify the facility for LEED (Leadership in Energy and Environmental Design) certification.

The Downtown Education Center, named for the founder and first president of SLCC, is the College’s focal point for business and industry training. As part of the College’s Center for Business, Industry & Labor, the Downtown Education Center is fully furnished to meet the training, conference and workshop needs of area businesses. It also serves as the administrative headquarters for the district.
The South County Education and University Center (SCEUC), an off-campus extension of the St. Louis Community College at Meramec, is located at the corner of Lemay Ferry and Meramec Bottom roads. The 59,000-square-foot complex opened in October 2003 and provides state-of-the-art computer labs and interactive classrooms in a nationally recognized facility. SCEUC partners with the University of Missouri-St. Louis to offer on-site upper division classes.

In an effort to expand college services to the north St. Louis community, St. Louis Community College opened the William J. Harrison Northside Education Center, an off-campus extension of the St. Louis Community College at Forest Park, in the Penrose Neighborhood of St. Louis in 1994. The Center was dedicated to the memory of Harrison, an educator, historian, and community and civil rights activist. The Center offers college-level classes available for credit through the Forest Park campus as well as non-credit continuing education classes, employee development programs and contractual training.
CENTERS OF EXCELLENCE

Four Centers of Excellence at St. Louis Community College provide advanced technology training on state-of-the-art equipment for high wage jobs in high demand occupations. The College’s Centers won the Missouri Community College Association’s 2002 Technology Innovation Award. Developed with funding from the Regional Technical Education Councils (RTEC), the four Centers include:

The Advanced Network Training Center (ANTC)
Located on the Forest Park campus, this center is a certified regional Cisco Academy offering an Associate of Applied Science in Information Systems and certificates in Networking, Data Communications and Network Administration.

Digital Arts and Technology Alliance
Located on the Meramec campus, this center provides programming that meets the technical and educational demands for digital arts and technology training in Architectural Design, Digital Media, Interior Design, Landscape Design and Video Editing.

Emerson Center for Engineering and Manufacturing
This center, housed on the Florissant Valley campus, provides students with opportunities to excel in occupational areas that are experiencing high demand in our region — namely, engineering and manufacturing. The center prepares learners to become the workers and managers of the future by preparing them to handle work assignments in high skill, high demand and high wage work environments. The center also provides local programming for the nationally recognized Project Lead the Way initiative.

Plant and Life Sciences Center
This districtwide Center of Excellence promotes educational opportunities within the regional corridor of businesses and industries engaged in a range of plant and life science initiatives for high demand occupations in biotechnology and chemical technology.

For more information on the Centers of Excellence and the programs and services offered through each center, contact the Division of Career and Technical Education at 314-539-5317 or 314-539-5395.
### College Calendar

#### FALL SEMESTER 2007
- **Services days**: August 14-17
- **Saturday classes begin**: August 18
- **Sunday classes begin**: August 19
- **Classes begin**: August 20
- **Labor Day holiday (no classes)**: September 1-3
- **Late start classes begin**: September 10
- **Midterm**: October 12
- **Midterm grades due**: October 15
- **Service Day (Midterm break - no classes)**: October 16
- **Withdrawal deadline**: November 9
- **Thanksgiving holiday (no classes)**: November 22-25
- **Last scheduled class**: December 9
- **Final exams**: December 10-16
- **Grades due**: December 17
- **Official degree conferral date**: December 18
- **Last day College open**: December 21

#### SPRING 2008
- **College opens**: January 2
- **Service days**: January 7-11
- **Saturday classes begin**: January 12
- **Sunday classes begin**: January 13
- **Classes begin**: January 14
- **Dr. Martin Luther King, Jr. holiday (no classes)**: January 21
- **Late start classes begin**: February 4
- **Presidents’ Day holiday (no classes)**: February 18
- **Midterm**: March 7
- **Midterm grades due**: March 10
- **Spring Break (no classes)***: March 10-16*
- **Spring Holiday (no classes)**: March 14
- **No classes**: March 22-23
- **Withdrawal deadline**: April 11
- **Last scheduled class day**: May 5
- **Final exams**: May 6-12
- **Grades due**: May 15
- **Official degree conferral date**: May 16
- **Commencement**: TBD

*Professional Development service day may be designated on one day during Spring Break (see above).
Saturday classes will not meet March 15 and March 22.
Sunday classes will not meet March 16 and March 23.

#### SUMMER 2008
- **3-week and 11-week classes begin**: May 13
- **Memorial Day holiday (no classes)**: May 26
- **6-week and 8-week classes begin**: June 2
- **Independence Day holiday (no classes)**: July 4
- **Last scheduled class day**: July 27
- **Grades due**: July 28
- **Official degree conferral date**: July 29
### FLORISSANT VALLEY

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<td>Admissions/Registration</td>
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<td>Alumni Relations</td>
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<td>Transcripts</td>
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<td>Tutoring (Academic Support)</td>
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<td>Veterans’ Certification</td>
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<td><strong>MERAMEC</strong></td>
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Admissions

OPEN ADMISSIONS POLICY

St. Louis Community College (SLCC) has an open admissions policy in keeping with its original purpose to provide quality, low-cost education to area residents. Although admission to the College is not based on minimum academic qualifications, certain programs have required standards for admission and retention.

The College reserves the right to guide enrollment on the basis of placement tests, pre-enrollment interviews, physical examinations (if required for a specific program), previous achievement and other criteria.

Standards of admission and retention have been established for certain programs and courses to make sure students have the necessary aptitude and background for success. Students applying for a program with selective admissions criteria may be required to take additional tests for admission purposes.

For programs requiring reading competency, English writing and/or mathematics courses, a battery of assessment tests is required for placement. Students not meeting standards for admission into a certain program may enroll in courses designed to help them qualify.

Before registering for courses, students must be admitted to the College. Students may apply for admission at any time during the year, although some programs begin only in the summer or fall semester. Applications and credentials may be submitted as early as one year in advance of the first semester of enrollment or as late as eight weeks prior to the beginning of a semester.

An admission application for St. Louis Community College is available on page 197 of this catalog.

ADMISSION CATEGORIES

Students register as either a regular or general student. Regular students are full-time or part-time students who want to work toward an associate degree, certificate of proficiency or certificate of specialization, and may enroll in from one to 18 credit hours per semester. Students applying for financial aid, veterans’ benefits or the A+ scholarship program must have regular student status. Students wishing to participate in intercollegiate athletics or are applying as an international student on a student visa must also have regular student status.

General students may enroll in from one to 18 credit hours per semester with limited admissions credentials. A general student may apply for regular status at a later time. Credits earned as a general student may be applied toward a degree or a certificate if the courses taken are part of the program requirements. (See “Change of Status”.)

Regular Students

Regular students must complete the following steps:
1. Fill out an application for admission and send it to the campus Admissions/Registration office.
2. Request high school to mail to the Admissions/Registration office an official transcript showing grades, class rank and date of graduation. Students who have received a General Education Development (GED) certificate should submit scores from that examination. For courses taken at other colleges, an official transcript should be sent directly from that college to the St. Louis Community College Admissions/Registration office. Students with 15 or more semester hours of college credit need not send a high school transcript unless the Admissions/Registration office requests one.
3. Take required assessment tests depending upon program. Students should check in advance with the campus Admissions/Registration office.

General Students

General students should complete the following steps:
1. Fill out an application for admission and send it to the Admissions/Registration office.
2. Send additional information to the Admissions/Registration office if requested.
3. Take an assessment test if required. Dependent upon course enrollment.

Non-Traditional Applicants

Applicants who have not completed a traditional high school program that is recognized by the College may apply for admission. Students who do not meet the required admission guidelines may apply as a non-high school graduate. See related section below.

Non-High School Graduates:

- Must be at least 18 years of age and have not attended high school for at least 6 months
- Take the College’s assessment test or submit SAT or ACT scores for evaluation
- Submit high school transcript from last school attended

Admissions eligibility is determined by the Dean of Enrollment Services.
Graduates of Home Schools, Non-Accredited High Schools and Non-Accredited Correspondence Schools:

- Must be at least 18 years of age
- Submit transcript verifying completion of academic program
- Submit required score levels from the ACT and/or SAT
- Students who do not meet the required admission guidelines may apply as a non-high school graduate. See related section.

Dual Enrollment

High school juniors and seniors may attend classes through the Dual Enrollment program which provides students an opportunity to take courses not offered in their high school or to continue a course series beyond the level offered in high school. Eligible students may earn college credit hours before the time they would normally begin college. Students must follow all college policies and procedures, and fulfill the following requirements:

- Complete dual enrollment application
- Discuss definite course or interest with counselor/principal
- Obtain required signatures from parent/guardian and authorized school official
- Have achieved a cumulative high school GPA of 2.0 or higher
- Submit copy of high school transcript
- Apply to the Access office for disability-related accommodations and services if applicable. Documentation of disability that meets the College’s requirements will be required. It should be noted that the requirements for and the types of accommodation at the postsecondary level are based on the Americans with Disabilities Act and Section 504, and are often significantly different from the Individuals with Disabilities Education Act.

Dual Credit

High school juniors and seniors may receive college credit for specified classes at high schools participating in the College’s dual credit program. Dual credit students must follow all college policies and procedures, and fulfill the following requirements:

- Complete the dual credit application
- Have a cumulative high school GPA of 3.0 or higher
- Obtain written permission to enroll from a designated high school official and from a parent/guardian
- Meet the College’s requirements for entry into the course
- Pay a non-refundable fee for the course which is equal to the cost of the course if taken on campus
- Apply to the Access office for disability-related accommodations and services if applicable. Documentation of disability that meets the College’s requirements will be required. It should be noted that the requirements for and the types of accommodation at the postsecondary level are based on the Americans with Disabilities Act and Section 504, and are often significantly different from the Individuals with Disabilities Education Act.

International Applicants

International students must fulfill the following requirements for admission:

1. Complete the requirements for admission as a regular student.
2. Request the “International Student” packet from the Admissions/Registration office at the campus of choice and follow the procedures outlined.
3. Submit a TOEFL (Test of English as a Foreign Language) score of 500 or above on the paper based TOEFL test, a score of 173 or above on the computerized TOEFL, a score of 61 or above on the Internet based TOEFL, a score of 80 or above on the University of Michigan English Proficiency examination, or a score of 240 on the ACT/ESL test. The College will also accept the Society for Testing English Proficiency (STEP) test pre-1st grade level as proof of English proficiency. The applicant must have taken the test within the last two years.

All admission requirements and all required documents for prospective students still residing outside of the United States must be on file 120 days prior to the start of classes.

Prospective students presently attending a college in the United States must submit all materials 30 days prior to the start of classes.

Prospective students already in the United States and attending English Language Centers or intensive English courses at another college must submit a grade of “B” (3.0) on all such course work. Students in regular academic programs at other accredited institutions in the United States must have earned a cumulative grade point average of “C” (2.0).

International students on F-1 Visas must comply with the following regulations:

1. Complete a minimum of 12 credit hours per semester.
2. Maintain a cumulative grade point average of 2.0 or above.
3. Complete a certification program in not more than four semesters or an associate degree program in not more than six semesters, excluding summer or interim sessions.
4. Provide the College with proof of health insurance.

If such a student completes fewer than 12 credit hours or earns a cumulative grade point average of less than 2.0, he or she will be placed on probation for the next semester of attendance. If the student completes fewer than 12 credit hours or earns a grade point average less than 2.0 while on probation, he or she will not be permitted to re-enroll.

Foreign-born students (both permanent residents and refugees) should have a command of written and spoken English in order to successfully complete college work.
RE-ADMISSION

Former students who have not attended St. Louis Community College for a semester or more may re-activate their files by updating their admission status with the Admissions/Registration office. Before changing status to regular student, transcripts of all college work not currently on file at SLCC must be sent to the Admissions/Registration office.

Files for students who have not attended within five years will be destroyed. Transcribed grades earned at SLCC are retained. Students may be required to resubmit high school records, transcripts from other colleges and universities or other documents that may have been destroyed.

CHANGE OF STATUS

Students who wish to change from general to regular status should complete the following steps:

1. Inform the Admissions/Registration office of intent to become a regular student.
2. Complete all admission requirements for regular student status.

Individuals who have not successfully completed entry-level college courses in college composition and mathematics are required to take assessment tests.

Fees and Refunds

Because much of the support for St. Louis Community College comes from state funds and local taxes, students who live within the service area of the College pay a small part of the cost of their education. The service area includes St. Louis City, St. Louis County and portions of Franklin and Jefferson counties which are part of the Meramec Valley R-3 School District and the Rockwood R-6 School District. Students may be required to submit an affidavit showing residency.

A resident student is defined as follows:

a. An unemancipated minor student who has not attained the age of 21 and is under the care, custody or support of the individual or individuals having legal custody of the student and who live in the district.

b. An emancipated minor student who has not attained the age of 21 and who is not under the care, custody and support of an individual or individuals having legal custody, but lives in the district.

c. An adult student who has attained the age of 21 and who has established residency within the St. Louis Community College district.

d. A non-immigrant unemancipated minor alien student, holding a visa type B, F, H (except H-1B), J, M, O-2, P or Q and who is a legal dependent of an individual(s) who holds permanent alien status or who holds a visa in a category other than those specified above and who lives within the district.

e. A non-immigrant alien holding a visa in a category other than those specified above will be assessed in-district fees if he/she has established residency within the district.

The burden of proof to establish eligibility for resident status rests completely with the student. The factual criteria used to determine resident status is as follows:

- Missouri voter registration
- Missouri domicile lease/deed
- Missouri automobile registration
- Missouri driver’s license with current address
- Missouri personal property tax receipt
- Marriage license and any of the above documentation identifying district residence of spouse
- Paycheck from employer with employee’s home address as part of check information
- Proof of checking account with home address printed on checks
- Utility bill showing home address

Refer all questions concerning residency to the Admissions/Registration office.

FEES

Student fees are one of the three primary sources of funding for St. Louis Community College. State funds, appropriated by the Missouri legislature and approved by the governor contribute some 30 percent. Another 36 percent of total revenue comes from local property owners who pay taxes within the College’s taxing district. Student fees account for 30 percent of the money needed to maintain the College. The other four percent comes from other miscellaneous sources.

Students normally pay fees in full when registering. The College does bill those students who register early enough and plan to pay their accounts in full by a due date prior to the start of classes.

The College accepts cash, checks, MasterCard, Visa and Discover for payments made at the campus cashier. In addition, the College accepts online payments when using the credit cards mentioned above or ACH (automatic clearing house) payments using checking or saving account information. Check with the Admissions/Registration office concerning fee payment.

The College also has an installment payment plan for maintenance fees. Please visit www.stlcc.edu for more information concerning the payment plan.

The College reserves the right to charge a transaction fee if other special services are required, and the College has a $20 bad check processing fee. If a student is not paid in full or signed up for the payment plan, a financial hold will be placed against the student’s record until this debt has been cleared.

Residents of the college service area, who are 60 years and older may enroll for half the usual fees. Missouri residents ages 65 years and older, may enroll on a not-for credit, space available basis in any credit course for a $15 non-refundable registration fee.

For a current schedule of maintenance fees contact a campus Admission/Registration office or the college Web site at www.stlcc.edu/admreg/fees.html.
Optional Fees

Course Fees: Students enrolling in courses that require special equipment, field trips, insurance, etc., will be charged additional fees. These are outlined in course information.

- Late Registration Fee: a non-refundable late registration fee of $20 is charged for enrolling after classes begin.
- MoPIRG Fee (Meramec only): Assessed fees include an optional non-refundable $7 payment to the Missouri Public Interest Research Group (MoPIRG). Students may decline to pay the fee BEFORE making a payment. Students paying for classes online, who want to decline contributing to MoPIRG, should deduct $7 from the amount due.

Fees for International Students

Maintenance fees for international students residing in the United States on non-immigrant visas will be assessed according to their visa category and their residency. Those on permanent resident visa will be charged district fee rates based upon appropriate documentation. Contact the Admissions/Registration office.

Fees listed above may have changed since publication of this catalog. The latest information is available in the Admissions/Registration office and at stlcc.edu/admreg/fees.html.

Refunds

Students withdrawing from a course prior to or during the early part of the semester will be eligible for a refund of fees based on the following schedule:

Courses of a minimum of 15-weeks duration:
- Before the end of the week prior to the beginning of classes: 100% refund
- Before the end of the first week of classes: 80% refund
- Before the end of the third week of classes: 50% refund
- After the third week of classes: none

Optional Fees

After the third week of classes...

- Before the end of the first week of classes: 80%
- Before the end of the week prior to the beginning of classes: 50%
- Before the end of the third week of classes: 25%
- After the third week of classes: none

FEES WILL BE REFUNDED BASED ON THE FOLLOWING SCHEDULE:

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<th>50% REFUND THROUGH THE END OF THE</th>
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Federal Financial Aid (Title IV) Recipients

Refunds to all Title IV recipients who withdraw during an enrollment period for which they have been charged will be identified and processed to comply with federal regulations.

Title IV of the Federal Higher Education Act (HEA) requires that students who receive federal grants (Federal Pell Grant, Federal Supplemental Educational Opportunity Grant) and federal loans repay some of their federal financial aid if they do not attend class through 60 percent of the term. Most students who do not attend at least one class through the 60 percent point of the term will owe some of their Title IV aid back to the U.S. Department of Education.

Please refer to the following Web site for more information about the return of unearned Title IV funds as required by HEA Title IV law and regulations: www.stlcc.edu/financialaid/apply.html.

When the Federal Higher Education Act (HEA) of 1965 was amended in 1998, a new concept was established with regard to HEA Title IV student financial aid programs. The new concept is that students earn their Title IV federal financial aid; if they do not stay enrolled long enough to earn all of their aid, then some of the aid has to be returned to the HEA Title IV programs as unearned Title IV aid. Colleges are required to implement the return of unearned Title IV funds policy.

HEA Title IV financial aid programs include Federal Pell Grant, Federal Supplemental Education Opportunity Grant (FSEOG), Federal Work-Study (FW-S), and Federal Stafford Loans. Federal Work-Study earnings are NOT affected by HEA Title IV law and regulations concerning the return of unearned federal financial aid. Only grants and loans are impacted by the new policy.

Students who want to withdraw from a course(s) should withdraw from the course(s) by using the appropriate form that is submitted to the Admissions/Registration office. The return of unearned Title IV funds policy will impact only those students who withdraw from all of their courses before 60 percent of the semester is completed. The policy will affect those students who do not withdraw from their course(s) but simply cease to attend classes. Pursuant to federal guidelines, the College will determine a last date of attendance for those students.

Unearned HEA Title IV funds are returned to the Title IV programs based on a federally mandated formula. Under this formula, colleges are obligated to return unearned funds used for institutional charges and students are obligated to return unearned funds beyond the institutional charges.

When a college has to return unearned Title IV fund from institutional charges, the money is returned to programs in the following order: Unsubsidized Federal Stafford Loans, Federal PLUS Loans, Federal Pell Grants, Federal SEOG, other Title IV assistance. The Charles Gallagher Student Financial Assistance Program (Missouri state grant) potentially falls in the category of other Title IV assistance, since state grant programs receive some of their funds through HEA Title IV.

When a student has to return unearned Title IV funds that he/she received beyond the institutional charges, the money is returned to the programs in the following order: Unsubsidized...
Federal Stafford Loans, Federal PLUS Loans, Federal Pell Grants (multiplied by 50 percent), Federal SEOG (multiplied by 50 percent), other Title IV assistance (multiplied by 50 percent for grants). Note that student’s responsibility for repayment of unearned Title IV money is reduced by one-half.

If a student owes unearned Title IV funds from a federal loan, the money is returned (repaid) in accordance with the terms and conditions of the promissory note.

If a student owes unearned Title IV funds from a federal grant, the College must notify the student within 30 days of determining the student’s withdrawal. The student retains eligibility for Title IV funds from an initial 45-day period, during which one of the following should happen: (1) student repays unearned Title IV grant money in full, or (2) the student makes satisfactory arrangements with the U.S. Department of Education (USDE) to repay the unearned Title IV grant money. If the student does not take one of these two steps, he/she loses eligibility for HEA Title IV funds.

The institutional charges (maintenance fees) incurred by the student are considered to be paid by HEA Title IV fund for the purpose of the formula, even if the institutional charges were directly paid by a source other than Title IV funds. USDE give colleges the option of billing students for unearned HEA Title IV funds that the school has to repay as part of the institutional charges.

The following is an example of the HEA Title IV return of unearned funds formula supplied by USDE:

A student withdrew from all courses with 40 percent of the days in the semester completed. The student paid $1,000 in institutional charges (maintenance fees). This student received $3,000 in HEA Title IV aid - $1,000 in a loan and $2,000 in grants. The student earned $1,200 of the the of the Title IV aid (40 percent times $3,000). The unearned Title IV aid is $1,800 ($3,000 minus $1,200).

Because only 40 percent of the HEA Title IV aid is earned, the College has to return $600 of the $1,000 paid in institutional charges to Title IV programs ($1,000 minus $400). Since loans are prioritized for return of unearned funds, the $600 is paid to the student’s federal loan.

The student now owes $1,200 in unearned Title IV funds, the difference between the $1,800 total of unearned Title IV funds and the $600 that the school has paid back from institutional charges. Because loans are prioritized for the return of funds, $400 is paid to the federal loan by the school for unearned institutional charges.

The remaining $800 in unearned Title IV aid (the $1,800 minus the $600 in unearned institutional charges paid to the loan and the $400 in unearned aid to the student paid to the loan) is owed to the federal grants. Because the student’s liability for return of unearned Title IV aid to grants is reduced by 50 percent, the student owes $400 to the federal grant program.

Sources for the information above: 34 Code of Federal Regulations part 668.22; USDE Spring 2000 Reauthorization Teleconference Training Guide; December 2000 USDE HEA Title IV Reauthorization Teleconference.

Medical/Job Related Withdrawals

If a student withdraws from all classes for medical or job-related reasons, he/she may receive a pro-rated refund when acceptable evidence of the necessity to withdraw (verified by a physician/employer) is presented. An instruction sheet detailing the procedure is available from the Admissions/Registration office.

Active Duty Military Service

A refund for classes in progress will be issued to students forced to withdraw as a result of being called to active duty military service.

It is the responsibility of the student to complete withdrawal procedures.

RESIDENCY

A resident student is defined as follows:

a. An unemancipated minor student who has not attained the age of 21 and is under the care, custody or support of the individual or individuals having legal custody of the student and who live in the district.

b. An emancipated minor student who has not attained the age of 21 and who is not under the care, custody and support of an individual or individuals having legal custody, but lives in the district.

c. An adult student who has attained the age of 21 and who has established residence within the St. Louis Community College district.

d. A non-immigrant unemancipated minor alien student, holding a visa type B, F, H(except H-1B), J, M, O-2, P or Q and who is a legal dependent of an individual(s) who holds permanent alien status or who holds a visa in a category other than those specified above and who lives within the district.

e. A non-immigrant alien holding a visa in a category other than those specified above will be assessed in-district fees if he/she has established residence within the district.

The burden of proof for establishing resident student status rests with the student.

Tuition for international students residing in the USA on non-immigrant visas will be assessed according to their visa category and their residency. Contact the Admissions/Registration office.

Financial Aid

St. Louis Community College provides a comprehensive financial aid program funded by federal, state and private agencies. Aid awards fall into four categories: grants, scholarships, loans and work. Although superior ability and talent are recognized through the College’s and other scholarship programs, most aid is awarded on the basis of financial need.

It is not within the scope of this catalog to explain all of the financial aid programs available. More information explaining the programs and application is available in the financial aid brochure available at each campus or on the college Web site at www.stlcc.edu/financialaid/index.html. Each campus
publishes a financial aid brochure that explains all of the programs and gives information on application.

Students are encouraged to apply for aid as early as possible (at least by April 1 for the fall semester) because some funds may be depleted. Students should use aid programs as a supplement to personal or family funds rather than as the only way of paying for college.

Students who wish to know more about their financial aid eligibility should contact the Financial Aid office. In general, students must demonstrate need through an approved federal need analysis system.

Students receiving certain types of financial aid are required to submit official high school transcripts, placement test scores and official college transcripts. They also are required to declare a program of study and enroll in courses appropriate to that program. Students are given a maximum amount of time within which to complete programs, based on enrollment status, and a maximum number of applicable credit hours transcripted. Students must pass at least two-thirds of all credit courses attempted.

Students are expected to maintain satisfactory grades to remain eligible for aid. A 2.0 cumulative grade point average is required. See “Satisfactory Academic Progress.” Grades of F, W, I, PR and U are not acceptable toward meeting these requirements.

At the end of each session, progress is assessed. Students who do not meet the requirements will be placed on financial warning the next session of enrollment. During the financial warning session, financial aid eligibility may be continued. Failure to meet the criteria during the financial warning semester will result in suspension and termination from Title IV aid.

Students, who fail, withdraw or receive an Incomplete for all classes in which they enroll will not be eligible for financial aid the next semester of enrollment.

Students may appeal termination of financial aid by writing a letter of appeal to the campus manager of financial aid. Students must document any extenuating circumstances that prevented them from maintaining the required standards.

VETERANS AND OTHER AID

Detailed information about services for veterans is available from the campus Veterans Services office.

Some students also may be eligible for financial aid from agencies such as Department of Mental Health, Department of Vocational Rehabilitation and Rehabilitation Services for the Blind. Students must make their own arrangements for such aid.

A+ SCHOOLS PROGRAM

Under grants made available through the Missouri A+ School Program, qualified graduates of participating high schools are eligible for scholarship grants to St. Louis Community College. Students must fulfill A+ Program requirements at the high school before applying for grants. Students should contact high school counselors for eligibility requirements. Information also available at: www.stlcc.edu/financialaid/scholarships.html#aplus.

Academic Policies

CREDIT/COURSE LOAD

The unit of credit is the semester hour. Normally, one credit it may be earned in a lecture course which meets for one hour each week during a semester. In a laboratory course, one credit usually is granted for two to three hours in a lab each week during the semester.

Course load is the total number of hours spent in class each week during a semester. Students enrolled in at least 12 hours are classified as full-time and normally carry a course load of 12 to 18 hours. Students intending to register for more than 18 credit hours must obtain approval from the campus Counseling office.

DEGREES AND CERTIFICATES OFFERED

The College offers five associate degrees, the certificate of proficiency and the certificate of specialization. Most of the College’s degrees and certificates are designed to be taken on a full- or part-time basis. Degrees can be completed in two years of full-time attendance. Certificates usually can be completed in one or two semesters. However, since most students attend classes part time, degrees and certificates can take longer to complete. (See “Degree and Certificate Time Limits.”)

The certificate of general education is designed for students who complete the 42-credit hour General Education program.

The associate in arts degree is designed for students who plan to transfer to another college and work toward a bachelor’s degree. The associate of arts in teaching degree is designed for students who plan to transfer to another college and work toward a bachelor’s degree in teacher education. The associate in fine arts degree is offered jointly with the University of Missouri-St. Louis and is designed for students who plan to transfer to UM-St. Louis and earn a bachelor of fine arts degree. The associate in applied science degree helps students develop practical and theoretical skills that prepare them for entry-level jobs. The associate in science degree is designed to transfer to a particular institution in a specialized area. The certificate of proficiency is for persons whose intended job does not require an associate degree. It also is for persons who wish additional information/skills in a particular subject area. The certificate of specialization is for persons who desire information/skills in a specific area usually related to a current job.

REQUIREMENTS FOR GRADUATION

Requirements for an associate degree are as follows:

1. Satisfactory completion of one of the programs listed in this catalog.

2. Completion of a minimum of 64 credit hours. Fifteen of the last 25 hours of credit applicable to the associate degree must be completed at St. Louis Community College.

   a. A maximum of four credit hours from courses numbered below :100 may apply as unspecified electives toward the associate degree. Credit hours below :100 may not be applied as electives defined by discipline, such as “science-mathematics elective” or “humanities-communications elective.”

   b. A maximum of nine credit hours in special problems courses may apply as unspecified electives toward the associate degree.
degree. Special Problems courses may not be applied as electives defined by disciplines such as “science-mathematics elective” or “humanities-communications elective.”

3. A cumulative grade point average of 2.0 (C) or higher. Credits from previously-attended colleges are not computed in the average.

4. Completion of a minimum of two credit hours of physical education, at least one in an activity course. A few specialized PE courses will not fulfill this requirement; see an academic advisor for detailed information. Appropriate accommodations will be made for students with disabilities.

5. Missouri Requirement: The course requirements in federal and state constitutions and American history and institutions must be met by the satisfactory completion of one of the following courses:
   - HST:100 American Civilization
   - HST:101 American History I
   - HST:102 American History II
   - HST:103 American History I (Honors)
   - HST:104 American History II (Honors)
   - HST:105 The United States in the Twentieth Century
   - HST:107 History of Black America
   - HST:137 African-American History I
   - HST:138 African-American History II
   - PSC:101 Introduction to American Politics
   - PSC:103 State and Urban Politics
   - PSC:106 Blacks and the American Political Process
   - PSC:205 Constitutional Issues

   Students who have taken HST:101, HST:102, HST:103, or HST:104, cannot receive credit toward graduation for HST:100. Students taking HST:100 cannot receive credit toward graduation for HST:101, HST:102, HST:103 or HST:104.

6. To obtain a certificate of proficiency or a certificate of specialization, students must earn a cumulative grade point average of 2.0 (C) or higher.

7. College policy requires students who apply for a degree to participate in an appropriate outcomes assessment prior to degree being awarded.

8. Two-thirds of all credit hours required for certificates must be completed at SLCC.

Note: Completion of graduation requirements does not mean professional certification or registration or approval to sit for board or licensing examinations.

SECOND ASSOCIATE DEGREE

Persons who wish to receive a second associate degree must earn 15 additional credit hours and complete all academic requirements for the additional program.

APPLICATION FOR GRADUATION

Students preparing to graduate with a degree or certificate must file a graduation application with the Admissions/Registration office not later than the end of the sixth week of the fall or spring semester or the third week of the summer session.

DEGREE AND CERTIFICATE TIME LIMITS

Students are expected to complete degree and certificate requirements within six years of the date the program of study was declared.

Students failing to meet the original time limit must meet the degree and certificate requirements of any catalog in effect within six years of the semester and year of application for graduation.

Former SLCC students returning to the College may not continue the original program of study if the program was deactivated prior to their re-entry.

HONORS

Transcripts and diplomas of graduates who have earned cumulative grade point averages of 3.5 or higher will be designated With Academic Honors.

Transcripts and diplomas of graduates who have earned cumulative grade point averages of 4.0 will be designated With Highest Academic Honors.

Full-time students who are enrolled in at least 12 credit hours and who earn current grade point averages of 3.5 or higher will be designated Dean’s List for that semester.

Part-time students will be designated Dean’s List at the accumulation of each increment of 12 credit hours with a grade point average of 3.5 or higher.

HONORS PROGRAM

Admission to the college honors program is based on any of the following criteria: a 3.5 or better GPA in either high school or college based on a 4.0 scale, a score of 1100 or better on the Scholastic Achievement Test (SAT) or a score of 25 or better on the American College Testing Program Assessment (ACT).

Both transfer and career programs offer a variety of ways to earn honors credit, including honors courses and projects and honors contracts within regular courses. Students who earn 15 hours of honors credit will receive the designation of Honors Program Scholar on their diplomas and transcripts.

For more information contact the campus honors coordinator.

ASSESSMENT

St. Louis Community College collects and uses assessment data to improve student learning, academic achievement, and overall institutional effectiveness. When combined with thoughtful interpretation by faculty and staff, assessment supports the overall decision-making needs of the College and the specific decision-making needs of individual units and programs.

Students often are asked to participate in assessment to provide information they may use in making decisions about their education or careers. Such assessments are “formative”—intended only to provide helpful information—and have nothing to do with students’ grades or other “summative” evaluations. Faculty, staff and administrators regularly assess performance of classes, courses, or departments to ensure that their desired outcomes are being achieved. Ultimately, assessment is the means by which St. Louis Community College can guarantee that it is fulfilling its mission: advancing student
learning. A mission-based approach to assessment helps the College focus its efforts and keep its promise to the St. Louis community.

Assessment at St. Louis Community College occurs at a number of different points and for a number of different reasons:

Assessment is required prior to advisement and registration. St. Louis Community College uses Accuplacer, a computerized placement test. Accuplacer gives essential information about academic skills and needs. Test results indicate whether students are college ready or will be required to complete one or more preparatory courses in reading, writing or mathematics. The Accuplacer test is required of all students unless academic skills and needs. Test results indicate whether students are college ready or will be required to complete one or more preparatory courses in reading, writing or mathematics. The Accuplacer test is required of all students unless academic credentials are submitted that qualify students to take such courses without testing.

The College may waive all or part of the entry assessment if students provide written documentation of one of the following:
- A college transcript or grade report documenting successful completion (with a C grade or higher) of reading, writing or mathematics course prerequisites
- A college degree from an accredited institution
- An appropriate ACT score earned within the last 3 years:
  - A composite score of 21 or above to waive the reading and writing tests
  - A math score of 23 or above to waive the math test
- An appropriate SAT score earned within the last 3 years:
  - A verbal score of 500 or above to waive the reading and writing tests
  - A math score of 580 or above to waive the math test.

If documentation cannot be provided, students will be required to take the appropriate placement test(s). Scores will remain valid up to three years from the semester in which the test was taken; thereafter, students will be required to retake the Accuplacer test. Call the Assessment Center for testing schedule, or visit the Web site: www.stlcc.edu/admreg/faq.html#ASSESSMENT or www.stlcc.edu/admreg/directory.html#assessment.

If you are a student with a disability and need accommodations for your entry assessment, call the Access office for an appointment prior to testing. You must provide current written documentation of a disability that is based on adult norms from a qualified professional or agency. For more information, contact the campus Access office. Individuals with speech or hearing impairments may call via Relay Missouri by dialing 711.

Assessment at St. Louis Community College occurs at a number of different points and for a number of different reasons:

Exit Assessment
Students completing their associate degrees are required to participate in an exit assessment, typically a nationally-normed standardized test. Such assessments are used to gauge students’ levels of competence in general education. In addition, special assessments may be required depending upon students’ chosen academic or career areas.

Classroom Assessment
Classroom assessment techniques, or CATs, are ungraded tasks commonly employed by instructors to monitor student learning. The primary purpose of such classroom assessment is to get students’ views on how to better help them learn.

Course Assessment
In course assessment, academic departments cooperate to decide which courses to assess and which assessment measures to use. The goal is to gather information which will allow departments to make collegewide changes in courses to increase student learning. These ongoing assessments are necessary to sustain the credibility and transferability of courses and the programs which require them.

Program Assessment
The College offers a number of programs, both academic and career, which are assessed to ensure that they are meeting the standards set both by professionals in the field and various accrediting agencies. Doing so assures students that they are participating in programs whose standards are recognized and accepted by other programs and institutions.

Institutional Assessment
The College assesses its various services and operations on an annual basis. College and student support services are assessed to determine how well they are accomplishing their institutional mission. Various external agencies expect colleges to assess and improve student learning and institutional effectiveness. These agencies include regional accrediting bodies like the Higher Learning Commission, professional accrediting bodies for career programs like nursing as well as government agencies.

ATTENDANCE AND WITHDRAWAL
Students are expected to attend classes. Excessive absences, as determined by the instructor, may result in a failing grade. Attendance requirements should be outlined during the first class meeting.

Students deciding to withdraw from a class are encouraged to talk to the instructor first. To formally withdraw, students must submit official forms to the Admissions/Registration office. To receive a grade of W for the course, the withdrawal process must be completed prior to the end of the College’s 12th week of classes. Late-start and short-term courses have different withdrawal deadlines. Contact the Admissions/Registration office for appropriate dates.

At the end of the second week of classes (first week for summer and interim sessions), students who have registered and paid for a class but are reported by the instructor as never attended will be withdrawn. Classes less than a full semester in length may have different administrative withdrawal dates. The class will be shown on the transcript with a grade of W, and students are not eligible for a refund of fees. After this period the instructor cannot withdraw students from class. It is always the student’s responsibility to initiate a withdrawal.
CLASS PREPARATION

On average at least two hours of outside study and preparation are needed for each hour of regular classroom work. Students enrolled for 15 credit hours, therefore, should budget a minimum of 30 clock hours per week for study outside class and laboratory meetings.

FINAL EXAMINATIONS

A final examination or other culminating experience usually is required for completion of a course and for a passing grade. Absences from the final examination and the privilege of a make-up examination must be approved by the instructor.

GRADING SYSTEM AND GRADE POINT AVERAGE

The following grading symbols and points are used:

<table>
<thead>
<tr>
<th>GRADING SYMBOLS</th>
<th>GRADE POINTS</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>superior</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>above average</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>average</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>passing, below average*</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>failure</td>
</tr>
</tbody>
</table>

* The grade of D may be considered unsatisfactory for progress in some programs.

Only grades earned at St. Louis Community College are included in the calculation of grade point averages for degrees and certificates.

THE FOLLOWING SYMBOLS ALSO MAY APPEAR ON STUDENTS’ TRANSCRIPTS:

R—Credit—This signifies that credit has been earned by examination. 
T—Audit—This is an enrollment status that signifies no intent to earn credit. It carries no implication concerning class attendance or skill accomplishment. The same fees and requirements as regular class members are expected. Students may change from audit to credit status or credit to audit status only during the period in which the 50 percent refund policy is in effect. 
**S—Satisfactory—A symbol indicating the award of credit. The earned credit(s) count toward graduation, but are not used in grade point average calculations.
**U—Unsatisfactory—A symbol indicating the award of no credit and no grade points.
I—Incomplete—This normally indicates students have completed a major portion of the work in a class and, for reasons approved by the instructor, are prevented from completing the amount of coursework required during the regular college term. Students must complete the coursework in the time frame established by the instructor, up to one calendar year, in order for the "I" to be changed to a letter grade. Student and instructor must enter into a written agreement describing the work to be completed, the grading criteria, and the time frame for completion. Upon satisfactory completion of all work by the student, the instructor will initiate an appropriate grade change. After one year, if all requirements are not met, the “I” will change to a permanent grade of “F” on the student’s academic record. With the consent of the instructor, the one-year limit may be extended by the instructor, the department chair or dean. The written agreement must be given to the department chair, who, if an instructor leaves the employ of St. Louis Community College, will assure evaluation of any work that might be completed. 
PR—Progress Reenroll—Students who make progress in a course, but do not complete the predetermined minimum amount of course work may, at the discretion of the instructor, be given a PR. This symbol represents no credits earned and carries no grade point value. Students are permitted to take the course again, but must pay tuition a second time.
W—Withdrawal—A transcript notation that reflects withdrawal.
NG—No Grade—This is a temporary indication that the instructor has not assigned a grade.
**Grades of S or U can be awarded only in courses approved for this purpose under guidelines developed by the College.

STUDENT GRADES

Students may view their final grades and print unofficial transcripts by visiting www.stlcc.edu/sct-erp/ and logging in to their student account.

If a paper copy of grades is required, students may request a duplicate grade mailer from the Admissions/Registration office.

REPEATING COURSES

When students repeat a course, the latest grade earned will be used in calculating grade point average. However, all enrollments and grades earned will appear on the transcript. Students must have authorization from a counselor or advisor before a third enrollment in the same course.

Some transfer schools will recalculate grade point averages for admissions purposes and include all grades earned.

CHANGE OF PROGRAM

Students can change programs by filing a form available from the Admissions/Registration office.

Recalculation of Grade Point Average—In some cases, the student may request academic records be reevaluated to establish a new cumulative grade point average. Any grades below a D for courses taken at the College will not be included in the new cumulative grade point average. Other courses will be accepted if they fulfill degree requirements in the new program. Coursework removed from GPA calculations cannot be used to meet degree requirements. All courses will remain on the transcript.
PROLONGED ABSENCE FROM COLLEGE

Following an absence from the College of 10 consecutive calendar years, former St. Louis Community College students may apply for a one-time recalculation of grade point average with academic forgiveness. Students must apply during their first semester of reenrollment after the 10-year absence. All coursework below “C” will be removed from the GPA calculation. Coursework removed from GPA calculation cannot be used to meet degree requirements. All courses will remain on the transcript.

SATISFACTORY ACADEMIC PROGRESS

All students are expected to make satisfactory academic progress.

1. Good Standing—Cumulative 2.0 GPA after completing at least six credit hours.
2. Academic Probation—Less than a cumulative 2.0 GPA after completing at least six credit hours.
3. Academic Probation/Restricted Probation/ Suspension— Students on academic probation will not be allowed to self-advice. Once placed on probation, a student must achieve a cumulative GPA of 2.0 in the next academic term in which he or she is enrolled, or be placed on restricted probation. Students on restricted probation must sign a contract with the Counseling office stipulating conditions for remaining enrolled at the College. Students on restricted probation have two terms in which to raise their GPA to 2.0. Those that fail to do so will be suspended from the college for one academic year.

CREDIT BY EXAMINATION OR EXPERIENCE

Students may be eligible for credit for academic knowledge gained outside the classroom. To earn credit through examination, students must currently be enrolled at St. Louis Community College. The amount of credit earned through examination is limited only by college policy that 15 of the final 25 semester hours toward the associate degree must be earned at SLCC. However, students transferring to another institution should be aware that some schools may have different standards for awarding credit based on examination. Students should talk to an advisor about the transfer of this credit.

Various procedures and programs for credit are available through the campus instructional departments. They include:

- **Advanced Placement Program (AP)**
  Students who have successfully completed college-level courses while still in high school may be eligible for college credit or advanced standing if they make satisfactory scores on the Advanced Placement Examination. This test is sponsored by the College Entrance Examination Board and is administered by participating high schools. Test scores should be sent to the Admissions/Registration office at the campus. Credit or advanced standing may be considered, if the instruction area approves, for scores of three or higher.

- **College Level Examination Program (CLEP)**
  The College Level Examination Program evaluates knowledge gained through reading, job experience, non-college training programs, etc. The program is sponsored by the College Entrance Examination Board. Students may earn credit for general or subject examinations. Students should check with the instruction divisions and campus Counseling office before taking the examination to determine requirements for credit. Test scores should be sent to the Admissions/Registration office.

- **Departmental Examination**
  Several instruction departments offer examinations for students who have acquired knowledge in a particular subject area. Students may petition to receive credit in a course by taking a departmental examination. The dean can refuse permission for students considered insufficiently prepared. An examination fee is charged. Tutoring is not provided, nor is passing the examination guaranteed. If credit is earned, it is recorded on the transcript as “credit by examination.” Students applying to transfer should be aware that some colleges and universities do not accept such credit.

- **Work or Military Experience Evaluation**
  Students who have earned credit from a non-accredited institution or for work experience may be granted college credit on the basis of a written or oral examination and/or certified verification of experience. Experience gained in the armed services, service schools and other sources may be considered for credit. The appropriate instruction division will determine requirements for credit.
TRANSCRIPT SERVICES

Official transcripts of grades and credits earned at the College are issued only by the Central Student Records office. The office is located at the Forest Park campus, Room B-013. The mailing address is Central Student Records, St. Louis Community College, 5600 Oakland Ave., St. Louis, MO 63110. The phone number is 314-644-9670.

Transcripts may be requested in person at the cashier’s office on campus or by writing directly to the Central Student Records office. Written requests should include semester and year of last attendance, name under which enrolled, and student identification number or Social Security number. Complete information as to street address and location and office or agency to which the transcript is to be mailed is required.

A $2 fee is required for each transcript. The fee for each transcript will increase to $5 as of July 1, 2007. Transcripts will not be processed for students with outstanding financial obligations at the College, such as library, parking fines or outstanding loans.

Students may view grades and print unofficial transcripts by going to www.stlcc.edu/sct-erp to log in to their information.

TRANSFER CREDIT

To be eligible for acceptance of previously-earned credit, students must be currently enrolled at St. Louis Community College with a declared program of study.

Students should have official transcripts mailed to the College and request an evaluation of previously-earned credits at the campus Admissions/Registration office.

Transcripts from other postsecondary institutions will be evaluated. Credits in which passing grades have to be earned will be accepted and counted in transfer as they fulfill SLCC’s program and degree requirements. Transfer credits will be evaluated for degree and prerequisite requirements in the same manner as credits earned at St. Louis Community College.

A transfer student may invoke the College’s transfer appeals process to challenge institutional decisions on the acceptance of credit(s) from regionally accredited Missouri public colleges and universities or those that have been advanced to candidacy status by the Higher Learning Commission of the North Central Association.

Accepted transfer credits will be included in the cumulative hours credit at SLCC. Grades earned at other institutions are not recorded and are not made part of the cumulative grade point average at SLCC.

TRANSFER TO ANOTHER SCHOOL

Admission regulations for transfer students vary among receiving colleges and universities. Therefore, students planning to transfer credits to another college or university should contact the college or university prior to enrollment. Although the acceptance of credit is at the discretion of the transfer school, SLCC does have articulation agreements that can facilitate transfer. Generally, college transfer program courses will satisfy various department, elective and degree requirements at receiving schools. Career program courses may not transfer because these programs are designed for employment preparation rather than transfer.

Students completing SLCC’s Missouri General Education requirements will receive certification on their transcripts. This certification satisfies all general education requirements of Missouri public colleges and universities except the University of Missouri-Columbia.

The following Missouri colleges are signators of the General Education agreement:

- Northwestern Missouri State University
- University of Central Missouri
- Culver-Stockton College
- Southeast Missouri State University
- Missouri State University
- Lincoln University
- Truman State University
- Missouri Southern State University
- Missouri Western State University
- University of Missouri-Kansas City
- University of Missouri-Rolla
- University of Missouri-St. Louis
- Harris-Street State University
- Ozarks Technical Community College
- Crowder College
- St. Charles Community College
- East Central College
- Jefferson College
- State Fair Community College
- St. Louis Community College
- Metropolitan Community College
- Three Rivers Community College
- Mineral Area College
- Moberly Area Community College
- North Central Missouri College

CONFIDENTIALITY OF STUDENT RECORDS

The College complies with the Family Educational Rights and Privacy Act (FERPA) which affords you certain rights with respect to your education records. They are as follows:

1. The right to inspect and review your education records within 45 days of the day you request access. This is a list of official records and their locations: Advisement (Advising); Counseling (Counseling); Disciplinary (Student Services); Enrollment Records (Admissions/Registration); Financial Aid (Financial Aid); Placement (Career and Employment Services); Medical (Health Services); Security (College Police); Photo Identification Card (Student Activities).

2. The right to request the amendment of your education records that you believe are inaccurate or misleading. You may fill out a request to challenge the record on a form available in the Admissions/Registration office. If the College decides not to amend the record, you may appeal...
the decision to the Student Appellate Hearing Committee.
3. The right to consent to disclosures of personally identifiable information contained in your education record, except to the extent that FERPA authorizes disclosure without consent.
4. The right to request that directory information not be released without prior consent. Requests to withhold release should be received by the Admissions/Registration office on the first day of each term during which the student wishes the withholding to be effective. Directory information may be released without the student's consent and includes the following: name, class level, full- or part-time enrollment, division, program of study, dates of enrollment, degrees received, height and weight for members of athletic teams, awards received, and honors.
5. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. The name and address of the office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4605.

Student Services

ACADEMIC ADVISING

Academic advisors are available to assist students by providing information about college policies and procedures, programs of study, and course requirements. For students planning to transfer, an advisor can help clarify transfer requirements and suggest appropriate coursework; however, the responsibility for course selection and meeting degree and transfer requirements rests with each student.

ACCESS OFFICE, DISABILITY SUPPORT SERVICES

The Access office offers support services to students who have documented disabilities of a permanent or temporary nature. The staff is available to provide the following services: individual counseling and academic advising; coordination of needed accommodations such as interpreters, notetakers and readers; and serving as liaison with faculty and staff and professional agencies in the community.

To qualify for services, students must identify themselves to the Access office and provide written documentation of their disabilities that meets the College's documentation criteria and indicates a substantial limitation in the educational environment from qualified professionals or agencies. This should be done at least six weeks prior to the beginning of each semester so that accommodations can be in place when classes begin. After accommodations are assigned by the Access office, students will pick up the notices listing approved accommodations and give the notices to their instructors. It is the student's responsibility to discuss his/her special needs with each instructor. The goal of the program is to minimize physical and attitudinal barriers by providing supplemental services to students and faculty. Another aim is to help students achieve individual autonomy. For more information, contact the Access office on each campus or visit the Web site at www.stlcc.edu/access.

ALUMNI SERVICES

Each campus has an alumni association open to all graduates and former students. Alumni association members are eligible for a variety of benefits and services including participation in selected field trip and travel programs; recreational facilities use; library privileges; career planning, general counseling, testing and job placement services; access to continuing education information; alumni publications; and admission to social, cultural and athletic events. In addition, special interest alumni groups are encouraged to organize and develop programs and activities. Alumni fees are assessed by the campus. Contact the Alumni Association office for information.

ATHLETICS

Men's and women's teams and individual athletes from Forest Park, Florissant Valley and Meramec have won numerous regional and national honors. Among the varsity sports offered by the College are baseball, basketball, soccer, softball, track and field, volleyball and wrestling. Students not involved in organized sports can take advantage of the campuses' recreational facilities.

The College is a member of the National Junior College Athletic Association and the Midwest Community College Athletic Conference.

BLACKBOARD CLASSES

The College uses the Blackboard Course Management System where important course information like syllabi and assignments are posted. For a Blackboard tutorial, visit: www.stlcc.edu/distance/bbfiles/.

The College also uses the BannerWeb System, which contains student information such as class enrollment, financial aid information and personal information. Enrollment information in BannerWeb is transmitted to Blackboard daily.

CAREER AND EMPLOYMENT SERVICES

Each campus provides placement services to assist students and alumni with finding full-time, part-time or temporary employment. An online database of employers and job listings is used to provide information about employment opportunities as well as internship and cooperative education programs. Professionals are available to help with producing resumes, improving interviewing skills and developing job search strategies.

Information about hundreds of careers is available at each campus. Decision making, life and career planning, and job search strategies are stressed as a part of career development.

CHILD CARE

The Florissant Valley, Forest Park and Meramec campuses offer child care services for children of students when classes are in session. The services are associated with the Early Care and Education program on each campus.
COUNSELING SERVICES
Professional counselors are available to assist students with educational, career and personal concerns. They help students gain a clear understanding of their strengths, identifying options and making choices. A variety of interest and personality tests is available to students using counseling services.

HEALTH SERVICES
A registered nurse is available on Florissant Valley, Forest Park and Meramec campuses for urgent care, first aid and treatment for minor injury and illness, referral, preventive screening and education. Some immunizations are available.

At Forest Park’s Dental Clinic, dental hygiene students perform preventive services which include cleanings and X-rays for a nominal fee.

For more information about hours, services, student insurance, special parking permits or extensive absence due to illness, please call the campus Health Service office.

INTERNATIONAL EDUCATION
In recognition of the importance of the United States' position within the international community, St. Louis Community College offers transcultural and international study. This includes semesters abroad, study tours and promoting an international aspect to programs and classes. Additional information can be obtained by calling the Office of International Education at 314-539-5363.

LEARNING LABS
Each campus has mathematics, reading, English and other specialized laboratories that offer personal assistance to students to supplement classroom instruction.

These labs provide individual tutorial and remedial help for students enrolled at the College. Students may use the labs on both an informal, walk-in and an appointment basis. The labs are designed primarily to help students who are enrolled in specific courses. However, the labs are open to any student on campus who would like some help with learning skills.

LIBRARIES
Instructional Resources (IR) is a service division on each of the campuses dedicated to the support of instruction, facilitation of learning and enhancement of the cultural environment. IR buildings are centrally located on each campus and house the principal activities of the two departments of Instructional Resources: Library Services and Media Services. A book collection of more than 250,000 volumes, 700 newspapers and periodicals, computer software, and numerous other instructional materials are maintained.

Registered students of the College may use and check out materials from any campus library. Campus ID cards serve as library cards and are valid at all campus libraries. Students are encouraged to check with the Reference and Circulation departments for brochures that describe services available and library procedures.

STUDENT ACTIVITIES
Student activities can help students develop and expand interests and find ways to contribute talents and skills to the College. Opportunities for leadership development are available through student government, clubs and organizations, honorary societies, student publications, and special interest groups. In addition, the campuses sponsor film series, concerts, plays, discussion groups, lectures, exhibits, performances, social functions and special presentations.

For informal gatherings, the campuses provide facilities such as game rooms, meeting rooms, music and television lounges, study areas and cafeterias.

STUDENT ID CARDS
All students enrolled in credit courses are required to activate a STLCC OneCard. Photos can be taken in the Campus Life office at Florissant Valley, the Office of Student Life at Forest Park, the Student Activities office at Meramec, or the Information Desk at Wildwood. This card is the College’s disbursement card for payments/refunds to student accounts and the card is required for checking out library books and other materials; for use of the game room, recreational facilities, and learning labs; attending student activities and sporting events; and for personal check approval.

STUDY HELP
The College is committed to helping students succeed. Students who are encountering difficulties with academic work should consult their instructor or a counselor. A tutorial program offered through Counseling is available for some courses.

If a problem should arise which can be traced to ineffective study habits, the student should contact the Study Skills Center which exists to provide helpful solutions to study problems. The College also offers students an opportunity to bolster their grasp of fundamental skills, such as reading and math, through learning labs.

TEXTBOOKS
Textbooks for all on-campus and off-campus classes will be available in the bookstore and at:
- www.flovalleybookstore.com/floris/
- www.forestparkbookstore.com/forpark/
- www.meramecbookstore.com/meramec/
- www.wildwoodbookstore.com/wildwood/
College Policies

CLOSING PROCEDURES
The decision to cancel, delay classes or close an entire campus due to weather or other emergency situations lies with the president of each campus. Upon this decision, closings will be announced on the following stations: KMOX (1120 AM); KMOX-TV, Channel 4; KSDK-TV, Channel 5; and KTVI-TV, Channel 2. This information is also available on www.stlcc.edu.

FIREARMS ON COLLEGE PROPERTY
No person (except for licensed police officers) shall possess or carry any firearm, visible or concealed, on college property (including college buildings and grounds – leased or owned by the College – college athletic fields and parking lots) or in any college van or vehicle or at college sponsored events on and off college property.

CONSUMER INFORMATION
St. Louis Community College is required by the Higher Education Amendments of 1998, Public Law 105-244, to provide information regarding several consumer-education related topics. Those topics include: general information about St. Louis Community College, financial aid information for St. Louis Community College, St. Louis Community College’s Completion/Graduation/Transfer Rates Report, Campus Crime Statistics (Clery Act Report), Drug and Alcohol Abuse Program Report, Equity in Athletics (Title IX) Report and Intercollegiate Athletics Annual Revenue/Expenditures (Title IX) Report.

This information may be accessed by visiting the college Web site at www.stlcc.edu/services/consumer.

PARKING ON CAMPUS
Parking tags are required on all vehicles using campus parking facilities. Parking tags are available in the Campus Life office at Florissant Valley, the Office of Student Life at Forest Park, the Student Activities office at Meramec, or the Information Desk at Wildwood. Parking tags are permanent and are to be kept from one semester to another. Replacement tags are $3.

Accessible parking is available for students with physical disabilities who have state parking authorization.

SEXUAL HARASSMENT
St. Louis Community College is committed to providing an academic and work environment that is free from sexual harassment. In keeping with this commitment, the college prohibits sexual harassment of any member of the college community. Sexual harassment in any form, including verbal, written, physical or visual harassment will not be tolerated. Information about the policy and a list of sexual harassment advisors is available from the human resources office, the Fact Finder student handbook or online at www.stlcc.edu/sh_tutorial.

SMOKING REGULATIONS
St. Louis Community College has adopted a NO Smoking policy. Smoking is permitted outside buildings only.

STUDENT RIGHTS AND RESPONSIBILITIES
Students are expected to assume responsibility for their actions; to know and obey federal, state and local laws; and to know and obey the rules and regulations of the College. College rules and regulations may be found in the Fact Finder student handbook available online at www.stlcc.edu/factfinder and in offices throughout the campuses.

Academic Appeals — Procedures are printed in Rights and Responsibilities section of the handbook and appear in College Administrative Procedures G.10 available online at www.stlcc.edu/pol/slccprocedures.pdf.

Grievance/Disciplinary Appeals — Procedures are printed in Rights and Responsibilities section of the handbook and appear in College Administrative Procedures G.15 available online at www.stlcc.edu/pol/slccprocedures.pdf.


Grievance Process for Persons with Disabilities — Procedures are printed in Rights and Responsibilities section of the handbook and appear in College Administrative Procedures G.6 available online at www.stlcc.edu/pol/slccprocedures.pdf.

SUBSTANCE ABUSE POLICY
St. Louis Community College is committed to providing a positive and healthy environment for students and employees. Students assume the obligation to conduct themselves in a manner compatible with the College’s function as an educational institution. Therefore, the use of, being under the influence of, possession of, or distribution of beverage alcohol or illegal drugs on campus or at any college-sponsored function will result in disciplinary action. In addition, students are subject to the rules of accountability imposed by federal, state and local laws. Detailed information about the College’s policy and resources concerning substance abuse can be found online at www.stlcc.edu/factfinder/ and in the “Substance Abuse Facts and Resources” pamphlet and Fact Finder student handbook available in offices throughout the campuses.

UNATTENDED CHILDREN
Students are not permitted to bring children to class, nor should children be left unattended in the halls, offices, library, student center or outside on campus property. The College reserves the right to protect the safety and welfare of unattended children. If students leave children unattended, the College will institute appropriate disciplinary action.

WELFARE REFORM RESPONSE
Support services are available to students who receive public assistance, Temporary Assistance for Needy Families (TANF), Food Stamps, Medicaid, or Child Care Assistance. The TANF office helps students stay in school and succeed in school by providing support, informing them of their rights and finding resources both on and off campus. To access these services, call the TANF office on campus.
Allied Health Continuing Education is a districtwide department with offices located on the Forest Park campus. Programs are offered at each of the main campuses as well as numerous off-campus locations. Both credit and non-credit programming reside in Allied Health Continuing Education. Credit courses offered by Allied Health Continuing Education are Emergency Medical Technician (including a Web-based class), Paramedic Technology and the RN First Assistant. Numerous non-credit courses are offered for nurses, EMS personnel and other allied health professionals. Allied Health Continuing Education offers a non-credit Legal Nurse Consultant Certificate for registered nurses. The course of study combines both credit and non-credit courses that encompass content areas such as law and torts, trial procedures, legal research and writing and specialized medical case analysis. In addition, non-credit courses are offered for the pre-professional nursing and allied health student. American Heart Association Advanced Cardiac Life Support, Basic Cardiac Life Support, Pediatric Advanced Life Support and lay rescuer CPR and first aid classes are offered by Allied Health Continuing Education.

www.stlcc.edu/fp/ASSCE/AHCE.html

College Credit Telecourses and Web Courses

Telecourses combine televised lessons, related readings and assignments, discussions and examinations. They are offered in a variety of subjects and carry the same credit as similar courses on the campuses. Telecourses can be viewed on KETC-TV Channel 9 and on the Higher Education Channel through local cable television stations. For more information, call 314-644-9798. Classes are also offered via the Internet.

New Traditions

New Traditions provides resources and academic guidance to assist people who are returning to school or work or who are changing jobs or careers. For more information visit: www.stlcc.edu/newtraditions/contact.html

Non-Credit Classes/ Continuing Education

Hundreds of non-credit courses ranging from allied health, family education and microcomputer applications to small business planning and operations, photography, recreation and travel options are offered through the Forest Park, Florissant Valley and Meramec campuses, education centers and at numerous school and community locations. A schedule of non-credit classes is published three times a year. Check the Web site at www.stlcc.edu/conted/ for more information or one of the campus Continuing Education offices.

Project Lead the Way

St. Louis Community College is the community college partner in the region’s Project Lead the Way program and provides leadership and support for the local initiative. Through Project Lead the Way, students in high school earn up to 12 credit hours in engineering technology or 3 credit hours in engineering science that will transfer to a four-year university. Project Lead the Way students also are required to take rigorous academic courses while in high school that better prepare them for college-level coursework. For additional information on Project Lead the Way credit or other Project Lead the Way activities, contact the St. Louis Community College Division of Career and Technical Education at 314-539-5317 or the Manager of College and Career Transitions at 314-539-5363 or 314-539-5166.

Small Business Training Center

Courses and services for small businesses are offered in cooperation with the St. Louis Small Business Development Center and the U.S. Small Business Administration. For more information, call 314-513-4581.

Tech Prep

St. Louis Community College is the college-level partner in the St. Louis Area Tech Prep Consortium and works with local area high school partners to support students in their transition from high school into career and technical education programs at the College. High school Tech Prep students can earn college credit by taking courses with approved articulation agreements. Once they enter SLCC, they can access their earned college credit and have a head start on their degree. Over 3,000 high school students each year participate in Tech Prep. For additional information on Tech Prep credit or other Tech Prep activities, contact the St. Louis Community College Division of Career and Technical Education at 314-539-5317 or the Manager of College and Career Transitions at 314-539-5363 or 314-539-5166.

Workforce and Community Development

Workforce and Community Development (WCD) is the division of St. Louis Community College that collaborates with business, civic, and community based organizations to provide economic opportunity through workforce education and training designed to maximize individual and organizational performance. WCD provides access to services beyond the traditional college setting by engaging students and workers in the workplace and the community. WCD accomplishes this through the following operational units:

- The Center for Business, Industry & Labor (CBIL) provides consulting, training and operational support services to maximize performance and sustain excellence in businesses. www.cbil.org
- The Employment and Training Center (ETC) provides services through the Missouri Career Centers that are designed to assist job seekers to find employment. These services include career counseling, assessment, skill improvement, referral to jobs or training, resume preparation and job seeking skills workshops. www.stlcc.edu/fp/work
• Community Workforce Partnership (CWP) provides opportunities to unemployed and underemployed individuals to enter the work force in jobs that are in demand and to help employed workers remain competitive and productive through skill upgrades. CWP accomplishes its work by developing partnerships with labor, government and community based organizations that leverage the contributions of the College and the partner organization.

www.stlcc.edu/wcd

• The Metropolitan Education and Training Center (MET), located in Wellston, provides area residents with a variety of opportunities to acquire the skills necessary to enter into productive, long-term employment. This training facility is operated through an innovative partnership between the College and key local government and community based organizations dedicated to providing economic opportunity to those most in need. For more information, visit www.techopportunities.org/met.htm or call 314-746-0818.

• Women Entrepreneur Training Program offers courses, workshops and mentoring for women who want to start or expand a small business. For more information, call 314-513-4581 or 314-513-4586.

St. Louis Community College Foundation

MISSION
The St. Louis Community College Foundation creates and fosters community linkages that support and advance the College’s mission of providing excellent educational opportunities for its students and the community by soliciting and administering gifts and funds for college endowment, capital projects, scholarships, and other programs.

PURPOSE
The St. Louis Community College Foundation was established to provide private financial support for students and college programs. Funds are used to provide various types of support including scholarships, faculty development, program support, and capital needs. The Foundation supports more than 50 scholarships and a wide range of projects throughout the College's campuses and educational centers. A list of scholarships can be found at www.stlcc.edu/foundation/copy/Scholarship_Book.pdf.

Call the Foundation office at 314-539-5385 for more information or e-mail at scholarships@stlcc.edu.

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St. Louis Community College and its campuses are accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, 30 North LaSalle St., Suite 2400, Chicago, IL 60602-2504, Telephone: 312-263-0456.

The College is a member of the League for Innovation in the Community College. The League is a nonprofit educational consortium of resourceful community colleges. The League’s mission is to stimulate experimentation and innovation in all areas of community college development and serves as a catalyst, project incubator, and experimental laboratory for all community colleges.

The following programs have been accredited or approved by the agencies listed.

**Collegewide:**

The College’s Emergency Medical Services programs have the associated approval of the Missouri Bureau of Emergency Medical Services.

Vocational and Teacher Education programs are approved by the Missouri Department of Elementary and Secondary Education.

The Nursing programs at each campus are accredited by the National League for Nursing Accrediting Commission, 61 Broadway, New York City, N.Y. 10006, 212-363-5555, and the Missouri State Board of Nursing.

**Florissant Valley:**

*Dietetic Technology*
- American Dietetic Association

*Art*
- National Association of Schools of Art and Design

*Chemical Technology*
- American Chemical Society

*Electronic Engineering Technology*
- Technology Accreditation Commission of Accreditation Board for Engineering and Technology

*Mechanical Engineering Technology*
- Technology Accreditation Commission of the Accreditation Board for Engineering and Technology

**Forest Park:**

*Allied Health*
- Commission on Accreditation of Allied Health Education Programs
- National Accrediting Agency for Clinical Laboratory Science
- Missouri Dental Board
- American Dental Association Commission on Dental Accreditation
- Committee on Accreditation-American Board of Funeral Service Education
- Joint Review Committee on Education in Diagnostic Medical Sonography
- Joint Review Committee on Education in Radiologic Technology
- Commission on Accreditation for Respiratory Care
- Accreditation Review Committee on Education in Surgical Technology

*Automotive Technology and Ford ASSET*
- National Automotive Technicians Education Foundation, Inc.

*Funeral Service*
- American Board of Funeral Service Education

**Meramec:**

*Art*
- National Association of Schools of Art and Design

*Information Reporting Technology*
- National Court Reporters Association
- American Occupational Therapy Association
- Physical Therapy Assistant
- American Physical Therapy Association

*Articulation Agreements*

**Signed Articulation Agreements**

- Capella University
- University of Central Missouri
- Fontbonne University
- Harris-Stowe State University

**Program Area**

- General Transfer
- Occupational Education
- Gen Ed Requirements
- Health Care Management
- Accounting
- Business Administration
- Entrepreneurship Option
- Management Option
- Marketing Option
- Hospitality and Tourism Management
- Information Science and Computer Technology
- MIS Option
- Computer Studies Option
- Elementary Teacher Education
- AFA/BFA
- Accounting
- Hospitality Services Management
- Industrial Technology
- Mortuary Management
- Articulation-General/BA or BS degrees

- Kansas City Art Institute
- Lindenwood University

- Logan University
- Maryville University

- Missouri Baptist University
- National Louis University
- Rollya Technical Center
- Southeast Missouri State University

- Missouri State University
- St. Charles Community College
- St. Louis Carpenters’ Joint Apprenticeship Committee
- St. Louis College of Pharmacy
- University of Missouri-Columbia

- University of Missouri-Rolla
- University of Missouri-St. Louis

- Webster University
- William Woods University

- Accepts AA degree
College Programs

**FV**—Florissant Valley  
**FP**—Forest Park  
**M**—Meramec  
**W**—Wildwood  
**AA**—Associate in Arts degree  
**AAS**—Associate in Applied Science degree  
**AAT**—Associate of Arts in Teaching  
**AFA**—Associate in Fine Arts degree  
**AS**—Associate in Science  
**CG**—Certificate of General Education  
**CP**—Certificate of Proficiency  
**CS**—Certificate of Specialization

**Associate in Fine Arts**—Art Education option, General Fine Arts option, Graphic Communications option, Photography option  
**Certificate of General Education**—Florissant Valley, Forest Park, Meramec and Wildwood  
**Associate of Arts in Teaching**—Florissant Valley, Forest Park and Meramec

Note: programs may not always be available at the campus indicated.

**TRANSFER PROGRAMS**

This program includes freshman- and sophomore-level courses offered in four-year institutions. Students may concentrate in the following subject areas:

<table>
<thead>
<tr>
<th>AA</th>
<th>AS</th>
<th>CS</th>
<th>Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Administration</td>
<td>FV/FP/M/W</td>
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<tr>
<td>Management Option</td>
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<tr>
<td>Communication Arts: Options</td>
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<tr>
<td>Advertising/Public Relations</td>
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<tr>
<td>Broadcasting</td>
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<td>Creative Writing</td>
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<td>Film</td>
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<td>Foreign Language</td>
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<td>Journalism</td>
<td>FV/FP/M</td>
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<td>Literature</td>
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<tr>
<td>Multimedia</td>
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<td>Organizational Communication</td>
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<td>Speech Communication</td>
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<td>Technical/Business Communication</td>
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<td>Theatre Arts</td>
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<td>Computer Science</td>
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<td>General Transfer Studies</td>
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<td>International Studies option</td>
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<td>Life Sciences</td>
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<td>Mathematics</td>
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<tr>
<td>Music</td>
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</tr>
<tr>
<td>Technology Education</td>
<td>FV</td>
<td></td>
<td>37</td>
</tr>
</tbody>
</table>

**CAREER PROGRAMS**

These programs are designed to help you develop or improve job skills. Selected courses from career programs may transfer to four-year institutions. See an academic advisor or counselor for information concerning transferability of courses.

<table>
<thead>
<tr>
<th>AA</th>
<th>CP</th>
<th>CS</th>
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</thead>
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<tr>
<td>Accounting</td>
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<td>Addictions Study</td>
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<tr>
<td>African-American Studies</td>
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<td>Architectural Technology</td>
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<td>Automotive Technology</td>
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<td>Ford Asset Option</td>
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<td>Banking and Finance</td>
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<tr>
<td>Biotechnology</td>
<td>FV</td>
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<td>43</td>
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<tr>
<td>Building Inspection and Code Enforcement Technology</td>
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<tr>
<td>Housing Inspection Option</td>
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<td>Business Administration</td>
<td>FV/FP/M</td>
<td>FV/FP</td>
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<td>Chemical Technology</td>
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<td>Civil Engineering Technology</td>
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<td>Clinical Laboratory Technology</td>
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<tr>
<td>Computer Accounting Technology</td>
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<tr>
<td>Computer Aided Design &amp; Drafting</td>
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<td>Computer Aided Manufacturing</td>
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<td>Computer Aided Publishing</td>
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<td>Construction Office Management</td>
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<td>FV</td>
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<td>Construction Technology</td>
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<td>Credit Management</td>
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<td>Criminal Justice: Options</td>
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<td>Corrections</td>
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<td>FV/FP/M</td>
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### College Programs

**FV**—Florissant Valley  **FP**—Forest Park  **M**—Meramec  **W**—Wildwood  **AA**—Associate in Arts degree  **AAS**—Associate in Applied Science degree  **AAT**—Associate of Arts in Teaching  **AFA**—Associate in Fine Arts degree  **AS**—Associate in Science  **CG**—Certificate of General Education  **CP**—Certificate of Proficiency  **CS**—Certificate of Specialization

### CAREER PROGRAMS

<table>
<thead>
<tr>
<th>Course</th>
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<td>Deaf Communication Studies: Interpreter Education</td>
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<td>Deaf Communication Studies: American Sign Language</td>
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<td>Graphic Design</td>
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<td>World Wide Web</td>
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## College Programs (cont’d.)

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### CLINICAL AND FIELD WORK

Some degree and certificate programs offered by the College require students to obtain clinical or other field experience as part of their coursework. Students with criminal convictions or illegal drug use may have difficulty progressing in these programs. **Healthcare facilities, educational institutions and other field experience settings may mandate that a criminal background check and/or drug screening check (at the student’s expense) be conducted prior to placement in a clinical or field setting. Students not passing these checks may be prohibited from participating in the clinical or field experience, thus rendering the student ineligible to satisfactorily meet the course/program requirements.** Students should contact an academic advisor or the program coordinator for further details.
ASSOCIATE IN ARTS
DEGREE PROGRAM

St. Louis Community College offers an associate in arts degree program with several areas of concentration. The associate in arts degree is designed for students planning to transfer and complete requirements for a bachelor's degree at a four-year college or university. Students should plan their transfer program carefully and become familiar with program requirements at the institution to which they plan to transfer. Many bachelor degree programs have very specific requirements for the freshman and sophomore years and it is the transferring student's responsibility to ensure that courses will apply to the bachelor's degree. Students are encouraged to talk to a counselor or advisor to assist in planning a program of study, or if they are considering a change in academic plans.

All St. Louis Community College associate of arts degrees require 42 credit hours of general education courses. The remaining requirements are specified in an area of concentration for each AA program. General transfer students may fulfill their 18 to 21 hours of electives by concentrating in a general education discipline or taking courses from a variety of disciplines.

General education provides students the opportunity to explore a variety of disciplines and introduces them to the fundamentals of a college education from the perspectives of different subject areas. In addition to giving students a broad foundation that prepares them for any future area of study, it helps them discover the subjects they are most interested in and might want to major in when transferring to a four-year institution.

Students who complete the general education requirements will have "Missouri General Education Requirement completed" noted on their transcripts. Students who achieve their certification will have satisfied all general education requirements at any Missouri public college or university to which they may transfer, except the University of Missouri-Columbia.

The program begins at the foundation level with a cornerstone course, a three-credit course that introduces students to the overall goal of general education and will explore the moral and ethical values of a diverse society in order to understand their own decision-making process. The remaining foundation courses allow students to build the skills they need as they move through the curriculum.

The program continues with main floor courses that make up the bulk of the general education program. Each course addresses institutional competencies for the appropriate knowledge goal and reinforces at least one skill goal. Two of the main floor courses must be speaking-intensive and two must be writing-intensive. Refer to the semester credit class schedule to find such courses. Some classes satisfy both speaking and writing intensive requirements.

The four-credit capstone provides a culminating experience for the general education program. It provides an opportunity for students to use all of the skills and knowledge they have acquired throughout their general education program. The capstone may be interdisciplinary context and allows for some exit assessment. The college Web site www.stlcc.edu/gened/students.html provides more information on the general education program.

St. Louis Community College General Education Course Requirements

FOUNDATION COURSES – 13 hours required
IDS:101 Cornerstone .......................... 3 credits
ENG:101 College Composition I ................. 3 credits
COM:101 Oral Communication ................ 3 credits
MTH: 155 Survey of College Mathematics or
MTH: 160 College Algebra or higher
(except MTH:165 and MTH:166) .................. 4 credits

MAIN FLOOR COURSES – 25-28 credit hours required

Humanities and Fine Arts – 6 credit hours required

Art
ART:100 Art Appreciation
ART:101 Art History I
ART:102 Art History II
ART:103 History of Modern Art
ART:104 Major Black Artists

Communications
COM:114 Oral Interpretation

English/Literature
ENG:110 Creative Writing
ENG:114 Writing Plays and Filmscripts
ENG:201 Introduction to Fiction
ENG:202 Introduction to Poetry and Plays
ENG:203 American Literature
ENG:204 American Literature Before 1865
ENG:205 American Literature Between 1865 and 1945
ENG:206 American Literature After 1945
ENG:207 Humor in American Literature
ENG:210 British Literature Before 1800
ENG:211 British Literature After 1800
ENG:213 The Short Novel
ENG:214 Contemporary Fiction
ENG:215 Popular Literature: Fantasy and Horror
ENG:216 Women in Literature
ENG:217 Major Black Writers
ENG:218 Literature of American Minorities
ENG:222 Major British Writers
ENG:224 Fiction Writing
ENG:225 Poetry Writing
EDU:226 Children's Literature (This is the same course as ENG:226.)
EDU:226 Children's Literature
ENG:227 Literature of the South
ENG:228 Studies in Literature
ENG:230 Environmental Literature
ENG:231 World Literature
ENG:232 Literature of the Caribbean

Foreign Language
ARA:101 Modern Arabic I
ARA:102 Modern Arabic II
CHI:101: Elementary Chinese I
CHI:102: Elementary Chinese II
FRE:101 Elementary French I
FRE:102 Elementary French II
FRE:201 Intermediate French I
FRE:202 Intermediate French II
GER:101 Elementary German I
GER:102 Elementary German II
GER:201 Intermediate German I
GER:202 Intermediate German II
JPN:101 Modern Japanese I
JPN:102 Modern Japanese II
RUS:101 Elementary Russian I
RUS:102 Elementary Russian II
SPA:101 Elementary Spanish I
SPA:102 Elementary Spanish II
SPA:201 Intermediate Spanish I
SPA:202 Intermediate Spanish II

Humanities
HUM:101 Humanities I
HUM:102 Humanities II
HUM:106 Black Humanities
HUM:109 Arts and Ideas I: Prehistoric and Ancient World
HUM:110 Arts and Ideas II: Medieval and Renaissance Time
HUM:112 Creative Thinking
HUM:113 Introduction to Irish Studies
HUM:209 Blacks and the World of Cinema

Mass Communications
MCM:102 Media Literacy
MCM:130 Film Appreciation
MCM:131 History of Film
MCM:132 Major Themes in Film
MCM:133 Film and People: Enjoying Foreign Film
MCM:134 Film Making
MCM:209 Blacks and the World of Cinema
MCM:215 Major Film Directors
MCM:218 Advanced Filmmaking

Music
MUS:113 History of Jazz
MUS:114 The Enjoyment of Music
MUS:128 Survey of Rock Music

Philosophy
PHL:101 Introduction to Philosophy
PHL:102 Introduction to Logic
PHL:104 Ethics
PHL:105 Black Philosophy
PHL:106 Black Religion
PHL:109 Bio-Medical Ethics
PHL:111 Environmental
PHL:112 Business Ethics

Theatre
THT:101 Introduction to Theatre
THT:110 History of Theatre

LIFE AND PHYSICAL SCIENCES – 7-10 CREDIT HOURS REQUIRED
(One lab course required.)

Laboratory Courses
Biology
BIO:106 Human Heredity
BIO:110 General Zoology
BIO:111 Introductory Biology I
BIO:124 General Botany I

Chemistry
CHM:101 Fundamentals of Chemistry I
CHM:102 Fundamentals of Chemistry II
CHM:105 General Chemistry I
CHM:106 General Chemistry II

Geology
GEO:111 Physical Geology

Physical Science
PSI:105 Physical Science I
PSI:124 Principles of Physical Science

Physics
PHY:111 College Physics I
PHY:112 College Physics II

Non-Laboratory Courses
Biology
BIO:105 Topics in Evolution
BIO:113 Modern Aspects of Biology
BIO:117 Conservation and Ecology
BIO:122 Human Sexuality
BIO:123 Animal Behavior
BIO:144 Marine Ecology
BIO:146 Desert Ecology
BIO:148 Ozark Ecology
BIO:151 Biology of Human Health and Disease

Geography
GEG:103 Physical Geography

Geology
GEO:100 Earth Science
GEO:103 Environmental Geology
GEO:104 Prehistoric Life
GEO:113 Oceanography

Physical Anthropology
ANT:101 Introduction to Physical Anthropology and Archaeology

Physical Science
PSI:101 Physical Science Lecture I
PSI:111 Introduction to Astronomy I
PSI:121 Light and Vision
PSI:123 Meteorology

SOCIAL AND BEHAVIORAL SCIENCES – 9 CREDIT HOURS REQUIRED
Three (3) credit hours must meet Missouri State Requirement.
* Indicates course meets Missouri State Requirement.

Anthropology
ANT:102 Introduction to Cultural Anthropology
ANT:103 Cultural Variations
ANT:104 Field Study in Archaeology
ANT:105 Foundations of Archaeology
ANT:201 North American Archaeology
ANT:202 Ethnography: North American Indians
ANT:203 Biblical Archaeology
ANT:205 Cultural Context of Early Christianity
ANT:207 Ancient Civilizations of the Old World
Communications
COM:120 Gender Communication
COM:200 Communication between Cultures
MCM:101 Introduction to Mass Communication

Economics
ECO:103 Economics of the Black Experience
ECO:140 Introduction to Economics
ECO:151 Principles of Economics I (Macro)
ECO:152 Principles of Economics II (Micro)

Geography
GEG:100 Regional Geography: Eastern World
GEG:101 Regional Geography: West World
GEG:106 U.S. and World Geography

History
*HST:100 American Civilization
*HST:101 American History
*HST:102 American History II
*HST:103 American History I, Honors
*HST:104 American History II, Honors
*HST:105 U.S. in the Twentieth Century
*HST:107 History of Black America
HST:115 Ancient and Medieval Heritage
HST:117 Early Modern Europe
HST:119 The Modern World
HST:130 African History I
HST:131 African History II
*HST:137 African American History I
*HST:138 African American History II
HST:139 British History
HST:140 Modern Latin American History
HST:205 History of the Modern Middle East

Humanities
HUM: 115 Life/Death During the Nazi Era

Philosophy
PHL: 103 World Religion

Political Science
*PSC: 101 Introduction to American Politics
*PSC:103 State and Local Politics
PSC:104 British Politics and Society
*PSC:106 Blacks and the American Political Process
PSC:201 International Relations
PSC:204 Politics of African Nations
*PSC:205 Constitutional Issues
PSC:211 U.S. Foreign Policy

Psychology
PSY:125 Human Sexuality
PSY:200 General Psychology
PSY:203 Child Psychology
PSY:205 Human Growth and Development
PSY:206 Introduction to Social Psychology
PSY:207 Applied Psychology
PSY:208 Abnormal Psychology
PSY:214 Adolescent Psychology
PSY:215 Brain and Behavior
PSY:216 Psychology of Gender
PSY:217 Cross Cultural Psychology

Sociology
SOC: 100 Human Relations
SOC:101 Introduction to Sociology
SOC:102 Introduction to Sociology, Honors
SOC:202 American Social Problems/Issues
SOC:203 Criminology and Deviance
SOC:204 Marriage and the Family

Women’s Studies
WMS: 100 Introduction to Women’s Studies

CAPSTONE COURSE – 4 CREDIT HOURS
IDS: 201

GENERAL EDUCATION ELECTIVES
BUS:201 Elementary Statistics
BUS:202 Statistical Analysis
COM:104 Persuasion
ENG:102 College Composition II
ENG:229 Intermediate Writing Workshop
ENG: 233 Writing Creative Nonfiction
LIB:101 Introduction to Library and Online Research
Any main floor course as well as mathematics courses numbered above MTH:160 (except MTH:165 and MTH:166) may be used as an elective.

For the latest updated list of approved General Education Courses, check the College’s Web site at:
http://www.stlcc.edu/gened/genednew/report/text/genedcore-courses.htm or contact a counselor or advisor.

DEGREE CONCENTRATIONS
St. Louis Community College is a good place to begin a college program in a traditional academic area. It offers the basic curriculum core that is the foundation for majoring in any subject the student may ultimately choose. Completing the General Transfer Studies concentration will prepare a student with the essential first two years of a Baccalaureate degree while retaining flexibility that will accommodate selecting a major field later or changing to a different one from what the student is interested in now.

Students who have definite ideas about their academic interests may find a specific associate in arts concentration that will fit them. Undecided students or students who wish to keep their academic programs more adaptable should choose the General Transfer Studies concentration. The College offers the following concentrations: Business Administration, Communications Arts, Life Sciences, Mathematics, General Transfer (including International Studies) option and Music.
ART

SEE ASSOCIATE IN FINE ARTS DEGREE PROGRAM

BUSINESS ADMINISTRATION

ASSOCIATE IN ARTS DEGREE
Florissant Valley, Forest Park, Meramec and Wildwood

This program offers students the first four semesters of a bachelor's degree in business administration. Students take courses in communications, humanities, science, mathematics and social science as well as basic business courses in accounting, economics, management and data processing.

Potential students should be interested in managing business transactions and working with other people. They should have a good math background and the flexibility to work in a variety of situations.

Graduates may transfer to any four-year college or university which offers a degree in business administration. Students are strongly advised to work closely with a counselor or advisor to ensure transferability of courses to a particular institution.

Graduates work in finance, production, marketing, personnel, accounting, management and statistics as management trainees, sales representatives and administrative assistants in all areas of commerce and industry for companies and organizations of all sizes.

I. General Education 42-45 credits
IDS:101 Cornerstone ........................................... 3
ENG:101 College Composition I .............................. 3
COM:101 Oral Communication I ............................... 3
MTH:160 College Algebra (or higher) ....................... 4
XXX:xxx Social and Behavioral Sciences ................. 6
XXX:xxx Principles of Macroeconomics ..................... 6
XXX:xxx Principles of Microeconomics ..................... 6
XXX:xxx Humanities and Fine Arts ......................... 6
XXX:xxx Life and Physical Sciences (One lab course required) .......................... 7-10
XXX:xxx General Education Elective ....................... 3
IDS:201 Capstone ............................................. 4

II. Physical Education Activity 2 credits

III. Area of Concentration 16 credits
ACC:110 Financial Accounting I .......................... 4
ACC:114 Managerial Accounting .......................... 3
BUS:104 Introduction to Business Administration ...... 3
Select two courses from ..................................... 6
BLW:101 Business Law I (or) ................................ 4
BLW:201 Legal Environment of Business ................ 3
BUS:201 Elementary Statistics (or) ....................... 3
BUS:202 Statistical Analysis ................................ 3
IB:100 International Business .............................. 3
IS:103 Information Systems for Business ............... 3
MG:204 Business Organization and Management ....... 3
MKT:203 Principles of Marketing ......................... 3

IV. Electives 1-4 credits
Students should consult advisors in selection of optional courses and electives based upon the college to which the student plans to transfer.

Program total .............................................. 64 credits

Management Option

I. General Education 42-45 credits
IDS:101 Cornerstone ........................................... 3
ENG:101 College Composition I .............................. 3
COM:101 Oral Communication I ............................... 3
MTH:160 College Algebra (or higher) ....................... 4
XXX:xxx Social and Behavioral Sciences ................. 6
XXX:xxx Principles of Macroeconomics ..................... 6
XXX:xxx Principles of Microeconomics ..................... 6
XXX:xxx Humanities and Fine Arts ......................... 6
XXX:xxx Life and Physical Sciences (One lab course required) .......................... 7-10
XXX:xxx General Education Elective ....................... 3
IDS:201 Capstone ............................................. 4

II. Physical Education Activity 2 credits

III. Area of Concentration 22 credits
ACC:110 Financial Accounting I .......................... 4
ACC:114 Managerial Accounting .......................... 3
BUS:104 Introduction to Business Administration ...... 3
Select three courses from ..................................... 9
BLW:101 Business Law I (or) ................................ 4
BLW:201 Legal Environment of Business ................ 3
BUS:201 Elementary Statistics (or) ....................... 3
BUS:202 Statistical Analysis ................................ 3
IB:100 International Business .............................. 3
IS:103 Information Systems for Business ............... 3
MKT:203 Principles of Marketing ......................... 3

Students should consult advisors in selection of optional courses and electives based upon the college to which the student plans to transfer.

Program total .............................................. 66-69 credits

COMMUNICATIONS ARTS

ASSOCIATE IN ARTS DEGREE
Florissant Valley, Forest Park and Meramec

This program provides students with the first two years of study toward a bachelor's degree at a four-year college or university. Students take fundamental courses common to most communications programs with a concentration in one of 12 options.

The communications field is composed of the areas of print and broadcast media and other forms of communication used to entertain, educate and inform others. A wide range of positions involving various creative skills is available in these areas.
Student are strongly advised to familiarize themselves with the communications programs at the schools to which they plan to transfer and work with advisers at St. Louis Community College to plan a program to meet those requirements.

I. General Education 42-45 credits
- IDS:101 Cornerstone . . . . . . . . . . . . . . . . . . . . . . . .3
- ENG:101 College Composition I . . . . . . . . . . . . . . . .3
- MTH:160 College Algebra or higher . . . . . . . . . . . . .4
- COM:101 Oral Communication I . . . . . . . . . . . . . . . .3
- XXX:xxx Missouri State Requirement . . . . . . . . . . .3
- XXX:xxx Social and Behavioral Sciences . . . . . . . . .6
- XXX:xxx Humanities and Fine Arts . . . . . . . . . . . . .6
- XXX:xxx Life and Physical Sciences . . . . . . . . . . .7-10
  (One lab course required)
- XXX:xxx General Education Elective . . . . . . . . . . .3
- IDS:201 Capstone . . . . . . . . . . . . . . . . . . . . . . . . . .4

II. Physical Education Activity 2 credits
- III. Area of Concentration 12 credits
  Complete one of the options listed below

IV. Electives 6-8 credits

Program total ............... 64 credits

Advertising/Public Relations Option
- Required:
  - MCM:101 Introduction to Mass Communication
  - MCM:140 Introduction to Advertising
- Select two courses from:
  - COM:104 Persuasion
  - MCM:141 Public Relations
  - MCM:142 Applied Advertising
  - MCM:201 Media Internship I
  - MCM:202 Media Internship II
  - MCM:211 Applied Public Relations

Broadcasting Option
- Required:
  - MCM:101 Introduction to Mass Communication
  - MCM:120 Introduction to Broadcasting
- Select two courses from:
  - MCM:121 Television Production
  - MCM:123 Broadcast Journalism
  - MCM:124 Radio Production
  - MCM:125 Scriptwriting for TV and Film
  - MCM:201 Media Internship I
  - MCM:202 Media Internship II
  - MCM:213 Advanced Video Production

Creative Writing Option
- Select 12 credits from:
  - ENG:110 Creative Writing
  - ENG:114 Writing Plays and Filmscripts
  - ENG:224 Fiction Writing
  - ENG:225 Poetry Writing
  - MCM:112 Feature Writing
  - MCM:123 Broadcast Journalism

Film Option
- Required:
  - MCM:101 Introduction to Mass Communications
- Select three courses:
  - MCM:121 Television Production
  - MCM:123 Broadcast Journalism
  - MCM:130 Film Appreciation
  - MCM:131 History of Film
  - MCM:132 Major Themes in Film
  - MCM:134 Filmmaking
  - MCM:201 Media Internship I
  - MCM:202 Media Internship II
  - MCM:215 Major Film Directors
  - MCM:216 Filmmaking II

Foreign Language Option
- Twelve credits in any foreign language

Journalism Option
- Required:
  - MCM:101 Introduction to Mass Communications
  - MCM:110 Journalism I: Writing and Reporting
  - MCM:112 Feature Writing
- Select one course from:
  - MCM:111 Journalism II: Editing and Design
  - MCM:113 Applied Journalism
  - MCM:114 Photojournalism
  - MCM:201 Media Internship I
  - MCM:202 Media Internship II

Literature Option
- Select 12 credits from:
  - ENG:201 Introduction to Fiction
  - ENG:202 Introduction to Poetry and Plays
  - ENG:203 American Literature
  - ENG:204 American Literature Between 1865 and 1945
  - ENG:205 American Literature After 1945
  - ENG:206 Modern American Literature
  - ENG:207 Humor in American Literature
  - ENG:210 British Literature Before 1800
  - ENG:211 British Literature After 1800
  - ENG:213 The Short Novel
  - ENG:214 Contemporary Fiction
  - ENG:215 Popular Literature: Fantasy and Horror
  - ENG:216 Women in Literature
  - ENG:217 Major Black Writers
  - ENG:218 Literature of American Minorities
  - ENG:222 Major British Writers
  - ENG:226 Children's Literature
  - ENG:228 Studies in Literature

Multimedia Option
- Select 12 credits from:
  - MCM:101 Introduction to Mass Communications
  - MCM:110 Journalism I: Writing and Reporting
  - MCM:120 Introduction to Broadcasting
  - MCM:130 Film Appreciation
  - MCM:140 Introduction to Advertising
Organizational Communication Option
Select 12 credits from:
- COM:104 Persuasion
- COM:105 Interview Process
- COM:109 Conference Leadership/Decision Making
- COM:110 Organizational Communication
- MCM:201 Media Internship I
- MCM:202 Media Internship II
- IS:103 Information Systems for Business (or)
- MCM:101 Introduction to Mass Communications (or)
- COM:102 Oral Communications II (or)
- COM:103 Small Group Communication (or)
- COM:107 Public Speaking (or)
- COM:108 Business/Technical Presentation

Speech Communication Option
Select 12 credits from:
- COM:102 Oral Communication II
- COM:103 Small Group Communication
- COM:104 Persuasion
- COM:105 Interview Process
- COM:107 Public Speaking
- COM:108 Business/Technical Presentation
- COM:110 Organizational Communication
- COM:111 Voice and Articulation
- COM:112 Argumentation and Debate
- COM:114 Oral Interpretation of Literature

Technical/Business Communication Option
Required:
- ENG:219 Advanced Report Writing
- COM:108 Business/Technical Presentation
Select 12 credits from:
- COM:103 Small Group Communication
- COM:105 Interview Process
- COM:109 Conference Leadership/Decision Making
- COM:110 Organizational Communication
- MCM:110 Journalism I: Writing and Reporting
- MCM:111 Journalism II: Editing and Design
- MCM:112 Feature Writing
- MCM:140 Introduction to Advertising
- MCM:142 Applied Advertising
Six of the above 18 hours may apply toward program electives.

Theatre Arts Option
Select 12 credits from:
- COM:111 Voice and Articulation
- COM:114 Oral Interpretation of Literature
- THT:101 Introduction to Theatre
- THT:102 Stagecraft
- THT:103 Stage Design and Lighting
- THT:106 Theatre Practicum
- THT:107 Playwriting
- THT:108 Acting I
- THT:109 Acting II
- THT:110 History of Theatre

Computer Science
ASSOCIATE IN ARTS DEGREE
This program deactivated effective Summer 2006. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor. (See Computer Science, Associate in Science Degree.)

General Education
CERTIFICATE OF GENERAL EDUCATION
Florissant Valley, Forest Park, Meramec and Wildwood
The certificate of general education gives students a solid basis for further study. It is designed to broaden awareness and widen horizons, cultivate the intellect, and prepare students to be life-long learners. It provides a broad introduction to a range of disciplines as well as teaching essential skills (communicating, higher-order thinking, managing information, and valuing) that will serve students well in life and in their future education.

I. Foundation Level 13 credits
- IDS:101 Cornerstone ........................................... 3
- ENG:101 College Composition I ............................. 3
- COM:101 Oral Communication I ........................... 3
- MTH:xxx MTH:155 Survey of College Mathematics,
  MTH:160 College Algebra or higher
  (except MTH:165 and MTH:166) .............................. 4

II. Main Floor 25-28 credits
- Humanities and Fine Arts ..................................... 6
- Missouri State Requirement ................................. 3
- Life and Physical Sciences (One lab course required) .... 7-10
- Social and Behavioral Sciences ............................. 6
- General Education Elective ................................... 3

Of the main floor courses, two must must be speaking-intensive and two must be writing-intensive. Refer to the semester course schedule to find such courses.

III. Capstone 4 credits
- IDS:201 Capstone ............................................. 4

Program total .................. 42-45 credits
General Transfer Studies

ASSOCIATE IN ARTS DEGREE
Florissant Valley, Forest Park, Meramec and Wildwood

The General Transfer Studies degree program provides students with the first two years of study toward a bachelor's degree with a major in almost any area at a four-year college or university. Students completing the general transfer studies degree requirements will have completed the 42 hours of general education for all public colleges and universities in Missouri. These courses from various general areas become the foundation for advanced study in areas such as humanities, the social sciences, mathematics, communications, economics, languages, and the fine arts.

I. General Education 42-45 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:xxx</td>
<td>MTH:155 Survey of College Mathematics, MTH:160 College Algebra or higher (except MTH:165 and MTH:166)</td>
<td>4</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Social and Behavioral Sciences</td>
<td>6</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Humanities and Fine Arts</td>
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</tr>
<tr>
<td>XXX:xxx</td>
<td>Life and Physical Sciences (One lab course required)</td>
<td>7-10</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>General Education Elective</td>
<td>3</td>
</tr>
<tr>
<td>IDS:201</td>
<td>Capstone</td>
<td>4</td>
</tr>
</tbody>
</table>

Completing these general education requirements with a minimum of 42 credit hours will assure the student transferring to a public institution in Missouri of completion of all general education requirements. The student's transcript will carry the note "Missouri General Education Requirements completed." If the student completes these requirements and earns the associate in arts degree, he/she will be able to transfer at the junior level into the general range of baccalaureate degree programs offered by the public four-year colleges and universities.

II. Physical Education Activity 2 credits

III. Electives 18-21 credits

The electives allow the student to continue to explore various subjects at an introductory level or, as many students prefer, to begin working toward an academic major by concentrating in a particular area. The student interested in psychology, for example, might choose to take such courses as PSY:206, Introduction to Social Psychology, and PSY:208, Abnormal Psychology, as well as the mathematics courses that the student will need to prepare for the more advanced psychology courses at the transfer institution.

As another example, the student wishing to major in English would want to take some literature courses, such as ENG:201, Introduction to Fiction, or ENG:204, American Literature Between 1865 and 1945, as well as the required composition courses. He/she should also begin the study of foreign language required for most English majors.

Program total ......................... 64 credits

Students should plan their transfer programs carefully and become familiar with the requirements at the institution to which they plan to transfer. Many bachelor degree programs have very specific requirements for the freshman and sophomore years, and it is the transferring student's responsibility to ensure that courses will apply to the bachelor's degree. Students are encouraged to talk to a counselor or advisor to assist in planning a program of study or if they are considering a change in academic plans. Very detailed information about the requirements of many transfer institutions is available in the counseling offices.

Missouri public colleges and universities, as well as most private institutions, require three semesters (12 to 13 credit hours) of a foreign language for the Bachelor of Arts degree.

General Transfer Studies:

Criminal Justice Option

ASSOCIATE IN ARTS DEGREE
Forest Park

This program deactivated effective Summer 2006. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor.

General Transfer Studies:

International Studies Option

ASSOCIATE IN ARTS DEGREE
Forest Park

This program enhances student's understanding of the forces and issues shaping the contemporary world. The program is especially beneficial to students planning to transfer to four-year colleges and universities and to students desiring international education. Students acquire the understanding, knowledge and skills necessary to function in a politically, economically and culturally interdependent world society.

Students who complete the Certificate of Specialization in International Studies may apply all of those courses towards this degree option.

I. General Education 44-47 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
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<td>IDS:101</td>
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<tr>
<td>ENG:101</td>
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<td>COM:101</td>
<td>Oral Communication I</td>
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<td>MTH:160</td>
<td>College Algebra or higher</td>
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Main Floor 27-30 credits

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<td>XXX:xxx</td>
<td>Humanities and Fine Arts</td>
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<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Life and Physical Sciences (One lab course required)</td>
<td>7-10</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Social and Behavioral Sciences</td>
<td>6</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>General Education Elective</td>
<td>3</td>
</tr>
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</table>

<table>
<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS:201</td>
<td>Capstone</td>
<td>4</td>
</tr>
</tbody>
</table>
II. Physical Education Activity 2 credits

III. Area of Concentration 18 credits

PSC:201 International Relations (required) . . . . . . .3
Select from at least three of the following: . . . . . . . . . .15
Anthropology
Art
Communications
Economics
English
French
Geography
History
Humanities
International Business
Mass Communications
Music
Philosophy
Political Science
Spanish

Examples of courses that meet the area of concentration requirements:
ANT:103 Cultural Variations
HST:119 The Modern World
HST:205 History of Modern Middle East
HUM:101 Humanities I
PHL:103 World Religions
PSC:204 Politics of African Nations
PSC:211 US Foreign Policy

Advisors and counselors have a complete list of courses that meet the area of concentration requirements.

Program total . . . . . . . . .64-67 credits

CERTIFICATE OF SPECIALIZATION

Forest Park

Although this program is designed primarily for college transfer students, other students may gain benefits from their jobs or personal satisfaction by taking all or selected courses in the program.

Courses
PSC:107 Introduction to International Studies . . . . . .3
ANT:103 Cultural Variations . . . . . . . . . . . . . . . . . . .3
PSC:201 International Relations . . . . . . . . . . . . . . . . . .3
XXX:xxx Foreign Language . . . . . . . . . . . . . . . . . . . . .6
International Studies elective chosen from . . . . . . . . . . .3
PHL:103 World Religions
HST:119 The Modern World
SPA:106 Introduction to Latin American Civilization
IB:100 Introduction to International Business
XXX:xxx Approved Course

Program total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .18 credits

Life Sciences

ASSOCIATE IN ARTS DEGREE

Floissant Valley, Forest Park and Meramec

This program provides students with the first two years of study toward a bachelor of science degree at a four-year college or university. Students take fundamental science and humanities courses and continue their studies in specialized areas such as biology, chemistry and other specialties after they transfer.

The life sciences include exciting fields that are leading the way into the “age of biology.” Professions within the life science field vary widely from the health sciences to biological sciences. Areas of study include biotechnology, plant science, medical sciences, ecology, dental science, chiropractor and pharmacists.

In addition to a high school diploma or GED certificate, other requirements are necessary for enrollment in the life science program. For specific information contact the campus Admissions office.

Students should make a decision early in their college studies concerning which college or university they would like to attend. They are strongly advised to familiarize themselves with the programs at the schools to which they plan to transfer and work with advisors at St. Louis Community College to plan a program to meet those requirements.

I. General Education 42 credits

IDS:101 Cornerstone . . . . . . . . . . . . . . . . . . . . . . . . . .3
ENG:101 College Composition I . . . . . . . . . . . . . . . . . . .3
COM:101 Oral Communication I . . . . . . . . . . . . . . . . . . .3
MTH:160 College Algebra (or higher) . . . . . . . . . . . . . . . .3
XXX:xxx Missouri State Requirement . . . . . . . . . . . . . . .3
XXX:xxx Social and Behavioral Sciences . . . . . . . . . . . . .6
XXX:xxx Humanities and Fine Arts . . . . . . . . . . . . . . . . .6
CHM:105 General Chemistry I . . . . . . . . . . . . . . . . . . . .5
CHM:106 General Chemistry II . . . . . . . . . . . . . . . . . . . .5
IDS:201 Capstone . . . . . . . . . . . . . . . . . . . . . . . . . . . . .4

II. Physical Education Activity 2 credits

III. Area of Concentration 26 credits

BIO:140 Principles of Biology I . . . . . . . . . . . . . . . . . . . .4
BIO:141 Principles of Biology II . . . . . . . . . . . . . . . . . . .4
CHM:206 Organic Chemistry Lecture I . . . . . . . . . . . . . .3
CHM:207 Organic Chemistry Lecture II . . . . . . . . . . . . . .3
CHM:210 Organic Chemistry Laboratory I . . . . . . . . . . . .2
CHM:211 Organic Chemistry Laboratory II . . . . . . . . . . . .2
PHY:111 College Physics I . . . . . . . . . . . . . . . . . . . . . . .4
PHY:112 College Physics II . . . . . . . . . . . . . . . . . . . . . . .4

Program total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .70 credits
## Mathematics

**ASSOCIATE IN ARTS DEGREE**  
Florissant Valley, Forest Park and Meramec  

This program provides students with the first two years of study toward a bachelor’s degree at a four-year college or university in the areas of mathematics, engineering, actuarial science, computer science, secondary education or statistics.  

Students are strongly advised to familiarize themselves with the mathematics or other major program at the school to which they plan to transfer and work with advisors at St. Louis Community College to plan a program to meet those requirements.

### I. General Education  
46 credits

<table>
<thead>
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<tr>
<td>ENG:101</td>
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<td>ENG:102</td>
<td>College Composition II</td>
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<td>COM:101</td>
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<tr>
<td>MTH:210</td>
<td>Analytic Geometry and Calculus I</td>
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<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
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<td>XXX:xxx</td>
<td>Social Science Requirement</td>
<td>6</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Humanities Requirement</td>
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</tr>
<tr>
<td>XXX:xxx</td>
<td>Physics/Chemistry Requirement</td>
<td>10</td>
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</tbody>
</table>

Select from:

- CHM:105 General Chemistry I
- CHM:106 General Chemistry II
- CHM:206 Organic Chemistry Lecture I
- CHM:207 Organic Chemistry Lecture II
- CHM:210 Organic Chemistry Lab I
- CHM:211 Organic Chemistry Lab II
- PHY:122 Engineering Physics I
- PHY:223 Engineering Physics II
- PHY:224 Engineering Physics III

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>IDS:201</td>
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### II. Physical Education Activity  
2 credits

### III. Area of Concentration  
19 credits

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<td>Scientific Computer Programming (or)</td>
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<tr>
<td>IS:117</td>
<td>Pascal Programming</td>
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<tr>
<td>MTH:220</td>
<td>Analytical Geometry and Calculus II</td>
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<td>MTH:230</td>
<td>Analytical Geometry and Calculus III</td>
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<tr>
<td>MTH:240</td>
<td>Differential Equations</td>
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<tr>
<td>MTH:215</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

### IV. Electives  
3 credits

Select from:

- BIO: 140 or higher
- CHM: 105 or higher
- IS: 117 or higher
- GEO:111 or higher
- PHY: 122 or higher

Program total 70 credits

## Music

**ASSOCIATE IN ARTS DEGREE**  
Florissant Valley, Forest Park and Meramec  

This program provides students with the first two years of study toward a bachelor of arts degree in music at a four-year college or university. Students take fundamental courses in music theory, music literature, class instruments and performing ensembles. Careers available in music include performing, composing and arranging music, music education, private instruction and music therapy.

Students are strongly advised to familiarize themselves with the music program at the school to which they plan to transfer and work with the advisors at St. Louis Community College to plan a program to meet those requirements.

### I. General Education  
42-45 credits

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<tr>
<td>IDS:101</td>
<td>Cornerstone</td>
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</tr>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102</td>
<td>College Composition II</td>
<td>3</td>
</tr>
<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:155</td>
<td>Survey of College Mathematics or</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>higher level</td>
<td></td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Social Science Requirements</td>
<td>6</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Life and Physical Sciences</td>
<td>7-10</td>
</tr>
<tr>
<td></td>
<td>Requirements</td>
<td></td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Humanities (non-music) Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Humanities (music) Requirement</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose three credits from:

- MUS:113, 114, 128, 211, 212
- IDS:201 Capstone

### II. Physical Education Activity  
2 credits

### III. Area of Concentration  
28 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MUS:101</td>
<td>Music Theory I</td>
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</tr>
<tr>
<td>MUS:102</td>
<td>Music Theory II</td>
<td>4</td>
</tr>
<tr>
<td>MUS:121</td>
<td>Class Piano I</td>
<td>2</td>
</tr>
<tr>
<td>MUS:122</td>
<td>Class Piano II</td>
<td>2</td>
</tr>
<tr>
<td>MUS:201</td>
<td>Music Theory III</td>
<td>4</td>
</tr>
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<td>MUS:202</td>
<td>Music Theory IV</td>
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<tr>
<td>MUS:221</td>
<td>Class Piano III</td>
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<tr>
<td>MUS:222</td>
<td>Class Piano IV</td>
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</tr>
<tr>
<td>MUS:xxx</td>
<td>Band, orchestra, choir or jazz ensembles</td>
<td>4</td>
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</tbody>
</table>

Program total 72-75 credits
Teacher Education

ASSOCIATE IN ARTS DEGREE
Florissant Valley, Forest Park and Meramec

This program deactivated effective Fall 2007. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor. (See Associate in Arts in Teaching.)

ASSOCIATE OF ARTS IN TEACHING DEGREE PROGRAM
Florissant Valley, Forest Park and Meramec

The Associate of Arts in Teaching Degree Program is a new state approved program which meets the state general education requirements and contains a core area of concentration of four Teacher Education courses which are consistent with the other eleven community colleges in the state of Missouri. This is an effort to promote a more seamless transfer to four-year colleges and universities. This program provides students with the first two years of study toward a bachelor's degree at a four-year college or university. It is governed and accredited by the state of Missouri. In addition, this program meets the mid-preparation benchmarks of the performance standards established for pre-service teachers in the state of Missouri.

Students should familiarize themselves with education programs at four-year schools and determine which program they plan to pursue early in their coursework at St. Louis Community College. In addition, they should work closely with St. Louis Community College faculty, counselors, and advisors to enable them to make a smooth transfer to the school of their choice. The maximum number of credit hours in teacher education which are allowed in transfer may vary among the transfer institutions. Students are discouraged from self advising.

An Associate of Arts in Teaching Degree (AAT) requires:

- a cumulative G.P.A. of 2.5
- a minimum score of 235 on each section of the College Base Academic Skills Examination (C-BASE)

Students should also be aware of the following information: cumulative G.P.A. and C-BASE score admission requirements at some four-year transfer institutions may exceed the minimum state requirements. Students will be required to pass a criminal background check and a child abuse check to participate in school observation experiences. Any individual who has been convicted of a felony may not be licensed to teach in the state of Missouri. Students considering this degree should have college level reading as demonstrated on the college placement test or should have completed developmental reading and/or writing coursework prior to entering the Teacher Education core courses. Students are expected to have college level oral and written proficiencies and display clear, correct and effective writing and speaking skills.

I. General Education 42 – 45 credits
IDS: 101 Cornerstone ............................................3
ENG: 101 College Composition I .................................3
COM: 101 Oral Communication I .................................3
MTH: 160 College Algebra or higher .............................4
XXX: xxx Missouri State Requirement ..........................3
(HST: 101, 102, 103, or 104 required for certification)
XXX: xxx Social and Behavioral Science .......................6
(PSY: 200 and either PSY: 203, 205, or 214 can be applied here)
XXX: xxx Humanities and Fine Arts ............................6
(Non-studio art or music class required for Elementary certification)
XXX: xxx Life and Physical Sciences .........................7 – 10
(One lab course required for secondary teachers; two lab courses required for Early Childhood and Elementary teachers)
XXX: xxx General Education Elective .........................3
(PSC: 101 or PSC: 102 required for certification)
IDS: 201 Capstone .............................................4

II. Physical Education 2 credits

III. Area of Concentration 12 credits
EDU: 220 Teaching Profession with Field Experience ......3
EDU: 211 Foundations of Education .............................3
EDU: 217 Educational Psychology ...............................3
EDU: 218 Technology for Teachers .............................3

Electives 8 credits

Electives may be selected from education electives, content areas or any other courses. They should be carefully selected with the help of an advisor to meet degree requirements, prerequisites, preparation for the C-BASE, and planned level and area of teacher preparation.

Students seeking elementary certification can choose to complete an approved economics course, an approved geography course or additional education courses.

Students seeking secondary certification should select courses required for their specific area of certification in coordination with their transfer institution.

Program total .................................................64 credits
ASSOCIATE IN FINE ARTS DEGREE PROGRAM

St. Louis Community College offers an associate in fine arts degree with four degree options—art education, general fine arts, graphic communications and photography. The associate in fine arts is offered jointly with the University of Missouri-St. Louis and is designed for students planning to transfer to UM-St. Louis and earn the bachelor of fine arts degree. Freshman and sophomore courses take place at Florissant Valley, Forest Park and Meramec, and junior- and senior-level courses take place on the UM-St. Louis campus.

UM-St. Louis accepts all art courses taken at St. Louis Community College up to a maximum of 66 credit hours. Students should work with a counselor or advisor to ensure their courses will transfer. UM-St. Louis admission counselors are available at Florissant Valley, Forest Park and Meramec to help students complete their transfer applications.

Art Education Option

ASSOCIATE IN FINE ARTS DEGREE
Florissant Valley, Forest Park and Meramec

This transfer option is designed to provide students with the first two years of study towards a professional degree in art education. Upon completion of the AFA - Art Education Option, students can successfully transfer to the University of Missouri-St. Louis to earn a bachelor of fine arts degree in art education or to other four-year art schools or colleges to complete the last two years toward a professional art education degree. Students are strongly advised to familiarize themselves with the art education program at the school to which they plan to transfer and work with advisors at St. Louis Community College to plan a program to meet those requirements.

The AFA - Art Education Option is governed and accredited by the state of Missouri and meets the mid-preparation benchmarks of the performance standards established for pre-service teachers in the state of Missouri. Students should work in consultation with both art and education advisors and will complete required courses in general education, art and professional education. Persons interested in this program should possess a strong interest in the visual arts and a desire to teach at the elementary or secondary level. Students are expected to have college level reading, oral and written language proficiencies and display clear, correct, and effective writing and speaking skills.

General Education 23 credits
ENG:101 College Composition I .................................. 3
COM:101 Oral Communication I ................................. 3
XXX:xxx Missouri State Requirement .......................... 3
PSY:200 General Psychology ..................................... 3
PSY:203 Child Psychology (or) ................................ 3
PSY:205 Human Growth and Development ............... 3
MTH:155 Survey of College Mathematics (or) ........... 4
MTH:160 College Algebra ......................................... 4
XXX:xxx Science Elective with lab .............................. 4

Physical Education Requirement 2 credits
EDU:102 Computers in Education .............................. 3
ART:185 or EDU:120 Art for Children .......................... 3
EDU:200 Introduction to Classroom Teaching ............... 3
EDU:215 Principles of Teaching and Learning .............. 3
EDU:211 Foundations of Education ............................. 3
EDU:216 Teacher Education Portfolio Development ....... 1

Area of Concentration 22 credits
ART:101 Art History I .............................................. 3
ART:102 Art History II ............................................ 3
ART:107 Design I ................................................... 2
ART:108 Design II .................................................. 2
ART:109 Drawing I .................................................. 3
ART:110 Drawing II .................................................. 3
ART:111 Figure Drawing I ......................................... 3
ART:131 Computer Art Studio .................................. 3

3-D Art Elective 2-3 credits
ART:207 Design III .................................................. 2
ART:113 Ceramics I ................................................. 3
ART:116 Sculpture I .................................................. 3

Art Electives 6 credits
ART:133 Graphic Design I ........................................ 3
ART:114 Painting I ................................................... 3
ART:165 Photography I .............................................. 3
ART:115 Printmaking I .............................................. 3

Program total ....................................................... 71-72 credits
## General Fine Arts Option

**ASSOCIATE IN FINE ARTS DEGREE**

Florissant Valley, Forest Park and Meramec

This program is designed for students planning to transfer to the University of Missouri-St. Louis and other four-year art schools and colleges and earn a bachelor of fine arts degree. Students may experience both two- and three-dimensional artwork through courses in painting, figure drawing, ceramics, sculpture, printmaking and design. Persons interested in this program should possess a strong interest in the visual world and a desire to produce work using traditional as well as non-traditional techniques.

### General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
</tr>
<tr>
<td>ENG:102</td>
<td>College Composition II</td>
</tr>
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<td>Missouri State Requirement</td>
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<tr>
<td>XXX:xxx</td>
<td>Social Science Elective</td>
</tr>
<tr>
<td>MTH:155</td>
<td>Survey of College Mathematics (or)</td>
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<tr>
<td>MTH:160</td>
<td>College Algebra</td>
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<tr>
<td>XXX:xxx</td>
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<td>ART:101</td>
<td>Art History I</td>
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<tr>
<td>ART:102</td>
<td>Art History II</td>
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### Physical Education Requirement

<table>
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<td>ART:109</td>
<td>Drawing I</td>
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<tr>
<td>ART:110</td>
<td>Drawing II</td>
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<tr>
<td>ART:111</td>
<td>Figure Drawing I</td>
</tr>
<tr>
<td>ART:112</td>
<td>Figure Drawing II</td>
</tr>
<tr>
<td>ART:207</td>
<td>Design III</td>
</tr>
<tr>
<td>ART:208</td>
<td>Design IV</td>
</tr>
<tr>
<td>ART:211</td>
<td>Figure Drawing III</td>
</tr>
<tr>
<td>ART:209</td>
<td>Drawing III</td>
</tr>
<tr>
<td>ART:210</td>
<td>Advanced Drawing</td>
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</table>

### Electives

<table>
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<th>Course</th>
<th>Credits</th>
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</thead>
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<tr>
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<tr>
<td>ART:113</td>
<td>Ceramics I</td>
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<tr>
<td>ART:213</td>
<td>Ceramics II</td>
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<td>Advanced Ceramics</td>
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<td>ART:165</td>
<td>Photography I</td>
</tr>
<tr>
<td>ART:166</td>
<td>Photography II</td>
</tr>
<tr>
<td>ART:116</td>
<td>Sculpture I</td>
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<tr>
<td>ART:216</td>
<td>Sculpture II</td>
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<tr>
<td>ART:114</td>
<td>Painting I</td>
</tr>
<tr>
<td>ART:214</td>
<td>Painting II</td>
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<tr>
<td>AT:229</td>
<td>Advanced Painting Projects</td>
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<tr>
<td>ART:115</td>
<td>Printmaking I</td>
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<tr>
<td>ART:215</td>
<td>Printmaking II</td>
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<tr>
<td>AT:215</td>
<td>Advanced Printmaking</td>
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</tbody>
</table>

**Program total** | **68 credits**


## Graphic Communications Option

**ASSOCIATE IN FINE ARTS DEGREE**

Florissant Valley, Forest Park and Meramec

This program is designed for students planning to transfer to a four-year art school and the University of Missouri-St. Louis and earn a bachelor of fine arts degree. The program includes concept origination and development; use of computers; logos, point-of-purchase, package and publication design; printing techniques and processes. Persons interested in this program should possess a strong interest in the visual world and a desire to produce work using traditional as well as non-traditional techniques.

### General Education

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>ENG:101</td>
<td>College Composition I</td>
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<tr>
<td>ENG:102</td>
<td>College Composition II (or)</td>
</tr>
<tr>
<td>ENG:103</td>
<td>Report Writing (or)</td>
</tr>
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<td>MCM:217</td>
<td>Publications Writing (or)</td>
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<td>COM:101</td>
<td>Oral Communication I</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Social Science Elective</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Science Elective</td>
</tr>
<tr>
<td>MTH:155</td>
<td>Survey of College Mathematics (or)</td>
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<tr>
<td>MTH:160</td>
<td>College Algebra</td>
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### Physical Education Requirement

<table>
<thead>
<tr>
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<tr>
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<tr>
<td>ART:107</td>
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<tr>
<td>ART:108</td>
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</tr>
<tr>
<td>ART:109</td>
<td>Drawing I</td>
</tr>
<tr>
<td>ART:110</td>
<td>Drawing II</td>
</tr>
<tr>
<td>ART:111</td>
<td>Figure Drawing I</td>
</tr>
<tr>
<td>ART:112</td>
<td>Figure Drawing II</td>
</tr>
<tr>
<td>ART:207</td>
<td>Design III</td>
</tr>
<tr>
<td>ART:208</td>
<td>Design IV</td>
</tr>
<tr>
<td>ART:211</td>
<td>Figure Drawing III</td>
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<tr>
<td>ART:209</td>
<td>Drawing III</td>
</tr>
<tr>
<td>ART:210</td>
<td>Advanced Drawing</td>
</tr>
<tr>
<td>ART:133</td>
<td>Graphic Design I</td>
</tr>
<tr>
<td>ART:134</td>
<td>Graphic Design II</td>
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<td>Drawing for Graphics I</td>
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<td>ART:238</td>
<td>Drawing for Graphics II</td>
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<tr>
<td>ART:239</td>
<td>Illustration I</td>
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<tr>
<td>ART:240</td>
<td>Illustration II</td>
</tr>
<tr>
<td>ART:233</td>
<td>Graphic Design III</td>
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<td>ART:234</td>
<td>Graphic Design IV</td>
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<td>ART:245</td>
<td>Portfolio Design and Professional Practices</td>
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<td>ART:135</td>
<td>Graphic Production I</td>
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<tr>
<td>ART:235</td>
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</tr>
<tr>
<td>AT:242</td>
<td>The History of Graphic Communications</td>
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</table>

**Program total** | **71 credits**
Photography Option

ASSOCIATE IN FINE ARTS DEGREE
Florissant Valley, Forest Park and Meramec

This program is designed for students planning to transfer to a four-year art school and the University of Missouri-St. Louis and earn a bachelor of fine arts degree. Students develop skills in black and white printing techniques; ways to gather information from visual images and use visual elements to form mental constructs; issues and ideas about photography; portrait, architectural, documentary, large format, industrial, field and figure fashion photography; and other areas. Persons interested in this program should possess a strong interest in the visual world and a desire to produce work using traditional as well as non-traditional techniques.

Program total ..............68-70 credits

GENERAL EDUCATION

ENG:101 College Composition I ..................3
ENG:102 College Composition II .................3
MTH:115 Survey of College Mathematics (or)
MTH:160 College Algebra.........................4
XXX:xxx Social Science Elective ..................3
ART:101 Art History I, ART:102 Art History II,
ART:103 History of Modern Art, ART:169 Visual
ART:107 Design I ..................................2
ART:108 Design II ..................................2
ART:109 Drawing I ..................................3
ART:110 Drawing II (or)
ART:207 Design III ..................................2
ART:208 Design IV ..................................2
ART:113 Ceramics I ..................................3
ART:116 Sculpture I ..................................3
ART:114 Painting I ..................................3
ART:115 Printmaking I ................................3
ART:ATxxx Computer Art ..........................3

PHOTOGRAPHY ELECTIVES

ART:266 Black and White Printing Lab .............3
ART:279 Non-Silver Photography ..................3
ART:267 Color Photography II ......................3
ART:272 Documentary Photography ...............3
ART:268 Large Format Photography ...............3
ART:269 Field Photography .........................3
ART:271 Portrait Photography .......................3
ART:273 Architectural Photography ...............3
AT:175 Video Art I ..................................3
AT:275 Video Art II ..................................3
AT:276 Photo Imaging II: Photoshop ...............3
AT:212 Special Topics in Photography .............3
AT:280 Advanced Photography .....................1-4

ASSOCIATE IN SCIENCE DEGREE

The associate of science degree is a specialized degree intended for transfer into a pre-professional program. This degree is substantively different from both the associate in applied science and the associate in arts degrees. The associate in science provides an alternative to the associate of arts degree for those fields that require so much specialized work that the student cannot complete as much general education as the AA degree demands.

Computer Science

ASSOCIATE IN SCIENCE DEGREE
Florissant Valley, Forest Park, Meramec

This program provides students with the first two years of study toward a bachelor’s degree at a four-year college or university. Persons with computer science skills design, engineer, produce, implement, sell or service systems for a variety of organizations. Many are employed to analyze jobs, translate them into computer language, refine programs or operate systems on a daily basis.

Students are strongly advised to familiarize themselves with the computer science program at the schools to which they plan to transfer. The general education component is designed to meet receiving institutions’ guidelines. They should contact the instructional department or a counselor or advisor at St. Louis Community College to plan a program to meet those requirements.

I. GENERAL EDUCATION

ENG:101 College Composition I ..................3
ENG:102 College Composition II .................3
MTH:210 Analytic Geometry and Calculus I ....5
CHM:105 General Chemistry I ....................5
PHY:122 Engineering Physics I ....................5
XXX:xxx Humanities or Social Science Elective 3
XXX:xxx Missouri State Requirement ............3

II. PHYSICAL EDUCATION ACTIVITY

AT:604 Physical Education Activity ...............2


### III. Area of Concentration  
27 credits

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:112</td>
<td>Software and Hardware Concepts</td>
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<tr>
<td>IS:227</td>
<td>C Programming Language I</td>
<td>.3</td>
</tr>
<tr>
<td>IS:256</td>
<td>C++ Object-Oriented Programming</td>
<td>.3</td>
</tr>
<tr>
<td>MTH:220</td>
<td>Analytic Geometry and Calculus II</td>
<td>.5</td>
</tr>
<tr>
<td>MTH:230</td>
<td>Analytic Geometry and Calculus III</td>
<td>.5</td>
</tr>
<tr>
<td>MTH:212</td>
<td>Discrete Mathematics</td>
<td>.3</td>
</tr>
<tr>
<td>PHY:223</td>
<td>Engineering Physics II</td>
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### IV. Electives  
12-15 credits

Choose one of the following:

<table>
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<th>Course</th>
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</thead>
<tbody>
<tr>
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<td>.3</td>
</tr>
<tr>
<td>IS:229</td>
<td>UNIX</td>
<td>.3</td>
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Choose one of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH:215</td>
<td>Linear Algebra</td>
<td>.3</td>
</tr>
<tr>
<td>MTH:240</td>
<td>Differential Equations</td>
<td>.3</td>
</tr>
</tbody>
</table>

Choose one of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE:242</td>
<td>Introduction to Microprocessors</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:200</td>
<td>Engineering Circuits I</td>
<td>.4</td>
</tr>
</tbody>
</table>

Choose one of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM:106</td>
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<td>.5</td>
</tr>
<tr>
<td>ESC:201</td>
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<td>.4</td>
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</tbody>
</table>

Or any one of the following not already chosen:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:225</td>
<td>Database Management</td>
<td>.3</td>
</tr>
<tr>
<td>IS:229</td>
<td>UNIX</td>
<td>.3</td>
</tr>
<tr>
<td>MTH:215</td>
<td>Linear Algebra</td>
<td>.3</td>
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<tr>
<td>MTH:240</td>
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<td>Engineering Circuits I</td>
<td>.4</td>
</tr>
<tr>
<td>EE:242</td>
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<td>.3</td>
</tr>
</tbody>
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Program total 68-71 credits

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### Engineering Science

**ASSOCIATE IN SCIENCE DEGREE**  
Floissant Valley, Forest Park and Meramec

This program provides students with the first two years of study toward a Bachelor of Science degree at a four-year college or university. Students take fundamental courses common to most engineering disciplines and continue their studies in specialized areas (such as electrical, mechanical, civil, chemical, aerospace and nuclear) during the remaining years at four-year colleges or universities.

St. Louis Community College works with the University of Missouri-Rolla, University of Missouri-Columbia, Washington University, Southern Illinois University-Edwardsville, UM-St. Louis /Washington University Joint Engineering Program, Parks College of St. Louis University and Rensselaer Polytechnic Institute to facilitate the transferability of specific courses. For the most current information on transferability, please consult an academic advisor, the Engineering Department or the transfer institution’s website. This program is designed to provide the necessary flexibility to meet the technical and general education requirements indicated in the receiving institution’s transfer guidelines.

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### I. General Education  
27 credits

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>.3</td>
</tr>
<tr>
<td>ENG:102</td>
<td>College Composition II (or)</td>
<td>.3</td>
</tr>
<tr>
<td>ENG:103</td>
<td>Report Writing (or)</td>
<td>.3</td>
</tr>
<tr>
<td>ENG:203</td>
<td>American Literature</td>
<td>.3</td>
</tr>
<tr>
<td>MTH:210</td>
<td>Analytical Geometry and Calculus I</td>
<td>.5</td>
</tr>
<tr>
<td>CHM:105</td>
<td>General Chemistry I</td>
<td>.5</td>
</tr>
<tr>
<td>PHY:122</td>
<td>Engineering Physics I</td>
<td>.5</td>
</tr>
<tr>
<td>XXX: xxx</td>
<td>Social Science Requirement</td>
<td>.3</td>
</tr>
<tr>
<td>XXX: xxx</td>
<td>Missouri State Requirement</td>
<td>.3</td>
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</tbody>
</table>

### II. Physical Education Activity  
2 credits

### III. Area of Concentration  
31 credits

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESC:100</td>
<td>Engineering Computer Applications</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:101</td>
<td>Scientific Computer Programming (or)</td>
<td>.3</td>
</tr>
<tr>
<td>IS:227</td>
<td>C Programming Language I</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:200</td>
<td>Engineering Circuits I</td>
<td>.4</td>
</tr>
<tr>
<td>ESC:203</td>
<td>Engineering Mechanics I</td>
<td>.3</td>
</tr>
<tr>
<td>MTH:220</td>
<td>Analytic Geometry and Calculus II</td>
<td>.5</td>
</tr>
<tr>
<td>MTH:230</td>
<td>Analytic Geometry and Calculus III</td>
<td>.5</td>
</tr>
<tr>
<td>MTH:240</td>
<td>Differential Equations</td>
<td>.3</td>
</tr>
<tr>
<td>PHY:223</td>
<td>Engineering Physics II</td>
<td>.5</td>
</tr>
</tbody>
</table>

### IV. Engineering Electives  
3-4 credits

Choose one course from the following list based on the engineering field to be pursued and the recommendation of the college to which transfer is expected.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESC:201</td>
<td>Engineering Circuits II</td>
<td>.4</td>
</tr>
<tr>
<td>ESC:204</td>
<td>Engineering Mechanics II</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:205</td>
<td>Mechanics of Materials</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:207</td>
<td>Engineering Thermodynamics (or)</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:202</td>
<td>Thermal Analysis</td>
<td>.3</td>
</tr>
</tbody>
</table>

### V. Technical and General Education Electives  
6-7 credits

Completion of the AS degree in Engineering Science requires an additional six to seven credit hours selected from any of the courses listed in the following three areas. Elective courses should be selected based on the engineering field to be pursued, and the recommendation of the college to which transfer is expected.

**Engineering and Related Electives:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR:100</td>
<td>Engineering Drawing</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:201</td>
<td>Engineering Circuits II</td>
<td>.4</td>
</tr>
<tr>
<td>ESC:204</td>
<td>Engineering Mechanics II</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:205</td>
<td>Mechanics of Materials</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:206</td>
<td>Strength of Materials Lab</td>
<td>.1</td>
</tr>
<tr>
<td>ESC:207</td>
<td>Engineering Thermodynamics (or)</td>
<td>.3</td>
</tr>
<tr>
<td>ESC:202</td>
<td>Thermal Analysis</td>
<td>.3</td>
</tr>
<tr>
<td>ME:151</td>
<td>Manufacturing Processes I</td>
<td>.3</td>
</tr>
<tr>
<td>ME:249</td>
<td>Materials and Metallurgy*</td>
<td>.3</td>
</tr>
<tr>
<td>CE:240</td>
<td>Plane Surveying*</td>
<td>.3</td>
</tr>
<tr>
<td>CE:243</td>
<td>Introduction to Environmental Engineering*</td>
<td>.3</td>
</tr>
<tr>
<td>QC:100</td>
<td>Introduction to Quality Control*</td>
<td>.3</td>
</tr>
<tr>
<td>SAF:100</td>
<td>Safety Program Organization and Administration*</td>
<td>.3</td>
</tr>
<tr>
<td>IS: 256</td>
<td>C++ Object Oriented Programming</td>
<td>.3</td>
</tr>
</tbody>
</table>
### Science and Mathematics Electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO:117</td>
<td>Conservation and Ecology</td>
<td>3</td>
</tr>
<tr>
<td>CHM:106</td>
<td>General Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>CHM:201</td>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>CHM:204</td>
<td>Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM:206</td>
<td>Organic Chemistry Lecture I (and)</td>
<td>3</td>
</tr>
<tr>
<td>CHM:210</td>
<td>Organic Chemistry Lab I</td>
<td>2</td>
</tr>
<tr>
<td>CHM:207</td>
<td>Organic Chemistry Lecture II (and)</td>
<td>3</td>
</tr>
<tr>
<td>CHM:211</td>
<td>Organic Chemistry Lab II</td>
<td>2</td>
</tr>
<tr>
<td>GEO:111</td>
<td>Physical Geology*</td>
<td>5</td>
</tr>
<tr>
<td>MTH:215</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>PHY:224</td>
<td>Engineering Physics III</td>
<td>3</td>
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</table>

* Check with institution to which transfer is expected to determine course acceptability.

### Recommended General Education Electives**:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ANT:103</td>
<td>Cultural Variations</td>
</tr>
<tr>
<td>ART:133</td>
<td>Graphic Design I</td>
</tr>
<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
</tr>
<tr>
<td>ECO:151</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>HST:119</td>
<td>The Modern World</td>
</tr>
<tr>
<td>HUM:112</td>
<td>Creative Thinking</td>
</tr>
<tr>
<td>PHL:111</td>
<td>Environmental Ethics</td>
</tr>
<tr>
<td>PSC:201</td>
<td>International Relations</td>
</tr>
<tr>
<td>PSY:200</td>
<td>General Psychology</td>
</tr>
<tr>
<td>PSY:206</td>
<td>Introduction to Social Psychology</td>
</tr>
<tr>
<td>PSY:217</td>
<td>Cross-Cultural Psychology</td>
</tr>
<tr>
<td>SOC:101</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>SOC:202</td>
<td>American Social Problems and Issues</td>
</tr>
</tbody>
</table>

** Substitutions may be made with permission from an advisor.

### Program total: 69-71 credits

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### Technology Education

**ASSOCIATE IN SCIENCE DEGREE**

**Florissant Valley**

#### I. General Education 26 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:103</td>
<td>Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENG:201</td>
<td>Introduction to Fiction or</td>
<td></td>
</tr>
<tr>
<td>ENG:202</td>
<td>Introduction to Poetry and Plays</td>
<td>3</td>
</tr>
<tr>
<td>PSY:200</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>MTH:144</td>
<td>Technical Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>PHL:101</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one course from:

- CHM:101 Fundamentals of Chemistry I
- CHM:105 General Chemistry I
- GEO:100 Earth Science
- GEO:111 Physical Geology
- PSI:101 Physical Science Lecture I
- PSI:105 Physical Science I
- PSI:111 Introduction to Astronomy I
- PSI:124 Principles of Physical Science
- PHY:111 College Physics I
- PHY:122 Engineering Physics I

### II. Physical Education Requirement 2 credits

#### I. Professional Education 9 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EDU:200</td>
<td>Introduction to Classroom Teaching</td>
<td>3</td>
</tr>
<tr>
<td>EDU:211</td>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>PSY:214</td>
<td>Adolescent Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

### III. Engineering Technology Education 41 credits

#### III. Communications Technology 12 credits

*Required: 6 hrs.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR:100</td>
<td>Engineering Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART:133</td>
<td>Graphic Design I</td>
<td>3</td>
</tr>
</tbody>
</table>

Select: 6 hrs.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR:140</td>
<td>Computer Aided Drafting and Design I</td>
<td>3</td>
</tr>
<tr>
<td>EGR:255</td>
<td>Advanced Computer Aided Drafting</td>
<td>3</td>
</tr>
<tr>
<td>ART:165</td>
<td>Photography I</td>
<td>3</td>
</tr>
<tr>
<td>ART:271</td>
<td>Desktop Publishing</td>
<td>2</td>
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</table>

#### Energy and Power Technology 14 credits

*Required: 8 hrs.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EE:130</td>
<td>Electric Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>EE:131</td>
<td>Electric Circuits II</td>
<td>4</td>
</tr>
</tbody>
</table>

Select: 6 hrs.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE:132</td>
<td>Electronic Devices</td>
<td>5</td>
</tr>
<tr>
<td>EE:241</td>
<td>Transmission and Distribution of Power</td>
<td>3</td>
</tr>
<tr>
<td>ME:223</td>
<td>Basic Hydraulics I</td>
<td>2</td>
</tr>
<tr>
<td>ME:255</td>
<td>Fluid Power</td>
<td>3</td>
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</table>

#### Materials and Processes Technology 15 credits

*Required: 9 hrs.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME:249</td>
<td>Materials and Metallurgy</td>
<td>3</td>
</tr>
<tr>
<td>ME:151</td>
<td>Manufacturing Processes I</td>
<td>3</td>
</tr>
<tr>
<td>ME:152</td>
<td>Manufacturing Processes II</td>
<td>3</td>
</tr>
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</table>

Select: 6 hrs.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE:108</td>
<td>Construction Methods</td>
<td>3</td>
</tr>
<tr>
<td>ME:241</td>
<td>Numerical Control Programming</td>
<td>3</td>
</tr>
<tr>
<td>ME:140</td>
<td>Introduction to Robotics</td>
<td>3</td>
</tr>
</tbody>
</table>

### Program total: 78 credits
ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAM

St. Louis Community College offers numerous career/vocational programs for students entering the job market for the first time, changing jobs or careers or upgrading skills. Three levels of programs are offered: the associate in applied science degree, the certificate of proficiency and the certificate of specialization.

The associate in applied science degree program helps students develop practical and theoretical skills that prepare them for entry-level jobs. These programs can be completed in two years of full-time attendance. However, most students take courses on a part-time basis and take longer to complete their programs. Many courses are offered both day and evening. All associate in applied science graduates must have coursework in the following areas:

**Humanities and Communications** 6 credit hours
Select from Art, College Composition, English Literature and Culture, Foreign Language and Cultures, Humanities, Media, Music, Philosophy, Reading, Speech and Theatre.

**Natural Science and Mathematics** 6 credit hours
Select from Astronomy, Biology, Chemistry, Geology, Physical Geography, Physical Science, Physics and Mathematics.

**Social Science** 6 credit hours
Select from Anthropology, Economics, Geography (except physical), History, Political Science, Psychology and Sociology.

**Physical Education** 2 credit hours
Select from activity courses.

For the remaining hours required for the degree, you may choose general electives or courses that fit a specific major.

CERTIFICATE PROGRAMS

The certificate of proficiency is designed primarily for persons whose intended job does not require an associate degree. It is also suitable for persons who wish additional information and skills in a particular area. Certificates of proficiency usually require one year of full-time attendance to complete. If courses are taken on a part-time basis, however, it will take longer to complete a program.

The certificate of specialization is designed primarily for persons who want information and skills in a specific area, often related to a current job. This certificate may allow students to qualify for promotion, obtain certification, or increase future employment opportunities. Certificates of specialization usually require 18 semester hours of work and can be completed on a full- or part-time basis.

**Accounting**

**ASSOCIATE IN APPLIED SCIENCE DEGREE**
Florissant Valley, Forest Park and Meramec

The degree is designed to provide students with a skill and knowledge background that will enhance an entry into the accounting job market. It is tailored to provide students with a comprehensive foundation in accounting and hands-on experience with computers using commercial accounting software.

Persons planning a career in accounting should have a proficiency in mathematics and be able to analyze, compare and interpret facts and figures quickly. Accuracy and the ability to handle responsibility with limited supervision are important. Courses in computer applications and work experience in the business area are extremely beneficial.

I. **Career General Education** .................21 credits
   ENG:100 Career English (or) ..................3
   ENG:101 College Composition I ................3
   ENG:103 Report Writing (or) .................3
   ENG:102 College Composition II .............3
   ECO:151 Principles of Macroeconomics ........3
   ECO:152 Principles of Microeconomics .......3
   MTH:xxx Mathematics (140 level or higher) .3
   BUS:103 Business Mathematics (counts as
       3 hours of the math requirement) ........3
   XXX:xxx Missouri State Requirement ..........3

II. **Physical Education Activity** ...............2 credits

III. **Area of Concentration** .................22 credits
    ACC:100 Applied Accounting .................3
    ACC:110 Financial Accounting I .............4
    ACC:114 Managerial Accounting .............3
    ACC:208 Intermediate Accounting I ...........3
    ACC:213 Survey of Business Taxes ..........3
    BLW:101 Business Law I .....................3
    BUS:104 Introduction to Business Administration ..3
IV. Technology Core Courses 9 credits
ACC:120 Computer Accounting Applications for Business 3
ACC:122 Computer Accounting Applications - Spreadsheets 3
ACC:124 Computer Accounting Applications - Database 3

V. Area of Concentration 6 credits
Complete one of the options listed below.

Accounting Associate Option:
Accounting electives

Tax Emphasis Option:
Approved tax electives

VI. Business Electives 6 credits
Select two from the following:
ACC:xxx
IS:xxx
MGT:xxx or MKT:xxx
FIN:xxx
BUS:201

Program total 66 credits

CERTIFICATE OF PROFICIENCY
Florissant Valley, Forest Park and Meramec
The accountant’s role has changed dramatically with the dominant role of computers. This program is designed to provide students with knowledge and skills to meet the changing needs required in today’s job market. A strong foundation in accounting with commercial computer application represents the proficiencies emphasized in this fast-track program. This certificate provides currently employed persons the opportunity to acquire an extensive accounting background; provides necessary skills and proficiencies to attain employment in the accounting field.

Courses 34 credits
BUS:103 Business Mathematics 3
ACC:100 Applied Accounting 3
ACC:110 Financial Accounting I 4
ACC:114 Managerial Accounting 3
ACC:208 Intermediate Accounting I 3
ACC:213 Survey of Business Taxes 3
BLW:101 Business Law I 3
ACC:120 Computer Accounting Applications for Business 3
ACC:122 Computer Accounting Applications - Spreadsheets 3
ACC:124 Computer Accounting Applications - Database 3
ACC:xxx Accounting Elective 3

Program total 37 credits

Business Electives 3 credits
Select from:
ACC:xxx
IS:xxx
BUS:xxx
FIN:xxx

Program total 37 credits

Computer Accounting Technology
CERTIFICATE OF SPECIALIZATION
Florissant Valley, Forest Park, Meramec
This fast-track certificate is designed for accounting students on the fast-track to the job market or practicing accountants who want to update technology skills.

Courses Credits
ACC:110 Financial Accounting I 4
ACC:120 Computer Accounting Applications for Business 3
ACC:122 Computer Accounting Applications - Spreadsheets 3
ACC:124 Computer Accounting Applications - Databases 3
ACC:xxx Accounting Elective(s) (Cannot be ACC:100) (or)
IS:xxx Information System Elective(s) 3

Program total 16 credits

Addictions Study
CERTIFICATE OF PROFICIENCY
Florissant Valley, Forest Park and Meramec
This program provides academic preparation for persons working or preparing to work in the field of alcohol and drug abuse treatment. It will look at commonalities of the various addiction and treatment modalities.

Courses 21 credits
HMS:100 Introduction to Human Services 3
HMS:101 Human Services: Theories and Skills (or)
HMS:205 Crisis Intervention 3
HMS:111 Group Practice in Human Services 3
HMS:201 Human Services Practicum I 3
HMS:203 Human Services Practicum Seminar I 3
SOC:126 Study of Psychodynamic Substances 3
SOC:211 Alcoholism and Drug Abuse 3

Electives 3 credits
Select one course from the following:
PSY:200 General Psychology
PSY:205 Human Growth and Development
PSY:208 Abnormal Psychology
SOC:204 Marriage and the Family
or other approved elective

Program total 24 credits
**African-American Studies**

**CERTIFICATE OF SPECIALIZATION**

**Forest Park**

This program is designed for students interested in a broad-based education and in enhancing their knowledge, understanding and capabilities for functioning effectively in a multi-racial society. Although the program is geared to students planning to transfer to four-year colleges, students in career programs will find the insight gained through these courses valuable. All students are urged to take at least one course in African-American Studies.

<table>
<thead>
<tr>
<th>Courses</th>
<th>18 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM:106 Black Humanities</td>
<td>.3</td>
</tr>
<tr>
<td>PHL:105 Black Philosophy (or)</td>
<td>.3</td>
</tr>
<tr>
<td>ENG:217 Major Black Writers*</td>
<td>.3</td>
</tr>
<tr>
<td>PSS:200 General Psychology (Black Emphasis)</td>
<td>.3</td>
</tr>
<tr>
<td>HST:137 African-American History I (or)</td>
<td>.3</td>
</tr>
<tr>
<td>HST:138 African-American History II*</td>
<td>.3</td>
</tr>
<tr>
<td>SOC:101 Introduction to Sociology (Black Emphasis)</td>
<td>.3</td>
</tr>
<tr>
<td>XXX:xxx African-American Studies approved elective</td>
<td>.3</td>
</tr>
</tbody>
</table>

**Electives**

* Required courses not selected may be taken as an elective course or any of the following courses:

<table>
<thead>
<tr>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART:104 Major Black Artists</td>
</tr>
<tr>
<td>ECO:103 Economics of the Black Experience</td>
</tr>
<tr>
<td>HST:130 African History I</td>
</tr>
<tr>
<td>HST:131 African History II</td>
</tr>
<tr>
<td>HUM:209 Blacks and the World of Cinema</td>
</tr>
<tr>
<td>PHL:106 Black Religion</td>
</tr>
<tr>
<td>PSS:106 Blacks and the American Political Process</td>
</tr>
<tr>
<td>PSS:204 Politics of African Nations</td>
</tr>
</tbody>
</table>

**Program total** .18 credits

**Architectural Technology**

**ASSOCIATE IN APPLIED SCIENCE DEGREE**

**Meramec**

This program prepares students for support positions in the architectural profession. Drafting and presentation skills are emphasized; however, detailing, design and project programming also are major concerns.

A variety of courses is offered from specification writing to rendering, to computer-aided drafting in an effort to expose students to the range of possibilities and knowledge necessary in this field.

The ability to visualize, draft and sketch is necessary. With patience and hard work most students are able to acquire these skills, but it must be under-stood that more outside time will be required for a student lacking in these areas.

Graduates are qualified for positions as drafters and junior designers in architectural firms.

**I. Career General Education**

<table>
<thead>
<tr>
<th>Courses</th>
<th>18-19 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:100 Career English (or)</td>
<td></td>
</tr>
<tr>
<td>ENG:101 College Composition I</td>
<td>.3</td>
</tr>
<tr>
<td>ENG:103 Report Writing (or)</td>
<td></td>
</tr>
<tr>
<td>COM:101 Oral Communication I</td>
<td>.3</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
<td>.3</td>
</tr>
<tr>
<td>SOC:103 Human Behavior at Work and in Business (or)</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>.3</td>
</tr>
<tr>
<td>MTH:124 Technical Mathematics (or)</td>
<td></td>
</tr>
<tr>
<td>MTH:140 Intermediate Algebra</td>
<td>.3</td>
</tr>
<tr>
<td>Selection from Biology, Chemistry, Geology, Math (100+ level), Physical Geology, Physical Science, or Physics</td>
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</tbody>
</table>

**II. Physical Education Activity**

<table>
<thead>
<tr>
<th>Courses</th>
<th>2 credits</th>
</tr>
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<tbody>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:103 Report Writing (or)</td>
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</table>

**III. Area of Concentration**

<table>
<thead>
<tr>
<th>Courses</th>
<th>40 credits</th>
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<tbody>
<tr>
<td>ARC:110 Architectural Graphics</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:112 Architectural Design and Production I</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:114 Architectural History and Theory</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:115 Architectural Rendering and Presentation</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:123 Introduction to Computer Aided Architectural Drafting</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:209 Mechanical and Electrical Systems I</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:211 Architectural Design and Production II</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:219 Professional Practice</td>
<td>.2</td>
</tr>
<tr>
<td>ARC:220 Architectural Design and Production III</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:222 Site Planning and Landscape Drafting</td>
<td>.3</td>
</tr>
<tr>
<td>ART:107 Design I</td>
<td>.2</td>
</tr>
<tr>
<td>ART:109 Drawing I</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:229 Architectural Specifications, Materials and Methods</td>
<td>.3</td>
</tr>
<tr>
<td>CE:117 Statics and Strengths of Materials</td>
<td>.3</td>
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</tbody>
</table>

**IV. Electives**

<table>
<thead>
<tr>
<th>Courses</th>
<th>3-4 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC:223 Intermediate Computer-Aided Architectural Drafting</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:224 Advanced Computer-Aided Drafting</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:227 Architectural Estimating</td>
<td>.3</td>
</tr>
<tr>
<td>ARC:228 Architectural Computer Rendering, Modeling and Animation</td>
<td>.3</td>
</tr>
<tr>
<td>CE:241 Structural Systems I</td>
<td>.4</td>
</tr>
</tbody>
</table>

**Program total** .64 credits

**Workplace Experience:** Students may substitute up to six credit hours of appropriate and relevant workplace learning experience for technical courses, and/or electives, included in the program. In order for the workplace learning credit to be counted for the degree requirement, the learning experience must be pre-approved by the department, and an appropriate faculty member must supervise the work.
Automotive Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Forest Park

This program prepares students for entry-level positions in the automotive industry at beginning supervisory and managerial levels. Students are trained in every aspect of the mechanical parts of a car; however, auto body repair training is not offered. The program begins during the fall semester only. Part-time or full-time attendance is possible.

Persons interested in this program should be able to work well with people, be capable of assuming responsibility and be able to work without supervision. They should have a strong math and reading background and be mechanically inclined with a high level of manual dexterity and eye/hand coordination.

Graduates of the AAS program are qualified for positions as mechanics and diagnostic technicians at automobile dealerships, independent garages and repair shops, discount stores, tire centers and service centers. Certificate graduates qualify for many entry level positions.

I. Career General Education 19 credits

ENG:101 College Composition I 3
COM:101 Oral Communication I 3
MTH:124 Technical Mathematics I 3
PSI:124 Principles of Physical Science 4
XXX:xxx Missouri State Requirement 3
XXX:xxx Psychology or Sociology Elective 3

II. Physical Education Activity 2 credits

III. Area of Concentration 47 credits

ACC:100 Applied Accounting (or) 3
BUS:104 Introduction to Business Administration 3
AUT:150 Automotive Fuel and Induction Systems 3
AUT:151 Automotive Engine Operation 3
AUT:156 Automotive Electricity 3
AUT:158 Charts, Diagrams, and Handbook Usage 2
AUT:167 Automotive Electronics 3
AUT:168 Suspension and Steering I 3
AUT:169 Suspension and Steering II 3
AUT:256 Automotive Powertrains 3
AUT:271 Diagnostic Equipment and Emissions 3
AUT:272 Accessories, Controls, and Air Conditioning 3
AUT:273 Automatic Transmissions and Transaxles 3
AUT:281 Automotive Field Work I 5
AUT:282 Automotive Field Work II 5
AUT:291 Automotive Service Management 2
ENG:101 College Composition I (or) 3
COM:101 Oral Communication I 3
MTH:124 Technical Mathematics I 3

Program total 47 credits

CERTIFICATE OF PROFICIENCY

Forest Park

Building on the skills developed in the certificate of specialization, this program prepares the graduate to perform more complicated repair and maintenance tasks on automobiles.

Courses Credits
AUT:150 Automotive Fuel and Induction Systems 3
AUT:151 Automotive Engine Operation 3
AUT:156 Automotive Electricity 3
AUT:158 Charts, Diagrams, and Handbook Usage 2
AUT:167 Automotive Electronics 3
AUT:168 Suspension and Steering I 3
AUT:169 Suspension and Steering II 3
AUT:256 Automotive Powertrains 3
AUT:271 Diagnostic Equipment and Emissions 3
AUT:272 Accessories, Controls, and Air Conditioning 3
AUT:273 Automatic Transmissions and Transaxles 3
AUT:281 Automotive Field Work I 5
AUT:282 Automotive Field Work II 5
AUT:291 Automotive Service Management 2

Program total 47 credits

CERTIFICATE OF SPECIALIZATION

Forest Park

Concentrating on development of skills, this certificate prepares the graduate to perform basic repairs and routine maintenance on automobiles and to use the necessary tools.

Courses Credits
AUT:150 Automotive Fuel and Induction Systems 3
AUT:151 Automotive Engine Operation 3
AUT:156 Automotive Electricity 3
AUT:168 Suspension and Steering I 3
AUT:169 Suspension and Steering II 3
AUT:256 Automotive Powertrains 3
AUT:271 Diagnostic Equipment and Emissions 3
AUT:272 Accessories, Controls, and Air Conditioning 3
AUT:273 Automatic Transmissions and Transaxles 3
AUT:281 Automotive Field Work I 5
AUT:282 Automotive Field Work II 5
AUT:291 Automotive Service Management 2
ENG:101 College Composition I (or) 3
MTH:124 Technical Mathematics I (or) 3
COM:101 Oral Communication I 3

Program total 18 credits

Workplace Experience: Students may substitute up to six credit hours of appropriate and relevant workplace learning experience for technical courses, and/or electives, included in the program. In order for the workplace learning credit to be counted for the degree requirement, the learning experience must be pre-approved by the department, and an appropriate faculty member must supervise the work.
Automotive Technology:  
Ford Asset Option

ASSOCIATE IN APPLIED SCIENCE DEGREE

Forest Park

The Ford ASSET (Automotive Student Service Educational Training) program is an alliance among Ford Motor Company, Ford, Lincoln-Mercury, and Mazda dealers, and St. Louis Community College. The program is a career program that trains students to become entry-level automotive service technicians at Ford, Lincoln-Mercury and Mazda Dealerships. Students get on-the-job training at a sponsoring dealership while earning an Associate in Applied Science Degree in Automotive Technology. Enrollment is restricted by dealer selection. For information contact the Ford ASSET Coordinator.

I. Career General Education 18 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101</td>
<td>College Composition</td>
<td>3</td>
</tr>
<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:108</td>
<td>Applied Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>PSI:101</td>
<td>Physical Science Lecture I</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Psychology or Sociology Elective</td>
<td>3</td>
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</table>

II. Physical Education Activity 2 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS:104</td>
<td>Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>AUT:150</td>
<td>Automotive Fuel and Induction Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUT:151</td>
<td>Automotive Engine Operation</td>
<td>3</td>
</tr>
<tr>
<td>AUT:156</td>
<td>Automotive Electricity</td>
<td>3</td>
</tr>
<tr>
<td>AUT:163</td>
<td>Cooperative Work Experience I</td>
<td>7</td>
</tr>
<tr>
<td>AUT:164</td>
<td>Cooperative Work Experience II</td>
<td>7</td>
</tr>
<tr>
<td>AUT:165</td>
<td>Cooperative Work Experience III</td>
<td>7</td>
</tr>
<tr>
<td>AUT:166</td>
<td>Cooperative Work Experience IV</td>
<td>7</td>
</tr>
<tr>
<td>AUT:167</td>
<td>Automotive Electronics</td>
<td>3</td>
</tr>
<tr>
<td>AUT:168</td>
<td>Suspension and Steering I</td>
<td>3</td>
</tr>
<tr>
<td>AUT:169</td>
<td>Suspension and Steering II</td>
<td>3</td>
</tr>
<tr>
<td>AUT:170</td>
<td>Introduction to Dealership Service</td>
<td>2</td>
</tr>
<tr>
<td>AUT:257</td>
<td>Air Conditioning and Auxiliary Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUT:258</td>
<td>Manual Drivetrains</td>
<td>3</td>
</tr>
<tr>
<td>AUT:259</td>
<td>Emissions and Driveability Diagnosis</td>
<td>3</td>
</tr>
<tr>
<td>AUT:273</td>
<td>Automatic Transmissions and Transaxles</td>
<td>3</td>
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</table>

III. Area of Concentration 63 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT:173</td>
<td>Automatic Transmissions and Transaxles</td>
<td>3</td>
</tr>
<tr>
<td>ECO:215</td>
<td>Money and Banking*</td>
<td>3</td>
</tr>
<tr>
<td>IS:116</td>
<td>Microcomputer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>MGT:222</td>
<td>Consumer Lending*</td>
<td>2</td>
</tr>
<tr>
<td>FIN:100</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>MKT:203</td>
<td>Principles of Marketing (or)</td>
<td>3</td>
</tr>
<tr>
<td>MKT:215</td>
<td>Marketing Financial Services*</td>
<td>2-3</td>
</tr>
</tbody>
</table>

Program total 64-65 credits

Banking and Finance

ASSOCIATE IN APPLIED SCIENCE DEGREE

Florissant Valley, Forest Park and Meramec

This program, offered in conjunction with the St. Louis Chapter of the Center for Financial Training, prepares students for entry-level positions in financial institutions and provides additional education in banking management to current bank employees. Current bank employees can earn college credit while taking specialized banking courses that can increase opportunities for promotion. Students receive basic knowledge and skill in accounting, banking law, banking credit management, bank marketing and the money and banking system of the United States.

Because good customer relations are vital to the financial service industry, students interested in the program should be highly service-oriented and interested in working with people. Potential students also should be industrious and trustworthy. Previous business and banking experience is helpful.

Graduates of the program are qualified for positions as clerks, tellers and management trainees. These positions can be found in departments such as installment loans, data processing, personnel, credit service, commercial loans and auditing in banks, thrifts or credit unions.

Students may obtain information through the College Admissions office, Counseling, the Business Administration department or through the C.F.T.

Banking Option

I. Career General Education 27-28 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102</td>
<td>College Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ECO:151</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECO:152</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Social Science Option</td>
<td>3</td>
</tr>
<tr>
<td>MTH:xxx</td>
<td>MATH:100 or higher</td>
<td>3</td>
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</table>

II. Physical Education Activity 2 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS:115</td>
<td>Principles of Banking*</td>
<td>3</td>
</tr>
<tr>
<td>ACC:110</td>
<td>Financial Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS:104</td>
<td>Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>BUS:115</td>
<td>Principles of Banking*</td>
<td>2</td>
</tr>
<tr>
<td>ECO:215</td>
<td>Money and Banking*</td>
<td>3</td>
</tr>
<tr>
<td>IS:116</td>
<td>Microcomputer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>MGT:222</td>
<td>Consumer Lending*</td>
<td>2</td>
</tr>
<tr>
<td>FIN:100</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>MKT:203</td>
<td>Principles of Marketing (or)</td>
<td>3</td>
</tr>
<tr>
<td>MKT:215</td>
<td>Marketing Financial Services*</td>
<td>2-3</td>
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</table>

Choose 4 - 5 courses 12 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACC:114</td>
<td>Managerial Accounting</td>
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</tr>
<tr>
<td>BLW:101</td>
<td>Business Law I (or)</td>
<td>3</td>
</tr>
<tr>
<td>GHT:220</td>
<td>Law and Banking: Principles*</td>
<td>2-3</td>
</tr>
<tr>
<td>BLW:102</td>
<td>Business Law II or</td>
<td>2</td>
</tr>
<tr>
<td>BLW:216</td>
<td>Law and Banking: Applications*</td>
<td>3</td>
</tr>
<tr>
<td>BLW:216</td>
<td>Analyzing Financial Statements*</td>
<td>3</td>
</tr>
<tr>
<td>MGT:204</td>
<td>Business Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT:104</td>
<td>Business Principles of Selling</td>
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</table>

IV. Electives 0-1 credits

Program total .64-65 credits
Finance Option

I. Career General Education: 27-28 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM:101 Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102 College Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ECO:151 Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECO:152 Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Social Science option</td>
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</tr>
<tr>
<td>MTH:xxx Math/Science elective</td>
<td>3-4</td>
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</table>

II. Physical Education Activity 2 credits

III. Area of Concentration 35 credits

Banking and Finance Core Courses 15 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACC:110 Financial Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS:104 Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>BUS:115 Principles of Banking*</td>
<td>2</td>
</tr>
<tr>
<td>ECO:215 Money and Banking*</td>
<td>3</td>
</tr>
<tr>
<td>IS:116 Microcomputer Literacy</td>
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</table>

Finance Option (required courses) 8 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MGT:221 Commercial Lending*</td>
<td>2</td>
</tr>
<tr>
<td>FIN:201 Principles of Finance</td>
<td>3</td>
</tr>
<tr>
<td>FIN:101 Introduction to Investments</td>
<td>3</td>
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</table>

Choose 4-5 courses 12 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC:114 Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BLW:101 Business Law I (or)</td>
<td>3</td>
</tr>
<tr>
<td>MGT:220 Law and Banking Principles*</td>
<td>2-3</td>
</tr>
<tr>
<td>BLW:102 Business Law II (or)</td>
<td>2</td>
</tr>
<tr>
<td>BLW:216 Law and Banking: Applications*</td>
<td>2-3</td>
</tr>
<tr>
<td>BUS:216 Analyzing Financial Statements*</td>
<td>3</td>
</tr>
<tr>
<td>MGT:204 Business Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT:104 Principles of Selling</td>
<td>3</td>
</tr>
<tr>
<td>MKT:203 Principles of Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

IV. Electives 0-2 credits

Program total .............64-65 credits

* Center for Social Education courses

Biotechnology

ASSOCIATE IN APPLIED SCIENCE DEGREE Florissant Valley

The biotechnology associate in applied science degree allows the student to earn an associate degree while gaining basic laboratory skills and experience required in biotechnology research and industry, permitting immediate employability in the field as entry-level lab technicians.

Fundamentals of Chemistry or high school chemistry with a grade of A or B within the past three years is required for entry into this program.

I. Career General Education 19 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102 College Composition II or</td>
<td>3</td>
</tr>
<tr>
<td>ENG:103 Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>MTH:160 College Algebra</td>
<td>4</td>
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<tr>
<td>COM:101 Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Social Science Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Physical Education 2 credits

III. Area of Concentration 45-47 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIO:104 Basic Laboratory Methods</td>
<td>3</td>
</tr>
<tr>
<td>BIO:111 Introductory Biology I (or)</td>
<td>3</td>
</tr>
<tr>
<td>BIO:140 Principles of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>CHM:105 General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHM:106 General Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>CHM:206 Organic Chemistry Lecture I (and)</td>
<td>5</td>
</tr>
<tr>
<td>CHM:210 Organic Chemistry Lab I (or)</td>
<td>5</td>
</tr>
<tr>
<td>BIO:222 Specialized Topics in Biotechnology</td>
<td>5</td>
</tr>
<tr>
<td>CHM:207 Organic Chemistry Lecture II (and)</td>
<td>5</td>
</tr>
<tr>
<td>CHM:211 Organic Chemistry Lab II (or)</td>
<td>5</td>
</tr>
<tr>
<td>BIO:221 Biotechnology Internship</td>
<td>3-5</td>
</tr>
<tr>
<td>BIO:218 Microbiology for Biotechnology</td>
<td>4</td>
</tr>
<tr>
<td>BIO:219 Biotechnology I</td>
<td>5</td>
</tr>
<tr>
<td>BIO:220 Biotechnology II</td>
<td>5</td>
</tr>
<tr>
<td>PHL:109 Bio-Medical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>GE:101 Technical Computer Applications (or)</td>
<td>3</td>
</tr>
<tr>
<td>IS:116 Microcomputer Literacy</td>
<td>3</td>
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IV. Electives 3-6 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT:103 Plant Propagation</td>
<td>3</td>
</tr>
<tr>
<td>BIO:124 General Botany</td>
<td>4</td>
</tr>
<tr>
<td>BIO:221 Biotechnology Internship</td>
<td>3</td>
</tr>
<tr>
<td>BIO:222 Specialized Topics in Biotechnology</td>
<td>5</td>
</tr>
<tr>
<td>BIO:224 Introduction to Bioinformatics</td>
<td>2</td>
</tr>
<tr>
<td>DIT:108 Food: Preparation and Science Lecture</td>
<td>3</td>
</tr>
<tr>
<td>DIT:109 Food: Preparation and Science Lab</td>
<td>2</td>
</tr>
<tr>
<td>BIO:223 Research Techniques in Biology</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Program total .............69-74 credits

Biomedical Engineering Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE Florissant Valley

This program deactivated effective Spring 2007. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor. (See Electrical/Electronic Engineering Technology.)
CERTIFICATE OF SPECIALIZATION  
Florissant Valley

Courses | Credits
---|---
BIO:104 Basic Laboratory Methods | .3
BIO:219 Biotechnology I | .5
BIO:220 Biotechnology II | .5
BIO:222 Specialized Topics in Biotechnology | .5

Program total | .18 credits

Broadcast Engineering

CERTIFICATE OF SPECIALIZATION  
Florissant Valley

This program deactivated effective Fall 2006. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor.

Building Inspection and Code Enforcement Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE  
Forest Park

This program provides in-service training for current building inspectors and code enforcement officials and prepares students for entry-level employment. Students will learn to approve architectural plans and specifications, award work permits and to inspect new construction as it progresses. They will become knowledgeable in inspection techniques, soils, architectural materials, plumbing and electrical systems, heating and ventilation systems and municipal fire safety regulations.

Persons interested in this program should be mechanically inclined, honest, able to work with and pursue small details, able to read and interpret technical documents and construction drawings and specifications.

Graduates are qualified for positions as building inspectors and code enforcement officials with municipal governments, national and state agencies and private firms.

I. Career General Education | 24 credits
ENGL:101 English Composition I | .3
ENGL:103 Report Writing | .3
COM:101 Oral Communication I | .3
CHM:114 Industrial Chemistry | .3
MTH:124 Technical Mathematics I | .3
PSI:101 Principles of Physical Science Lecture | .3
XXX:xxx Missouri State Requirement | .3
SOCI:101 Introduction to Sociology | .3

II. Physical Education Activity | 2 credits

III. Area of Concentration | 42 credits
BIC:101 Basic Building Inspection Techniques | .3
BIC:103 Building Codes and Ordinances | .3
BIC:200 Plumbing and Mechanical Inspection | .4
BIC:201 Electrical Inspection | .2
BIC:202 Administration of Building Regulations | .3
BIC:203 Plan Review I (Non-structural) | .3
BIC:204 Plan Review II (Structural) | .3
BIC:205 Soils, Grading and Waste Water Control | .3
CE:116 Construction Blueprint Reading | .3
FIR:105 Inspection and Fire Prevention | .3
FIR:210 Architectural Structural Representation-Materials | .3
ME:135 Mechanics-Statics | .3
ME:243 Strength of Materials | .3
MGT:204 Business Organization and Management | .3

Program total | .68 credits

CERTIFICATE OF PROFICIENCY  
Forest Park

This program provides in-service training for current building inspectors and code enforcement officials and prepares students for entry-level employment. Students will learn to approve architectural plans and specifications, award work permits and to inspect new construction as it progresses. They will become knowledgeable in inspection techniques, soils, architectural materials, plumbing and electrical systems, heating and ventilation systems and municipal fire safety regulations.

Persons interested in this program should be mechanically inclined, honest, able to work with and pursue small details, able to read and interpret technical documents and construction drawings and specifications.

Courses | Credits
---|---
XXX:xxx Building Inspection, or Fire Protection, or Mechanical Engineering Electives from AAS degrees | .23
XXX:xxx Approved Electives from AAS degree | .9

Program total | .32 Credits

Housing Inspection Option

CERTIFICATE OF PROFICIENCY  
Forest Park

This program provides training for individuals seeking positions in municipal government and private firms. In general, the housing inspector performs inspections on existing homes to insure they meet local and national codes.

Persons interested in this program should be mechanically inclined, honest, able to work with and pursue small details, and able to read and interpret technical documents and construction drawings and specifications.

Courses | Credits
---|---
BIC:101 Basic Building Inspection Techniques | .3
BIC:102 Housing Inspection and Programs | .3
BIC:103 Building Codes and Ordinances | .3
BIC:104 Housing Inspection Problems | .3
BIC:200 Plumbing and Mechanical Inspection | .4
BIC:201 Electrical Inspection | .2
COM:101 Oral Communication I | .3
Business Administration

CERTIFICATE OF PROFICIENCY
Florissant Valley, Forest Park and Meramec

This flexible program is designed to address the educational and occupational needs of several groups of people in the business field. Persons presently employed in business-related areas can upgrade their skills and competencies. People presently employed who possess non-business degrees can enhance their business skills and competencies. They can enroll in short-term, intensive training for job opportunities or they can complete specific undergraduate requirements toward an advanced degree in business.

Students will acquire fundamental knowledge and skill in accounting, marketing, management, decision making, economics and statistics.

The ability to communicate effectively verbally and in writing is especially important for persons interested in this program.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:160 College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>ECO:151 Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECO:152 Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ACC:110 Financial Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACC:114 Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUS:104 Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>BLW:101 Business Law I (or)</td>
<td>3</td>
</tr>
<tr>
<td>BLW:201 Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS:201 Elementary Statistics (or)</td>
<td>3</td>
</tr>
<tr>
<td>BUS:202 Statistical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>IB:100 International Business</td>
<td>3</td>
</tr>
<tr>
<td>IS:103 Information Systems for Business</td>
<td>3</td>
</tr>
<tr>
<td>MKT:203 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MGT:204 Business Organization and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total ..........................35 credits

CERTIFICATE OF SPECIALIZATION
Florissant Valley and Forest Park

This flexible program is designed to address the career and educational needs of those currently employed in business-related areas. Designed to enhance business skills and competencies, this focused program can be used to expand job-related skills and to provide a foundation for advanced study in business.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC:100 Applied Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>BUS:104 Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>IS:103 Information Systems for Business (or)</td>
<td>3</td>
</tr>
<tr>
<td>IS:xxx Approved Information Systems course</td>
<td>3</td>
</tr>
<tr>
<td>MTH:108 Elementary Applied Mathematics (or)</td>
<td>3</td>
</tr>
<tr>
<td>MTH:xxx Approved 100 level Mathematics course (or)</td>
<td>3</td>
</tr>
<tr>
<td>BUS:103 Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MGT:204 Business Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT:203 Principles of Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total ..........................18 credits

Chemical Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program prepares students to work as chemical laboratory technicians with chemists, engineers, and environmentalists. Students learn the basics of wet chemical methods and acquire skills in analyzing and interpreting the results of basic chemical instrumentation.

Persons interested in this program should have an interest in math and science. They also should be able to work with people in teams.

Graduates are qualified for positions as industrial chemical technicians in chemical processing plants and environmental, agricultural, research and manufacturing facilities.

I. Career General Education 15 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:100 Career English (or)</td>
<td>3</td>
</tr>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102 College Composition II (or)</td>
<td>3</td>
</tr>
<tr>
<td>ENG:103 Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>MTH:140 Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Social Science Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Physical Education Activity 2 credits

III. Area of Concentration 39 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM:101 Fundamentals of Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHM:121 Chemical Technology I</td>
<td>5</td>
</tr>
<tr>
<td>CHM:122 Chemical Technology II</td>
<td>5</td>
</tr>
<tr>
<td>CHM:221 Chemical Technology III</td>
<td>5</td>
</tr>
<tr>
<td>CHM:222 Chemical Technology IV</td>
<td>5</td>
</tr>
<tr>
<td>CHM:231 Chemical Technology V</td>
<td>5</td>
</tr>
<tr>
<td>CHM:232 Chemical Technology VI</td>
<td>5</td>
</tr>
</tbody>
</table>
Civil Engineering Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

Civil engineering technicians work as part of the project team in the design and construction of roads, dams, airports, bridges, pollution control systems, water and sewage treatment plants and all types of commercial and industrial buildings. To accomplish that work, the civil technician could be involved in surveying, soil testing, preparation of drawings, basic design, construction inspection, material testing, contract administration, estimating project costs or technical sales. Many positions provide the opportunity to work out of doors.

An interest in practical problem solving and in observing a project from start to finish is important for persons employed in this field. Prior course work in algebra, geometry and drafting would be helpful. If necessary, developmental courses in those subjects are available.

Graduates are qualified for positions as civil and structural design draftsmen, survey instrument operators, construction inspectors, soils technicians and technical sales representatives.

I. Career General Education  38-39 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM:101</td>
<td>3</td>
</tr>
<tr>
<td>EGR:100</td>
<td>3</td>
</tr>
<tr>
<td>ENG:100</td>
<td>3</td>
</tr>
<tr>
<td>ENG:101</td>
<td>3</td>
</tr>
<tr>
<td>ENG:103</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102</td>
<td>3</td>
</tr>
</tbody>
</table>

** Students who are planning to pursue a BS in Civil Engineering should take the MTH:185/MTH:210 sequence.**

Workplace Experience: Students may substitute up to six credit hours of appropriate and relevant workplace learning experience for technical courses, and/or electives, included in the program. In order for the workplace learning credit to be counted for the degree requirement, the learning experience must be pre-approved by the department, and an appropriate faculty member must supervise the work.
Clinical Laboratory Technology

(MEDICAL LABORATORY TECHNICIAN)  
ASSOCIATE IN APPLIED SCIENCE DEGREE  
Forest Park  

This program prepares students for entry-level positions as clinical laboratory technicians. Through classroom and practical experience in hospital and clinical laboratories, students learn to perform qualitative, quantitative and analytic testing in microbiology, hematology, blood banking, clinical chemistry, serology, immunology and routine analysis.

Persons interested in this program should have an interest in biology, chemistry and the health sciences and be able to follow precise and detailed instructions.

Graduates are eligible to take the National Certifying Registry Examination. Positions are available in hospitals, clinics, doctors’ offices, independent laboratories, and public health, research and industrial laboratories.

I. Career General Education  
27 credits  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102</td>
<td>College Composition II (or)</td>
<td>3</td>
</tr>
<tr>
<td>ENG:xxx</td>
<td>English Elective</td>
<td>3</td>
</tr>
<tr>
<td>BIO:102</td>
<td>Clinical Physiology</td>
<td>3</td>
</tr>
<tr>
<td>CHM:101</td>
<td>Fundamentals of Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHM:212</td>
<td>Bio-Organic and Analytic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>MTH:124</td>
<td>Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>SOC:101</td>
<td>Introduction to Sociology (or)</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Psychology or Sociology Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Physical Education Activity  
2 credits  

III. Area of Concentration  
43 credits  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLT:100</td>
<td>Orientation of the Medical Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CLT:101</td>
<td>Medical Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>CLT:102</td>
<td>Routine Analysis</td>
<td>2</td>
</tr>
<tr>
<td>CLT:103</td>
<td>Hematology</td>
<td>3</td>
</tr>
<tr>
<td>CLT:104</td>
<td>Pathogenic Bacteriology I</td>
<td>4</td>
</tr>
<tr>
<td>CLT:105</td>
<td>Basic Laboratory Skills</td>
<td>4</td>
</tr>
<tr>
<td>CLT:200</td>
<td>Pathogenic Bacteriology II</td>
<td>4</td>
</tr>
<tr>
<td>CLT:201</td>
<td>Clinical Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CLT:202</td>
<td>Clinical Practice I</td>
<td>4</td>
</tr>
<tr>
<td>CLT:204</td>
<td>Blood Bank</td>
<td>2</td>
</tr>
<tr>
<td>CLT:205</td>
<td>Pathology-Correlation Conference</td>
<td>1</td>
</tr>
<tr>
<td>CLT:206</td>
<td>Clinical Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CLT:207</td>
<td>Clinical Practice II</td>
<td>4</td>
</tr>
<tr>
<td>CLT:210</td>
<td>Immunology and Serology</td>
<td>2</td>
</tr>
</tbody>
</table>

Program total: 72 credits

Computer Aided Design and Drafting (CADD)

CERTIFICATE OF SPECIALIZATION  
Florissant Valley  

A CAD operator is able to interpret data from multiple sources, apply traditional drafting skills, utilize operating system software, follow industrial practices and company procedures related to CAD work, and efficiently perform all related tasks to produce a final drawing.

Courses  
13-14 credits  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR:100</td>
<td>Engineering Drawing</td>
<td>3</td>
</tr>
<tr>
<td>EGR:110</td>
<td>Descriptive Geometry</td>
<td>3</td>
</tr>
<tr>
<td>EGR:135</td>
<td>CADD Management</td>
<td>2</td>
</tr>
<tr>
<td>GE:101</td>
<td>Technical Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Elective</td>
<td>2-3</td>
</tr>
</tbody>
</table>

Choose one of the following: 6 credits  

Option A  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR:140</td>
<td>Computer Aided Drafting and Design I</td>
<td>3</td>
</tr>
<tr>
<td>EGR:255</td>
<td>Advanced Computer Aided Drafting</td>
<td>3</td>
</tr>
</tbody>
</table>

Option B  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR:133</td>
<td>Introduction to AutoCAD I</td>
<td>2</td>
</tr>
<tr>
<td>EGR:141</td>
<td>Introduction to AutoCAD II</td>
<td>2</td>
</tr>
<tr>
<td>EGR:xxx</td>
<td>AutoCAD Elective</td>
<td>2</td>
</tr>
</tbody>
</table>

Program total: 19-20 credits

Computer Aided Manufacturing (CAM)

CERTIFICATE OF SPECIALIZATION  
Florissant Valley  

This program upgrades skills of persons currently employed in numerical control programming. It provides persons currently employed in manufacturing with a specialty in numerical control programming and provides students in technical areas with specialization in a specific area of manufacturing. Students learn the basics of numerical control programming through the use of computers and computer graphics with an orientation toward fabrication and assembly of a product after the design phase is completed.

Persons interested in this program should consult a counselor at the campus to determine whether they have the necessary prerequisites needed for the program.

Graduates are qualified for positions in computer-aided drafting, numerical control programming and/or numerical control machine operators, and related mechanical/manufacturing areas.

Courses  
18 credits  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE:101</td>
<td>Technical Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>EGR:110</td>
<td>Descriptive Geometry</td>
<td>3</td>
</tr>
<tr>
<td>EGR:140</td>
<td>Computer Aided Drafting and Design I</td>
<td>3</td>
</tr>
<tr>
<td>ME:140</td>
<td>Introduction to Robotics</td>
<td>3</td>
</tr>
<tr>
<td>ME:241</td>
<td>Numerical Control Programming</td>
<td>3</td>
</tr>
<tr>
<td>ME:250</td>
<td>Advanced Numerical Control Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total: 18 credits
Computer Aided Publishing

CERTIFICATE OF SPECIALIZATION
Forest Park

This program combines business writing, editing, design and layout courses with desktop publishing equipment to produce finished advertising and business communications materials. It is designed for persons with some previous experience in advertising or communications who wish to enhance their skills, increase their employability and explore the technological advances in computer aided publishing.

**Courses**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART:133 Graphic Design I</td>
<td>3</td>
</tr>
<tr>
<td>ART:131 Computer Art Studio</td>
<td>3</td>
</tr>
<tr>
<td>AT:246 Advanced Computer Art Applications</td>
<td>3</td>
</tr>
<tr>
<td>MCM:217 Publications Writing</td>
<td>3</td>
</tr>
<tr>
<td>ART:135 Graphic Production I</td>
<td>2</td>
</tr>
<tr>
<td>ART:245 Portfolio Design &amp; Professional Practices</td>
<td>2</td>
</tr>
</tbody>
</table>

**Electives**

Choose approved elective(s) from
- ART:241 Publication Design 3
- ART:236 Typography 2
- AT:247 Broadcast Graphics 2
- MCM:101 Introduction to Mass Communications 3
- MCM:113 Applied Journalism 3
- MCM:140 Introduction to Advertising 3
- MCM:141 Public Relations 3

**Program total** 18-19 credits

Other Art or Mass Communications courses may also substitute for the elective with the department’s permission.

Computer Engineering Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program deactivates effective Spring 2007. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor. (See Electrical/Electronic Engineering Technology.)

Construction Office Management

CERTIFICATE OF SPECIALIZATION
Florissant Valley

This program was designed to provide students with a solid background in the four areas of concentration relating to the construction industry. These areas are: estimating, scheduling, blueprint reading and management. Students successfully completing this program can seek immediate employment by marketing themselves as individuals qualified to participate in construction bidding and management functions, or can continue on in the Construction Technology Program and receive an Associate in Applied Science Degree. The certificate program can be completed either in two-semesters by taking regular semester long courses, or in a (five-month) compressed format by taking one course in each of the five months.

The program of study will consist of 15 credit hours of course work in estimating, scheduling, blueprint reading and management.

**Courses**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE:116 Construction Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>CE:131 Construction Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CE:132 Construction Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CE:235 Construction Office Practice</td>
<td>3</td>
</tr>
<tr>
<td>GE:101 Technical Computer Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program total** 15 credits

Construction Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program prepares students to work as technicians in the construction industry. Students acquire knowledge and skills in all phases of construction including planning, design, construction methods and contract management.

Persons interested in this program should have an interest in construction and enjoy working outdoors. They will be involved in problem solving so will eventually need a good background in mathematics.

Graduates are qualified for positions in the areas of inspection, work scheduling, estimating, material ordering, equipment sales, field management and construction planning and layout.

I. Career General Education 27 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:100 Career English (or)</td>
<td>3</td>
</tr>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:103 Report Writing (or)</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102 College Composition II</td>
<td>3</td>
</tr>
<tr>
<td>COM:101 Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>EGR:100 Engineering Drawing</td>
<td>3</td>
</tr>
<tr>
<td>GE:101 Technical Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>MTH:124 Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:134 Technical Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>SOC:103 Human Behavior at Work and in Business</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xx Missouri State Requirement</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Physical Education Activity 2 credits

III. Area of Concentration 33 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC:100 Applied Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ARC:209 Mechanical and Electrical Systems I</td>
<td>3</td>
</tr>
<tr>
<td>CE:108 Construction Methods</td>
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<tr>
<td>CE:116 Construction Blueprint Reading</td>
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<tr>
<td>CE:131 Construction Estimating</td>
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<tr>
<td>CE:132 Construction Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CE:230 Construction Materials and Testing</td>
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<tr>
<td>CE:235 Construction Office Practice</td>
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<tr>
<td>ME:135 Mechanics-Statics</td>
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<tr>
<td>ME:243 Strength of Materials</td>
<td>3</td>
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<tr>
<td>MGT:101 Introduction to Supervision</td>
<td>3</td>
</tr>
</tbody>
</table>
Credit Management

CERTIFICATE OF PROFICIENCY

Florissant Valley

Developed in conjunction with the St. Louis Chapter of the National Institute of Credit, this certificate provides relevant career training for those employed in the credit management field and a sound foundation for those who are seeking entry level positions in the credit field.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC:110 Financial Accounting I</td>
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<tr>
<td>ACC:111 Financial Accounting II</td>
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<tr>
<td>AOS:220 Business Communications Applications</td>
<td>3</td>
</tr>
<tr>
<td>ECO:151 Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECO:152 Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>FIN:201 Fundamentals of Finance</td>
<td>3</td>
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<td>MGT:118 Principles of Credit Management</td>
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<td>MGT:219 Financial Analysis for Credit Management</td>
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Program total .............. 25 credits

II. Physical Education Activity

<table>
<thead>
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<th>Courses</th>
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<tr>
<td>ENG:101 College Composition I</td>
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<tr>
<td>ENG:102 College Composition II</td>
<td>3</td>
</tr>
<tr>
<td>COM:101 Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>SOC:101 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>PSY:200 General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ANT:103 Cultural Variations (or)</td>
<td>3</td>
</tr>
<tr>
<td>SOC:203 Crime and Deviance</td>
<td>3</td>
</tr>
<tr>
<td>PSC:101 Introduction to American Politics</td>
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<tr>
<td>MTH:XXX Math elective (100 level or above)</td>
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<tr>
<td>XXX:xxx Science elective</td>
<td>3-4</td>
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<tr>
<td>PHL:104 Ethics</td>
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<tr>
<td>IS:101 Keyboarding and</td>
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</tr>
<tr>
<td>AOS:106 Keyboarding/Typewriting II (or)</td>
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</tr>
<tr>
<td>IS:116 Microcomputer Literacy (or)</td>
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</tr>
<tr>
<td>IS:151 Microcomputer Applications in Business</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Program total .............. 64-67 credits

CERTIFICATE OF PROFICIENCY

Forest Park

This program prepares students for entry level employment and advancement in the corrections field. Students learn to work toward the prevention of crime through rehabilitation, probation, work release and other modern treatment techniques.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ:101 American Correctional System</td>
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<tr>
<td>CRJ:102 Rehabilitation, Parole and Probation</td>
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</tr>
<tr>
<td>CRJ:111 Rules of Criminal Evidence</td>
<td>3</td>
</tr>
<tr>
<td>CRJ:122 Introduction to Criminal Justice</td>
<td>3</td>
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<tr>
<td>CRJ:123 Juvenile Justice</td>
<td>3</td>
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<tr>
<td>CRJ:124 Criminal Law and Procedures</td>
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<tr>
<td>CRJ:208 Correctional Policies and Procedures</td>
<td>3</td>
</tr>
<tr>
<td>CRJ:209 Criminal Justice Practicum</td>
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<td>CRJ:211 Criminal Justice Practicum Seminar</td>
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<tr>
<td>CRJ:xxxx Criminal Justice Elective</td>
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</tbody>
</table>

Program total .............. 33 credits
Criminal Justice: 
Law Enforcement Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley, Forest Park and Meramec

This program is designed to prepare students for entry-level employment in the criminal justice system; prepare those currently employed by a law enforcement agency for promotion; provide a background in law enforcement for those preparing for studies such as pre-law and advanced study in police management, criminology or social welfare. The program introduces students to the criminal justice system and its components. Students will obtain a working knowledge of the laws and procedures of the Missouri Juvenile Code.

Persons interested in this program should be capable of working effectively with others. Previous participation in team sports, military service and other group experiences are helpful. Prior course work in psychology, sociology, social studies and law is also beneficial.

Graduates are qualified for positions in law enforcement agencies, private security organizations and businesses such as insurance companies, banks and retail operations.

I. Career General Education 30-33 credits
   ENG:101 College Composition I ............3
   ENG:102 College Composition II ............3
   COM:101 Oral Communication I ............3
   XXX:xxx Missouri State Requirement ........3
   XXX:xxx Social Science (PSY or SOC) ........6
   PHL:104 Ethics ............................3
   MTH:xxx Mathematics 100 level or above ....3-4
   XXX:xxx Science Requirement ..............3-4
   IS:116 Microcomputer Literacy (or)
   IS:151 Microcomputer Applications in Business 3-4

II. Physical Education Activity 2 credits

III. Area of Concentration 21 credits
   CRJ:111 Rules of Criminal Evidence ........3
   CRJ:122 Introduction to Criminal Justice ....3
   CRJ:123 Juvenile Justice .................3
   CRJ:124 Criminal Law and Procedures ....3
   CRJ:207 Police Supervision ..............3
   CRJ:206 Management of Human Conflicts (or)
   SOC:203 Criminology and Deviance ....3
   CRJ:212 Criminal Investigation ............3

IV. Electives 9-11 credits

Program total ............64-67 credits

CERTIFICATE OF PROFICIENCY
Florissant Valley, Forest Park and Meramec

This program prepares students for employment and advancement in Law Enforcement. Students are provided with a sound background in legal procedures, a strong base of writing skills and a basic understanding of the government process.

Courses Credits
CRJ:111 Rules of Criminal Evidence ........3
CRJ:122 Introduction to Criminal Justice ....3
CRJ:123 Juvenile Justice .................3
CRJ:124 Criminal Law and Procedures ....3
CRJ:207 Police Supervision ..............3
CRJ:212 Criminal Investigation ............3
ENG:101 College Composition I ............3
CRJ:206 Management of Human Conflicts (or)
SOC:203 Criminology and Deviance ....3
PHL:104 Ethics ............................3
Select one course: ........................3
HST:100 American Civilization
HST:101 American History I
HST:102 American History II
PSC:101 Introduction to American Politics
PSC:102 American National Politics
PSC:103 State and Urban Politics

Electives 3 credits

Recommended electives include courses in criminal justice, human services, and sociology as related to the Criminal Justice field.

Program total ............33 Credits

Database Developer

CERTIFICATE OF SPECIALIZATION
Florissant Valley, Forest Park and Meramec

This certificate is designed for individuals who are interested in developing skills to create and manage databases. It will provide the student with the tools, knowledge, and practical experience needed to design, develop, implement and administer a database. Graduates will be qualified for the high demand positions of Advanced User, Developer, Analyst, Administrator, or Programmer in a database environment. The Certificate of Specialization is designed to parallel the courses in the Oracle Developer Certificate of Proficiency. This certificate can be an intermediate affirmation of success for a student or provide a quantitative benchmark for those who do not need the additional course material provided in the Certificate of Proficiency.

Advanced users, management, and programmers could select this shorter while still intense certificate in database techniques.

Prerequisites:
   IS:225 Database Management (or)
   Database Experience
   IS:246 Visual Basic Programming (or)
   IS:251 Introduction to Java (or)
   IS:227 C Programming Language I (or)
   Approved Programming Language

Core Courses 3 credits
   IS:257 Advanced Database Design ............3

Oracle Focus 12 credits
   IS:133 Introduction to SQL ....................3
   IS:272 Oracle Database Administration ........3
Deaf Communication Studies: Interpreter Education

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This two-year American Sign Language interpreter education program provides the instruction and experience needed to interpret between individuals using American Sign Language and English. Focus is on a multi-disciplinary and interdisciplinary approach to interpreting centered around the theory of interpretation. This professional, career program consists of a comprehensive, sequential, and integrated series of courses intended to provide students with the necessary mastery of the theory, techniques, and skills required to enter the profession of interpretation.

Students interested in the interpreting profession can expect to expand their worldview, commit to lifelong learning, meet new people, and experience diverse situations, within large and small group settings.

The foundation of the curriculum is American Sign Language (ASL) which is the native, indigenous language of the North American Deaf community. We recognize the Deaf community as a linguistic and cultural minority that functions distinctly from the American mainstream culture.

Admission into the program is contingent upon meeting established criteria, as defined in the DCS-IEP Advising Checklist.

Graduates of the program will be prepared for entry level, paraprofessional interpreting positions.

I. Career General Education 15 credits
   ENG:101 College Composition I . . . . . . . . . . . . . . . .3
   ENG:102 College Composition II . . . . . . . . . . . . . . . .3
   MTH:xxx 100 level or higher . . . . . . . . . . . . . . . .3
   XXX:xxx Missouri State Requirement . . . . . . . . . .3
   XXX:xxx Biological/Physical Science . . . . . . . . . .3

II. Physical Education Activity 2 credits
   
III. Area of Concentration 51 credits
   COM:111 Voice and Articulation . . . . . . . . . . . . . . .3
   DCS:106 American Sign Language III . . . . . . . . . . .5
   DCS:108 Orientation to Interpreting . . . . . . . . . . .3
   DCS:109 Etymology for Interpreters . . . . . . . . . . .3
   DCS:110 Deaf Theater Studies . . . . . . . . . . . . . . .3
   DCS:206 Consecutive Interpreting . . . . . . . . . . . . .3
   DCS:207 Simultaneous Interpreting . . . . . . . . . . .3
   DCS:208 DCS Practicum . . . . . . . . . . . . . . . . . . . . .3
   DCS:209 Interpreting/Transliteration Lab . . . . . . . . .1
   
   Electives (select on course) 3 credits
   IS:259 Introduction to JavaScript . . . . . . . . . . . . . .3
   IS:255 Advanced Visual Basic Programming . . . . . . .3
   IS:256 C++ Object-Oriented Programming . . . . . . . .3
   IS:270 Oracle PL/SQL . . . . . . . . . . . . . . . . . . . . . .3

Program total . . . . . . . . . . . .18 credits

Deaf Communication Studies: American Sign Language

CERTIFICATE OF PROFICIENCY
Florissant Valley

The foundation of the curriculum is American Sign Language (ASL), which is the native, indigenous language of the North American Deaf community. We recognize the Deaf community as a linguistic and cultural minority that functions distinctly from the American mainstream culture.

Students of this program will learn to recognize and adapt to the variations in language that exists within the deaf and non-deaf communities. Students learn to create equivalency in meaning between English and ASL.

These entry-level language courses are open to all members of the Deaf and non-deaf community.

Courses Credits
   DCS:104 American Sign Language I . . . . . . . . . . . . . . .5
   DCS:105 American Sign Language II . . . . . . . . . . . . . . .5
   DCS:107 Fingerspelling . . . . . . . . . . . . . . . . . . . . . .3
   DCS:111 Theory of American Sign Language . . . . . . . . .3
   DCS:115 Introduction to Deaf Communication Studies . . . . . .3
   DCS:116 American Sign Language Semantics . . . . . . . . .3

Program total . . . . . . . . . . . .22 credits

Dental Assisting

CERTIFICATE OF PROFICIENCY
Forest Park

This program prepares students to work as members of the dental health care team. Students receive a broad background in all aspects of dentistry through extensive classroom, laboratory and clinical instruction. Major emphasis is placed on gaining proficiency in chairside assisting procedures and expanded functions. Students learn to prepare patients and records for treatment, sterilize and prepare instrument trays, take x-rays and impressions, and prepare restorative materials for dental procedures.

The Missouri Dental Board has approved nineteen (19) expanded functions for dental assistants who meet specific certification and training criteria. Competency in one or more expanded functions enlarges the skill mix of the
Graduates are qualified for positions as dental hygienists and may serve as clinical practitioners in general or specialty dental practice, or as educators, researchers, administrators, managers, program developers, consultants or dental product sales representatives. Employment is available in the military, health maintenance organizations, community health agencies, private industry, and abroad with the Peace Corps or World Health Organization.

Dental Hygiene Program Prerequisites:
- BIO:207 Anatomy and Physiology I
- BIO:208 Anatomy and Physiology II
- CHM:101 Fundamentals of Chemistry

(These prerequisites must be satisfied prior to entry in the program.)

I. Career General Education 19 credits
- COM:101 Oral Communication I 3
- ENG:101 College Composition I 3
- SOC:101 Introduction to Sociology 3

II. Physical Education Activity 2 credits
- BIO:203 General Microbiology 4
- XXX:xxx Missouri State Requirement 3

III. Area of Concentration 53 credits
- DA:120 Concepts of Pre-Clinical Dental Hygiene I 3
- DA:126 Dental Radiology I 2
- DA:127 Oral Anatomy 3
- DA:128 Biomedical Sciences for the Dental Hygienist 2
- DA:129 Dental Medical Emergencies 1
- DA:130 Concepts of Clinical Dental Hygiene II 3
- DA:131 Clinical Dental Hygiene II 4
- DA:132 Clinical Dental Hygiene II 4
- DA:133 Clinical Dental Hygiene II 4
- DA:134 Clinical Dental Hygiene II 4
- DA:135 Clinical Dental Hygiene II 4
- DA:136 Dental Nutrition and Biochemistry 3
- DA:137 Anatomy and Embryology of the Head and Neck 2
- DA:138 General and Oral Pathology 2
- DA:201 Expanded Functions I 1
- DA:202 Expanded Functions II 1
- DA:203 Expanded Functions III 1
- ENG:101 College Composition I 3
- ENG:102 College Composition II 3

Program Total 40 credits

Dental Hygiene

ASSOCIATE IN APPLIED SCIENCE DEGREE

Forest Park

This program prepares students to practice dental hygiene under the supervision of a practicing dentist. Through classroom work and laboratory and clinical experience in the on-campus public dental hygiene clinic, students learn to conduct patient assessments, take medical and dental histories, perform diagnostic tests and examinations, instruct patients in preventive dental health practices, perform various dental procedures and to design and implement community and school health programs. Persons interested in this program should enjoy working with people from all age groups. An interest in biology and the health sciences is important. Good eye/hand coordination and attention to detail is necessary.

Courses Credits
- COM:101 Oral Communication I 3
- DA:120 Concepts of Pre-Clinical Dental Hygiene I 3
- DA:126 Dental Radiology I 2
- DA:127 Oral Anatomy 3
- DA:128 Biomedical Sciences for the Dental Hygienist 2
- DA:129 Dental Medical Emergencies 1
- DA:130 Concepts of Clinical Dental Hygiene II 3
- DA:131 Clinical Dental Hygiene II 4
- DA:132 Clinical Dental Hygiene II 4
- DA:133 Clinical Dental Hygiene II 4
- DA:134 Clinical Dental Hygiene II 4
- DA:135 Clinical Dental Hygiene II 4
- DA:136 Dental Nutrition and Biochemistry 3
- DA:137 Anatomy and Embryology of the Head and Neck 2
- DA:138 General and Oral Pathology 2
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- DA:127 Oral Anatomy 3
- DA:128 Biomedical Sciences for the Dental Hygienist 2
- DA:129 Dental Medical Emergencies 1
- DA:130 Concepts of Clinical Dental Hygiene II 3
- DA:131 Clinical Dental Hygiene II 4
- DA:132 Clinical Dental Hygiene II 4
- DA:133 Clinical Dental Hygiene II 4
- DA:134 Clinical Dental Hygiene II 4
- DA:135 Clinical Dental Hygiene II 4
- DA:136 Dental Nutrition and Biochemistry 3
- DA:137 Anatomy and Embryology of the Head and Neck 2
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- DA:203 Expanded Functions III 1
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- DA:126 Dental Radiology I 2
- DA:127 Oral Anatomy 3
- DA:128 Biomedical Sciences for the Dental Hygienist 2
- DA:129 Dental Medical Emergencies 1
- DA:130 Concepts of Clinical Dental Hygiene II 3
- DA:131 Clinical Dental Hygiene II 4
- DA:132 Clinical Dental Hygiene II 4
- DA:133 Clinical Dental Hygiene II 4
- DA:134 Clinical Dental Hygiene II 4
- DA:135 Clinical Dental Hygiene II 4
- DA:136 Dental Nutrition and Biochemistry 3
- DA:137 Anatomy and Embryology of the Head and Neck 2
- DA:138 General and Oral Pathology 2
- DA:201 Expanded Functions I 1
- DA:202 Expanded Functions II 1
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Program Total 40 credits

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- DA:129 Dental Medical Emergencies 1
- DA:130 Concepts of Clinical Dental Hygiene II 3
- DA:131 Clinical Dental Hygiene II 4
- DA:132 Clinical Dental Hygiene II 4
- DA:133 Clinical Dental Hygiene II 4
- DA:134 Clinical Dental Hygiene II 4
- DA:135 Clinical Dental Hygiene II 4
- DA:136 Dental Nutrition and Biochemistry 3
- DA:137 Anatomy and Embryology of the Head and Neck 2
- DA:138 General and Oral Pathology 2
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- DA:202 Expanded Functions II 1
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- DA:127 Oral Anatomy 3
- DA:128 Biomedical Sciences for the Dental Hygienist 2
- DA:129 Dental Medical Emergencies 1
- DA:130 Concepts of Clinical Dental Hygiene II 3
- DA:131 Clinical Dental Hygiene II 4
- DA:132 Clinical Dental Hygiene II 4
- DA:133 Clinical Dental Hygiene II 4
- DA:134 Clinical Dental Hygiene II 4
- DA:135 Clinical Dental Hygiene II 4
- DA:136 Dental Nutrition and Biochemistry 3
- DA:137 Anatomy and Embryology of the Head and Neck 2
- DA:138 General and Oral Pathology 2
- DA:201 Expanded Functions I 1
- DA:202 Expanded Functions II 1
- DA:203 Expanded Functions III 1
- ENG:101 College Composition I 3
- ENG:102 College Composition II 3

Program Total 40 credits

Dental Hygiene

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Forest Park

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Diagnostic Medical Sonography
CERTIFICATE OF PROFICIENCY

Forest Park

This program provides a specialty in ultrasound technology for graduates of an associate degree or two-year hospital-based program in another allied health area. Students attend full-time and complete classroom work and clinical education in an affiliated ultrasound department. Students acquire skills in record keeping, reviewing and recording pertinent clinical patient history, performing the sonographic examination, providing for the comfort and needs of the patient during the examination and recording the anatomic, pathologic and physiologic data for interpretation by the supervising physician.

Thoroughness, accuracy and empathy are traits needed by persons interested in this program. They also should be versatile and able to follow precise and detailed directions.

Graduates are eligible to take the certifying examination of the American Registry of Diagnostic Medical Sonographers in the specialty areas of abdomen and obstetrics-gynecology. Positions are available in hospital ultrasound departments, clinics, mobile services and private physicians' offices.

Core Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
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<td>DMS:101</td>
<td>Clinical Foundations of Ultrasound</td>
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<td>DMS:102</td>
<td>Medical Ethics and Professional Issues</td>
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<td>DMS:103</td>
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<tr>
<td>DMS:201</td>
<td>Ultrasound Physics and Instrumentation III</td>
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Medical Sonography Option

<table>
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<td>DMS:107</td>
<td>Medical Sonography Practicum I</td>
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<td>Medical Sonography Clinical Applications I</td>
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Cardiac Sonography Option

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<td>DMS:114</td>
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<td>DMS:115</td>
<td>Cardiac Sonography II</td>
<td>3</td>
</tr>
<tr>
<td>DMS:116</td>
<td>Cardiac Sonography Scanning Techniques II</td>
<td>1</td>
</tr>
<tr>
<td>DMS:117</td>
<td>Cardiac Sonography Clinical Applications I</td>
<td>2</td>
</tr>
<tr>
<td>DMS:118</td>
<td>Cardiac Sonography Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>DMS:207</td>
<td>Cardiac Sonography III</td>
<td>2</td>
</tr>
</tbody>
</table>

Vascular Technology Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMS:119</td>
<td>Vascular Technology I</td>
<td>3</td>
</tr>
<tr>
<td>DMS:120</td>
<td>Vascular Technology Scanning Techniques I</td>
<td>1</td>
</tr>
<tr>
<td>DMS:121</td>
<td>Vascular Technology Practicum I</td>
<td>2</td>
</tr>
<tr>
<td>DMS:122</td>
<td>Vascular Technology II</td>
<td>3</td>
</tr>
<tr>
<td>DMS:123</td>
<td>Vascular Technology Scanning Techniques II</td>
<td>1</td>
</tr>
<tr>
<td>DMS:124</td>
<td>Vascular Technology Clinical Applications I</td>
<td>2</td>
</tr>
<tr>
<td>DMS:125</td>
<td>Vascular Technology Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>DMS:126</td>
<td>Vascular Technology III</td>
<td>2</td>
</tr>
<tr>
<td>DMS:127</td>
<td>Vascular Technology Practicum III</td>
<td>4</td>
</tr>
<tr>
<td>DMS:128</td>
<td>Vascular Technology IV</td>
<td>4</td>
</tr>
<tr>
<td>DMS:129</td>
<td>Vascular Technology Clinical Applications II</td>
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<tr>
<td>DMS:210</td>
<td>Vascular Technology Practicum IV</td>
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</tr>
</tbody>
</table>

Program total: 42 credits

Diesel Technology
ASSOCIATE IN APPLIED SCIENCE DEGREE

Forest Park

The AAS degree Diesel Technology program is designed to prepare graduates for careers as medium/heavy truck repair technicians. Graduates will be qualified for positions requiring diagnosis and repair of the following truck systems: diesel engines, suspension & steering, brakes, electrical & electronic, preventive maintenance, drive train, and heating, ventilation, and air conditioning. Graduates will be competent for entry level positions in new vehicle dealerships, truck and bus leasing companies, street and highway departments, and metropolitan transit facilities.

I. Career General Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENS:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:108</td>
<td>Elementary Applied Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>SOC:101</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>BUS:104</td>
<td>Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>PSI:101</td>
<td>Physical Science Lecture I</td>
<td>3</td>
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<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
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II. Physical Education Activity

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>DIE:101</td>
<td>Diesel Engine Operation and Repair</td>
<td>3</td>
</tr>
<tr>
<td>DIE:102</td>
<td>Medium/Heavy Truck Suspension and Steering</td>
<td>3</td>
</tr>
<tr>
<td>DIE:103</td>
<td>Medium/Heavy Truck Electricity</td>
<td>3</td>
</tr>
<tr>
<td>DIE:104</td>
<td>Electronic Information Systems and Manuals</td>
<td>3</td>
</tr>
<tr>
<td>DIE:105</td>
<td>Diesel Fuel Systems</td>
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</table>

III. Area of Concentration

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIE:105</td>
<td>Diesel Fuel Systems</td>
<td>3</td>
</tr>
</tbody>
</table>
## Dietetic Technology: Food Service Management Option

**ASSOCIATE IN APPLIED SCIENCE DEGREE**

This program includes a variety of courses in food and nutrition sciences, foodservice systems management, communication and education. Students completing the program are eligible to sit for the national registration exam to become credentialed as a Dietetic Technician, Registered (DTR). Dietetic technicians in the food service management area work independently or in teams with registered dietitians in schools, day-care centers, correctional facilities, health facilities, corporations and hospitals managing employees, purchasing and food preparation, and preparing budgets within food service operations. Food companies, contract food management companies, or food vending distribution operations hire dietetic technicians to develop menus, overseeing food service preparation and food safety, and preparing food labeling and nutrient information.

### I. Career General Education 19-20 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I (or)</td>
<td>3</td>
</tr>
<tr>
<td>MTH:108 Elementary Applied Mathematics (or)</td>
<td>3</td>
</tr>
<tr>
<td>BUS:104 Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>DIE:101 Diesel Engine Operation and Repair</td>
<td>3</td>
</tr>
<tr>
<td>DIE:102 Medium/Heavy Truck Suspension and Steering</td>
<td>3</td>
</tr>
<tr>
<td>DIE:103 Medium/Heavy Truck Electricity</td>
<td>3</td>
</tr>
<tr>
<td>DIE:104 Electronic Information Systems and Manuals</td>
<td>3</td>
</tr>
<tr>
<td>DIE:105 Diesel Fuel Systems</td>
<td>3</td>
</tr>
<tr>
<td>DIE:106 Medium/Heavy Truck Brakes</td>
<td>3</td>
</tr>
<tr>
<td>DIE:107 Medium/Heavy Truck Electronics</td>
<td>3</td>
</tr>
<tr>
<td>DIE:201 Preventive Maintenance Inspection</td>
<td>3</td>
</tr>
<tr>
<td>DIE:202 Co-op Work Experience I-Diesel Technology</td>
<td>3</td>
</tr>
<tr>
<td>DIE:203 Truck Heating, Ventilation, and Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>DIE:204 Service and Parts Management</td>
<td>3</td>
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<tr>
<td>DIE:205 Co-op Work Experience II-Diesel Technology</td>
<td>3</td>
</tr>
<tr>
<td>DIE:206 Medium/Heavy Truck Drivetrains</td>
<td>3</td>
</tr>
<tr>
<td>ME:101 Welding Technology</td>
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</table>

**Program total . . . . . . . . . . 45 credits**

### II. Physical Education Activity 2

### III. Area of Concentration 46 credits

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>DIT:108 Food: Preparation and Science Lecture</td>
<td>3</td>
</tr>
<tr>
<td>DIT:109 Food: Preparation and Science Lab</td>
<td>2</td>
</tr>
<tr>
<td>DIT:103 Food Management</td>
<td>3</td>
</tr>
<tr>
<td>DIT:104 Clinical Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>DIT:214 Nutrition Through the Life Cycle</td>
<td>3</td>
</tr>
<tr>
<td>DIT:106 Food Management Practicum</td>
<td>3</td>
</tr>
<tr>
<td>DIT:107 Clinical Nutrition Practicum</td>
<td>3</td>
</tr>
<tr>
<td>DIT:115 Principles of Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>DIT:201 Food Systems Management</td>
<td>3</td>
</tr>
<tr>
<td>DIT:202 Medical Nutrition Therapy</td>
<td>3</td>
</tr>
<tr>
<td>DIT:204 Seminar: Strategies for Professional Practice</td>
<td>2</td>
</tr>
<tr>
<td>DIT:206 Seminar: Dietetic Practitioner Issues</td>
<td>2</td>
</tr>
<tr>
<td>DIT:207 Quantity Foods</td>
<td>3</td>
</tr>
<tr>
<td>DIT:208 Food Systems Management Practicum</td>
<td>4</td>
</tr>
<tr>
<td>DIT:210 Community Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>DIT:225 The Cultural Feast: An Introduction to Food and Society</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program total . . . . . . . . . . 70-71 credits**

### IV. Program Elective 3 credits

(Program Director has list of approved courses.)
Dietetic Technology: Nutrition Care Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program includes a variety of courses in food and nutrition sciences, foodservice systems management, communication and education. Students completing the program are eligible to sit for the national registration exam to become credentialed as a Dietetic Technician, Registered (DTR). Dietetic technicians in the nutrition care area work independently or in teams with registered dieticians in hospitals, HMOs, clinics, nursing homes, retirement centers, hospital health care programs and research facilities helping to treat and prevent disease and administering medical nutrition therapy as an important member of health care teams. WIC programs, public health agencies, company health programs, health clubs, weight management clinics, and community wellness programs hire dietetic technicians to develop and teach nutrition classes and educate clients about the connection between food, fitness and health.

I. Career General Education 19-20 credits
   ENG:101 College Composition I .......................3
   COM:101 Oral Communication I .......................3
   MTH:xxx Mathematics Elective
      (MTH:108 or higher) .......................3
   BIO/CHM: Biology/Chemistry Elective ..........4-5
   PSY:200 General Psychology .......................3
   XXX:xxx Missouri State Requirement ...........3

II. Physical Education Activity 2 credits

III. Area of Concentration 46 credits
    DIT:108 Food: Preparation and Science Lecture . .3
    DIT:109 Food: Preparation and Science Lab .......2
    DIT:103 Food Management ................................3
    DIT:104 Clinical Nutrition ..........................3
    DIT:214 Nutrition Through the Life Cycle ..3
    DIT:106 Food Management Practicum ............3
    DIT:107 Clinical Nutrition Practicum ............3
    DIT:115 Principles of Nutrition ..................3
    DIT:201 Food Systems Management ................3
    DIT:202 Medical Nutrition Therapy ..............3
    DIT:204 Seminar: Strategies for Professional
       Practice ........................................2
    DIT:206 Seminar: Dietetic Practitioner Issues ....2
    DIT:207 Quantity Foods .............................3
    DIT:209 Community Nutrition Practicum ........4
    DIT:210 Community Nutrition ........................3
    DIT:225 The Cultural Feast: An Introduction to
       Food and Society .............................3

IV. Program Elective 3 credits
    (Program Director has list of approved courses)

Program total .....................70-71 credits

Digital Media: 3D Design and Animation

CERTIFICATE OF PROFICIENCY
Florissant Valley, Forest Park, Meramec

The Digital Media Certificate in 3D Design and Animation, Certificate of Proficiency program, is designed to meet the needs of those professionals currently working in the various fields of digital imaging and web page development. These courses will provide returning professional artist and new students the expertise necessary in using the graphic tools made available by advances in technology. Students will learn ways in which traditional methods can be enhanced by computer technology and software. Students in this certificate program will develop skills necessary for expression in the form of digital imaging as it pertains to 3D design and animation. The students will be trained in state-of-the-art facilities using the most current software and hardware available.

Prerequisites:
The following courses must be completed prior to enrolling in the certificate program:
   ART:165 Photography I
   ART:238 Drawing for Graphics II
   ART:240 Illustration II
   AT:175 Video Art I (or)
   MCM:127 Video Production Studio

Area of Concentration 27 credits
   ART:131 Computer Art Studio ......................3
   ART:275 Photo Imaging I: Photoshop ..............3
   AT:101 Color Management ..........................3
   AT:100 Hardware Configuration and
      Troubleshooting: Macintosh/Windows ....1
   AT:233 Storyboarding/Animatics ..................2
   AT:154 Camera and Lighting Techniques for
      3D Design .......................................3
   AT:146 3D Modeling I: Surface Modeling ..........3
   AT:234 Computer Animation I .....................3
   AT:235 Computer Animation II .....................3
   AT:236 Computer Animation III:
      Character Animation ..........................3

Final Course
   AT:160 Digital Capstone .........................3

Program total ...................30 credits
Digital Media: Fine Art

CERTIFICATE OF PROFICIENCY

Florissant Valley, Forest Park, Meramec

The Digital Media Certificate in Fine Art, Certificate of Proficiency program, is designed to meet the needs of those professionals currently working in the various fields of digital imaging and web page development. These courses will provide returning professional artist and new students the expertise necessary in using the graphic tools made available by advances in technology. Students will learn ways in which traditional methods can be enhanced by computer technology and software. Students in this certificate program will develop skills necessary for expression in the form of digital imaging as it pertains to fine art. The students will be trained in state-of-the-art facilities using the most current software and hardware available.

Prerequisites:
The following courses must be completed prior to enrolling in the certificate program:

ART:108 Design II
ART:110 Drawing II
ART:112 Figure Drawing II

Area of Concentration 19 credits

ART:131 Computer Art Studio .................3
ART:275 Photo Imaging I: Photoshop ...........3
AT:101 Color Management ..........................3
AT:100 Hardware Configuration and ............3
Troubleshooting: Macintosh/Windows ....1
AT:120 Computer Drawing I: Illustrator ....3
AT:108 Computer Painting and Drawing: Corel Painter .........................3
AT:105 Digital Printing ..................3

Electives 3 credits

Select three credits from the following:

AT:276 Photo Imaging II: Photoshop ...........3
AT:106 Two Dimensional Computer Animation: Adobe After Effects ........3
AT:135 (or) IS:135 (or) MCM:135 Communication and Design for the WWW I .................3
AT:146 3D Modeling I: Surface Modeling ..........3
AT:234 Computer Animation I ................3

Final Course

AT:160 Digital Capstone ..................3

Program total ...............25 credits

Digital Media: Graphic Design

CERTIFICATE OF PROFICIENCY

Florissant Valley, Forest Park, Meramec

The Digital Media Certificate in Graphic Design, Certificate of Proficiency program, is designed to meet the needs of those professionals currently working in the various fields of digital imaging and web page development. These courses will provide returning professional artist and new students the expertise necessary in using the graphic tools made available by advances in technology. Students will learn ways in which traditional methods can be enhanced by computer technology and software. Students in this certificate program will develop skills necessary for expression in the form of digital imaging as it pertains to graphic design. The students will be trained in state-of-the-art facilities using the most current software and hardware available.

Prerequisites:
The following courses must be completed prior to enrolling in the certificate program:

ART:134 Graphic Design II
ART:165 Photography I
ART:238 Drawing for Graphics II

Area of Concentration 18 credits

ART:131 Computer Art Studio ..................3
ART:275 Photo Imaging I: Photoshop ...........3
AT:101 Color Management ..........................3
AT:100 Hardware Configuration and ............3
Troubleshooting: Macintosh/Windows ....1
AT:120 Computer Drawing I: Illustrator ....3
AT:108 Computer Painting and Drawing: Corel Painter .........................3
AT:105 Digital Printing ..................3

Electives 3 credits

Select three credits from the following:

AT:276 Photo Imaging II: Photoshop ...........3
AT:106 Two Dimensional Computer Animation: Adobe After Effects ........3
AT:135 (or) IS:135 (or) MCM:135 Communication and Design for the WWW I .................3
AT:108 Computer Painting and Drawing: Corel Painter .........................3

Final Course

AT:160 Digital Capstone ..................3

Program total ...............24 credits
**Digital Media: Photography**

**CERTIFICATE OF PROFICIENCY**

Florissant Valley, Forest Park, Meramec

The Digital Media Certificate in Photography, Certificate of Proficiency program, is designed to meet the needs of those professionals currently working in the various fields of digital imaging and web page development. These courses will provide returning professional artist and new students the expertise necessary in using the graphic tools made available by advances in technology. Students will learn ways in which traditional methods can be enhanced by computer technology and software. Students in this certificate program will develop skills necessary for expression in the form of digital imaging as it pertains to photography. The students will be trained in state-of-the-art facilities using the most current software and hardware available.

**Prerequisites:**
The following courses must be completed prior to enrolling in the certificate program:

- ART:108 Design II
- ART:167 Color Photography

**Area of Concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART:131</td>
<td>Computer Art Studio</td>
<td>3</td>
</tr>
<tr>
<td>ART:275</td>
<td>Photo Imaging I: Photoshop</td>
<td>3</td>
</tr>
<tr>
<td>AT:101</td>
<td>Color Management</td>
<td>3</td>
</tr>
<tr>
<td>AT:100</td>
<td>Hardware Configuration and Troubleshooting: Macintosh/Windows</td>
<td>1</td>
</tr>
<tr>
<td>AT:276</td>
<td>Photo Imaging II: Photoshop</td>
<td>3</td>
</tr>
<tr>
<td>AT:105</td>
<td>Digital Printing</td>
<td>3</td>
</tr>
<tr>
<td>AT:104</td>
<td>Electronic Photo Studio</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select three credits from the following:

- AT:106 Two Dimensional Computer Animation: Adobe After Effects
- AT:108 Computer Painting and Drawing: Corel Painter
- AT:135 (or) IS:135 (or) MCM:135 Communication and Design for the WWW

**Final Course**

- AT:160 Digital Capstone

**Program total**

25 credits

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**Digital Media: World Wide Web**

**CERTIFICATE OF PROFICIENCY**

Florissant Valley, Forest Park, Meramec

The Digital Media Certificate in World Wide Web, Certificate of Proficiency program, is designed to meet the needs of those professionals currently working in the various fields of digital imaging and web page development. These courses will provide returning professional artist and new students the expertise necessary in using the graphic tools made available by advances in technology. Students will learn ways in which traditional methods can be enhanced by computer technology and software. Students in this certificate program will develop skills necessary for expression in the form of digital imaging as it pertains to world wide web. The students will be trained in state-of-the-art facilities using the most current software and hardware available.

**Prerequisites:**
The following courses must be completed prior to enrolling in the certificate program:

- ART:108 Design II
- ART:110 Drawing II
- ART:111 Figure Drawing I
- ART:134 Graphic Design II
- MCM:217 Publications Writing

**Area of Concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART:131</td>
<td>Computer Art Studio</td>
<td>3</td>
</tr>
<tr>
<td>ART:275</td>
<td>Photo Imaging I: Photoshop</td>
<td>3</td>
</tr>
<tr>
<td>AT:101</td>
<td>Color Management</td>
<td>3</td>
</tr>
<tr>
<td>AT:100</td>
<td>Hardware Configuration and Troubleshooting: Macintosh/Windows</td>
<td>1</td>
</tr>
<tr>
<td>AT:120</td>
<td>Computer Drawing I: Illustrator</td>
<td>3</td>
</tr>
<tr>
<td>AT:135 (or)</td>
<td>IS:135 (or) MCM:135 Communication and Design for the WWW</td>
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</tbody>
</table>

**Final Course**

- AT:160 Digital Capstone

**Program total**

25 credits
E-Commerce

CERTIFICATE OF SPECIALIZATION
Florissant Valley, Meramec

The program will help develop skilled practitioners in electronic commerce, web site development, data-mining and warehousing, interactive media, and other new technologies used by businesses and organizations in the communication of mission-critical information to both internal and external audiences.

Through guided exposure to and interaction with the specialized hardware and software used to create these new communications tools, the student will gain professional hands-on knowledge, a better overall comprehension of the current “state of the art,” and practical skills which may be immediately used on the job or in a professional portfolio.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>IS:103  Information Systems for Business</td>
<td>.3</td>
</tr>
<tr>
<td>BUS:104  Introduction to Business</td>
<td>.3</td>
</tr>
<tr>
<td>MKT:203  Principles of Marketing</td>
<td>.3</td>
</tr>
<tr>
<td>MKT:219  E-Commerce: Strategies</td>
<td>.3</td>
</tr>
<tr>
<td>MKT:220  E-Commerce: Methodologies</td>
<td>.3</td>
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<tr>
<td>MGT:224  E-Commerce: Management</td>
<td>.3</td>
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</table>

Program total ................. .18 credits

Early Care and Education

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley, Forest Park and Meramec

The associate in applied science degree is a two-year program of study with a concentration of coursework in early education, child development, and family studies. Students who complete the AAS degree can find employment as teachers or directors in early childhood settings, including preschool programs, teacher assistants in elementary schools, or as parent educators working within the community.

Students must earn at least a “C” in certain courses to be eligible for the associate degree. See an academic advisor or the program coordinator for details.

I. Career General Education 18 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENG:101  College Composition I</td>
<td>.3</td>
</tr>
<tr>
<td>MTH:108  Elementary Applied Mathematics</td>
<td>.3</td>
</tr>
<tr>
<td>or higher</td>
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</tr>
<tr>
<td>XXX:xxx  Missouri State Requirement</td>
<td>.3</td>
</tr>
<tr>
<td>XXX:xxx  Social Science Elective</td>
<td>.3</td>
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<tr>
<td>XXX:xxx  Science Elective</td>
<td>.3</td>
</tr>
<tr>
<td>XXX:xxx  Humanities or Communications Elective</td>
<td>.3</td>
</tr>
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II. Physical Education Activity 2 credits

III. Area of Concentration 42 credits

<table>
<thead>
<tr>
<th>Courses</th>
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<tbody>
<tr>
<td>ECE:101  Introduction to Early Care and Education</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:102  Creative Experiences in Early Care and Education</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:103  Language and Literacy in Early Care and Education</td>
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</table>

II. Electives 65 credits

<table>
<thead>
<tr>
<th>Courses</th>
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<tbody>
<tr>
<td>ECE:104  Principles of Early Care and Education</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:105  Child Development Laboratory</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:124  Child Nutrition, Health and Safety</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:125  Child Growth and Development I</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:127  Family and Teacher Interactions</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:200  Guiding Young Children</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:201  Math and Science in Early Care and Education</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:202  Movement and Music in Early Care and Education</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:203  Early Care and Education Practicum I</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:205  Child and Society</td>
<td>.3</td>
</tr>
<tr>
<td>ECE:206  Early Care and Education Practicum II</td>
<td>.3</td>
</tr>
</tbody>
</table>

Program total ................. .65 credits

Early Care and Education—Child Development Associate Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Forest Park

This program is competency-based. It provides students with the knowledge and skills to care for children, ages birth through eight, and to communicate effectively with parents and other child care personnel. Students acquire child care proficiency by working part time in a child care setting, through academic instruction in six competency areas, and individual study in 16 learning modules. The program requires regular college attendance and requires students to spend substantial amounts of time in direct contact with children in a child care facility.

Persons interested in this program should be responsible, mature and sensitive. They also should be in good physical condition and be able to interact positively with children and adults. They must be able to write with clarity and read and understand numerous readings. They should be prepared to adapt and change and to incorporate new knowledge and methods directly into teaching young children.

Graduates are qualified for positions as parent educators; substitute teachers in public schools; teacher-aides in public schools; directors, lead teachers or teacher-assistants in nursery schools, child care centers, residential centers; assistant recreational therapists or camp/recreation leaders.
### Early Care and Education—Developmental Disabilities Option

**ASSOCIATE IN APPLIED SCIENCE DEGREE**

Florissant Valley and Meramec

This option prepares students to work in preschools, residential centers and other programs having developmentally disabled children.

Students must earn at least a “C” in certain courses to be eligible for the associate degree. See an academic advisor or the program coordinator for details.

<table>
<thead>
<tr>
<th>I. Career General Education</th>
<th>18 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I</td>
<td>3 credits</td>
</tr>
<tr>
<td>ENG:102 College Composition II</td>
<td>3 credits</td>
</tr>
<tr>
<td>MTH:108 Elementary Applied Mathematics or higher</td>
<td>3 credits</td>
</tr>
<tr>
<td>XXX:xxx Science Elective</td>
<td>3-4 credits</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
<td>3 credits</td>
</tr>
<tr>
<td>SOC:101 Introduction to Sociology</td>
<td>3 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Physical Education Activity</th>
<th>2 credits</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>III. Area of Concentration</th>
<th>47 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE:109 Preschool Equipment and Materials</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECE:110 Health and Safety in the Preschool</td>
<td>2 credits</td>
</tr>
<tr>
<td>ECE:111 Self-Concept of the Young Child</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECE:112 Social Development</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECE:113 Classroom Management</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECE:114 Cultural and Ethnic Variety</td>
<td>2 credits</td>
</tr>
<tr>
<td>ECE:115 Home-School Coordination</td>
<td>2 credits</td>
</tr>
<tr>
<td>ECE:116 Administration: Child Care</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECE:117 Early Childhood Learning Models</td>
<td>2 credits</td>
</tr>
<tr>
<td>ECE:118 Stimulation of Learning</td>
<td>2 credits</td>
</tr>
<tr>
<td>ECE:119 Development of Physical Competence</td>
<td>1 credit</td>
</tr>
<tr>
<td>ECE:120 Development of Creative Expression</td>
<td>2 credits</td>
</tr>
<tr>
<td>ECE:121 Play and the Young Child</td>
<td>2 credits</td>
</tr>
<tr>
<td>ECE:122 Individual Differences in the Young Child</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECE:123 Planning and Scheduling in Programs for Young Children</td>
<td>2 credits</td>
</tr>
<tr>
<td>ECE:125 Child Growth and Development I</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECE:209 Capacities/Qualities: Physical Learning Environment</td>
<td>1 credit</td>
</tr>
<tr>
<td>ECE:210 Capacities/Qualities: The Program</td>
<td>1 credit</td>
</tr>
<tr>
<td>ECE:211 Capacities/Qualities: Individual Child</td>
<td>1 credit</td>
</tr>
<tr>
<td>ECE:212 Capacities/Qualities: Social Environment</td>
<td>1 credit</td>
</tr>
<tr>
<td>ECE:213 Capacities/Qualities: Home and Center</td>
<td>1 credit</td>
</tr>
<tr>
<td>ECE:214 Capacities/Qualities: Supplementary Responsibility</td>
<td>1 credit</td>
</tr>
<tr>
<td>ECE:215 Skill Building Workshop</td>
<td>3 credits</td>
</tr>
</tbody>
</table>

**Program total** | **67-68 credits**
Early Care and Education

CERTIFICATE OF PROFICIENCY
Florissant Valley and Meramec

This certificate prepares students for entry-level or assistant teacher positions in early childhood programs.

Students who have had experience in early childhood programs or education in a different field may select the courses that are necessary to meet state licensing requirements for administrative positions in early childhood programs.

Students must earn at least a “C” in certain courses to be eligible for the associate degree. See an academic advisor or the program coordinator for details.

I. Courses 18 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE:101</td>
<td>Introduction to Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:104</td>
<td>Principles of Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:105</td>
<td>Child Development Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>ECE:200</td>
<td>Guiding Young Children or ECE:127</td>
<td>Family and Teacher Interactions</td>
</tr>
<tr>
<td>ECE:124</td>
<td>Child Nutrition, Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>ECE:125</td>
<td>Child Growth and Development I</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Electives 6 credits

Select two additional courses from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE:102</td>
<td>Creative Experiences in Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:103</td>
<td>Language and Literacy in Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:107</td>
<td>Early Care and Special Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:108</td>
<td>Infant, Toddler, and Two-Year-Old Children</td>
<td>3</td>
</tr>
<tr>
<td>ECE:127</td>
<td>Family and Teacher Interactions</td>
<td>3</td>
</tr>
<tr>
<td>ECE:201</td>
<td>Math and Science in Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:202</td>
<td>Movement and Music in Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:204</td>
<td>Management of Early Care and Education Settings</td>
<td>3</td>
</tr>
<tr>
<td>ECE:208</td>
<td>Before and After School Care</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total 24 credits

Early Care and Education

CERTIFICATE OF SPECIALIZATION
Forest Park

This program is designed for individuals interested in working as teacher aides in child care centers. However, through elective selection, the certificate may also satisfy the child care course requirements for Child Care Center Directors as specified by the State of Missouri regulations. Students are strongly encouraged to enroll in ENG:101 (or its prerequisite course as determined by placement testing) immediately upon entry into this certificate program. Center Directors must take ECE:204.

Students must earn at least a “C” in certain courses to be eligible for the associate degree. See an academic advisor or the program coordinator for details.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE:101</td>
<td>Introduction to Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:104</td>
<td>Principles of Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:105</td>
<td>Child Development Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE:102</td>
<td>Creative Experiences in Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:103</td>
<td>Language and Literature in Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:124</td>
<td>Child Nutrition, Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>ECE:202</td>
<td>Movement and Music in Early Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE:204</td>
<td>Management of Early Care and Education Settings</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total 18 credits
St. Louis Community College

Biomedical Engineering Technology
ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program prepares students to function as technical assistants to scientists and engineers. Through classroom work and practical experience in technology laboratories, students learn to prepare and interpret engineering drawings, perform testing procedures and compile technical data in the chosen option.

Persons interested in the program should be mechanically inclined and be able to follow instructions. Prior course work in physics and math is beneficial.

Graduates are qualified for engineering technician positions in industry and research in their option area.

I. Career General Education ..........21-22 credits

ENG:101 College Composition I ..........3
ENG:102 College Composition II (or)
ENG:103 Report Writing ................3
MTH:124 Technical Mathematics I (and) ..........3
MTH:134 Technical Mathematics II (or) ..........3
MTH:144 Technical Algebra and Trigonometry ......5
MTH:154 Technical Analytical Geometry and Calculus ............4
XXX:xxx Missouri State Requirement ..........3
XXX:xxx Social Science Requirement ..........3

II. Physical Education Activity ........2 credits

III. Area of Concentration ..........30 credits

GE:131 Engineering Technology Orientation ........1
GE:101 Technical Computer Applications ..........3
EGR:104 Electronic Drafting ................2
EE:106 IBM Personal Computer Installation and Repair ........1
EE:130 Electric Circuits I ..................4
EE:131 Electric Circuits II ..................4
EE:132 Electronic Devices ..................5
EE:233 Digital Logic ......................4
EE:242 Introduction to Microprocessors ..........3
EE:260 Electronic Project Design and Fabrication ........3

IV. Electives ........13-20 credits

Complete one of the options listed below:

Electrical Engineering Technology ..........14-15 credits

PHY:111 College Physics I (or)
CHM:101 Fundamentals of Chemistry I ..........4-5
EE:236 PLC/Programmable Logic Controller ..........3
EE:240 Electrical Machines ..................4
EE:241 Transmission and Power Distribution ..........3

Program total ......67-69 credits
Electrical Engineering Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program deactivated effective Spring 2007. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor. (See Electrical/Electronic Engineering Technology.)

Electronic Engineering Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program prepares students to function as assistants to professional engineers, scientists and senior technicians in research, development, manufacturing, testing, installation or maintenance of a variety of products. Students acquire skills in preparing and interpreting engineering drawings and sketches, selecting, compiling and using technical information, analyzing and interpreting information obtained from precision measuring and recording instruments; assembling and testing electronic components and writing reports through class work and practical experience in electronic engineering technology laboratories. This program provides students with a background in electronics rather than power equipment.

Persons interested in this program should be proficient in physics and math. They also should have an interest in building and repairing electrical and mechanical devices.

Graduates are qualified for positions as engineering assistants, laboratory technicians, sales and service representatives and office positions requiring a technical electronic background.

I. Career General Education 35 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE:131</td>
<td>Engineering Technology Orientation</td>
<td>1</td>
</tr>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102</td>
<td>College Composition II (or)</td>
<td></td>
</tr>
<tr>
<td>ENG:103</td>
<td>Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>EGR:104</td>
<td>Electronic Drafting</td>
<td>2</td>
</tr>
<tr>
<td>GE:101</td>
<td>Technical Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>MTH:144</td>
<td>Technical Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>MTH:154</td>
<td>Technical Analytical Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>PHY:111</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHY:112</td>
<td>College Physics II (or)</td>
<td></td>
</tr>
<tr>
<td>CHM:101</td>
<td>Fundamentals of Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Social Science Requirement</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Physical Education Activity 2 credits

III. Area of Concentration 32 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE:130</td>
<td>Electric Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>EE:131</td>
<td>Electric Circuits II</td>
<td>4</td>
</tr>
<tr>
<td>EE:132</td>
<td>Electronic Devices</td>
<td>5</td>
</tr>
<tr>
<td>EE:233</td>
<td>Digital Logic</td>
<td>4</td>
</tr>
<tr>
<td>EE:234</td>
<td>Applied Electronics</td>
<td>5</td>
</tr>
<tr>
<td>EE:235</td>
<td>Electronic Communications</td>
<td>4</td>
</tr>
<tr>
<td>EE:242</td>
<td>Introduction to Microprocessors</td>
<td>3</td>
</tr>
<tr>
<td>EE:260</td>
<td>Electronic Project Design and Fabrication</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total 69 credits

Workplace Experience: Students may substitute up to six credit hours of appropriate and relevant workplace learning experience for technical courses, and/or electives, included in the program. In order for the workplace learning credit to be counted for the degree requirement, the learning experience must be pre-approved by the department, and an appropriate faculty member must supervise the work.

Electronics: Microprocessors

CERTIFICATE OF SPECIALIZATION
Florissant Valley

This program deactivated effective Fall 2006. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor.
Emergency Medical Technology

CERTIFICATE OF PROFICIENCY
Florissant Valley and Forest Park

This program prepares students for positions as emergency medical technicians. Students learn to perform basic life support and some advanced procedures in emergency situations. EMT’s are skilled in patient assessment and recognition of diagnostic signs and symptoms of major injuries and illnesses. They also learn to use ambulance, rescue vehicle and hospital emergency room equipment.

Persons interested in this program should have maturity in dealing with others as well as co-workers. They should have manual dexterity and physical coordination for carrying, lifting, extricating, climbing, hoisting and other activities. They also should be able to give as well as receive written and verbal instructions and have good vision and visual color discrimination for examining patients to determine diagnostic signs requiring immediate treatment.

Graduates are eligible to sit for state and national licensing boards.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:100 Career English (or)</td>
<td>3</td>
</tr>
<tr>
<td>ENG:101 College Composition I</td>
<td></td>
</tr>
<tr>
<td>ENG:102 College Composition II (or)</td>
<td>3</td>
</tr>
<tr>
<td>ENG:103 Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>BIO:207 Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO:208 Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>XXX:xxx Science or Mathematics Requirement</td>
<td>3-4</td>
</tr>
<tr>
<td>XXX:xxx Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>EMT:120 Internship in Emergency Medical Technology</td>
<td>6</td>
</tr>
<tr>
<td>EMT:121 Emergency Care Principles and Techniques</td>
<td>8</td>
</tr>
</tbody>
</table>

Program total 34-35 credits

Entrepreneurship

CERTIFICATE OF SPECIALIZATION
Florissant Valley, Forest Park, Meramec

This program addresses the needs of persons interested in owning a small business, as well as persons who desire additional training to enhance ongoing businesses. The courses are designed to be informational in nature, providing students with hands-on experience with new technologies.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC:100 Applied Accounting (or)</td>
<td>3</td>
</tr>
<tr>
<td>ACC:120 Computer Accounting Applications for Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS:217 Basic Law for Small Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS:101 Small Business Management (or)</td>
<td>3</td>
</tr>
<tr>
<td>BUS:116 Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>BUS:218 Financial Aspects of Small Business</td>
<td>3</td>
</tr>
<tr>
<td>MKT:203 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT:219 E-Commerce: Strategies (or)</td>
<td>3</td>
</tr>
<tr>
<td>MGT:204 Business Organization and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total 18 credits

Fire Protection Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Forest Park

This program is designed to upgrade the skills of persons currently employed in the field. Students receive a thorough knowledge of effective fire fighting techniques and the ability to use equipment appropriate to extinguish all types of fires. They become familiar with inspection techniques, municipal safety codes and ordinances, insurance regulations, alarm systems, hydraulics and structures.

All courses are taught identically on two successive evenings to accommodate rotating schedules of working fire fighters. Required liberal arts courses may be taken day or evening, but are offered on a rotating basis in the evenings only as listed in the long-range schedule available from the department.

Persons interested in this program should be mechanically inclined and have good coordination and vision. Stamina and agility are also important. Fire fighters should have a willingness to serve the public, be capable of exerting maximum effort under discouraging conditions, be persistent, and tenacious, and be able to work in a team and to improvise in problem solving.

I. Career General Education 21 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:103 Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>COM:101 Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:124 Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>PSI:101 Physical Science Lecture</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
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</tr>
<tr>
<td>SOC:101 Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>
II. Physical Education Activity  

II. Area of Concentration  

III. Area of Concentration 41 credits

CHM:114 Industrial Chemistry  . . . . . . . . . . . . . . . . .3
FIR:100 Fire Department Apparatus  . . . . . . . . . . . .2
FIR:102 Fire Characteristics  . . . . . . . . . . . . . . . . .3
FIR:103 Fire Service Management and  
Administration ...........................................3
FIR:105 Inspection and Fire Prevention  . . . . . . . . . . .3
FIR:106 Teaching Techniques for Fire  
Department Personnel ..................................3
FIR:110 Basic Fire Protection and Alarm Systems . .3
FIR:202 Fire Investigation  . . . . . . . . . . . . . . . . . . . . . . .3
FIR:204 Fire Fighting Tactics and Strategy  . . . . . . .3
FIR:205 Fire Science Hydraulics  . . . . . . . . . . . . . . . . . . .3
FIR:207 Codes and Ordinances  . . . . . . . . . . . . . . . . . . . . .3
FIR:208 Hazardous Materials  . . . . . . . . . . . . . . . . . . . . . .3
FIR:210 Architectural Structural  
Representation-Materials ..............................3
IS:103 Information Systems for Business (or)  . . . . . .3
IS:151 Microcomputer Applications in  
Business ..................................................3-4

Program total ............... 64 credits

CERTIFICATE OF PROFICIENCY

Forest Park

This program is designed to upgrade the skills of persons  
currently employed in the field. Students receive a thorough  
knowledge of effective fire fighting techniques and the ability  
to use equipment appropriate to extinguish all types of fires.  
They become familiar with inspection techniques, municipal  
safety codes and ordinances, insurance regulations, alarm sys-  
tems, hydraulics and structures.

Courses Credits
FIR:xxx Approved Fire Protection Courses ........ 18
MTH:124 Technical Mathematics I .....................3
PSI:101 Physical Science Lecture (or) .............. 3
CHM:114 Industrial Chemistry ..........................3
XXX:xxx Approved electives from AAS (3) .......... 9

Program total ............... 33 credits

III. Area of Concentration 36 credits

FIR:102 Fire Characteristics  . . . . . . . . . . . . . . . . . . . . . . . . .3
FIR:110 Basic Fire Protection and Alarms Systems . .3
FIR:208 Hazardous Materials  . . . . . . . . . . . . . . . . . . . . . . . . .3
FIR:210 Architectural Structural Representations-  
Materials ................................................3
SAF:100 Safety Program Organization and  
Administration ........................................3
SAF:101 Safety and Health Standards,  
Regulations and Codes ..................................3
SAF:102 Plant and Equipment Layout ..................3
SAF:103 Operations-Hazards and Controls ............3
SAF:200 Materials Handling Safety .....................3
SAF:201 Occupational Safety Engineering  
Techniques ................................................3
SAF:202 Elements of Industrial Hygiene ..............3
SAF:203 Motor Fleet Safety .............................3

IV. Electives  

3 credits

Program total ............... 65 credits

CERTIFICATE OF PROFICIENCY

Florissant Valley

This program is designed for the individual working in  
industry or business who needs to gain some specialized  
knowledge in the field of industrial safety. Safety-related  
elective courses may be selected based on the individual's  
present or anticipated job requirements.

Courses Credits
SAF:xxx ....................................................18
MTH:124; PSI:101; CHM:114 .................................6
Electives ....................................................9

Program total ............... 33 credits

Fire Protection Technology:  
Safety Option

ASSOCIATE IN APPLIED SCIENCE DEGREE

Florissant Valley

This program is offered for individuals currently working  
in the safety field in industrial plants, insurance companies  
or firms selling fire protection equipment. It is also  
offered for persons interested in entering this area of  
employment. Courses may be taken as a complete program  
or as needed according to individual interest. Technical  
courses are offered in the evening only. Academic courses  
are offered day and evening.
Food Distribution Technology

CERTIFICATE OF PROFICIENCY

Meramec

This program focuses on supermarket management and on the development of leadership in food distribution management.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC:100 Applied Accounting (or)</td>
<td></td>
</tr>
<tr>
<td>ACC:110 Financial Accounting I</td>
<td>3-4</td>
</tr>
<tr>
<td>BUS:103 Business Mathematics (or) Mathematics 100 level or higher</td>
<td>3</td>
</tr>
<tr>
<td>BUS:104 Introduction to Business Administration</td>
<td></td>
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<tr>
<td>ENG:100 Career English (or)</td>
<td></td>
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<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MGT:101 Introduction to Supervision</td>
<td>3</td>
</tr>
<tr>
<td>MGT:104 Introduction to Supermarket Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT:101 Advertising Theory</td>
<td>3</td>
</tr>
<tr>
<td>MKT:103 Consumer Behavior (or)</td>
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</tr>
<tr>
<td>MKT:203 Principles of Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives 3 credits
Select three credits from:
Business, Social Science or In-Store Training

Program total 27 credits

Funeral Service Education

ASSOCIATE IN APPLIED SCIENCE DEGREE

Forest Park

This program prepares students for entry-level employment in funeral homes. Prior to enrolling in the College, each applicant must meet the pre-matriculation requirements of the state in which the student intends to practice. Students gain practical experience in the various techniques of embalming through the use of modern facilities at local funeral homes as well as in the classroom.

Persons interested in funeral service education should possess emotional stability, the desire to serve others and be in good physical health to withstand the irregular working hours and stresses of the job. Good grooming habits are important.

In most states, graduates are required to work as interns under the supervision of a licensed funeral director or embalmer for a specified period of time. Graduates of the program are qualified for positions as funeral directors and/or embalmers.

The Funeral Service Education program at St. Louis Community College at Forest Park is accredited by the American Board of Funeral Service Education (ABFSE), 3432 Ashland Avenue, Suite U, St. Joseph, Missouri 64506, telephone 816-233-3747. Web: (www.abfse.org). The annual passage rate of first-time takers on the National Board Examination (NBE) for the most recent three-year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE web site (www.abfse.org).

After January 1, 2004, each accredited program in funeral service education must require that each funeral service student take the National Board Exam (NBE) as a requirement for graduation.

I. Career General Education 22 credits

<table>
<thead>
<tr>
<th>Courses</th>
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<tbody>
<tr>
<td>BIO:103 Problems in Anatomy</td>
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<tr>
<td>BIO:203 General Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>COM:101 Oral Communication I</td>
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<tr>
<td>ENG:101 College Composition I</td>
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</tr>
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<td>ENG:102 College Composition II (or)</td>
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<tr>
<td>ENG:103 Report Writing</td>
<td>3</td>
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<tr>
<td>HST:xxx Missouri State Requirement</td>
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</tr>
<tr>
<td>SOC:101 Introduction to Sociology</td>
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</tr>
</tbody>
</table>

II. Physical Education Activity 2 credits
III. Area of Concentration  

**Graphic Communications**

*ASSOCIATE IN APPLIED SCIENCE DEGREE*

Florissant Valley, Forest Park and Meramec

Students gain graphic design fundamentals using basic graphic design materials to learn such skills as lettering, drawing for graphics layout, advertising design, illustration and computer graphics.

Graduates of the graphics communications program will have the creative and conceptual skills necessary to, and be ready for, entry-level employment and beyond in a variety of visual communication settings. Skill areas are applicable to graphic designers, illustrators, computer artists, layout artists, animators, display artists, cartoonists, package designers, production artists and artists working in digital forms of visual communication.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART:101</td>
<td>Small Business Management (or)</td>
</tr>
<tr>
<td>BUS:104</td>
<td>Orientation to Business</td>
</tr>
<tr>
<td>FNL:101</td>
<td>Orientation to Funeral Service</td>
</tr>
<tr>
<td>FNL:102</td>
<td>Mortuary Law</td>
</tr>
<tr>
<td>FNL:103</td>
<td>Embalming Chemistry</td>
</tr>
<tr>
<td>FNL:104</td>
<td>Funeral Service Equipment</td>
</tr>
<tr>
<td>FNL:106</td>
<td>Dynamics of Grief</td>
</tr>
<tr>
<td>FNL:200</td>
<td>Restorative Art</td>
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<td>FNL:201</td>
<td>Embalming</td>
</tr>
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<td>FNL:202</td>
<td>Funeral Management</td>
</tr>
<tr>
<td>FNL:205</td>
<td>Funeral Service Seminar</td>
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<tr>
<td>FNL:206</td>
<td>Embalming Practicum I</td>
</tr>
<tr>
<td>FNL:207</td>
<td>Embalming Practicum II</td>
</tr>
<tr>
<td>FNL:208</td>
<td>Pathology for Funeral Service</td>
</tr>
<tr>
<td>IS:103</td>
<td>Information Systems for Business</td>
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</table>

Program total ............... 41 credits

I. Career General Education  

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<td>College Composition II (or)</td>
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<td>Report Writing (or)</td>
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<td>MCM:217</td>
<td>Publications Writing (or)</td>
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<td>Oral Communication I (or)</td>
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<td>Approved Writing Intensive Course</td>
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<td>Missouri State Requirement</td>
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<td>Science/Mathematics Requirement</td>
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Program total ............... 18 credits

II. Physical Education Activity  

<table>
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<td>BUS:101</td>
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<td>ACC:100</td>
<td>Applied Accounting</td>
</tr>
<tr>
<td>BUS:101</td>
<td>Small Business Management (or)</td>
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<td>BUS:104</td>
<td>Orientation to Business</td>
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<td>FNL:101</td>
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<tr>
<td>FNL:202</td>
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<td>Embalming Practicum I</td>
</tr>
<tr>
<td>FNL:207</td>
<td>Embalming Practicum II</td>
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<tr>
<td>FNL:208</td>
<td>Pathology for Funeral Service</td>
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<tr>
<td>IS:103</td>
<td>Information Systems for Business</td>
</tr>
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</table>

Program total ............... 65 credits

III. Area of Concentration  

**Gerontology**

**CERTIFICATE OF SPECIALIZATION**

Forest Park

This program prepares students for entry-level work in geriatrics and other services directed to senior citizens. Students acquire skills in one-on-one relationships, group work and activities for older persons.

Persons interested in this program should be responsible, mature, patient and have a genuine concern and interest in the field of geriatrics. They also should possess effective verbal and written communications skills.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HMS:110</td>
<td>Introduction to Gerontology</td>
</tr>
<tr>
<td>HMS:201</td>
<td>Human Services Practicum I</td>
</tr>
<tr>
<td>HMS:203</td>
<td>Human Services Practicum Seminar I</td>
</tr>
<tr>
<td>PSY:213</td>
<td>Psychology of Aging</td>
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<td>SOC:201</td>
<td>Social Aspects of Aging</td>
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Program total ............... 15 credits

**Illustration Option**

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<tr>
<td>ART:109</td>
<td>Drawing I</td>
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<tr>
<td>ART:107</td>
<td>Design I</td>
</tr>
<tr>
<td>ART:108</td>
<td>Design II</td>
</tr>
<tr>
<td>ART:111</td>
<td>Figure Drawing I</td>
</tr>
<tr>
<td>ART:131</td>
<td>Computer Art Studio</td>
</tr>
<tr>
<td>ART:133</td>
<td>Graphic Design I</td>
</tr>
<tr>
<td>ART:134</td>
<td>Graphic Design II</td>
</tr>
<tr>
<td>ART:138</td>
<td>Drawing for Graphics I</td>
</tr>
<tr>
<td>ART:245</td>
<td>Portfolio Design and Professional Practices</td>
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Illustration Option total . . . .27-29 credits

**Animation Option**

<table>
<thead>
<tr>
<th>Courses</th>
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<tbody>
<tr>
<td>ART:238</td>
<td>Drawing for Graphics II</td>
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<tr>
<td>ART:236</td>
<td>Typography</td>
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<tr>
<td>ART:233</td>
<td>Graphic Design III</td>
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<tr>
<td>ART:234</td>
<td>Graphic Design IV</td>
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</table>

Animation Option total . . . .27-29 credits

**Graphic Design Option**
Horticulture

ASSOCIATE IN APPLIED SCIENCE DEGREE
Meramec

Students learn both the science and the art of horticulture through a combination of classroom theory with laboratory practice and on-the-job training. Courses in soils, plant diseases, turfgrass management and cooperative horticulture are integral parts of the program. Students receive their training in the College’s greenhouses, outdoor nursery facilities, laboratories and lath house. Students should enjoy working with plants and observing the growth process.

Graduates may specialize in nursery management, interior landscape design and maintenance, greenhouse management, horticulture retail sales, commercial grounds management and urban forestry. Entry-level jobs are available with state and city park departments, nurseries, landscape contracting firms, golf courses and retail sales.

I. Career General Education 19 credits

ENG:100 Career English (or)........................................3
ENG:101 College Composition I ..................................3
COM:101 Oral Communication I ..................................3
CHM:109 Chemistry for Environmental Careers I ............4
MTH:140 Intermediate Algebra ..................................3
PSY:200 General Psychology ....................................3
XXX:xxx Missouri State Requirement ..........................3

II. Physical Education Activity 2 credits

III. Area of Concentration 39-40 credits

Select 6-7 credits from:
ACC:100 Applied Accounting (or).................................3-4
ACC:110 Financial Accounting ..................................3
BLW:101 Business Law I .........................................3
BUS:101 Small Business Management ..........................3
MGT:101 Introduction to Supervision ............................3
MKT:104 Principles of Selling ....................................3

Horticulture Core 24 credits

HRT:101 Introductory Horticulture (or) ..........................3
BIO:124 General Botany I .........................................4
HRT:102 Soils .........................................................3
HRT:105 Cooperative Horticulture ................................1
HRT:206 Ornamental Plants – Trees and Vines ...............3
HRT:207 Ornamental Plants – Shrubs and Evergreens .......3
HRT:230 Ornamental Plants – Herbaceous Perennials .......3
HRT:214 Grounds Management ..................................3
HRT:227 Plant Pest Management ................................3

IV. Horticulture Electives 6 credits

Select 3 credits from:
HRT:245 Special Applications in Landscape Design .........3
HRT:235 Annuals and Ornamental Grasses ..................3

Program total ..........................66-67 credits

CERTIFICATE OF PROFICIENCY

Meramec

Horticulture Core 24 credits

HRT:101 Introductory Horticulture (or) ..........................3
BIO:124 General Botany I .........................................4
HRT:102 Soils .........................................................3
HRT:105 Cooperative Horticulture ................................1
HRT:206 Ornamental Plants – Trees and Vines ...............3
HRT:207 Ornamental Plants – Shrubs and Evergreens .......3
HRT:230 Ornamental Plants – Herbaceous Perennials .......3
HRT:214 Grounds Management ..................................3
HRT:227 Plant Pest Management ................................3
Horticulture Options

Select one option

Turfgrass Management
   HRT:201 Turfgrass Management .................3
   HRT:240 Golf Course Management .................3
   HRT:220 Landscape Irrigation .................3
   (or)

Landscape Design
   HRT:104 Landscape Design I .................3
   HRT:217 Landscape Design II .................3
   HRT:218 Landscape Design III .................3
   (or)

Plant Production and Marketing
   HRT:103 Plant Propagation ..................3
   HRT:205 Nursery and Garden Center Practices ....3
   HRT:241 Greenhouse Management .................3
   (or)

Landscape Management
   HRT:201 Turfgrass Management .................3
   HRT:220 Landscape Irrigation .................3
   HRT:242 Urban Tree Management .................3

Horticulture Electives

Select 6 credits from:
   HRT:245 Special Applications in Landscape Design .................3
   HRT:235 Annuals and Ornamental Grasses .................3
   Credits from options ......................3-6

Program total .................39 Credits

CERTIFICATE OF SPECIALIZATION

Meramec

Students learn both the science and the art of horticulture through a combination of classroom theory with laboratory practice and on-the-job training. Courses in soils, plant diseases, turf grass management and cooperative horticulture are integral parts of the program. Students receive their training in the College’s greenhouses, outdoor nursery facilities, laboratories and lath house. Students should enjoy working with plants and observing the growth process. Entry-level jobs are available with state and city park departments, nurseries, landscape contracting firms, golf courses and retail sales.

Courses     Credits
BIO:124 General Botany I (or) .....4
HRT:101 Introductory Horticulture ..................4
HRT:125 Plant Identification: Trees .................1
HRT:126 Plant Identification: Shrubs and Vines .................1
HRT:127 Soil Management .................1
HRT:128 Turfgrass Culture ..................1
HRT:129 Propagation Principles and Practices .................1
HRT:130 Principles of Landscape Design .................1
HRT:132 Plant Pest Identification and Management .................1
HRT:133 Landscape Management .................1

Program total .................12 credits

Hospitality Studies

ASSOCIATE IN APPLIED SCIENCE DEGREE

Forest Park

The Hospitality Studies Program prepares students for careers in the areas of culinary arts and hotel and restaurant management.

I. Career General Education

   18 credits
   ENG:101 College Composition I .................3
   COM:101 Oral Communication I .................3
   MTH:108 Elementary Applied Math or higher .................3
   PSI:101 Physical Science Lecture .................3
   XXX:xxx Missouri State Requirement .................3
   PSY:200 General Psychology .................3

II. Physical Education Activity

   2 credits

Culinary Arts Option

The Culinary Arts Option is designed to meet current and future needs for training food service and food service managerial persons to assume leadership roles in the industry. The curriculum covers food preparation, culinary arts, and culinary management, addressing the business, academic, and technical aspects of the industry. The curriculum offers a wide range of courses, specifically meeting the requirements of the hotels, restaurants and clubs in this field. The program features a heavy emphasis on food preparation from basic to advanced, combined with courses that offer a solid background in the managerial aspects. This prepares graduates to enter the industry in supervisory positions.

III. Area of Concentration

   13 credits
   HRM:135 Food Preparation Theory .................3
   HRM:116 Safety and Sanitation .................1
   HRM:134 Introduction to the Hospitality Industry .................3
   HRM:201 Problems of Hospitality Management .................3
   HRM:205 Operational Cost Control .................3

Culinary Arts Courses

   36 credits
   HRM:140 Food Preparation Practical I .................3
   HRM:145 Food Preparation Practical II .................3
   HRM:112 Purchasing .................3
   HRM:119 Garde Manger .................2
   HRM:122 Baking .................3
   HRM:123 Pastry .................3
   HRM:128 Nutrition .................3
   HRM:129 Global Cuisine .................2
   HRM:225 Nutritional Cooking .................2
   HRM:230 American Regional Cuisine .................2
   HRM:260 Restaurant Operations .................6

Select at least four credits from:
   ACC:100 Applied Accounting .................3
   HRM:250 Food Service Design and Layout .................3
   HRM:202 Hospitality Law .................3
   HRM:245 Salon Competition .................3
   HRM:235 Ice Carving .................2
Hotel and Restaurant Management Option

The Hotel and Restaurant Management Option prepares students for middle management positions in the hospitality industry. The graduate will be prepared to enter the industry at a supervisory level and to perform management functions and duties. The program is a combined curriculum for academic training and practical application (structured experience in hotels and food service) courses leading to an AAS Degree in Hospitality Studies. The graduate will be prepared for employment in all types of operations in the hospitality industry.

III. Area of Concentration 19 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I</td>
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<tr>
<td>MTH:108 Elementary Applied Math</td>
<td>3</td>
</tr>
<tr>
<td>HRM:110 Quantity Food Preparation I</td>
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<tr>
<td>HRM:116 Safety and Sanitation</td>
<td>1</td>
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<tr>
<td>HRM:122 Baking</td>
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<td>HRM:123 Pastry</td>
<td>3</td>
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<tr>
<td>HRM:128 Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HRM:218 Specialty Breads and Rolls</td>
<td>3</td>
</tr>
<tr>
<td>HRM:219 Specialty Cakes</td>
<td>3</td>
</tr>
<tr>
<td>HRM:220 Decorated and Wedding Cakes</td>
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</tr>
<tr>
<td>IS:151 Microcomputer Applications</td>
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</tr>
</tbody>
</table>

Program total 69 credits

Hospitality Studies:
Baking and Pastry Arts

CERTIFICATE OF PROFICIENCY
Forest Park

Courses                          Credits
ENG:101 College Composition I       3
MTH:108 Elementary Applied Math     3
HRM:110 Quantity Food Preparation I  6
HRM:116 Safety and Sanitation       1
HRM:122 Baking                      3
HRM:123 Pastry                      3
HRM:128 Nutrition                   3
HRM:215 Chocolates and Confections  3
HRM:216 Confectionary Art           3
HRM:217 Nutritional Baking and Pastry 3
HRM:218 Specialty Breads and Rolls  3
HRM:219 Specialty Cakes             3
HRM:220 Decorated and Wedding Cakes 3

Program total 40 credits

Hospitality Studies:
Hotel Management

CERTIFICATE OF PROFICIENCY
Forest Park

This program prepares students for entry level positions within the hotel industry. Students learn the key areas of a hotel including front office management, guest services, and facility management. Course work would include hospitality law, marketing, safety and sanitation, cost control and supervision.

General Education 9 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
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<tr>
<td>COM:101 Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:108 Elementary Applied Math</td>
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</tr>
</tbody>
</table>

Area of Concentration 30 credits

<table>
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<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>ACC:100 Applied Accounting</td>
<td>3</td>
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<tr>
<td>HRM:116 Safety and Sanitation</td>
<td>1</td>
</tr>
<tr>
<td>HRM:134 Introduction to the Hospitality Industry</td>
<td>3</td>
</tr>
<tr>
<td>HRM:141 Workplace Learning I</td>
<td>1</td>
</tr>
<tr>
<td>HRM:211 Hotel Facilities Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM:221 Workplace Learning II</td>
<td>1</td>
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<tr>
<td>HRM:201 Problems of Hospitality Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM:202 Hospitality Law</td>
<td>3</td>
</tr>
<tr>
<td>HRM:205 Operational Cost Control</td>
<td>1</td>
</tr>
<tr>
<td>IS:123 Introduction to Windows</td>
<td>1</td>
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</tbody>
</table>

Program total 70 credits
Human Services

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley, Forest Park and Meramec

This program provides students with a basic social science framework and perspective for pursuing a career in human services. The program also provides currently employed human service workers the opportunity to upgrade their skills and abilities. Students are taught a specific body of theoretical knowledge and practice skills.

They are introduced to human service organizations and resources designed to meet human needs. Students learn to identify various helping strategies and techniques for working with people.

Persons interested in this program should enjoy working with people. They should possess good communications and problem solving skills and have a positive attitude about themselves and others.

Graduates are qualified for positions as alcoholism/drug abuse assistant to counselors, directors of GED (General Education Development) tutoring programs, house parents, nursing home activity therapy assistants, case workers, corrections officers, vocational rehabilitation workers, teacher’s aides for exceptional children and personnel assistants. These positions are available in the areas of social welfare, mental health, juvenile and adult correctional programs, geriatrics, education, counseling and related fields in business, industry and health care.

### I. Career General Education 30 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENG:101 College Composition I</td>
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<tr>
<td>ENG:102 College Composition II (or)</td>
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<tr>
<td>ENG:103 Report Writing</td>
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<tr>
<td>SOC:101 Introduction to Sociology</td>
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<td>XXX:xxx Missouri State Requirement</td>
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<td>XXX:xxx Humanities Requirements</td>
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<tr>
<td>XXX:xxx Science/Mathematics Requirements</td>
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<tr>
<td>PSY:200 General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY:205 Human Growth and Development</td>
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### II. Physical Education Activity  2 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>XX:xxx Science/Mathematics Requirements (MTH:100 or above; laboratory science course recommended)</td>
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</table>

### III. Area of Concentration 24 credits

<table>
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<tr>
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<tbody>
<tr>
<td>HMS:100 Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HMS:101 Human Services: Theories and Skills</td>
<td>3</td>
</tr>
<tr>
<td>HMS:102 Human Services: Policy and Politics</td>
<td>3</td>
</tr>
<tr>
<td>HMS:201 Human Services Practicum I</td>
<td>3</td>
</tr>
<tr>
<td>HMS:202 Human Services Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>HMS:203 Human Services Practicum Seminar I</td>
<td>3</td>
</tr>
<tr>
<td>HMS:204 Human Services Practicum Seminar II</td>
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</table>

Select one course from

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HMS:111 Group Practice in Human Services</td>
<td>3</td>
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<tr>
<td>SOC:100 Human Relations</td>
<td>3</td>
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<tr>
<td>SOC:103 Human Behavior at Work and in Business</td>
<td>3</td>
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</tbody>
</table>
IV. Electives 8 credits
Recommended electives include courses with prefixes HMS, SOC, PSY, ECE, CRJ as well as computer, business and personal development courses related to the human services field.

Program total . . . . . . . . . . . . . .64 credits

Human Services:
Corrections Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program prepares students to upgrade or develop new skills as corrections officers in jails, workhouses, halfway houses and other correctional programs and institutions.

Persons interested in this program should have supervisory and leadership skills, a desire to teach or instruct adults or disadvantaged youths and a knowledge and understanding of customs, language patterns and problems of institutionalized populations.

Graduates are qualified for positions as corrections officers, rehabilitation counselors, youth services specialists, bond investigators with probation and parole, alcoholism/drug abuse counselors, group home workers and security officers.

I. Career General Education 27-29 credits
ENG:101 College Composition I . . . . . . . . . . . . . . .3
ENG:102 College Composition II (or) . . . . . . . . . . . . . . .3
ENG:103 Report Writing . . . . . . . . . . . . . . . . . . . . . . . . .3
XXX:xxx Missouri State Requirement . . . . . . . . . . . . . . .3
SOC:101 Introduction to Sociology . . . . . . . . . . . . . . .3
SOC:100 Human Relations (or) . . . . . . . . . . . . . . . . . . . . .3
PSY:200 General Psychology . . . . . . . . . . . . . . . . . . . . . .3
PSY:208 Abnormal Psychology . . . . . . . . . . . . . . . . . . . . .3
XXX:xxx Science/Mathematics . . . . . . . . . . . . . . . . . . . . .6-8

II. Physical Education Activity 2 credits

III. Area of Concentration 33 credits
CRJ:122 Introduction to Criminal Justice . . . . . . . . . . . . . . .3
CRJ:101 American Correctional System . . . . . . . . . . . . . . .3
CRJ:102 Rehabilitation, Probation and Parole . . . . . . . . . . . . .3
CRJ:124 Criminal Law and Procedures . . . . . . . . . . . . . . . .3
ENG:101 College Composition I . . . . . . . . . . . . . . . . . . . . .3
HMS:100 Introduction to Human Services . . . . . . . . . . . . . .3
HMS:201 Human Services Practicum I . . . . . . . . . . . . . . . .3
HMS:203 Human Services Practicum Seminar I . . . . . . . . . . .3
PSY:200 General Psychology . . . . . . . . . . . . . . . . . . . . . .3
XXX:xxx Missouri State Requirement . . . . . . . . . . . . . . . .3

Electives 3 credits

Program total . . . . . . . . . . . . . .33 credits

CERTIFICATE OF PROFICIENCY
Florissant Valley

This program prepares students to upgrade or develop new skills as corrections officers in jails, workhouses, halfway houses and other correctional programs and institutions.

Courses
CRJ:122 Introduction to Criminal Justice . . . . . . . . . . . . . . .3
CRJ:101 American Correctional System . . . . . . . . . . . . . . .3
CRJ:102 Rehabilitation, Probation and Parole . . . . . . . . . . . . .3
CRJ:124 Criminal Law and Procedures . . . . . . . . . . . . . . . .3
ENG:101 College Composition I . . . . . . . . . . . . . . . . . . . . .3
HMS:100 Introduction to Human Services . . . . . . . . . . . . . .3
HMS:201 Human Services Practicum I . . . . . . . . . . . . . . . .3
HMS:203 Human Services Practicum Seminar I . . . . . . . . . . .3
PSY:200 General Psychology . . . . . . . . . . . . . . . . . . . . . .3
XXX:xxx Missouri State Requirement . . . . . . . . . . . . . . . .3

Electives 3 credits

Program total . . . . . . . . . . . . . .33 credits

Human Services:
Disabilities Studies Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Forest Park

This program provides students with a basic knowledge of persons with disabilities and a perspective of the service delivery model and the field of disabilities. Students entering the profession may want to work in entry level positions. Persons already working in the field of disabilities may want to upgrade their already existing skills. Persons with degrees in related fields may want to gain more specialized knowledge in the field.

Persons in this field should enjoy working with people and their challenges. They should possess good communication and problem solving skills and have a positive attitude about themselves and others.

Graduates may expect to work in the areas of special or regular education; supported living; day care centers; leisure and recreation programs; or any other inclusionary community setting.

I. Career General Education 30-31 credits
ENG:101 College Composition I . . . . . . . . . . . . . . . . . . . . .3
ENG:102 College Composition II (or) . . . . . . . . . . . . . . . . .3
ENG:103 Report Writing . . . . . . . . . . . . . . . . . . . . . . . . . .3
SOC:101 Introduction to Sociology . . . . . . . . . . . . . . . . . . . .3
PSY:200 General Psychology . . . . . . . . . . . . . . . . . . . . . .3
PSY:205 Human Growth and Development . . . . . . . . . . . . . .3
XXX:xxx Humanities Electives . . . . . . . . . . . . . . . . . . . . . .6
XXX:xxx Science/Math Electives (Math 100 or above; lab science course recommended) . . . . . . . . . . . . . . . . . . . . . . . . . . .6-7
XXX:xxx Missouri State Requirement . . . . . . . . . . . . . . . .3

II. Physical Education Activity 2 credits

III. Area of Concentration 27 credits
Human Services: Disabilities
CERTIFICATE OF SPECIALIZATION
Forest Park
This program provides students with the knowledge and skills to enter the disabilities field and upgrades the existing skills of persons already working in the field.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMS:119 Introduction to the Field of Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>HMS:120 Team Building: Working with Care Givers (or)</td>
<td>3</td>
</tr>
<tr>
<td>HMS:121 Working with Challenging Behaviors</td>
<td>3</td>
</tr>
<tr>
<td>HMS:122 Health Issues and Persons with Disabilities (or)</td>
<td>3</td>
</tr>
<tr>
<td>HMS:118 Aging and Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>HMS:201 Human Services Practicum I</td>
<td>3</td>
</tr>
<tr>
<td>HMS:202 Human Services Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>HMS:203 Human Services Practicum Seminar I</td>
<td>3</td>
</tr>
<tr>
<td>HMS:204 Human Services Practicum Seminar II</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total .................. 18 credits

Note: Students who are currently working in the field of developmental disabilities should take the two seminars HMS:203 and HMS:204 instead of HMS:201 and HMS:203.

Information Reporting Technology
ASSOCIATE IN APPLIED SCIENCE DEGREE
Meramec
This program prepares the student for entry-level positions in judicial reporting or realtime captioning (CART: Communication Access Realtime Translation). The entering student should have keyboarding experience before attempting the skill of machine shorthand. After taking a series of fundamental courses, the student chooses between these options, which prepare the student for the appropriate certification tests upon completion of the program. Judicial reporters work in legal or corporate settings. CART reporters provide captioning for broadcast or live events. Employment opportunities are excellent in both areas.

I. Career General Education 18 credits
ENG:101 College Composition I ................... 3
XXX:xxx Humanities/Communications Elective .......... 3
XXX:xxx Missouri State Requirement .................. 3
XXX:xxx Social/Behavioral Science Elective .......... 3
BUS:103 Business Mathematics ....................... 3
XXX:xxx Science/Mathematics Elective ............... 3

II. Physical Education Activity 2 credits

III. Area of Concentration 23 credits
IRT:121 Machine Shorthand I ....................... 3
IRT:122 Machine Shorthand II ...................... 3
IRT:123 Machine Shorthand III ..................... 3
IRT:124 Machine Shorthand IV ..................... 3
IRT:138 Introduction to Computer-Aided Transcription .................. 2
IRT:140 Legal Terminology ........................ 3
IS:123 Introduction to Windows .................. 1
IS:136 Internet Fundamentals ....................... 1
IS:205 Medical Terminology ....................... 4

Judicial Reporting Option: 26 credits
IRT:125 Machine Shorthand V ..................... 3
IRT:126 Machine Shorthand VI .................... 3
IRT:127 Machine Shorthand VII ................... 3
IRT:128 Machine Shorthand VIII ................... 3
IRT:142 Editing Legal Documents .................. 3
IRT:156 Judicial Realtime Applications ............ 3
IRT:166 Judicial Reporting Internship ............ 1
IRT:167 Colloquy .................................. 2
IRT:101 Principles of Judicial Reporting I ....... 3
IRT:201 Principles of Judicial Reporting II ....... 2

Program total .................. 69 credits
CART and Captioning Reporting Option: 25 credits
IRT:168 CART/Captioning Internship .......... 1
IRT:202 Broadcasting Captioning I ........... 3
IRT:203 Broadcast Captioning II ............... 3
IRT:145 Research Techniques for Captioning .... 3
MCM:120 Introduction to Broadcasting ........ 3
IRT:146 Realtime Applications for CART/ Captioning ............. 3
IRT:150 Literary I .......................................... 3
IRT:250 Literary II ..................................... 3
IRT:251 Literary III ..................................... 3

Program total .................. 68 credits

Information Reporting Technology: Judicial Reporting
CERTIFICATE OF PROFICIENCY
Meramec
This program prepares the student to take the certification test in order to work in the field of judicial reporting, usually in a legal setting. Employment opportunities are excellent.

Courses Credits
IRT:101 Principles of Judicial Reporting I .... 3
IRT:121 Machine Shorthand I .................... 3
IRT:122 Machine Shorthand II .................... 3
IRT:123 Machine Shorthand III ................... 3
IRT:124 Machine Shorthand IV ................... 3
IRT:125 Machine Shorthand V .................... 3
IRT:126 Machine Shorthand VI ................... 3
IRT:127 Machine Shorthand VII .................. 3
IRT:128 Machine Shorthand VIII ................ 3
IRT:138 Introduction to Computer-Aided Transcription .................. 2
IRT:140 Legal Terminology ....................... 3
IRT:142 Editing Legal Documents ............... 3
IRT:156 Judicial Realtime Applications .......... 3
IRT:166 Judicial Reporting Internship .......... 1
IRT:167 Colloquy ......................................... 2
IRT:201 Principles of Judicial Reporting II ..... 2
IS:123 Introduction to Windows ................ 1
IS:136 Internet Fundamentals .................... 1
IS:205 Medical Terminology ..................... 4

Program total .................. 49 credits

Broadcast Captioning
CERTIFICATE OF SPECIALIZATION
Meramec

Courses Credits
IRT:143 Introduction to Captioning .......... 3
IRT:202 Broadcast Captioning I ............... 3
IRT:203 Broadcast Captioning II ............... 3
IRT:145 Research Techniques for Captioning .... 3
MCM:120 Introduction to Broadcasting .......... 3
IRT:251 Literary III .............................. 3

Program total .................. 18 credits
Information Systems: Computer Network Specialist Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley, Forest Park and Meramec

This program provides students with both the theoretical and practical knowledge required to perform as entry level local area network technicians or administrators. Significant portions of the networking classes involve hands-on lab activity utilizing current computer networking equipment and software. The classes emphasize selection of hardware and software, physical planning, local and wide area network design, network optimization, and network management.

I. Career General Education 19 credits
- ENG:101 College Composition I ..................................3
- ENG:102 College Composition II (or)..........................3
- ENG:103 Report Writing ...........................................3
- MTH:160 College Algebra .........................................4
- XXX:xxx Natural Science/Mathematics Elective ............3
- XXX:xxx Missouri State Requirement ........................3
- XXX:xxx Social Science Elective or SOC:103 Human Behavior at Work and in Business ..................3

II. Physical Education Activity 2 credits

III. Area of Concentration 43-45 credits
- BUS:104 Introduction to Business Administration ..........3
- IS:103 Information Systems for Business ......................3
- IS:110 Programming Design and Development ............3
- IS:111 Programming in Basic (or) .............................3
- IS:227 C Programming Language I (or) ......................3
- IS:251 Introduction to Java ........................................3
- IS:112 Software and Hardware Concepts ........................3
- IS:130 Hardware and Software Support ........................3
- IS:215 Introduction to Local Area Networks ....................3
- IS:217 Network Performance Monitoring .....................3
- IS:229 UNIX ..........................................................3
- IS:231 Introduction to Data Communications ...................3
- IS:235 Network Design and Installation .....................3
- IS:236 Network Administration ..................................3
- IS:239 Router Administration ....................................3

Select 4-6 credit hours from the following list:
- IS:129 HTML ......................................................1
- IS:218 Network Internship .......................................3
- IS:237 Computer System and Network Security ............3
- IS:238 Web Server Implementation ............................3
- IS:254 Advanced Microcomputer Operating Systems ......3
- IS:264 Advanced UNIX: System Administration I ........3
- IS:165 Microcomputer Applications-Microsoft Project ....1

Program total .....................64-66 credits

Information Systems: Microcomputer Support Specialist Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley, Forest Park and Meramec

This program provides students with the technical skills necessary to perform application development tasks and to provide support to end users. Students are trained in an environment which emphasizes end-user facilitation of microcomputer resources. The microcomputer application classes are taught in a hands-on environment. Upon completion of this program students are prepared for positions such as user-support specialist or PC help desk specialist.

I. Career General Education 19 credits
- ENG:101 College Composition I ..................................3
- ENG:102 College Composition II (or)..........................3
- ENG:103 Report Writing ...........................................3
- MTH:160 College Algebra .........................................4
- COM:101 Oral Communication I ..................................3
- XXX:xxx Missouri State Requirement ........................3
- Choose one of the following courses: .........................3
  - ECO:151 Principles of Macroeconomics
  - PSY:200 General Psychology
  - PSY:206 Social Psychology
  - SOC:101 Introduction to Sociology
  - SOC:103 Human Behavior at Work and Business

II. Physical Education Activity 2 credits

III. Area of Concentration 43 credits
- IS:101 Keyboarding ..............................................1
- BUS:104 Introduction to Business Administration ..........3
- IS:103 Information Systems for Business ......................3
- IS:110 Program Design and Development ....................3
- IS:111 Programming in Basic ....................................3
- IS:123 Introduction to Windows ................................1
- IS:132 Windows–Intermediate Topics ...........................3
- IS:134 Windows–Advanced Topics ..............................1
- IS:130 Hardware and Software Support .......................3
- IS:215 Introduction to Local Area Networks ....................3
- IS:241 Systems Analysis and Design ...........................3
- IS:254 Advanced Microcomputer Operating Systems ......3

Choose one of the following 4 credit hour options:
- IS:151 Microcomputer Applications in Business .............4
- IS:118 Microcomputer Applications–Databases and ..........1
- IS:119 Microcomputer Applications–Word Processing and ...1
- IS:125 Excel for Windows .......................................2
Choose 8 credits from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>IS:125</td>
<td>Excel for Windows</td>
<td>2</td>
</tr>
<tr>
<td>IS:137</td>
<td>Microcomputer Applications—Presentation Software</td>
<td>1</td>
</tr>
<tr>
<td>IS:129</td>
<td>HTML</td>
<td></td>
</tr>
<tr>
<td>IS:202</td>
<td>Information Systems Fieldwork</td>
<td></td>
</tr>
<tr>
<td>IS:131</td>
<td>Advanced HTML</td>
<td>2</td>
</tr>
<tr>
<td>IS:229</td>
<td>UNIX</td>
<td></td>
</tr>
<tr>
<td>IS:231</td>
<td>Introduction to Data Communications</td>
<td>3</td>
</tr>
<tr>
<td>IS:235</td>
<td>Network Design and Installation</td>
<td></td>
</tr>
<tr>
<td>IS:237</td>
<td>Computer System and Network Security</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total ..............64 credits

Information Systems: Office Information Coordinator Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley, Forest Park and Meramec

This program is designed to prepare students to be proficient in the use of office technology including current computer hardware, operating and application software, and traditional as well as state-of-the-art office equipment such as personal digital assistants, voice recognition technology, and scanners. Students in this program will become proficient at using microcomputer office applications and desktop computer systems. In addition to learning to use these skills in the workplace, they will learn to supervise and train others in their use. The courses provide students with both the theoretical and practical knowledge required to perform as productive office professionals.

I. Career General Education 19 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
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<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
<td>3</td>
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<tr>
<td>XXX:xxx</td>
<td>Natural Science/Mathematics Elective</td>
<td>3</td>
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<tr>
<td>MTH:160</td>
<td>College Algebra</td>
<td>4</td>
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<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
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<tr>
<td>Choose one of the following courses</td>
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<tr>
<td>ECO:151</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>PSY:200</td>
<td>General Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY:206</td>
<td>Introduction to Social Psychology</td>
<td></td>
</tr>
<tr>
<td>SOC:101</td>
<td>Introduction to Sociology</td>
<td></td>
</tr>
<tr>
<td>SOC:103</td>
<td>Human Behavior at Work and Business</td>
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</table>

II. Physical Education Activity 2 credits

<table>
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<tr>
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<th>Title</th>
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</tr>
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III. Area of Concentration 44 credits

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<th>Course</th>
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<td>ACC:100</td>
<td>Applied Accounting</td>
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<tr>
<td>BUS:104</td>
<td>Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>IS:103</td>
<td>Information Systems for Business</td>
<td>3</td>
</tr>
<tr>
<td>IS:123</td>
<td>Introduction to Windows</td>
<td>1</td>
</tr>
<tr>
<td>IS:124</td>
<td>Windows—Advanced Topics</td>
<td>1</td>
</tr>
<tr>
<td>IS:132</td>
<td>Windows—Intermediate Topics</td>
<td>1</td>
</tr>
<tr>
<td>IS:129</td>
<td>HTML</td>
<td></td>
</tr>
<tr>
<td>IS:130</td>
<td>Hardware and Software Support</td>
<td>3</td>
</tr>
<tr>
<td>IS:136</td>
<td>Internet Fundamentals</td>
<td>1</td>
</tr>
<tr>
<td>IS:102</td>
<td>Keyboarding and Formatting</td>
<td>3</td>
</tr>
<tr>
<td>IS:210</td>
<td>Office Procedures</td>
<td>3</td>
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<tr>
<td>IS:200</td>
<td>Electronic Records Management</td>
<td>2</td>
</tr>
<tr>
<td>IS:157</td>
<td>Microcomputer Applications—Intermediate Word Processing</td>
<td>1</td>
</tr>
<tr>
<td>IS:126</td>
<td>E-Mail and Information Management</td>
<td>1</td>
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<tr>
<td>IS:109</td>
<td>Proofreading and Editing Skills</td>
<td>1</td>
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<tr>
<td>IS:155</td>
<td>Office Technology</td>
<td>2</td>
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<tr>
<td>IS:161</td>
<td>Microcomputer Applications—Advanced Word Processing</td>
<td>1</td>
</tr>
<tr>
<td>IS:156</td>
<td>Microcomputer Applications—Intermediate Database</td>
<td>1</td>
</tr>
<tr>
<td>IS:164</td>
<td>Voice Recognition Technology</td>
<td>1</td>
</tr>
<tr>
<td>MGT:101</td>
<td>Introduction to Supervision</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one of the following four courses: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>IS:139</td>
<td>Web Publishing Using Advanced HTML</td>
<td></td>
</tr>
<tr>
<td>IS:135</td>
<td>Communication and Design for the WWW</td>
<td></td>
</tr>
<tr>
<td>IS:141</td>
<td>Graphics for the Web</td>
<td></td>
</tr>
<tr>
<td>IS:291</td>
<td>Co-op Work Experience I—Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one of the following 5 credit hour options:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:151</td>
<td>Microcomputer Applications in Business</td>
<td>4</td>
</tr>
<tr>
<td>IS:158</td>
<td>Microcomputer Application—Intermediate Spreadsheets</td>
<td>1</td>
</tr>
<tr>
<td>IS:118</td>
<td>Microcomputer Applications—Databases</td>
<td>1</td>
</tr>
<tr>
<td>IS:119</td>
<td>Microcomputer Applications—Word Processing</td>
<td>1</td>
</tr>
<tr>
<td>IS:125</td>
<td>Excel for Windows</td>
<td>2</td>
</tr>
<tr>
<td>IS:137</td>
<td>Microcomputer Applications—Presentation Software</td>
<td>1</td>
</tr>
<tr>
<td>IS:158</td>
<td>Microcomputer Application—Intermediate Spreadsheets</td>
<td>1</td>
</tr>
<tr>
<td>IS:118</td>
<td>Microcomputer Applications—Databases</td>
<td>1</td>
</tr>
<tr>
<td>IS:119</td>
<td>Microcomputer Applications—Word Processing</td>
<td>1</td>
</tr>
<tr>
<td>IS:120</td>
<td>Microcomputer Applications—Spreadsheets</td>
<td>1</td>
</tr>
<tr>
<td>IS:137</td>
<td>Microcomputer Applications—Presentation Software</td>
<td>1</td>
</tr>
<tr>
<td>IS:158</td>
<td>Microcomputer Application—Intermediate Spreadsheets</td>
<td>1</td>
</tr>
</tbody>
</table>

Program total ..............65 credits
Information Systems: Programmer/Analyst Option

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley, Forest Park and Meramec

This program provides students with the technical skills and knowledge required to write, implement, and maintain business application programming systems. It teaches the concepts of computer programming and systems analysis. Students completing the program are prepared for positions as entry level programmers.

I. Career General Education 19-20 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102 College Composition II (or)</td>
<td></td>
</tr>
<tr>
<td>ENG:103 Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
<td></td>
</tr>
<tr>
<td>MTH:160 College Algebra (and)</td>
<td>4</td>
</tr>
<tr>
<td>MTH:177 Finite Mathematics (or)</td>
<td>4</td>
</tr>
<tr>
<td>MTH:186 Survey of Calculus (or)</td>
<td>4</td>
</tr>
<tr>
<td>BUS:103 Business Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

Social Science Component 3 credits
Choose one of the following courses:
SOC:101 Introduction to Sociology
PSY:200 General Psychology
ECO:151 Principles of Macroeconomics
PHL:102 Introduction to Logic

II. Physical Education Activity 2 credits

III. Area of Concentration 25 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACC:110 Financial Accounting I</td>
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<tr>
<td>BUS:104 Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>IS:103 Information Systems for Business</td>
<td>3</td>
</tr>
<tr>
<td>IS:110 Program Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>IS:111 Programming in Basic</td>
<td>3</td>
</tr>
<tr>
<td>IS:112 Software and Hardware Concepts</td>
<td>3</td>
</tr>
<tr>
<td>IS:225 Database Management</td>
<td>3</td>
</tr>
<tr>
<td>IS:241 Systems Analysis and Design</td>
<td>3</td>
</tr>
</tbody>
</table>

Microcomputer Component 6-7 credits
Pick one sequence from Option A, B, or C, then complete 2 credits from the microcomputer requirements list at the end of this section.

Option A: Choose 4-5 credits from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:123 Introduction to Windows (or)</td>
<td>1</td>
</tr>
<tr>
<td>IS:118 Microcomputer Applications – Database</td>
<td>1</td>
</tr>
<tr>
<td>IS:119 Microcomputer Applications – Word Processing (or)</td>
<td>1</td>
</tr>
<tr>
<td>IS:137 Microcomputer Applications – Presentation Software</td>
<td>1</td>
</tr>
<tr>
<td>IS:120 Microcomputer Applications – Spreadsheets (or)</td>
<td>1</td>
</tr>
<tr>
<td>IS:125 Excel for Windows</td>
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</tbody>
</table>

Option B: Choose

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:209 Development of End-User Microcomputer Systems</td>
<td>3</td>
</tr>
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</table>

And either

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:123 Introduction to Windows (or)</td>
<td>1</td>
</tr>
<tr>
<td>IS:118 Microcomputer Applications – Database</td>
<td>1</td>
</tr>
<tr>
<td>IS:119 Microcomputer Applications – Word Processing (or)</td>
<td>1</td>
</tr>
<tr>
<td>IS:125 Excel for Windows (or)</td>
<td>2</td>
</tr>
<tr>
<td>IS:120 Microcomputer Applications – Spreadsheets</td>
<td>1</td>
</tr>
</tbody>
</table>

Option C: Choose

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:151 Microcomputer Applications in Business</td>
<td>4</td>
</tr>
</tbody>
</table>

Microcomputer Requirements List:
IS:136 Internet Fundamentals 1
IS:129 HTML 1

System Software Component 3 credits
Choose one of the following courses:
IS:229 UNIX 3
IS:127 Introduction to the AS/400 3
IS:254 Advanced Microcomputer Operating Systems 3

Language Component 6 credits
Students must complete a two semester sequence in the same programming area, choosing from one of the following options:

COBOL Option
IS:211 COBOL Programming I (and) 3
IS:212 COBOL Programming II 3

C/C++ Option
IS:227 C Programming Language I (and) 3
IS:256 C++ Object-Oriented Programming 3

Visual Basic Option
IS:246 Visual Basic Programming (and) 3
IS:255 Advanced Visual Basic Programming 3

Java Option
IS:251 Introduction to Java (and) 3
IS:252 Advanced Java 3

Elective Component 6 credits
Choose two of the following courses:
IS:117 Pascal Programming 3
IS:130 Hardware and Software Support 3
IS:133 Introduction to SQL 3
IS:257 Advanced Database Design 3
IS:139 Web Publishing Using Advanced HTML 3
IS:251 Introduction to Java 3
IS:259 Introduction to JavaScript 3
IS:260 Visual C++ Application Development 3
CERTIFICATE OF PROFICIENCY

**Information Systems**

Florissant Valley, Forest Park and Meramec

The certificate is designed for persons with an information systems background or for persons who have completed IS:103 or equivalent. Persons attending full time can complete the program within two semesters.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:110 Program Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>IS:111 Programming in Basic</td>
<td>3</td>
</tr>
<tr>
<td>IS:112 Software and Hardware Concepts</td>
<td>3</td>
</tr>
<tr>
<td>IS:241 Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>IS:123 Introduction to Windows</td>
<td>1</td>
</tr>
<tr>
<td>IS:225 Database Management</td>
<td>3</td>
</tr>
<tr>
<td>IS:xxx Microcomputer Electives (see below)</td>
<td>4</td>
</tr>
<tr>
<td>IS:xxx Information Systems Programming Electives</td>
<td>6</td>
</tr>
<tr>
<td>BUS:104 Introduction to Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>MTH:160 College Algebra</td>
<td>4</td>
</tr>
</tbody>
</table>

**Microcomputer Electives**

Choose one from Option A, B, or C

**Option A:**
- IS:151 Microcomputer Applications in Business (.4)
- IS:152 Microcomputer Applications (or)

**Option B:**
- IS:156 Microcomputer Literacy (and) (.3)
- IS:226 Microcomputer Operating System - DOS (.1)
- IS:227 Microcomputer Operating System - DOS (and)

**Option C:**
- IS:226 Microcomputer Operating System - DOS (and)
- IS:118 Microcomputer Applications - Database

And as part of Option C choose one of the following:
- IS:119 Microcomputer Applications - Word Processing (or)
- IS:129 HTML (or)
- IS:137 Microcomputer Applications - Presentation Software

And as part of Option C choose one of the following:
- IS:120 Microcomputer Applications - Spreadsheets (or)
- IS:125 Excel for Windows

**Program total**

67-69 credits

**Information Technology: Network Administration**

CERTIFICATE OF PROFICIENCY

Florissant Valley, Forest Park, and Meramec

This program will assist computer professionals to update their network and communications technology skill set. These courses provide students with both the theoretical and practical knowledge required to perform as entry-level network technicians or administrators. Students will gain additional skills through practical applications that focus on the day-to-day technology changes experienced by business and industry.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS:129 HTML</td>
<td>1</td>
</tr>
<tr>
<td>IS:130 Hardware and Software Support</td>
<td>3</td>
</tr>
<tr>
<td>IS:215 Introduction to Local Area Networks</td>
<td>3</td>
</tr>
<tr>
<td>IS:217 Network Performance Monitoring</td>
<td>3</td>
</tr>
<tr>
<td>IS:218 Network Internship</td>
<td>3</td>
</tr>
<tr>
<td>IS:229 UNIX</td>
<td>3</td>
</tr>
<tr>
<td>IS:231 Introduction to Data Communications</td>
<td>3</td>
</tr>
<tr>
<td>IS:235 Network Design and Installation</td>
<td>3</td>
</tr>
<tr>
<td>IS:236 Network Administration</td>
<td>3</td>
</tr>
<tr>
<td>IS:237 Computer System and Network Security</td>
<td>3</td>
</tr>
<tr>
<td>IS:238 Web Server Implementation</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program total**

31 credits
Interior Design

ASSOCIATE IN APPLIED SCIENCE DEGREE

Meramec

This skill-oriented program emphasizes visual and oral communication skills necessary for the development of functional aesthetic interior space planning and design solutions. Students will learn to solve interior design-related problems by developing free-hand and drafting skills and computer skills as well as oral presentation skills. Students will become familiar with trade, professional and industry resources available both locally and nationally.

Persons interested in this program should have a strong desire to work with people, enjoy functional problem solving and appreciate the impact of design in our environment. Previous drawing, design or drafting courses also are helpful.

Graduates are qualified for entry-level positions in residential and/or commercial interior design and related fields.

Typical positions include draftspersons, design apprentices, design assistants, independent or manufacturer’s representatives, facilities/space planner, retail home furnishing and product sales, and independent interior design consultant.

I. Career General Education 18 credits
ENG:101  College Composition I ......................... .3
ENG:102  College Composition II (or) ................... .3
ENG:103  Report Writing ................................. .3
PSY:200  General Psychology ............................. .3
XXX:xxx  Missouri State Requirement .................. .3
XXX:xxx  Science/Mathematics Requirement ............ .6

II. Physical Education Activity 2 credits

III. Area of Concentration 41 credits
ART:102  Art History II ................................. .3
ART:103  History of Modern Art (or) .................. .3
ART:110  Drawing II .................................. .3
ART:107  Design I .................................. .3
ART:108  Design II .................................. .3
ART:109  Drawing I .................................. .3
ART:151  Interior Design I ............................. .3
ART:251  Interior Design II ............................ .3
ART:252  Residential Interior Design .................. .3
ART:253  Commercial Interior Design .................. .3
ART:152  Textiles .................................... .3
ART:153  History of Cultural Environments I ........... .3
ART:254  History of Cultural Environments II ............ .3
ARC:110  Architectural Graphics ......................... .3
ARC:112  Architectural Design and Production I ...... .3
ART:154  Computer Aided Interior Design ............... .3

IV. Electives 3 credits
Consult program coordinator for approved electives

Program total .................. 66 credits

International Business

ASSOCIATE IN APPLIED SCIENCE DEGREE

Forest Park

This program combines a strong blend of international business, general business and liberal arts course work to prepare students to complete international business transactions: identify potential markets; secure licensing, financing and insurance; prepare goods for transit and complete the required documentation.

An awareness of cultural differences is extremely important in this field. Persons interested in this program should have an interest in other cultures and possess a healthy respect for and an understanding of cross-cultural differences. A willingness to relocate and travel anywhere in the world is a fundamental part of many positions.

Graduates of this program are prepared to work in a variety of international business positions. Typical job titles include export administrators, international sales administrators and coordinators, customer service representatives, assistants to international business directors, export correspondents, documentation specialists, international trafficking managers, export clerks, operations clerks and export sales specialists.

The associate degree program is designed for recent high school graduates and persons who do not currently possess a strong business background. The certificate program is designed for people interested in a career change, people currently employed in international business and current or potential business owners.

I. Career General Education 24-25 credits
ENG:101  College Composition I ......................... .3
ENG:103  Report Writing ................................. .3
COM:101  Oral Communication I .......................... .3
MTH:124  Technical Mathematics (or) ................. .3
MTH:160  College Algebra ................................ .3
XXX:xxx  Math or Science Elective ......................... .3
ANT:103  Cultural Variations ............................ .3
PSC:101  Introduction to American Politics ............ .3
PSC:201  International Relations ......................... .3

II. Physical Education Activity 2 credits

III. Area of Concentration 31 credits
ACC:110  Financial Accounting I ......................... .4
BUS:104  Introduction to Business Administration ....... .3
ECO:151  Principles of Macroeconomics .................. .3
ECO:152  Principles of Microeconomics .................. .3
IB:100  International Business .......................... .3
IB:200  The Export Process .............................. .3
IB:201  The Import Process .............................. .3
IB:202  International Marketing .......................... .3
IB:203  International Transportation (Freight Forwarding) ........ .3
IB:205  International Business Organization and Management ........ .3
IV. Electives 9-14 credits
XXX:xxx Foreign Language(s) ...................... 6-8
XXX:xxx Free elective (required) .................. 3
IB:206 International Business Internship (optional) .................. 0-3

Program total .............. 66-72 credits

CERTIFICATE OF PROFICIENCY
Forest Park
This program combines a strong blend of international business, general business and liberal arts course work to prepare students to complete international business transactions: identify potential markets; secure licensing, financing and insurance; prepare goods for transit and complete the required documentation. The certificate programs are designed for people interested in a career change, people currently employed in international business and current or potential business owners.

Courses Credits
ANT:103 Cultural Variations ...................... 3
BUS:104 Introduction to Business Administration .. 3
PSC:101 Introduction to American Politics ........ 3
IB:100 International Business ..................... 3
IB:200 The Export Process ......................... 3
IB:201 The Import Process ......................... 3
IB:202 International Marketing ................... 3
IB:203 International Transportation (Freight Forwarding) .................. 3
IB:205 International Business Organization and Management .................. 3
IB:206 International Business Internship (optional) .................. 0-3

Program total .............. 30-33 credits

CERTIFICATE OF SPECIALIZATION
Forest Park
This certificate allows the student to concentrate on the essential international business courses.

Courses Credits
ANT:103 Cultural Variations ...................... 3
IB:100 International Business ..................... 3
IB:200 The Export Process (or)
IB:201 The Import Process ......................... 3
IB:202 International Marketing (or)
IB:205 International Business Organization and Management .................. 3

Program total .............. 12 credits

Kitchen and Bath Design
CERTIFICATE OF PROFICIENCY
Meramec
This skill-oriented program emphasizes visual and oral communication skills necessary for the development of functional and aesthetically pleasing residential kitchen and bath design. Students will become familiar with trade, professional and industry resources available both locally and nationally.

Persons interested in this program should have a strong desire to work with people, enjoy functional problem solving, and appreciate the impact of design in our environment.

Previous drawing, design, drafting or computer courses are also helpful.

Students will become student members of the National Kitchen and Bath Association. At the completion of the program, students will be eligible to sit for the AKBD (Associate Kitchen and Bath Designer) exam. Graduates are qualified for entry level positions in the residential kitchen and bath design field.

Courses Credits
ARC:110 Architectural Graphics .................. 3
ARC:112 Architectural Design and Production I ... 3
ARC:209 Mechanical and Electrical Systems I .... 3
ART:151 Interior Design I ......................... 3
ART:155 Bath Design ......................... 3
ART:156 Advanced Kitchen Design .............. 3
ART:157 Perspective Drawing and Rendering for Interior designers .................. 2
ART:158 Workplace Learning: Internship in Kitchen and Bath Design ............. 3
AT:151 Designer Resources ....................... 3
AT:152 Lighting Design ....................... 3
AT:251 Computer Aided Kitchen and Bath Design .......... 3
MKT:104 Principles of Selling .................. 3

Program total .................. 35 credits

Landscapes and Gardening
CERTIFICATE OF SPECIALIZATION
Meramec
This program is offered at the Missouri Botanical Garden’s Kemper Center for Home Gardening and provides training that enables students to enhance their gardening skills. The program provides hands-on instruction in basic horticulture principles to those who plan to manage landscapes. Courses address plant selection and care, weed and pest control, preparation and use of garden soil, and lawn care.

I. Required Course
HRT:110 Fundamentals of Horticulture .............. 1
II. Choose 8 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT:111</td>
<td>.5</td>
</tr>
<tr>
<td>HRT:112</td>
<td>.5</td>
</tr>
<tr>
<td>HRT:125</td>
<td>.5</td>
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<tr>
<td>HRT:126</td>
<td>.5</td>
</tr>
<tr>
<td>HRT:127</td>
<td>.5</td>
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<tr>
<td>HRT:128</td>
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<tr>
<td>HRT:130</td>
<td>.5</td>
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<tr>
<td>HRT:132</td>
<td>.5</td>
</tr>
<tr>
<td>HRT:133</td>
<td>.5</td>
</tr>
</tbody>
</table>

Program total 9 credits

**Lead Maintenance Mechanic**

**CERTIFICATE OF SPECIALIZATION**

**Florissant Valley**

This certificate program is designed both for those preparing for entry-level positions and for those already working in the maintenance field. Building upon the skills developed in the Maintenance Mechanic program, this certificate prepares the graduate for a higher level of responsibility in the maintenance field.

*Sponsored by City of St. Louis and International Union of Operating Engineers, Local 2*

**Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE:116</td>
<td>.3</td>
</tr>
<tr>
<td>MGT:101</td>
<td>.3</td>
</tr>
<tr>
<td>ME:103</td>
<td>.3</td>
</tr>
<tr>
<td>ME:109</td>
<td>.3</td>
</tr>
</tbody>
</table>

Program total 12 credits

**Legal Studies for the Paralegal**

**ASSOCIATE IN APPLIED SCIENCE DEGREE**

**Florissant Valley and Meramec**

This program, designed in cooperation with the Bar Association of Metropolitan St. Louis, prepares students for careers in the paralegal profession. Students develop a basic legal proceedings vocabulary and an understanding of Missouri statutes and cases and pretrial and trial proceedings. They study concepts of real and personal property and business organizations and develop skills in interviewing and counseling clients, writing legal resume, analyzing legal problems and drafting/preparing legal documents.

Students may obtain a certificate or an associate degree which requires ten additional courses in business, communications, social science and legal assistant.

Persons interested in this program should have an interest in the law. They should be self-motivated, able to work without supervision and have good oral and written communication skills.

Graduates are qualified for positions as legal assistants in private law firms, corporations, government agencies, or other businesses.

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**I. Career General Education 33 credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG:101</td>
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<td>ENG:102</td>
<td>.3</td>
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<td>HST:100</td>
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<td>.3</td>
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<tr>
<td>HST:102</td>
<td>.3</td>
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<td>ECO:140</td>
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<td>ECO:151</td>
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<td>PSC:101</td>
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<tr>
<td>PSC:205</td>
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<tr>
<td>PSY:200</td>
<td>.3</td>
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<tr>
<td>SOC:101</td>
<td>.3</td>
</tr>
<tr>
<td>SOC:103</td>
<td>.3</td>
</tr>
<tr>
<td>BUS:103</td>
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</table>

**II. Physical Education Activity 2 credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLW:101</td>
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<tr>
<td>Business Elective</td>
<td>.6</td>
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</table>

**III. Legal Studies for the Paralegal 27 credits**

**Required Courses 15 credits**

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
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<tr>
<td>LGL:104</td>
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<tr>
<td>LGL:108</td>
<td>.3</td>
</tr>
<tr>
<td>LGL:106</td>
<td>.3</td>
</tr>
<tr>
<td>LGL:217</td>
<td>.3</td>
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<tr>
<td>LGL:218</td>
<td>.3</td>
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</tbody>
</table>

**Electives 12 credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL:202</td>
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<tr>
<td>LGL:205</td>
<td>.3</td>
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<tr>
<td>LGL:206</td>
<td>.3</td>
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<tr>
<td>LGL:228</td>
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<tr>
<td>LGL:211</td>
<td>.3</td>
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<tr>
<td>LGL:229</td>
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<td>LGL:107</td>
<td>.1</td>
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<tr>
<td>LGL:224</td>
<td>.1</td>
</tr>
</tbody>
</table>
Maintenance Mechanic
CERTIFICATE OF SPECIALIZATION
Florissant Valley

This certificate program is designed both for those preparing for entry-level positions and for those already working in the maintenance field. Graduates will be prepared to perform general maintenance duties and to use the tools necessary to repair equipment in existing facilities.

**Sponsored by City of St. Louis and International Union of Operating Engineers, Local 2**

**Courses**

- ME.101 Welding Technology .......................... 3
- ME.108 Principles of Plumbing/Pipefitting  ...... 3
- ME.110 HVAC Operator I .............................. 3
- ME.151 Manufacturing Processes I ................. 3
- ME.223 Basic Hydraulics I ............................ 2

**Program total .......................... 14 credits**

Mammography Technology
CERTIFICATE OF SPECIALIZATION
Forest Park

This program provides a specialty in Mammography Technology for graduates of an accredited two-year Allied Health program in Radiologic Technology. Applicants must also have passed the certification examination administered by the American Registry of Radiologic Technologist (ARRT) and possess a current ARRT registry card.

Persons interested in the program should be comfortable working in a close one-to-one relationship. They should also be self-motivated, detail-oriented, compassionate and have an interest in the health sciences.

The Mammography program is a 16-week program that is offered in the fall and spring semester. This program has also been designed to meet the FDA/MQSA initial requirements for training in Mammography.

**Courses**

- XRT.250 Essentials of Mammography I ............ 2
- XRT.251 Essentials of Mammography II ............ 2
- XRT.252 Mammography Practicum .................... 5

**Program total .......................... 9 credits**
Management and Supervisory Development

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley and Meramec

This program provides the knowledge and skills necessary for effective supervisory performance. Although the program is designed to enable currently employed persons to further their education and develop leadership qualities, persons seeking the degree to obtain entry-level positions would have a functional academic background that would fit many areas of business.

Persons interested in this program should enjoy working with people and accomplishing objectives. Work experience that heightens students’ understanding of functional and interpersonal relationships also is helpful.

Graduates of the program are qualified for first-line and middle management positions in business and industry. Typical positions available to graduates are group leaders, management trainees, first-line supervisors, middle managers, staff specialists, plant supervisors, office managers, data processing coordinators, contract administrators and administrative assistants.

I. Career General Education 27-28 credits
ENG:100 Career English (or) 3
ENG:101 College Composition I 3
ENG:103 Report Writing (or) 3
ENG:102 College Composition II 3
COM:101 Oral Communication (or) 3
COM:107 Public Speaking 3
ECO:140 Introduction to Economics (or) 3
ECO:151 Principles of Macroeconomics 3
MGT:109 Business Organizational Behavior and Dynamics (or) 3
SOC:103 Human Behavior at Work and in Business 3
PSY:200 General Psychology 3
XXX:xxx Missouri State Requirement 3
BUS:103 Business Mathematics (or) 3
Mathematics 100 level or higher 3
Science requirement 3-4

II. Physical Education Activity 2 credits

III. Area of Concentration 27-28 credits
ACC:100 Applied Accounting (or) 3-4
ACC:110 Financial Accounting I 3-4
BLW:101 Business Law I (or) 3
BLW:201 Legal Environment of Business 3
BUS:104 Introduction to Business Administration 3
IS:103 Information Systems for Business 3
MGT:101 Introduction to Supervision 3
MGT:231 Production Planning and Inventory Control (or) 3
MGT:119 Service Operations Management 3
MGT:106 Human Resources Management 3
MGT:201 Case Studies in Supervision 3
MGT:204 Business Organization and Management 3

IV. Electives 9 credits
Select from:
MGT:107 Labor Relations 3
MGT:110 Safety Management 3
MGT:111 Introduction to Traffic and Transportation Management 3
MGT:205 Purchasing Management 3
AOS:220 Business Communications Applications 3
MGT:103 Production Planning and Control 3
MGT:119 Service Operations Management 3

Program total 65-67 credits

CERTIFICATE OF PROFICIENCY
Florissant Valley and Meramec

This program provides the knowledge and skills necessary for effective supervisory performance. Although the program is designed to enable currently employed persons to further their education and develop leadership qualities, persons seeking the degree to obtain entry-level positions will receive a functional academic background to fit many areas of business.

Persons interested in this program should enjoy working with people and accomplishing objectives. Work experiences that heighten students’ understanding of functional and interpersonal relationships also are helpful.

I. Career General Education 9 credits
ENG:100 Career English (or) 3
ENG:101 College Composition I 3
SOC:103 Human Behavior at Work and in Business (or) 3
MGT:109 Business Organizational Behavior and Dynamics 3
BUS:103 Business Mathematics (or) 3
Mathematics 100 level or higher 3

II. Area of Concentration 24-25 credits
ACC:100 Applied Accounting (or) 3-4
ACC:110 Financial Accounting I 3-4
BLW:104 Introduction to Business Administration 3
IS:103 Information Systems for Business 3
MGT:101 Introduction to Supervision 3
MGT:231 Production Planning and Inventory Control (or) 3
MGT:119 Service Operations Management 3
MGT:106 Human Resources Management 3
MGT:201 Case Studies in Supervision 3
MGT:204 Business Organization and Management 3

Program total 33-34 credits
CERTIFICATE OF SPECIALIZATION

Florissant Valley and Forest Park

This program is primarily intended for persons who are currently employed. It provides the knowledge and skills necessary for effective performance in first-level supervisory positions.

Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:100 Career English (or)</td>
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<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
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<tr>
<td>ACC:100 Applied Accounting</td>
<td>3</td>
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<tr>
<td>BUS:104 Introduction to Business Administration</td>
<td>3</td>
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<tr>
<td>MGT:101 Introduction to Supervision</td>
<td>3</td>
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<tr>
<td>MGT:106 Human Resources Management</td>
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</tr>
<tr>
<td>MGT:201 Case Studies in Supervision</td>
<td>3</td>
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</tbody>
</table>

Program total 18 credits

Manufacturing Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE

Florissant Valley

This program prepares students for positions as manufacturing technicians who assist manufacturing engineers by translating the general ideas of the engineer into specific, detailed plans and communicating these plans to the machinist and craftsmen. Students learn to measure, analyze and improve upon production elements such as workers, materials and machines.

Persons interested in this field should be mechanically inclined, proficient in algebra and trigonometry and able to work well with others.

Graduates are qualified for wide variety of technical positions in the manufacturing sector, including sales and service. The program provides a mixture of education and training. The program emphasizes the computer aided-drafting and computerized numerical control aspects (CAD/CAM) of manufacturing technology.

I. Career General Education 17-18 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENG:101 College Composition I</td>
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<tr>
<td>ENG:103 Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>MTH:144 Technical Algebra and Trigonometry (or)</td>
<td>5</td>
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<tr>
<td>MTH:124 Technical Mathematics I (and)</td>
<td>3</td>
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<tr>
<td>MTH:134 Technical Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
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<tr>
<td>XXX:xxx Social Science elective</td>
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</table>

II. Physical Education Activity 2 credits

III. Area of Concentration 47 credits

<table>
<thead>
<tr>
<th>Courses</th>
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<tbody>
<tr>
<td>EE:101 Technical Electricity (or)</td>
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<tr>
<td>EE:121 Fundamentals of Digital Electronics (or)</td>
<td>3</td>
</tr>
<tr>
<td>EE:130 Electric Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>EGR:100 Engineering Drawing</td>
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<tr>
<td>EGR:140 Computer Aided Drafting and Design I (or)</td>
<td>3</td>
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<tr>
<td>EGR:147 Introduction to Engineering Design (or)</td>
<td>3</td>
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</tbody>
</table>

EGR:133 Introduction to AutoCad I 2

GE:101 Technical Computer Applications (or) 3

GE:121 Principles of Engineering 3

ME:135 Mechanics-Statics 3

ME:140 Introduction to Robotics (or) 3

ME:121 Computer Integrated Manufacturing 3

ME:151 Manufacturing Processes I 3

ME:152 Manufacturing Processes II 3

ME:241 Numerical Control Programming 3

ME:242 Mechanics-Dynamics 3

ME:243 Strength of Materials 3

ME:244 Mechanical Design I (or) 3

GE:122 Engineering Design and Development 3

ME:249 Materials and Metallurgy 3

ME:255 Fluid Power 3

XXX:xxx Electives 3-6

Program total 66-67 credits

Workplace Learning Experience: Students may substitute up to six credit hours of appropriate and relevant workplace learning experience for technical courses, and/or electives, included in the program. In order for the workplace learning credit to be counted for the degree requirement, the learning experience must be pre-approved by the department, and an appropriate faculty member must supervise the work.

Mass Communications

ASSOCIATE IN APPLIED SCIENCE DEGREE

Forest Park

This program is designed to prepare students for entry-level positions in the mass communications field. Students learn the fundamentals of journalism, broadcasting and advertising through a combination of basic liberal arts courses and advanced courses in print and broadcasting that emphasize hands-on experience. Students acquire organizational, technical and writing skills and the ability to assess situations and sell themselves accordingly.

Persons interested in this program should have an interest in writing and enjoy communicating with other people.

All students in this program are required to complete an on-the-job internship. Graduates of the program are qualified for positions as newspaper reporters, magazine writers, public relations or advertising specialists or as radio and television writers and producers.

Mass Communications students must be able to type 40 wpm.

I. Career General Education 21-22 credits

<table>
<thead>
<tr>
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<td>ENG:102 College Composition II</td>
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<td>XXX:xxx Math or Science Electives</td>
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<td>XXX:xxx Missouri State Requirement</td>
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<td>ECO:140 Introduction to Economics</td>
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II. Physical Education Activity 2 credits
I. Career General Education  
25 credits

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<td>College Composition II</td>
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<td>GE:101</td>
<td>Technical Computer Applications</td>
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<td>GE:131</td>
<td>Engineering Technology Orientation</td>
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<td>MTH:144</td>
<td>Technical Algebra and Trigonometry</td>
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<td>MTH:154</td>
<td>Technical Analytic Geometry and Calculus</td>
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<td>Missouri State Requirement</td>
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<td>XXX:xxx</td>
<td>Social Science Requirement</td>
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II. Physical Education Activity  
2 credits

III. Area of Concentration  
43 credits

<table>
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<td>ME:135</td>
<td>Mechanics-Statics</td>
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<td>ME:151</td>
<td>Manufacturing Processes I</td>
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<tr>
<td>ME:152</td>
<td>Manufacturing Processes II</td>
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<tr>
<td>ME:242</td>
<td>Mechanics-Dynamics</td>
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<tr>
<td>ME:243</td>
<td>Strength of Materials</td>
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<td>ME:244</td>
<td>Mechanical Design I</td>
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<td>ME:255</td>
<td>Fluid Power</td>
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<td>ME:246</td>
<td>Mechanical Design II</td>
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<td>ME:249</td>
<td>Materials and Metallurgy</td>
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<tr>
<td>ME:253</td>
<td>Energy Conversion</td>
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<td>ME:254</td>
<td>Electricity and Controls</td>
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<tr>
<td>PHY:111</td>
<td>College Physics I</td>
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<tr>
<td>CHM:101</td>
<td>Fundamentals of Chemistry</td>
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IV. Electives  
8-11 credits

<table>
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<tbody>
<tr>
<td>XXX:xxx</td>
<td>Electives</td>
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</table>

Program total 64 credits

Workplace Learning Experience: Students may substitute up to six credit hours of appropriate and relevant workplace learning experience for technical courses, and/or electives, included in the program. In order for the workplace learning credit to be counted for the degree requirement, the learning experience must be pre-approved by the department, and an appropriate faculty member must supervise the work.

Mechanical Engineering Technology  
ASSOCIATE IN APPLIED SCIENCE DEGREE  
Florissant Valley

This program provides students with the scientific and engineering knowledge needed to obtain entry-level positions in this field. Students learn the theory and principles of mechanical engineering technology in the development and testing of machinery and equipment under the direction of engineering staff and physical scientists. Through classroom work and practical experience in mechanical engineering laboratories, students learn to perform mechanical testing and reduction and interpretation of data from tests, design and development new equipment or modify existing equipment and prepare or interpret engineering drawings or sketches.

Persons interested in this program should be mechanically inclined, possess analytical skills and have an interest in design.

Graduates are qualified for positions as engineering assistants, laboratory technicians, designers, tool designers and plant engineering technicians in the automotive, aerospace, heavy equipment, chemical, electrical, petroleum and food processing industry.
Medical Billing and Coding
CERTIFICATE OF PROFICIENCY
Forest Park

This program prepares students for entry-level positions as medical billing specialists, medical coders, claims examiners, healthcare reimbursement specialists, and health insurance specialists. Students will learn ICD-9-CM, ICD-10-CM, CPT-4 Surgical and CPT-4 Non-Surgical coding procedures and will prepare for the AAPC (American Academy of Professional Coders), CDPC (Certified Professional Coder) certification. Students will also gain preparation for the AHIMA (American Health Information Management Association), CCS (Certified Coding Specialist) and CCA (Certified Coding Associate) certifications, and the HRS (Healthcare Reimbursement Specialist) credential offered by the National Electronic Billers Alliance (NEBA). This certificate program provides the foundation to pursue additional study in Health Information Technology.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO:215 Human Body Systems</td>
<td>5</td>
</tr>
<tr>
<td>HIT:101 Medical Terminology</td>
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<tr>
<td>HIT:102 Health Information Management Technology</td>
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<tr>
<td>HIT:103 Healthcare Delivery Systems</td>
<td>2</td>
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<tr>
<td>HIT:104 Basic Principles of Disease</td>
<td>2</td>
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<tr>
<td>HIT:105 Pharmacology for Health Information Technology Professionals</td>
<td>1</td>
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<tr>
<td>HIT:106 Diagnosis Coding Systems I</td>
<td>3</td>
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<tr>
<td>HIT:107 Procedure Coding Systems I</td>
<td>3</td>
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<tr>
<td>HIT:201 Health Insurance Billing and Reimbursement</td>
<td>3</td>
</tr>
<tr>
<td>HIT:206 Diagnosis Coding Systems II</td>
<td>3</td>
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<tr>
<td>HIT:207 Procedure Coding Systems II</td>
<td>3</td>
</tr>
<tr>
<td>HIT:208 Advanced Coding Applications</td>
<td>2</td>
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<tr>
<td>HIT:210 Co-op Work Experience– Health Information Technology</td>
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</tr>
<tr>
<td>IS:103 Information Systems for Business</td>
<td>3</td>
</tr>
<tr>
<td>IS:123 Introduction to Windows</td>
<td>1</td>
</tr>
<tr>
<td>IS:151 Microcomputer Applications in Business</td>
<td>4</td>
</tr>
</tbody>
</table>

Program total ................. 45 credits

Medical Transcription
CERTIFICATE OF PROFICIENCY
Forest Park

This program prepares students for entry-level positions as medical transcriptionists. Graduates can also be considered for positions as medical records clerks, receptionists in health care facilities, and hospital unit secretaries. Employment opportunities are available in private transcription services, hospitals, doctors’ offices, clinics, and other health care facilities. The primary job function of medical transcriptionists is to transcribe dictated medical reports (patient histories, physical examinations, consultation reports, operation reports, discharge summaries) and other clinical diagnostic information.

Students acquire a basic knowledge of medical terminology and human anatomy. Skills in machine transcription, word processing and communications are emphasized.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO:111 Introductory Biology I</td>
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</tr>
<tr>
<td>BIO:215 Human Body Systems</td>
<td>5</td>
</tr>
<tr>
<td>HIT:101 Medical Terminology</td>
<td>4</td>
</tr>
<tr>
<td>HIT:102 Health Information Management Technology</td>
<td>4</td>
</tr>
<tr>
<td>HIT:104 Basic Principles of Disease</td>
<td>2</td>
</tr>
<tr>
<td>HIT:105 Pharmacology for Health Information Technology Professionals</td>
<td>1</td>
</tr>
<tr>
<td>HIT:109 Medical Transcription I</td>
<td>3</td>
</tr>
<tr>
<td>HIT:209 Medical Transcription II</td>
<td>3</td>
</tr>
<tr>
<td>HIT:210 Co-op Work Experience– Health Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>IS:102 Keyboarding and Formatting</td>
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<tr>
<td>IS:103 Information Systems for Business</td>
<td>3</td>
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<tr>
<td>IS:109 Proofreading and Editing Skills</td>
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<tr>
<td>IS:123 Introduction to Windows</td>
<td>1</td>
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<tr>
<td>IS:151 Microcomputer Applications in Business</td>
<td>4</td>
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<tr>
<td>IS:157 Microcomputer Applications - Intermediate Word Processing</td>
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<tr>
<td>IS:161 Microcomputer Applications - Advanced Word Processing</td>
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</table>

Program Total ................. 43 credits
Microcomputer Applications

CERTIFICATE OF SPECIALIZATION
Florissant Valley, Forest Park and Meramec

This certificate is designed for individuals who are interested in learning a range of end-user applications for personal computers, including operating systems, word processing, spreadsheets, and data bases. It prepares the graduate to employ the functions of personal computers that are generally in use in offices today.

I. Courses 8 credits
IS:101 Keyboarding ......................1
IS:103 Information Systems for Business ....3
IS:123 Introduction to Windows ...............1
IS:124 Windows - Advanced Topics ...........1
IS:132 Windows - Intermediate Topics .......1
IS:136 Internet Fundamentals ................1

Applications Electives:
Choose one of these four-hour options:
Option A:
IS:118 Microcomputer Applications-
Databases (and) .........................1
IS:119 Microcomputer Applications-
Word Processing (and) ..................1
IS:125 Excel for Windows (or) ............2
(or)
Option B:
IS:151 Microcomputer Applications in Business 4
Total 4 credits
IS:241 Systems Analysis and Design (or) 1
IS:209 Development of End-User
Microcomputer Systems .................3
Total 3 credits

II. Electives 3 credits
IS:126 E-Mail and Information Management ....1
IS:129 HTML ................................1
IS:130 Hardware and Software Support ......3
IS:156 Microcomputer Applications -
Intermediate Database ...................1
IS:157 Microcomputer Applications -
Intermediate Word Processing ..........1
IS:161 Microcomputer Applications -
Advanced Word Processing .............1
IS:226 Microcomputer Operating System-DOS 1
IS:254 Advanced Microcomputer
Operating Systems ......................3

Program total ...............18 credits

Microcomputer Programming

CERTIFICATE OF PROFICIENCY
Florissant Valley, Forest Park and Meramec

These programs provide additional training for students pursuing an associate degree in information systems, business administration, accounting or secretarial. It also provides training for persons with bachelor’s degrees who wish to upgrade their job skills by obtaining a microcomputer specialization. Students will learn general computer concepts which include hardware, software and logical processes required when using a microcomputer system; methodologies for selecting and using software application packages and the necessary skills to design and implement computer programs.

Persons interested in the program should be familiar with algebraic concepts and have strong analytical skills.

Courses 6 credits
IS:110 Program Design and Development .....3
IS:111 Programming In Basic (or)..........3
IS:117 Pascal Programming ................3

Programming electives:
Choose one of these four-hour options:
Option A
IS:151 Microcomputer Applications in Business .4
(or)
Option B
IS:116 Microcomputer Literacy (and) .........3
IS:226 Microcomputer Operating System -DOS 1
(or)
Option C
IS:226 Microcomputer Operating System -DOS 1
(is)
IS:118 Microcomputer Applications-Databases 1
(is)
IS:119 Microcomputer Applications - . . . . . . . . . .1
Word Processing (and)
IS:120 Microcomputer Applications -
Spreadsheets .........................1
Total 4 credits

Area of Concentration 26 credits
IS:123 Introduction to Windows .............1
IS:241 Systems Analysis and Design (or) 1
IS:209 Development of End-User
Microcomputer Systems .................3
IS:227 C Programming Language I ..........3
IS:225 Database Management (or) ..........3
IS:133 Introduction to SQL ................3
IS:229 UNIX ................................3
IS:215 Introduction to Local Area Networks ....3
IS:246 Visual Basic Programming (or) .......3
IS:256 C++ Object-Oriented Programming ......3
IS:130 Hardware and Software Support ......3
MTH:160 College Algebra ..................4

Program total ...............36 credits
**Multimedia**

**CERTIFICATE OF PROFICIENCY**

**Forest Park**

This program is designed to provide instructional training to students or retrain professionals in the high technology multimedia field. The certificate draws expertise from several disciplines: audio/video, graphic design, photography, information systems, and mass communications. This certificate can be tailored to students’ interests.

**Introductory Courses**

5 credits

- IS:103 Information Systems for Business ...........3
- MCM:136 Introduction to Multimedia ...............2

**Area of Concentration**

12 credits

(Select 12 credit hours from a minimum of two of the four following categories, A-D.)

**Design Classes**

- ART:107 Design I ..................................2
- ART:108 Design II ..................................2
- ART:131 Computer Art Studio ......................3
- ART:133 Graphic Design I ..........................3
- ART:134 Graphic Design II ........................3
- AT:233 Storyboarding/Animatics ....................2
- AT:234 Computer Animation I ......................3
- ART:236 Typography ................................3
- ART:241 Publication Design ........................3
- AT:248 Audio/Visual Multi-Image Presentations ..3
- ART:274 Presentation Graphics .....................3
- AT:247 Broadcast Graphics .........................2
- MCM:135 Communications and Design for the WWW I ..................1
  This course is also offered as AT:135 and IS:135.
- MCM:212 Specialized Publication Production ........3

**Writing Classes**

- MCM:110 Journalism I: Writing and Reporting ....3
- MCM:112 Feature Writing ...........................3
- MCM:123 Broadcast Journalism ......................3
- MCM:125 Scriptwriting for T.V. and Film ..........3
- MCM:140 Introduction to Advertising ............3
- MCM:141 Public Relations ..........................3
- MCM:217 Publications Writing .....................3

**Media Presentation Classes**

- MCM:114 Photojournalism ..........................3
- MCM:121 Television Production ....................3
- MCM:122 Applied Broadcasting ....................3
- MCM:124 Radio Production ........................3
- MCM:219 Multimedia Applications .................1-3
- MCM:126 Video Production-Field ..................3
- MCM:127 Video Production-Studio ................3
- MCM:201 Media Internship I .......................3
- MCM:213 Advanced Video Production .............3
- AT:275 Introduction to Digital Imaging ..........3
- AT:276 Advanced Digital Imaging-3D ..............3

**Information Systems Classes**

- IS:251 Introduction to Java .......................3
- IS:250 Scripting for Internet with Perl ..........3
- IS:129 HTML .......................................1
- IS:131 Advanced HTML ............................2

**Completion Course**

4 credits

- MCM:137 Multimedia Production ....................4

**Program total .............21 credits**

**Nursing**

**ASSOCIATE IN APPLIED SCIENCE DEGREE**

**Florissant Valley, Forest Park and Meramec**

St. Louis Community College currently offers a nursing program on the Florissant Valley, Forest Park and Meramec campuses.

This program prepares students to become registered nurses. Students learn to provide direct care for clients that is based on the nursing process. Students acquire knowledge and technical skills necessary for effective communication with clients and families. They learn management, organizational and delegation skills necessary to provide competent care to a group of clients. Health care teaching is emphasized as a critical aspect of the communication process.

The didactic and clinical components of the curriculum are interrelated to provide a strong background for the student in attaining the objectives of the programs and in becoming a competent practitioner. Experience is provided in a variety of agencies including hospitals, nursing homes, clinics and home health care settings.

The nursing program on each campus is approved by the Missouri State Board of Nursing and accredited by the National League for Nursing Accrediting Commission.

Persons considering a career in nursing should have an interest in the health sciences and in working closely with people. In addition, they should be able to meet the academic demands of a program that requires a commitment of time, energy and motivation to learn.

Admission to the program is contingent on meeting the established minimum criteria as defined in the Nursing Program Handbook. Applicants also are required to complete a health history and immunization record. Applicants selected for the program are required to have a physical examination.

Graduates are eligible to apply to write the National Council Licensure Examination for Registered Nurses.

(An individual who has been convicted of a felony may not be licensed to practice as a registered nurse in the state of Missouri.)
### I. Career General Education  30 credits

<table>
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<th>Credits</th>
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<td>ENG:102</td>
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<td>PSY:200</td>
<td>General Psychology</td>
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<tr>
<td>PSY:205</td>
<td>Human Growth and Development</td>
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<tr>
<td>SOC:101</td>
<td>Introduction to Sociology</td>
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<tr>
<td>XXX:xxx</td>
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<tr>
<td>BIO:203</td>
<td>General Microbiology</td>
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<tr>
<td>BIO:207</td>
<td>Human Anatomy and Physiology I</td>
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</tr>
<tr>
<td>BIO:208</td>
<td>Human Anatomy and Physiology II</td>
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</tr>
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</table>

### II. Physical Education Activity  2 credits

#### III. Area of Concentration  36 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>NUR:101</td>
<td>Fundamentals of Nursing</td>
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<tr>
<td>NUR:102</td>
<td>Nursing Laboratory Practicum I</td>
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<tr>
<td>NUR:105</td>
<td>Nursing Laboratory Practicum II</td>
<td>1</td>
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<tr>
<td>NUR:108</td>
<td>Nursing of Adults and Children I</td>
<td>8</td>
</tr>
<tr>
<td>NUR:201</td>
<td>Nursing of Adults and Children II</td>
<td>9</td>
</tr>
<tr>
<td>NUR:203</td>
<td>Contemporary Nursing</td>
<td>1</td>
</tr>
<tr>
<td>NUR:205</td>
<td>Nursing of Adults and Children III</td>
<td>8</td>
</tr>
<tr>
<td>NUR:204</td>
<td>Management Skills in Nursing</td>
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</tr>
</tbody>
</table>

Program total: **68 credits**

## Occupational Therapy Assistant

### ASSOCIATE IN APPLIED SCIENCE DEGREE

**Meramec**

This program prepares students for positions as occupational therapy assistants who work under the supervision of registered occupational therapists. Through courses in the structure and function of the human body, psychology and occupational therapy principles and techniques, in addition to clinical experience, students learn skills in interviewing; assessing; and treatment planning and implementation.

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. AOTA's phone number is (301) 652-AOTA. Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.

Program total: **67 credits**

---

## Oracle Developer

### CERTIFICATE OF PROFICIENCY

**Florissant Valley, Forest Park and Meramec**

This certificate is designed for individuals who are interested in developing skills to create and manage an Oracle database. It will empower the student with the tools, knowledge, and practical experience needed to design, develop, program, implement and administer an Oracle database. Graduates will be qualified for the high demand positions of Developer, Analyst, Administrator or Programmer in the Oracle environment.

#### Core Courses  9 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IS:225</td>
<td>Database Management</td>
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<tr>
<td>IS:257</td>
<td>Advanced Database Design</td>
<td>3</td>
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<tr>
<td>IS:246</td>
<td>Visual Basic Programming (or)</td>
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<tr>
<td>IS:227</td>
<td>C Programming Language I (or)</td>
<td>3</td>
</tr>
<tr>
<td>IS:251</td>
<td>Introduction to Java (or)</td>
<td>3</td>
</tr>
</tbody>
</table>
Oracle Focus 18 credits
IS:133 Introduction to SQL 3
IS:270 Oracle PL/SQL 3
IS:272 Oracle Database Administration 3
IS:271 Oracle User Interface Design 3
IS:273 Oracle Design and Implementation 3
IS:262 Advanced Web Development 3
Electives (select one course) 3 credits
IS:259 Introduction to JavaScript 3
IS:255 Advanced Visual Basic Programming 3
IS:256 C++ Object-Oriented Programming 3
IS:250 Scripting for the Internet with Perl 3
Program total 30 credits

II. Physical Education Activity 2 credits

III. Area of Concentration 39 credits
PAR:201 Principles of Paramedic Technology I 8
PAR:202 Principles of Paramedic Technology II 8
PAR:226 Principles of Paramedic Technology III 3
PAR:227 Principles of Paramedic Technology IV 7
PAR:203 Pharmacology for Paramedics 3
PAR:211 Paramedic Laboratory I 1
PAR:212 Paramedic Laboratory II 1
PAR:221 Paramedic Clinical I 1
PAR:222 Paramedic Clinical II 2
PAR:228 Paramedic Clinical III 1
PAR:223 Paramedic Internship I 1
PAR:224 Paramedic Internship II 1
PAR:225 Paramedic Internship III 4
Program total 68-69 credits

Pharmacy Technician
CERTIFICATE OF PROFICIENCY
Forest Park

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO: 215 Human Body Systems</td>
<td>5</td>
</tr>
<tr>
<td>COM: 101 Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>ENG: 103 Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>SOC: 101 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>PHT:101 Pharmacy Technician Orientation</td>
<td>3</td>
</tr>
<tr>
<td>PHT:103 Pharmacy Calculations</td>
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<tr>
<td>PHT:104 Pharmacy Law</td>
<td>1</td>
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<tr>
<td>PHT:201 Pharmacology</td>
<td>4</td>
</tr>
<tr>
<td>PHT:203 Pharmacy Practice</td>
<td>4</td>
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<tr>
<td>PHT:205 Sterile Compounding</td>
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<tr>
<td>PHT:110 Pharmacy Technician Internship I</td>
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<tr>
<td>PHT:111 Pharmacy Technician Internship I Seminar</td>
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<tr>
<td>PHT:220 Pharmacy Technician Internship II</td>
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<tr>
<td>PHT:221 Pharmacy Technician Internship II Seminar</td>
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</tbody>
</table>
Program total 38 credits

CERTIFICATE OF SPECIALIZATION
Forest Park

<table>
<thead>
<tr>
<th>Courses</th>
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<tbody>
<tr>
<td>PHT:115 Fundamentals of Pharmacy Practice</td>
<td>6</td>
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<tr>
<td>PHT:116 Pharmacy Technician Practicum</td>
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<tr>
<td>PHT:117 Pharmacy Technician Practicum Seminar</td>
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</tbody>
</table>
Program total .8 credits

Paramedic Technology
ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley and Meramec

This program prepares students for positions as emergency medical technicians-paramedics. Paramedics are skilled in patient assessment and recognition of diagnostic signs and symptoms of major injuries and illnesses. They learn to use ambulance, rescue vehicle and hospital emergency room equipment to provide high-level emergency medical care and stabilize emergency patients. Paramedics also are trained to provide advanced life support to include fluid and drug therapy, as well as the performance of some essential emergency surgical techniques under the written or oral orders of licensed physicians.

Persons interested in this program should have maturity in dealing with others as well as co-workers. They should have good manual dexterity and physical coordination for carrying, lifting, extricating, climbing, hoisting, etc. In addition, they should be able to give as well as receive written and oral directions and instruction and have good vision and visual color discrimination in examination of patients for determining diagnostic signs requiring immediate treatment.

Graduates are eligible to sit for state and national licensing boards. Positions are available with ambulance services, fire departments, hospitals, emergency communications centers and industrial medical and safety departments.

I. Career General Education 28-29 credits
ENG:101 College Composition I (or) 3
ENG:100 Career English 3
ENG:102 College Composition II (or) 3
ENG:103 Report Writing 3
XXX:xxx Missouri State Requirement 3
XXX:xxx Social Science requirement 3
BIO:207 Anatomy and Physiology I 4
BIO:208 Anatomy and Physiology II 4
BIO:203 General Microbiology 4
CHM:101 Fundamentals of Chemistry (or) 4-5
CHM:105 General Chemistry 4-5
Phlebotomy

CERTIFICATE OF SPECIALIZATION
Forest Park

This program prepares students for entry-level positions as phlebotomists. Through practical experience at clinical affiliates, students learn to draw blood using various techniques in venipuncture and microcollection and gain experience in other specimen collection, transport, recording and reporting of patient data.

Persons interested in this program should have an interest in the health sciences and be comfortable working with people in close one-to-one relationships. They should be patient and tactful in their interactions with others.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CLT:106</td>
<td>Phlebotomy Essentials ............ .5</td>
</tr>
<tr>
<td>CLT:107</td>
<td>Phlebotomy Practicum ............. 6</td>
</tr>
</tbody>
</table>

Program total ............... 11 credits

Physical Therapist Assistant

ASSOCIATE IN APPLIED SCIENCE DEGREE
Meramec

This program prepares students for positions as physical therapist assistants. Students take career general education and related science courses in the first year and take physical therapy core courses and complete clinical experiences during the second year. Students acquire skills in helping physical therapists evaluate the capabilities of an individual to determine the best type of therapy and administer different types of treatment to patients. In addition, students learn to assist patients in performing exercises, walking, climbing stairs, dressing and other everyday activities. They are responsible for setting up and caring for therapy equipment, transporting and positioning patients for treatment and instructing patients in the use of artificial limbs, braces and crutches.

Persons interested in this program should be comfortable working with people of all age groups in close one-to-one relationships. They should enjoy physical activity and be patient and empathetic when instructing others.

Graduates are qualified for positions in hospitals, rehabilitation centers, out-patient clinics, nursing homes and schools.

I. Career General Education 33 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:100</td>
<td>Career English (or)</td>
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<tr>
<td>ENG:101</td>
<td>College Composition I</td>
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<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
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<tr>
<td>PSY:200</td>
<td>General Psychology</td>
<td>3</td>
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<tr>
<td>PSY:205</td>
<td>Human Growth and Development (or)</td>
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<td>PSY:203</td>
<td>Child Psychology</td>
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<td>SOC:201</td>
<td>Aspects of Aging</td>
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<td>College Composition I</td>
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<td>ENG:103</td>
<td>Report Writing (or)</td>
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<td>ENG:102</td>
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<td>MTH:108</td>
<td>Elementary Applied Mathematics</td>
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<td>CHM:101</td>
<td>Fundamentals of Chemistry</td>
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<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
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<td>XXX:xxx</td>
<td>Social Science Elective</td>
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<tr>
<td>BIO:111</td>
<td>Introductory Biology I</td>
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<tr>
<td>(Prerequisite to PTA Program)</td>
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<tr>
<td>BIO:207</td>
<td>Anatomy and Physiology I</td>
<td>3</td>
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<tr>
<td>BIO:208</td>
<td>Anatomy and Physiology II</td>
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<tr>
<td>BIO:209</td>
<td>Kinesiology</td>
<td>3</td>
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<tr>
<td>BIO:210</td>
<td>Anatomical Muscle Mechanics</td>
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II. Physical Education Activity 2 credits

<table>
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<th>Course Name</th>
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<td>PTA:100</td>
<td>Introduction to Physical Therapist</td>
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<td>Assistant</td>
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<tr>
<td>PTA:104</td>
<td>Clinical Experience I</td>
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<tr>
<td>PTA:105</td>
<td>Fundamentals of Physical Therapist</td>
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<tr>
<td>Assistant</td>
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<tr>
<td>PTA:208</td>
<td>Health Occupation Seminar</td>
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<td>PTA:211</td>
<td>Physical Agents</td>
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<td>PTA:212</td>
<td>Therapeutic Exercise and Rehabilitation Concepts I</td>
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<td>PTA:213</td>
<td>Therapeutic Exercise and Rehabilitation Concepts II</td>
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<td>PTA:214</td>
<td>Data Collection and Intervention Techniques for the PTA</td>
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<td>Medical Conditions in Rehabilitation</td>
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<td>PTA:216</td>
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<td>PTA:217</td>
<td>Clinical Education IIB</td>
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</table>

Program total ............... 72 credits

Plastics Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

The AAS degree Plastics Technology program is designed to prepare graduates for careers as processing technicians in the plastics industry. Graduates will be qualified for positions requiring setting up and operating plastics processing equipment, troubleshooting processing problems, production line management, technical service, safety, and support. The curriculum is designed to provide education in applied mathematics, chemistry, fundamentals of the chemical and physical properties of plastics materials and their processing characteristics, quality control, electronic, pneumatic, and hydraulic control systems, and technical communications. Students will receive extensive “hands-on” experience. They will gain an understanding of how the various mechanical, hydraulic, and electrical systems of processing machinery interact to form a plastic product. The curriculum will include all of the major processing methods but will emphasize injection molding.

I. Career General Education 19 credits

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<td>ENG:101</td>
<td>College Composition I</td>
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<tr>
<td>ENG:103</td>
<td>Report Writing (or)</td>
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<tr>
<td>ENG:102</td>
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<td>MTH:108</td>
<td>Elementary Applied Mathematics</td>
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<tr>
<td>CHM:101</td>
<td>Fundamentals of Chemistry</td>
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<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
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<td>XXX:xxx</td>
<td>Social Science Elective</td>
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</tr>
<tr>
<td>BIO:111</td>
<td>Introductory Biology I</td>
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<tr>
<td>(Prerequisite to PTA Program)</td>
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<tr>
<td>BIO:207</td>
<td>Anatomy and Physiology I</td>
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<td>BIO:208</td>
<td>Anatomy and Physiology II</td>
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<tr>
<td>BIO:209</td>
<td>Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>BIO:210</td>
<td>Anatomical Muscle Mechanics</td>
<td>3</td>
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</table>

II. Physical Education Activity 2 credits

<table>
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<tr>
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<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>PLA:100</td>
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<tr>
<td>PLA:150</td>
<td>Plastics Materials, Testing and Handling</td>
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<tr>
<td>PLA:200</td>
<td>Plastics Machine Operations I</td>
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</tbody>
</table>
I. Career General Education 21 credits
ENG:101 College Composition I .............3
ENG:103 Report Writing ....................3
MTH:144 Technical Algebra and Trigonometry ....5
MTH:154 Technical Analytical Geometry and Calculus ...4
XXX:xxx Missouri State Requirement ........3
XXX:xxx Social Science Elective ............3

II. Physical Education Activity 2 credits

III. Area of Concentration 41 credits
EE:101 Technical Electricity ....................5
EGR:100 Engineering Drawing ..................3
EGR:110 Descriptive Geometry ................3
FIR:110 Basic Fire Protection and Alarm Systems ...3
GE:101 Technical Computer Applications ........3
ME:104 Plumbing Design I .....................3
ME:105 Plumbing Design II ...................3
ME:106 Plumbing Design III ...................3
ME:135 Mechanics-Statics .....................3
ME:226 Air Conditioning and Heating ..........3
ME:243 Strength of Materials ................3
ME:247 Energy Conversion ....................3
ME:255 Fluid Power .........................3

IV. Technical Electives 25 credits
GE:131 Engineering Technology Orientation ....1
GE:132 Technology Applications ................4
QC:104 Principles and Application of Quality ....3
ME:109 Electrical Fundamentals and Maintenance 3
ME:151 Manufacturing Process I ...............3
ME:211 Programmable Logic Controllers ..........3
ME:223 Basic Hydraulics I ....................2

Program total .......................65 credits

CERTIFICATE OF SPECIALIZATION

Florissant Valley

Plumbing Design Engineering Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program is designed to train students interested in entering plumbing design and to upgrade the skills of persons currently employed in this area. Plumbing Design Engineering Technology is primarily an evening program. Plumbing Design I, Plumbing Design II, Plumbing Design III, Fire Systems Design, Basic Fire Protection and Alarm Systems are only offered at night. All other courses are offered both day and evening.

CERTIFICATE OF PROFICIENCY
Florissant Valley

Program total .......................29 credits

CERTIFICATE OF SPECIALIZATION

Florissant Valley

Program total .......................17 credits
Polysomnography Technology
CERTIFICATE OF SPECIALIZATION
Forest Park

This is the region's first sleep testing certificate program.

Courses Credits
RTH:246 Basic Neurologic Anatomy and Physiology .................. 2
RTH:247 Polysomnography Equipment and Testing I . . . . .2
RTH:249 Neuropathology and Sleep Medicine  . . . . .2
RTH:250 Polysomnography Equipment and Testing II . . . . .2
RTH:252 Polysomnographic Test Interpretation and Scoring .................. 2
RTH:253 American Polysomnography National Board Preparation ............. 1
RTH:248 Polysomnography Clinical Level I . . . . .1
RTH:251 Polysomnography Clinical Level II . . . . .1
RTH:254 Polysomnography Clinical Level III . . . . .1

Program total .................14 credits

Quality Technology
ASSOCIATE IN APPLIED SCIENCE DEGREE
Fiorissant Valley

Quality control requires the application of scientific and engineering knowledge combined with technical skills in the support of quality engineering activities. Students receive a broad technical background and learn the theory and principles of quality and quality-related activities through classroom work and practical assignments. Quality costing, inspection planning, statistical quality control and quality assurance are among the topics covered.

Persons interested in this program should be mechanically inclined and possess analytical and problem solving skills.

Graduates are qualified as quality technicians, machine inspectors, instrument technicians, quality auditors and quality control analysts in all major industries.

III. Area of Concentration 31 credits
ME:138 Mechanical Measurement .................. 3
ME:249 Materials and Metallurgy .................. 3
QC:100 Introduction to Quality Control .................. 3
QC:102 Quality Cost Analysis .................. 3
QC:105 Non-Destructive Testing .................. 4
QC:200 Quality Assurance .................. 3
QC:202 Inspection Methods .................. 3
QC:204 Reliability and Failure Analysis .................. 3
QC:206 Statistical Quality Control I .................. 3
QC:208 Statistical Quality Control II .................. 3

IV. Electives 6 credits
QC:104 Principles and Application of Quality .................. 3
QC:209 Design of Experiments/Taguchi Methods .................. 3
QC:210 Software Quality Assurance .................. 3
QC:211 Assessment of Quality Systems .................. 3
BUS:104 Introduction to Business Administration .................. 3
COM:108 Business/Technical Presentation .................. 3
EE:207 Industrial Instrumentation .................. 3
ME:151 Manufacturing Process I .................. 3

Program total .................69 credits

Workplace Learning Experience: Students may substitute up to six credit hours of appropriate and relevant workplace learning experience for technical courses, and/or electives, included in the program. In order for the workplace learning credit to be counted for the degree requirement, the learning experience must be pre-approved by the department, and an appropriate faculty member must supervise the work.

CERTIFICATE OF PROFICIENCY
Fiorissant Valley

This certificate provides the student with a general background in technical methods and measurements associated with quality control. It qualifies the student for entry-level positions in quality where an understanding of quality techniques combined with a comprehension of math and computer applications.

Courses Credits
QC:100 Introduction to Quality Control .................. 3
QC:102 Quality Cost Analysis .................. 3
QC:200 Quality Assurance .................. 3
QC:202 Inspection Methods .................. 3
QC:204 Reliability and Failure Analysis .................. 3
QC:206 Statistical Quality Control I .................. 3
QC:208 Statistical Quality Control II .................. 3
QC:xxx Elective .................. 3
EGR:100 Engineering Drawing .................. 3
EE:101 Technical Computer Applications .................. 3
ME:138 Mechanical Measurement .................. 3
MTH:124 Technical Math I .................. 3
ENG:100 Career English (or)
ENG:101 College Composition I .................. 3

Program total .................36 credits
CERTIFICATE OF SPECIALIZATION
Florissant Valley

This certificate provides the student with a general background in technical methods and measurements associated with quality control. It qualifies the student for entry-level positions in quality where an understanding of quality techniques combined with a comprehension of math and computer applications.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>QC:100 Introduction to Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>QC:102 Quality Cost Analysis</td>
<td>3</td>
</tr>
<tr>
<td>QC:200 Quality Assurance</td>
<td>3</td>
</tr>
<tr>
<td>QC:206 Statistical Quality Control I</td>
<td>3</td>
</tr>
<tr>
<td>QC:208 Statistical Quality Control II</td>
<td>3</td>
</tr>
<tr>
<td>QC:xxx Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total ..................18 credits

Radiologic Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Forest Park

This program prepares students for positions as radiographers (x-ray technologists). Students must attend full-time and take courses in radiographic procedures and related subjects. In addition, they receive approximately 2000 hours of clinical education in the campus laboratory and clinical education centers. Students learn to use complex x-ray and darkroom equipment designed to record images which aid radiologists in diagnosing and treating various health problems.

Persons interested in this program should be comfortable working with people of all age groups in close one-to-one relationships. They should be patient and tactful in their interactions with others and have an interest in health sciences.

Students must meet technical standards of the program before admission. See admission material.

Graduates are eligible to make application for the certification examination administered by the American Registry of Radiologic Technologists. Positions are available in hospital radiology departments, clinics and private physicians’ offices. Students enrolled in this program should like and have a personal commitment to working with sick patients.

Prerequisite: Students must be accepted into the Radiologic Technology Program or obtain the program director’s permission before they can take any professional radiology course.

I. Career General Education  23-24 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
</tr>
<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
</tr>
<tr>
<td>MTH:124</td>
<td>Technical Math I or higher</td>
</tr>
<tr>
<td>BIO:207</td>
<td>Anatomy and Physiology I</td>
</tr>
<tr>
<td>BIO:208</td>
<td>Anatomy and Physiology II</td>
</tr>
<tr>
<td>PSY:200</td>
<td>General Psychology</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
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</table>

II. Physical Education Activity  2 credits

<table>
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<tr>
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<tbody>
<tr>
<td>XXX:xxx</td>
<td>Physical Science</td>
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</table>

III. Area of Concentration  55 credits

<table>
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<tr>
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<tbody>
<tr>
<td>XRT:101</td>
<td>Radiographic Procedures I</td>
</tr>
<tr>
<td>XRT:102</td>
<td>Radiographic Procedures II</td>
</tr>
<tr>
<td>XRT:103</td>
<td>Radiographic Procedures III</td>
</tr>
<tr>
<td>XRT:104</td>
<td>Principles of Radiographic Exposure I</td>
</tr>
<tr>
<td>XRT:105</td>
<td>Principles of Radiographic Exposure II</td>
</tr>
<tr>
<td>XRT:107</td>
<td>Radiologic Physics I</td>
</tr>
<tr>
<td>XRT:108</td>
<td>Radiologic Physics II</td>
</tr>
<tr>
<td>XRT:111</td>
<td>Clinical Education I</td>
</tr>
<tr>
<td>XRT:112</td>
<td>Clinical Education II</td>
</tr>
<tr>
<td>XRT:116</td>
<td>Clinical Education III</td>
</tr>
<tr>
<td>XRT:121</td>
<td>Radiographic Film Evaluation I</td>
</tr>
<tr>
<td>XRT:122</td>
<td>Radiographic Film Evaluation II</td>
</tr>
<tr>
<td>XRT:207</td>
<td>Radiologic Pathology</td>
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<tr>
<td>XRT:208</td>
<td>Imaging and Special Techniques</td>
</tr>
<tr>
<td>XRT:209</td>
<td>Radiobiology</td>
</tr>
<tr>
<td>XRT:211</td>
<td>Radiologic Technology Review</td>
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<tr>
<td>XRT:212</td>
<td>Radiologic Technology Seminar</td>
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<td>Clinical Education IV</td>
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<td>XRT:214</td>
<td>Clinical Education V</td>
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<tr>
<td>XRT:215</td>
<td>Clinical Education VI</td>
</tr>
</tbody>
</table>

Program total ..................79-80 credits

Real Estate

ASSOCIATE IN APPLIED SCIENCE DEGREE
Meramec

This program provides increased technical competency in real estate sales, appraisal and management. Students gain the knowledge and skills necessary for handling residential real estate transactions and real estate property appraisal procedures and requirements. In addition, limited knowledge and skills in commercial property transactions, fundamental knowledge and skills in operating a real estate broker business and real estate property management skills also are taught. This program prepares individuals to sit for the Missouri Real Estate Sales and Brokers License Examinations. It also provides additional education for those currently employed in the real estate industry.

Persons interested in the program should have a proficiency in business mathematics. Interpersonal and communication skills are important in this field.

Graduates of this program are qualified for positions as real estate sales persons, real estate brokers, real estate appraisers and real estate property managers.

I. Career General Education  24-26 credits

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
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<td>Career English (or)</td>
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<tr>
<td>ENG:101</td>
<td>College Composition I</td>
</tr>
<tr>
<td>ENG:102</td>
<td>College Composition II (or)</td>
</tr>
<tr>
<td>ENG:103</td>
<td>Report Writing</td>
</tr>
<tr>
<td>COM:101</td>
<td>Oral Communication I</td>
</tr>
<tr>
<td>ECO:140</td>
<td>Introduction to Economics (or)</td>
</tr>
<tr>
<td>ECO:151</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>PSY:200</td>
<td>General Psychology</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
</tr>
<tr>
<td>MTH:xxx</td>
<td>Mathematics 100 level or higher (or BUS:103)</td>
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<tr>
<td>XXX:xxx</td>
<td>Physical Science</td>
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</table>
**Real Estate Appraisal**

**CERTIFICATE OF PROFICIENCY**
Florissant Valley and Meramec

This program is designed to provide technical competency in real estate sales and appraisal. The course of study will prepare individuals to sit for the Missouri Real Estate Sales and Brokers License Examination.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>REL:100 Real Estate Sales Procedures</td>
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</tr>
<tr>
<td>REL:102 Property Appraisal I: Residential</td>
<td>3</td>
</tr>
<tr>
<td>REL:105 Residential Appraisal II: Market Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>REL:202 Property Appraisal II: Income Producing</td>
<td>3</td>
</tr>
<tr>
<td>REL:104 Real Estate Law</td>
<td>3</td>
</tr>
<tr>
<td>REL:204 Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>REL:205 Real Estate Property Management</td>
<td>3</td>
</tr>
<tr>
<td>REL:208 Real Estate Broker Procedures</td>
<td>4</td>
</tr>
</tbody>
</table>

Program total 14 credits

---

**Respiratory Therapy**

**ASSOCIATE IN APPLIED SCIENCE DEGREE**
Forest Park

This Program prepares students for positions as respiratory therapists. Students learn to administer treatment(s) or conduct tests on persons with lung and heart ailments, as ordered by a patient’s physician. The program includes natural sciences, humanities, and respiratory therapy courses, in addition to clinical practice at area health facilities.

Persons interested in the program should be team-oriented, compassionate individuals who derive satisfaction from helping others in time of crisis. They also should be able to tolerate moderate physical activity, long hours of standing, and be able to work effectively under stress.

Graduates are eligible to challenge the entry-level (CRT), and advance practitioner’s (RRT) examinations offered through the National Board for Respiratory Care. Employment is available through hospitals, clinics, home care agencies, education, equipment sales and marketing.

I. **Career General Education** 32-33 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENG:101 College Composition I</td>
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</tr>
<tr>
<td>ENG:102 College Composition II</td>
<td>3</td>
</tr>
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<td>MTH:124 Technical Mathematics I or higher</td>
<td>3-4</td>
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<tr>
<td>CHM:101 Fundamentals of Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>BIO:203 General Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIO:207 Anatomy and Physiology I</td>
<td>4</td>
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<tr>
<td>BIO:208 Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>XXX:xxx Missouri State Requirement</td>
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<tr>
<td>PSY:200 General Psychology</td>
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</table>

II. **Physical Education Activity** 2 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Program total 19 credits
Robotics Technology

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

This program prepares students for positions in electro-mechanics (another name for robotics), robotics and automation fields. Students take courses similar to those in engineering, but with a less demanding level of math and more emphasis on the use of industrial equipment. The programs provide a mixture of education and training. Persons interested in this program should be mechanically inclined, self-starters who can work without constant supervision.

Graduates are qualified for a variety of technical positions within the automotive, aerospace, heavy equipment, chemical, electrical, petroleum and food processing industries that utilize computer process control and computer integrated manufacturing (including robots).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTH:120</td>
<td>Introduction to Respiratory Care and Respiratory Physics</td>
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<tr>
<td>RTH:121</td>
<td>Orientation to the Hospital</td>
<td>2</td>
</tr>
<tr>
<td>RTH:125</td>
<td>Airway Management</td>
<td>3</td>
</tr>
<tr>
<td>RTH:126</td>
<td>Introduction to Mechanical Ventilation</td>
<td>3</td>
</tr>
<tr>
<td>RTH:127</td>
<td>Respiratory Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>RTH:128</td>
<td>Arterial Blood Gases</td>
<td>2</td>
</tr>
<tr>
<td>RTH:131</td>
<td>Pediatric Respiratory Care</td>
<td>3</td>
</tr>
<tr>
<td>RTH:140</td>
<td>Respiratory Care Clinical I</td>
<td>1</td>
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<tr>
<td>RTH:146</td>
<td>Clinical Level II</td>
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<tr>
<td>RTH:220</td>
<td>Pulmonary Pathophysiology</td>
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</tr>
<tr>
<td>RTH:221</td>
<td>Critical Care Monitoring</td>
<td>2</td>
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<tr>
<td>RTH:222</td>
<td>Cardiopulmonary Physiology</td>
<td>2</td>
</tr>
<tr>
<td>RTH:223</td>
<td>Mechanical Ventilation: A Clinical Approach</td>
<td>4</td>
</tr>
<tr>
<td>RTH:225</td>
<td>Pulmonary Function Testing</td>
<td>3</td>
</tr>
<tr>
<td>RTH:228</td>
<td>NBRC Review</td>
<td>2</td>
</tr>
<tr>
<td>RTH:240</td>
<td>Respiratory Care Clinical II</td>
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</tr>
<tr>
<td>RTH:245</td>
<td>Respiratory Care Clinical IV</td>
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</tbody>
</table>

Program total ...............78-79 credits

Workplace Experience: Students may substitute up to six credit hours of appropriate and relevant co-op experience for technical courses, and/or elective, included in the program above. In order for the co-op credit to be counted for the degree requirement, co-op experience must be pre-approved by the department and the work must be supervised by an appropriate faculty member.

Sales

ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley and Meramec

This program prepares students for sales positions in organizations which market industrial, technical and consumer goods and services. Students will learn to apply practical techniques or selling in a range of situations, act as intermediaries between customers and suppliers, and comprehend the complex interrelationship between the salesperson and the other components of a business.

Graduates are qualified for positions as sales trainees for small and medium sized manufacturers, wholesalers and retailers. Sales trainees are responsible for servicing existing customers, prospecting and qualifying new prospects, creating and making sales presentations, closing sales, performing post-sale service and acting as field market research resources for customer needs.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101</td>
<td>College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG:102</td>
<td>College Composition II</td>
<td>3</td>
</tr>
<tr>
<td>COM:101</td>
<td>Oral Communication I (or)</td>
<td>3</td>
</tr>
<tr>
<td>COM:107</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>MTH:140</td>
<td>Intermediate Algebra</td>
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<tr>
<td>XXX:xxx</td>
<td>Math/Science electives</td>
<td>3-4</td>
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<tr>
<td>ECO:140</td>
<td>Introduction to Economics (or)</td>
<td>3</td>
</tr>
<tr>
<td>ECO:151</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>PSY:200</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xxx</td>
<td>Missouri State Requirement</td>
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Program total ...............67 credits

I. Career General Education 30-31 credits

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<th>Course Title</th>
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<tbody>
<tr>
<td>EGR:140</td>
<td>Computer Aided Drafting and Design</td>
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<tr>
<td>GE:101</td>
<td>Technical Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>ME:140</td>
<td>Introduction to Robotics</td>
<td>3</td>
</tr>
<tr>
<td>ME:151</td>
<td>Manufacturing Processes I</td>
<td>3</td>
</tr>
<tr>
<td>ME:210</td>
<td>Robot Subsystems and Components</td>
<td>3</td>
</tr>
<tr>
<td>ME:211</td>
<td>Programmable Logic Controllers</td>
<td>3</td>
</tr>
<tr>
<td>ME:242</td>
<td>Mechanics-Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ME:243</td>
<td>Strength of Materials</td>
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<tr>
<td>ME:255</td>
<td>Fluid Power</td>
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II. Physical Education Activity 2 credits

II. Area of Concentration 45 credits

<table>
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<tr>
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<tbody>
<tr>
<td>EE:101</td>
<td>Technical Electricity</td>
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<tr>
<td>EE:233</td>
<td>Digital Logic</td>
<td>4</td>
</tr>
<tr>
<td>EE:242</td>
<td>Introduction to Microprocessors</td>
<td>3</td>
</tr>
<tr>
<td>EE:244</td>
<td>Microprocessor Applications</td>
<td>3</td>
</tr>
<tr>
<td>EGR:100</td>
<td>Engineering Drawing</td>
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</tr>
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</table>
I. Career General Education  
22 credits

- ENG:101 College Composition I  
- ENG:102 College Composition II (or)
- ENG:103 Report Writing  
- MTH:124 Technical Math I (or)
- PSI:124 Principles of Physical Science  
- IS:103 Information Systems for Business  
- XXX:xxx Missouri State Requirement  
- Choose one of the following:  
  - ECO:151 Principles of Macroeconomics  
  - PSY:200 General Psychology  
  - PSY:206 Social Psychology  
  - SOC:101 Introduction to Sociology  
  - SOC:103 Human Behavior at Work and in Business

II. Physical Education Activity  
2 credits

III. Area of Concentration  
28 credits

- ACC:100 Applied Accounting (or)
- ACC:120 Computer Accounting Applications
  for Business  
- IS:125 Excel for Windows  
- IS:118 Microcomputer Applications-
  Databases  
- IS:137 Microcomputer Applications-
  Presentation Software  
- BLW:101 Business Law I  
- BUS:104 Introduction to Business
  Administration  
- MKT:101 Advertising Theory  
- MGT:204 Business Organization and
  Management  
- MKT:104 Principles of Selling  
- MKT:203 Principles of Marketing  
- XXX:xxx Business Elective

IV. Electives  
3-4 credits

Program total 64 credits

CERTIFICATE OF SPECIALIZATION
Florissant Valley and Meramec

This certificate program is designed for persons who
want to receive some fundamental knowledge in sales,
business, and communications. Persons interested in entering
the sales field and those currently employed in sales
will benefit from the knowledge and skills received in the
coursework provided in this certificate program.

Courses Credits
ENG:101 College Composition I 3
COM:101 Oral Communication I (or)
COM:104 Persuasion 3
IS:125 Excel for Windows 2
IS:118 Microcomputer Applications-
  Databases 1
BUS:104 Introduction to Business
  Administration 3
MKT:104 Principles of Selling 3
MKT:203 Principles of Marketing 3

Program total 18 credits

Skilled Trades Industrial Apprenticeship Training: Carpenter
ASSOCIATE IN APPLIED SCIENCE DEGREE
Florissant Valley

Career general education requirements are comparable to other SLCC technically oriented AAS programs. The carpenter's apprenticeship courses must be transferred in as a block and are only accepted after the student receives his/her journeyman's license. Proof of receipt of the journeyman's license is required. The directed electives were jointly chosen by college and Carpenter's Training School faculty members.
Skilled Trades Industrial Training: Millwright

**CERTIFICATE OF PROFICIENCY**

Florissant Valley

Provides industrial technical education and training for the skilled trade classification of millwright apprentice. (Millwright apprentices install and operate all forms of rigging equipment, including the installation, servicing, moving and dismantling of plant equipment and machinery and perform all types of maintenance welding.)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MTH:124</td>
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<tr>
<td>MTH:134</td>
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<td>EGR:050</td>
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<td>ME:101</td>
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<td>ME:103</td>
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<td>ME:151</td>
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<td>CE:116</td>
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</table>

Program total .............. 36 credits

Skilled Trades Industrial Training: Tool and Die

**CERTIFICATE OF PROFICIENCY**

Florissant Valley

Provides industrial technical education and training for the skilled trade classifications of tool and die apprentice. (Tool and die apprentices are machinists performing any type of machine work required for parts and equipment installation and repair. They design, manufacture, and install specialized tooling, jigs and fixtures required for various manufacturing and assembly operations.)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MTH:124</td>
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<td>ME:151</td>
<td>3</td>
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<tr>
<td>ME:152</td>
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<td>ME:245</td>
<td>3</td>
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<tr>
<td>ME:249</td>
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</tbody>
</table>

Program total .............. 30 credits

Skilled Trades Industrial Training: Plumbing and Pipefitting

**CERTIFICATE OF PROFICIENCY**

Florissant Valley

Provides industrial technical education and training for the skilled trade classifications of plumbing and pipefitting apprentice. (Plumbing apprentices install and repair drainage waste and vent pipes for water supply systems. Pipefitting apprentices install mechanical systems and process systems requiring piping or tubing.)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH:124</td>
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<td>ME:103</td>
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<td>EE:132</td>
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<td>EE:233</td>
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<td>EE:242</td>
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<td>ME:245</td>
<td>3</td>
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<tr>
<td>ME:211</td>
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</tbody>
</table>

Program total .............. 39 credits

Skilled Trades Industrial Training: Welder Repair

**CERTIFICATE OF PROFICIENCY**

Florissant Valley

Provides industrial technical education and training for the skilled trade classification of welding equipment repair apprentice. (Welder repair apprentices troubleshoot, repair, and maintain welding robots utilized in automated manufacturing systems.)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH:124</td>
<td>3</td>
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<td>EGR:104</td>
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<tr>
<td>EE:130</td>
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<tr>
<td>EE:131</td>
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<td>ME:245</td>
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<tr>
<td>ME:211</td>
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</tbody>
</table>

Program total .............. 37 credits
Skilled Trades Industrial Training

CERTIFICATE OF SPECIALIZATION
Florissant Valley

Provides industrial technical education and training associated with a variety of skilled trades.

MTH:030  Elementary Algebra  . . . . . . . . . . . . . . . . . .3
MTH:124  Technical Mathematics I  . . . . . . . . . . . . . .3

Dependent on the skilled trade classification an additional 6 to 12 credit hours of technical courses are required for the particular Certificate of Specialization. The program advisor must select these courses.

Choice of Skilled Trades Classifications and Emphasis Areas:
- Boiler Operator
- Carpenter
- Electrician
- Engineer - Steam
- Layout - Metal and Wood
- Mechanic - Gas and Electric Jitney
- Millwright
- Pipefitter/Plumber
- Repairer - Welder Equipment
- Sheet Metal Worker
- Waste Treatment Plant Operator

Supply Chain Management

ASSOCIATE IN APPLIED SCIENCE

I. Career General Education  26-27 credits
   ENG:101  College Composition I  . . . . . . . . . . . . . . . . . .3
   ENG:102  College Composition II  . . . . . . . . . . . . . . . . . .3
   COM:101  Oral Communication I  . . . . . . . . . . . . . . . . . .3
   MTH:160  College Algebra or higher  . . . . . . . . . . . . . .4
   ECO:151  Principles of Macroeconomics  . . . . . . . . . . . . .3
   GEG:106  U.S. and World Geography  . . . . . . . . . . . . . .3
   PHY:111  College Physics  . . . . . . . . . . . . . . . . . . . . . . . .4
   XXX:xxx  Missouri State Requirement  . . . . . . . . . . . . . .3

II. Physical Education Activity  2 credits

III. Area of Concentration  42 credits
   ACC:110  Financial Accounting I  . . . . . . . . . . . . . . . . . .4
   IS:118  Microcomputer Applications-Databases  . . . . . . . . . .1
   IS:119  Microcomputer Applications-Word Processing  . . . . . .3
   IS:125  Excel for Windows  . . . . . . . . . . . . . . . . . . . . . . .2
   IS:137  Microcomputer Applications-Presentation Software  . .4
   BUS:201  Elementary Statistics  . . . . . . . . . . . . . . . . . .3
   BUS:104  Introduction to Business Administration  . . . . . . .3
   MGT:204  Business Organization and Management  . . . . . . .3
   MGT:130  Introduction to Supply Chain Management  . . . . . . .3
   MGT:230  Logistics Operations  . . . . . . . . . . . . . . . . . . . .3
   MGT:231  Production Planning and Inventory Control  . . . . . . .3
   MGT:205  Purchasing Management  . . . . . . . . . . . . . . . . . .3
   MGT:110  Safety Management  . . . . . . . . . . . . . . . . . . . . .3
   MGT:232  Transportation Logistics Management  . . . . . . . . . .3
   MGT:239  Advanced Supply Chain Management  . . . . . . . . . .3
   MGT:120  Managerial Leadership  . . . . . . . . . . . . . . . . . .3

Program total  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .70-71 credits

CERTIFICATE OF PROFICIENCY

Meramec

The certificate of proficiency is ideal for the student new to the field of material management, or one who wishes to establish academic credentials in one of the material management career paths.

Courses Credits
ACC:110  Financial Accounting I  . . . . . . . . . . . . . . . . . .4
BUS: 201  Elementary Statistics  . . . . . . . . . . . . . . . . . .3
MGT:130  Introduction to Supply Chain Management  . . . . . . .3
MGT:230  Logistics Operations  . . . . . . . . . . . . . . . . . . . . .3
MGT:231  Production Planning and Inventory Control  . . . . . . .3
MGT:205  Purchasing Management  . . . . . . . . . . . . . . . . . .3
MGT:110  Safety Management  . . . . . . . . . . . . . . . . . . . . . .3
MGT:232  Transportation Logistics Management  . . . . . . . . . .3
MGT:239  Advanced Supply Chain Management  . . . . . . . . . .3
MGT:120  Managerial Leadership  . . . . . . . . . . . . . . . . . .3
MTH:160  College Algebra or higher  . . . . . . . . . . . . . . . . .4

Program total  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .35 Credits
Surgical Technology
CERTIFICATE OF PROFICIENCY
Forest Park

This program prepares students for entry-level positions as surgical technicians. Students learn aseptic technique, instrumentation, surgical procedures and patient care through classroom, laboratory practice and at a clinical affiliate. Students learn to assist the surgeon by passing instruments and sutures, holding retractors and cutting sutures.

Persons interested in this program should be able to work well with others in a team environment. They should have good manual dexterity, enjoy the operating room situation, and function effectively under intense and stressful situations.

Graduates are qualified to take the National Certifying Examination offered by the Liaison Council on Certification through the Association of Surgical Technologists.

Prerequisites
The following courses must be completed prior to applying for the program.
MTH:030 Elementary Algebra
BIO:203 General Microbiology
BIO:207 Anatomy and Physiology I

Courses Credits
BIO:208 Anatomy and Physiology II . . . . . . . . . . . .4
ENG:101 College Composition I . . . . . . . . . . . . . . . .3
PSY:200 General Psychology (or) 
SOC:101 Introduction to Sociology . . . . . . . . . . . . .3
ST:104 Pharmacology for Surgical Technologists . . .2
ST:105 Fundamentals of Surgical Technology . . . . .4
ST:108 Introduction to Surgical Technology . . . . .6
ST:109 Principles of Operating Room Communication . . . . . . . . .2
ST:110 Surgical Procedures I . . . . . . . . . . . . . . . . .4
ST:111 Surgical Technology Clinical I . . . . . . . . . .8
ST:210 Surgical Procedures II . . . . . . . . . . . . . . . . .2
ST:211 Surgical Technology Clinical II . . . . . . . . . .4

Program total . . . . . . . . . . . .42 credits

Technical/Business Communication
CERTIFICATE OF PROFICIENCY
Florissant Valley, Forest Park and Meramec

This program is designed to provide practical communications skills and experience to those who have trained or are training in another field, but who desire a higher level of communications skills. Students learn to create written and oral messages through a variety of media. Through courses in composition, communications and art, students acquire skills in locating, gathering and organizing information from printed, electronic and other media and in designing and using graphic aids. Students learn to present information in correct form, standard format and an understandable style.

Persons interested in the program should possess career skills in a clerical, managerial, financial, governmental, health services or technical area. They should have an interest in language and communication. Prior course work or experience in word processing, photography, engineering or technical illustration also is helpful.

Courses Credits
ENG:100 Career English (or) 
ENG:101 College Composition I . . . . . . . . . . . . . . . .3
ENG:103 Report Writing . . . . . . . . . . . . . . . . . . . . . .3
ENG:219 Advanced Report Writing . . . . . . . . . . . . .3
COM:101 Oral Communication I . . . . . . . . . . . . . . . .3
COM:108 Business/Technical Presentation . . . . . . . . .3

Select three courses from following: . . . . . . . . . . . . .9
MCM:110 Journalism I: Writing and Reporting
MCM:111 Journalism II: Editing and Design
MCM:112 Feature Writing
MCM:140 Introduction to Advertising
MCM:142 Applied Advertising
COM:103 Small Group Communication
COM:105 Interview Process
COM:110 Organizational Communication

Select two courses from following: . . . . . . . . . . . . . .6
ART:165 Photography I
ART:107 Design I (and) 
ART:108 Design II (or) 
ART:133 Graphic Design I (and)
ART:134 Graphic Design II
Foreign language (French, German, Italian, Japanese, or Spanish)

Program total . . . . . . . . . . . .30 credits
### Telecommunications Engineering Technology

**ASSOCIATE IN APPLIED SCIENCE DEGREE**  
**Florissant Valley**

This program deactivated effective Spring 2007. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor. (See Electrical /Electronic Engineering Technology.)

### CERTIFICATE OF PROFICIENCY

This program deactivated effective Summer 2006. New students are no longer being accepted. Students currently enrolled in this program should see the department chair or an advisor.

### Telecommunications Engineering Technology: Basic Electronics

**CERTIFICATE OF PROFICIENCY**  
**Florissant Valley**

This program offers basic courses in the fundamentals of electricity, electronics, computers and telecommunications to support entry-level positions in the telecommunications industry.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE:131</td>
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<tr>
<td>EE:110</td>
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<td>EE:230</td>
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<tr>
<td>EE:106</td>
<td>1</td>
</tr>
<tr>
<td>TEL:103</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total ..........21 credits

### Travel and Tourism

**ASSOCIATE IN APPLIED SCIENCE DEGREE**  
**Forest Park**

The Travel and Tourism program prepares students with the knowledge, technical skills, and work habits required for a variety of entry-level positions with career ladder advancement opportunities. General education courses in composition, communications, science, mathematics, social science, and accounting along with courses in geography, hospitality management, hospitality law, hospitality sales and marketing, airline reservations, cruise and tour arrangements, convention and meeting planning, and international travel, gives the student a strong foundation as they enter into this vast global industry.

Persons interested in the program should have an ability to effectively communicate with others. They should be able to work with computer automation and reference materials, while providing accurate information and assistance to the traveling public. Students should possess keyboarding skills and computer navigation knowledge, along with a very positive, friendly, customer-oriented attitude when functioning in an active work environment.

Graduates of the program can pursue positions with retail travel agencies, wholesale tour operators, Internet travel entities, group incentive businesses, corporate travel firms, meeting and event planning organizations, airlines, cruise lines, car rental services, hotels, destination management companies, and convention and visitor’s bureaus.

<table>
<thead>
<tr>
<th>I. Career General Education</th>
<th>18 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG:101 College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>COM:101 Oral Communication I</td>
<td>3</td>
</tr>
<tr>
<td>MTH:108 Elementary Applied Math</td>
<td>3</td>
</tr>
<tr>
<td>PSY:200 General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>XXX:xx Missouri State Requirement</td>
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<tr>
<td>XXX:xx Science Elective</td>
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</table>

<table>
<thead>
<tr>
<th>II. Physical Education Activity</th>
<th>2 credits</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>III. Core Courses</th>
<th>37 credits</th>
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<tbody>
<tr>
<td>ACC:100 Applied Accounting</td>
<td>3</td>
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<tr>
<td>HRM:134 Introduction to the Hospitality Industry</td>
<td>3</td>
</tr>
<tr>
<td>TUR:104 Travel and Tourism Foundations I</td>
<td>6</td>
</tr>
<tr>
<td>TUR:105 Travel and Tourism Foundations II</td>
<td>10</td>
</tr>
<tr>
<td>TUR:106 Domestic and International Geography and Landmarks</td>
<td>3</td>
</tr>
<tr>
<td>HRM:201 Problems of Hospitality Management</td>
<td>3</td>
</tr>
<tr>
<td>HRM:209 Hospitality Sales and Marketing</td>
<td>3</td>
</tr>
<tr>
<td>TUR:230 International Travel and World Issues</td>
<td>3</td>
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<tr>
<td>TUR:236 Practicum - Travel and Tourism</td>
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<table>
<thead>
<tr>
<th>Electives</th>
<th>9 credits</th>
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<tbody>
<tr>
<td>XXX:xx Conversational Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>IS:151 Microcomputer Applications In Business</td>
<td>4</td>
</tr>
<tr>
<td>HRM:202 Hospitality Law</td>
<td>3</td>
</tr>
<tr>
<td>TUR:223 Selling Leisure Cruises and Tours</td>
<td>3</td>
</tr>
<tr>
<td>TUR:201 Convention and Meeting Planning</td>
<td>3</td>
</tr>
<tr>
<td>TUR:235 Certified Travel Associate (CTA) Prep Course and Test</td>
<td>3</td>
</tr>
</tbody>
</table>

Program total ...............66 credits
Travel and Tourism Foundations

CERTIFICATE OF SPECIALIZATION

Forest Park

This program is designed for students seeking entry-level positions in the field of travel and tourism. The curriculum is intended as a one-semester program covering travel industry terms, definitions, codes, industry segments, geographic mapping, and live computer automation on the Sabre Global Distribution System and Internet.

Persons interested in this program should possess keyboarding and computer navigation abilities, along with developed interpersonal and organizational skills.

Graduates are eligible to pursue entry-level employment opportunities with travel agencies, tour companies, airlines, car rental firms, meeting and event planning businesses, incentive travel organizations, and Internet travel entities.

Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>TUR:104</td>
<td>Travel and Tourism Foundations I</td>
</tr>
<tr>
<td>TUR:105</td>
<td>Travel and Tourism Foundations II</td>
</tr>
</tbody>
</table>

Program total ............... 16 credits

Voice/Data Communications Analyst

CERTIFICATE OF SPECIALIZATION

Forest Park, Meramec

This program is designed to provide a foundation in the concepts of managing a voice/data communications network. Students will develop an understanding of the different techniques used to transport voice or data to various locations and learn the part each of the hardware or software components in a system contributes to overall network functioning. The basic principles of designing or evaluating a network also are covered.

Persons interested in this program should be familiar with college-level algebra and enjoy dealing with abstract symbolically oriented problems.

Graduates of the program are qualified for positions as voice/data communications analysts and designers.

Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IS:231</td>
<td>Introduction to Data Communications</td>
</tr>
<tr>
<td>IS:232</td>
<td>Introduction to Telecommunications</td>
</tr>
<tr>
<td>IS:233</td>
<td>Components of Voice/Data Communications</td>
</tr>
<tr>
<td>IS:234</td>
<td>Data/Voice Traffic Analysis</td>
</tr>
<tr>
<td>IS:215</td>
<td>Introduction to Local Area Networks</td>
</tr>
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</table>

Elective: 3 credits

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<tr>
<th>Course</th>
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<tr>
<td>IS:217 Network Performance Monitoring</td>
</tr>
<tr>
<td>IS:235 Network Design and Installation</td>
</tr>
<tr>
<td>IS:237 Computer System and Network Security</td>
</tr>
<tr>
<td>IS:227 C Programming Language I</td>
</tr>
<tr>
<td>IS:229 UNIX</td>
</tr>
</tbody>
</table>

Program total ............... 18 credits

Web Development

CERTIFICATE OF SPECIALIZATION

Florissant Valley, Forest Park, Meramec

This Certificate of Specialization is designed for students seeking skills to qualify for positions as Web Developers. The certificate was developed to include topics that will build the programming and database skills a Web Developer needs in order to build and maintain a corporation's Web site. Emphasis is placed upon object-oriented languages that are prevalently used for the Internet and intranets. The courses provide students with both the theoretical and technical knowledge and practical hands-on experience to be successful in the high demand Web Developer occupation.

Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IS:139</td>
<td>Web Publishing Using Advanced HTML</td>
</tr>
<tr>
<td>IS:259</td>
<td>Introduction to JavaScript</td>
</tr>
<tr>
<td>IS:257</td>
<td>Advanced Database Design</td>
</tr>
<tr>
<td>IS:262</td>
<td>Advanced Web Development</td>
</tr>
</tbody>
</table>

Select one of the focuses for six credit hours:

Focus: Small Business

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>IS:141 Graphics for the Web</td>
<td>3</td>
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</table>

and one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MKT:101 Advertising Theory</td>
<td>3</td>
</tr>
<tr>
<td>MKT:104 Principles of Selling</td>
<td>3</td>
</tr>
<tr>
<td>MKT:203 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MCM:140 Introduction to Advertising</td>
<td>3</td>
</tr>
<tr>
<td>MCM:142 Applied Advertising</td>
<td>3</td>
</tr>
</tbody>
</table>

Focus: Corporate IS Professional

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IS:261 Object-Oriented Program Design</td>
<td>3</td>
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</table>

and one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>IS:251 Introduction to Java</td>
<td>3</td>
</tr>
<tr>
<td>IS:260 Visual C++ Application Development</td>
<td>3</td>
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<tr>
<td>IS:255 Advanced Visual Basic Programming</td>
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</table>

Program total ............... 18 credits
Section 3

2007-08 Course Descriptions
# Key to Abbreviations and Page References

The letters in the course descriptions indicate subject areas. The abbreviations, subject areas and page numbers are as follows:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Subject Area</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC</td>
<td>Accounting</td>
<td>101</td>
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<td>ANT</td>
<td>Anthropology</td>
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<td>ARA</td>
<td>Arabic</td>
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<td>Architectural Technology</td>
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<td>AVI</td>
<td>Aviation Technology</td>
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<td>BIO</td>
<td>Biology</td>
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<tr>
<td>BE</td>
<td>Biomedical Engineering Technology</td>
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<td>BIC</td>
<td>Building Inspection Technology</td>
<td>114</td>
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<td>BUS</td>
<td>Business Administration</td>
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<td>BLW</td>
<td>Business Law</td>
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<td>CST</td>
<td>Central Service Technology</td>
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<td>CHM</td>
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<td>CE</td>
<td>Civil Engineering Technology</td>
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<td>Clinical Laboratory Technology</td>
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<td>COM</td>
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<td>DCS</td>
<td>Deaf Communication Studies</td>
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<td>Diagnostic Medical Sonography</td>
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<td>Funeral Directing</td>
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<td>Funeral Service Education</td>
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Course Descriptions

ABOUT THIS SECTION
The course descriptions for St. Louis Community College includes descriptions of all credit courses offered at the Florissant Valley, Forest Park and Meramec campuses as well as other off-campus locations during the academic year. The courses listed herein are current as of January, 2005. For descriptions of courses approved after this date, consult the campus course schedules. All of the courses listed in this section are not offered every semester. Information on where and when these courses are available may be found in the campus course schedules published each semester. Contact the campus Admissions office for more information.

READING PROFICIENCY PREREQUISITE
Many of the courses in this catalog include a prerequisite of “Reading Proficiency.” This means that before a student can enroll in one of these courses, he or she must demonstrate the ability to read at the college level. This ability will give the student a much better chance to pass the course, since many courses require a certain amount of reading, whether it be a textbook, journal articles, or reports from many sources.

The student can meet the Reading Proficiency prerequisite by scoring at least 77 on the Accuplacer reading placement test, given as part of the admission process. Students who present an ACT composite score of at least 21 or an SAT verbal score of at least 500 meet the prerequisite. Students with a college reading course with a grade of at least “C” or who have earned a college degree (associate or baccalaureate) also meet the prerequisite. In addition, transfer students who present evidence of a grade of at least “C” in a three-hour college course numbered 100 or higher will be considered to have met the prerequisite. This applies also to students with dual credit courses taken in high school.

Students who do not meet this prerequisite in any of these ways must enroll for RDG:030, Introduction to College Reading. A grade of “C” or higher in this course meets the Reading Proficiency requirement. Students who are not native speakers of English can meet this prerequisite with at least a “C” in ENG:070, Academic English for NonNative Speakers 111.

This prerequisite applies to all students new to St. Louis Community College beginning fall semester, 2005.

COURSE LEVELS
The course numbering system uses an abbreviation to identify subject matter area and a three-digit number to identify course level. Course levels are defined as follows:

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Example
DA:103
CLINICAL PRACTICE
DA indicates the subject area of Dental Assisting. The number 103 indicates that the course is on the beginning level.

COURSE HOURS
Unless otherwise noted in the course description, the credit hours shown represent the number of lecture hours per week over a 15 week semester that the student will spend in class for a given course.
ACCOUNTING

ACC:100 APPLIED ACCOUNTING 3
An introductory course in the principles of accounting with emphasis on practice in bookkeeping techniques, designed to familiarize career students with the basic accounting system and the knowledge of keeping records. Prerequisite: Reading Proficiency.

ACC:110 FINANCIAL ACCOUNTING I 4
The emphasis of this course is on the measurement and presentation of financial data. The course focuses on preparation and use of corporate financial statements consistent with General Accepted Accounting Principles. Prerequisite: ACC:100 or one year of high school accounting or department approval, and Reading Proficiency.

ACC:111 FINANCIAL ACCOUNTING II 3
Reinforces ACC:110 Financial Accounting topics on reporting corporate long term liabilities, intercompany investments and the Statement of Cash Flows. Introduces Managerial Accounting with coverage of cost accounting systems, cost-volume-profit analysis, capital budgeting and other current managerial accounting topics. Prerequisite: ACC:110 with grade of “C” or better or department approval and Reading Proficiency.

ACC:114 MANAGERIAL ACCOUNTING 3
Emphasis is on evaluation and utilization of accounting data for the purpose of planning and controlling operations. Topics include financial statement analysis, methods of cost accumulation, budgeting, standard costs, direct costing, and cost-volume-profit analysis. Prerequisite: ACC:110 with grade of “C” or better or department approval and Reading Proficiency.

ACC:120 COMPUTER ACCOUNTING APPLICATIONS FOR BUSINESS 3
This survey course introduces various commercial accounting software in a hands-on environment. Topics covered include general ledger, receivables, payables, inventory, payroll, and importing and exporting accounting data to other software. The course provides an introduction to accounting applications of spreadsheet and presentation software and the Internet. No previous computer experience is necessary. Prerequisite: ACC:100 and/or ACC:110 and/or Departmental approval and Reading Proficiency.

ACC:122 COMPUTER ACCOUNTING APPLICATIONS SPREADSHEETS 3
This course covers accounting applications using spreadsheet software as a tool in solving accounting problems and preparing and analyzing accounting data. Topics include using spreadsheet software to prepare accounting reports such as the income statement, balance sheet, statement of cash flow, and special purpose accounting reports for decision making. Financial reports are analyzed using spreadsheet software. In addition, auditing a worksheet and graphical analysis of accounting information is performed using the charting feature of spreadsheet software. Prerequisite: ACC:110 or Departmental approval and Reading Proficiency.

ACC:124 COMPUTER ACCOUNTING APPLICATIONS DATABASES 3
This course covers how to build a database for accounts receivable, accounts payable, inventory, fixed assets and payroll. Prerequisite: ACC:110 or Departmental approval and Reading Proficiency.

ACC:203 COST ACCOUNTING 3
A study of the general principles of cost accounting with emphasis on process and job order cost accounting; methods of collection, preparation and interpretation of data, as well as preparation of records and reports. Prerequisite: ACC:208 or ACC:214 and Reading Proficiency.

ACC:204 INCOME TAX ACCOUNTING 3
A study of federal tax accounting; emphasis is placed on the procedure required to comply with the tax laws and to make the required tax returns. Income tax, social security and payroll tax accounting is included. Prerequisite: Reading Proficiency.

ACC:206 AUDITING 3
This course teaches the procedures of examination of financial statements by external and internal auditors. Topics include: auditing standards, development of working papers and reports, and development of sampling and original records examination. Prerequisites: ACC:208 and ACC:209 and Reading Proficiency.

ACC:208 INTERMEDIATE ACCOUNTING I 3
Study of financial accounting theory relating to asset, liability and owner’s equity accounts, including methods of valuation and the related effects on financial statements. Prerequisite: ACC:111 or ACC:114 and a grade of “C” or better or departmental approval and Reading Proficiency.

ACC:209 INTERMEDIATE ACCOUNTING II 3
A further study of financial accounting theory. Topics will include intangible assets, current and long-term liabilities, equity, earnings per share, and investments. Prerequisite: ACC:208 and a grade of “C” or better or departmental approval and Reading Proficiency.

ACC:210 INTERMEDIATE ACCOUNTING III 3
A further study of financial accounting theory. Topics will include interperiod income tax allocation, pension plans, changes in accounting principle, the cash flow statement and financial statement analysis. Prerequisite: ACC:208 and a grade of “C” or better or departmental approval and Reading Proficiency.

ACC:211 CURRENT TOPICS IN ACCOUNTING 3
Study of selected topics or current topics in Accounting. This course will provide an opportunity to explore various current issues in greater detail. Prerequisite: ACC:110 or departmental approval and Reading Proficiency.

ACC:212 NONPROFIT ACCOUNTING 3
The course addresses the principles, concepts and processes involved in the accounting treatment for nonprofit entities. Organizations discussed will include state and local governments, the federal government, college and universities, hospitals and health organizations, and other voluntary health and welfare organizations. Prerequisite: ACC:110 or Departmental approval and Reading Proficiency.

ACC:213 SURVEY OF BUSINESS TAXES 3
This is a survey course of Business Taxes. Topics include federal taxation of income, state taxation of income, state capital base taxes, state sales and use tax, federal and state employment related taxes and property taxes. Prerequisites: ACC:110 or Departmental approval and Reading Proficiency.

ACC:214 BUSINESS TAXES: RESEARCH AND PLANNING 3
This course concentrates on advanced business tax issues for partnerships, corporations, and S-corporations. Topics include tax planning, tax practice considerations, and tax research. Prerequisite: ACC:213 or departmental approval and Reading Proficiency.

ACC:291 ACCOUNTING INTERNSHIP 3
An Accounting Internship allows students to apply skills learned in the classroom, learn new skills, and explore career opportunities while supervised by an employer and a faculty member. Working as an intern for 120 hours under the supervision of an accounting professional, the student will have the opportunity to participate in the accounting functions of an accounting firm, accounting department, or other business unit. Prerequisites: Approval of Department Chair or Program Coordinator and Reading Proficiency.

ACC:292 ACCOUNTING INTERNSHIP II 3
This is an additional internship opportunity for accounting students to apply skills learned in the classroom, learn new skills, and explore career opportunities while supervised by an employer and a faculty member. Working as an intern for 120 hours under the supervision of an accounting professional, the student will have the opportunity to participate in the accounting functions of an accounting firm, accounting department, or other business unit. Prerequisites: Approval of Department Chair or Program Coordinator and Reading Proficiency.

ACC:293 ACCOUNTING INTERNSHIP III 3
This is an additional internship opportunity for accounting students to apply skills learned in the classroom, learn new skills, and explore career opportunities while supervised by an employer and a faculty member. Working as an intern for 120 hours under the supervision of an accounting professional, the student will have the opportunity to participate in the accounting functions of an accounting firm, accounting department, or other business unit. Prerequisites: Approval of Department Chair or Program Coordinator and Reading Proficiency.
ANTHROPOLOGY

ANT:101 INTRODUCTION TO PHYSICAL ANTHROPOLOGY AND ARCHAEOLOGY
This course is designed to present the principles, theories, data and methods used by anthropologists and archaeologists in their attempts to study human evolutionary development. Generally speaking, three broad topics are covered: the mechanisms of evolution, human prehistory, and the fossil evidence of Homo Sapiens and ancestral forms. Prerequisite: Reading Proficiency.

ANT:102 INTRODUCTION TO CULTURAL ANTHROPOLOGY
In this course, students are introduced to the great diversity of human cultures. Economic, social, political and religious systems are compared, including such topics as the nature of culture, cultural ecology, magic and witchcraft, disease and curing, sex roles, and rites of passage. Problems resulting when traditional societies confront industrial societies or industrialization are discussed. Prerequisite: Reading Proficiency.

ANT:103 CULTURAL VARIATIONS
This course focuses on culture as a prime determinant of human behavior. To understand how culture "works" helps us to understand better the people who live in that culture. The basic concepts of culture are presented including adaptation to the environment, language and communication, social stratification, values and attitudes, customs and habits, and social change. Economics, politics, religion and social systems are compared and evaluated with special application to living, visiting, and doing business in another culture. Prerequisite: Reading Proficiency.

ANT:104 FIELD STUDY IN ARCHAEOLOGY
This course is designed to introduce students to field methods in archaeology and to the methods of recording, storing, analyzing, and reporting archaeological findings. Experience is gained through participation in a field project. Prerequisite: Reading Proficiency.

ANT:105 FOUNDATIONS OF ARCHAEOLOGY
A basic introduction to archaeology as an interpretive discipline. Why and how do archaeologists determine how old things are and which ancient cultures they belong to? How do they reconstruct the religions, economy, and politics of ancient civilizations? Using cases from ancient cultures around the world, this course will answer these and many other questions about the study of archaeology. Prerequisite: Reading Proficiency.

ANT:106 THE INCAN, AZTEC, AND MAYAN CULTURES
A survey of the cultural evolution of Meso America and Andean South America, from the early hunters to the high civilizations. This course will conclude with the sixteenth century Spanish conquest of these civilizations. Prerequisite: Reading Proficiency.

ANT:107 ANCIENT CIVILIZATION OF THE OLD WORLD
A survey of the earliest complex societies in the Old World during the Neolithic and Bronze Ages. Emphasis will be focused on the cultures in Mesopotamia, Egypt, India, and China. Prerequisite: Reading Proficiency.

ARABIC

ARA:101 MODERN ARABIC I
This is a practical, beginning course in speaking and understanding modern Arabic. It is designed for persons who want to learn some Arabic, who want to travel to an Arabic-speaking country, or who have previous limited experience in Arabic. Attention is given to proper pronunciation, to practicing the words and basic structures most frequently in daily conversation and to learning the social conventions and Arabic culture necessary for interpersonal communication with native speakers of contemporary Arabic. Prerequisite: Reading Proficiency.

ARA:102 MODERN ARABIC II
Modern Arabic II is a continuation of Modern Arabic I. Students complete the basic elements of Arabic grammar, increase their vocabulary and gain added facility in speaking and reading Arabic. Prerequisite: ARA:101 or the permission of the instructor and Reading Proficiency.

ARA:104 SPECIAL READINGS IN ARABIC
This class is a continuation of Modern Arabic II and will focus on vocabulary acquisition and improving fluency of reading and understanding of Modern Standard Arabic, the formal language of the Arab people. This class will also introduce new grammatical structures and review those previously learned. Content of readings may vary from semester to semester. This class may be repeated for credit when topic is varied. Prerequisites: ARA:101 and ARA:102 or the permission of the instructor and Reading Proficiency.

ARCHITECTURAL TECHNOLOGY

ARC:110 ARCHITECTURAL GRAPHICS
Foundation course in which quality drafting in the areas of line weight and quality, lettering, dimensioning, notes is taught. Drafting procedures such as orthographic, axonometric, perspective, shade and shadow, topography, entourage rendering are introduced. Care and use of drafting and print tools and media are considered. (Approximate cost of supply kit - $50). Additional lab hours required. Prerequisite: Reading Proficiency.

ARC:112 ARCHITECTURAL DESIGN AND PRODUCTION I
A small project is designed and detailed. Topics covered include: design method, design presentation techniques, construction details, and construction document set production. Verbal and graphic communication of ideas is developed. A portfolio of student work is begun. Additional lab hours required. Prerequisite: ARC:110 with a grade of "C" or better and Reading Proficiency.

ARC:114 ARCHITECTURAL HISTORY AND THEORY
Course presents a survey of the history of shelter, monuments, other building types, towns and cities, and site design in relation to current architectural trends. Forces which shape the built-environment are studied. Tours of area sites or buildings may be included. Prerequisite: Reading Proficiency.

ARC:115 ARCHITECTURAL RENDERING AND PRESENTATION
Students gain experience in color and pattern rendering and presentation drawing technology. A variety of media and concepts is explored. Finished projects can be included in the architectural portfolio. Additional hours required. Prerequisite: Reading Proficiency.

ARC:123 INTRODUCTION TO COMPUTER-AIDED ARCHITECTURAL DRAFTING
Students learn to operate hardware and software generally in use in the architectural profession. A basic introduction to the systems will be presented. Hands-on use of the equipment will be emphasized. Prerequisite: Reading Proficiency.
ARC:209  MECHANICAL AND ELECTRICAL SYSTEMS I  3
An introduction to the physics and practical design aspects of plumbing systems, and the systems and building form and fabric affecting the heat loss and gain and internal comfort of buildings. Prerequisite: MTH:124 or MTH:140 and Reading Proficiency.

ARC:211  ARCHITECTURAL DESIGN AND PRODUCTION II  3
A small commercial project is designed and detailed. Topics covered include design method, design presentation techniques, construction details and construction document production. Verbal and graphic communication of ideas is continued. Students continue to develop a portfolio. Additional lab hours required. Prerequisites: ARC:112 with grade of "C" or better and ARC:123, and Reading Proficiency.

ARC:219  PROFESSIONAL ARCHITECTURAL PRACTICE  2
This course explores issues related to the functions of the architectural office: business practices and development, professional conduct and liability, project management, contract management, and marketing. Prerequisite: Reading Proficiency.

ARC:220  ARCHITECTURAL DESIGN AND PRODUCTION III  3
Students will work on commercial/institutional projects designed to reinforce skills in architectural rendering, model building, and construction document production. The student portfolio is completed. Additional lab hours required. Prerequisites: ARC:112, ARC:114, and ARC:115 with grades of "C" or better and Reading Proficiency.

ARC:222  SITE PLANNING AND LANDSCAPE DRAFTING  3
This course provides an introduction to the art of arranging the external environment to support human behavior. The student will learn skills used in architecture, engineering, landscape architecture and city planning. Principles of plane surveying as related to site planning are also studied. Drafting skills are studied with emphasis on site plans and techniques of landscape drafting. Additional hours required. Prerequisite: ARC:110 and Reading Proficiency.

ARC:223  INTERMEDIATE COMPUTER-AIDED ARCHITECTURAL DRAFTING  3
This course will deal with architectural office applications of computer-aided drafting involving orthographics, axonometrics, topography, 3-D modeling, walkthroughs, and rendering. Prerequisite: ARC:112 and ARC:123 or permission of department, or professional experience and Reading Proficiency.

ARC:224  ADVANCED COMPUTER-AIDED DRAFTING  3
This course focuses on the management aspects of computer-aided drafting. Topics include drawing file library management, screen, table and button menu creation and an introduction into LISP Language. Menu customizing is a major topic of this course. Prerequisite: ARC:223 or permission of department and Reading Proficiency.

ARC:227  ARCHITECTURAL ESTIMATING  3
Course will deal with the preparation of architectural estimates on contemporary construction projects. The student will learn to analyze existing conditions, estimate quantities and costs, prepare quantity take offs, and determine square/linear footage, areas. Prerequisite: Reading Proficiency.

ARC:228  ARCHITECTURAL COMPUTER RENDERING, MODELING, AND ANIMATION  3
This course provides an introduction to the use of computers in architectural illustration, rendering, and animation. The uses of both three-dimensional and two-dimensional rendering techniques are explored using 3-D computer programs as well as advanced CAD applications. The student will gain experience in creating solid and surface models of architectural forms. Lighting and material application theory are presented. Prerequisite: ARC:123 or department approval and Reading Proficiency.

ARC:229  ARCHITECTURAL SPECIFICATIONS, MATERIALS, AND METHODS  3
This course explores the process of selecting building materials, and introduces the Project Manual as an essential element of the Contract Documents. The student will learn how to research, evaluate, select and specify appropriate products for a variety of architectural projects. Prerequisite: Reading Proficiency.

ART:100  ART APPRECIATION  3
This lecture course is intended to stimulate the student's visual, emotional and intellectual awareness of an artistic heritage and to acquaint the individual with the work of the great masters of the art world, both past and present. For non-art majors. Prerequisite: Reading Proficiency.

ART:101  ART HISTORY I  3
A survey of art from the prehistoric to medieval period. Prerequisite: Reading Proficiency.

ART:102  ART HISTORY II  3
Continuation of ART:101 covering the medieval to modern art. Prerequisite: Reading Proficiency.

ART:103  HISTORY OF MODERN ART  3
A survey of modern art beginning with the late 19th century and proceeding through the work of contemporary artists. Recurrent themes from the following periods will be examined: impressionism, post-impressionism, art nouveau, cubism, expressionism, dada, surrealism, abstract expressionism, pop and new realism. Prerequisite: Reading Proficiency.

ART:104  MAJOR BLACK ARTISTS  3
This course examines the work and influence of select artists of African descent in the 19th and 20th centuries. This course will concentrate on the cultural, social, and political influences that these artists exhibited in their particular regions. Special attention will be given to the overall place of Black Art in the study of Art History. Prerequisite: Reading Proficiency.

ART:105  INTRODUCTION TO ART  3
An introduction to basic design, drawing and painting in a studio-type learning situation. This course is for non-art majors. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:107  DESIGN I  2
Emphasis on principles and elements of design through a series of assigned problems. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:108  DESIGN II  2
The study of color, exploring various color theories and the historical application through a series of problems. Additional studio hours required. Prerequisite: ART:107 and Reading Proficiency.

ART:109  DRAWING I  3
This is a beginning course in fundamentals of drawing that includes an introduction to drawing principles, construction, proportion, form, value, perspective, composition, tools and media. Perception, visual awareness, sensitivity, attitude and judgment are all stressed. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:110  DRAWING II  3
A continuation of ART:109, the fundamentals and principles of drawing, with more emphasis on organizational concepts and a variety of media. Additional studio hours required. Prerequisite: ART:109 and Reading Proficiency.

ART:111  FIGURE DRAWING I  3
Introduction to drawing from the human figure, analysis of structure, proportion and basic forms. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:112  FIGURE DRAWING II  3
Continuation of ART:111. Emphasizes the use of various drawing media. Analysis of the structure of the human figure through anatomy. Additional studio hours required. Prerequisite: ART:111 and Reading Proficiency.

ART:113  CERAMICS I  3
A study of the basic principles of ceramics and ceramic sculpture with emphasis on hand-built techniques. As the student progresses, there will be study on the kick wheel. Additional studio hours required. Prerequisite: Reading Proficiency.
ART:107  TEXTILES 3
An introduction to oil painting from still-life objects, with emphasis on technique and the effective use of color. Composition and drawing will be stressed as they relate to painting. Additional studio hours required. Prerequisite: ART:109 and Reading Proficiency.

ART:110  PRINTMAKING I 3
This is an introductory course in traditional and contemporary printmaking. The student will be exposed to a variety of printmaking media from a selection of monotypes, linoleum blocks, wood blocks, collagraphs, dry points, etchings, and solvent transfers. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:111  SCULPTURE I 3
A course based on individual development stressing the elements of sculpture: form, space, light, movement, texture, proportion in relation to the basic methods associated with the sculpture field. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:131  COMPUTER ART STUDIO 3
Computer Art Studio introduces students to the most common graphic software programs. Students will learn to navigate through the operating system and will gain basic experience with drawing, photo-imaging and page-layout applications. Additional lab hours required. Prerequisite: Reading Proficiency.

ART:132  GRAPHIC DESIGN I 3
This course is an introduction to graphic design with an emphasis on its history and its place in the advertising world. It will cover basic layout processes, typography, and the use of materials required in the field. Issues such as client needs, concept development, and ethical considerations will also be covered. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:133  GRAPHIC DESIGN II 3
Students in this course will further explore the area of graphic design with an emphasis on various layout formats, the creative use of typography, and the historic aspects of graphic design. Concept origination and development are also addressed. The use of computers as a design tool will be employed. Additional studio hours required. Prerequisite: ART:131 and ART:133 with grades of "C" or better, ART:107, and Reading Proficiency.

ART:134  GRAPHIC PRODUCTION I 2
Students in this class will study the history of printing and the basics of how the various commercial printing processes work. The major emphasis will be on understanding mechanical art procedures, the selection of printing papers, and the development of dialog with printing suppliers. The proper use and preparation of art for spot color, multicolor and process color printing and pre-press files preparation will be stressed. Binding and finishing techniques as well as layout and design concepts will be discussed in relation to the finished printed product. Additional studio hours required. Prerequisites: ART:131 and ART:133 with grades of "C" or better and Reading Proficiency.

ART:138  DRAWING FOR GRAPHICS I 2
This drawing course fulfills the specific needs of graphic design students. It emphasizes the study of composition and design as they apply to the solution of graphic design and illustration problems. Additional studio hours required. Prerequisites: ART:107, ART:109, ART:111 with grades of "C" or better and Reading Proficiency.

ART:150  INTERIOR DESIGN I 3
An introduction to interior space planning through the use of scaled floor plans and elevations. Emphasis is placed on the design and selection of furnishings, textiles, accessories, and other interior components. Additional studio hours required. Prerequisite: Prior or concurrent enrollment in ARC:110 and Reading Proficiency.

ART:152  TEXTILES 3
A study of fabric selection, care and performance based on the characteristics of textile fibers, processing, color application, and finishes. Prerequisite: Reading Proficiency.

ART:153  HISTORY OF CULTURAL ENVIRONMENTS I 3
The history of furniture styles, decorative arts, and architecture from Mesopotamia to French Empire will be taught. The emphasis is on materials, techniques, and aesthetics that make environments unique within their historical-cultural environments. There will be slides with the lectures. A notebook of styles will be required. Prerequisite: Reading Proficiency.

ART:154  COMPUTER AIDED INTERIOR DESIGN 3
This course is an introduction to hardware and software used in the practice of interior design. AutoCAD will be used to create scaled drawings, specifications and programming documents. Additional lab hours required. Prerequisite: Prior or concurrent enrollment in ARC:110 and Reading Proficiency.

ART:155  BATH DESIGN 3
This course is designed so that students can learn the special requirements necessary to design safe and functional bathrooms utilizing the standards established by the National Kitchen and Bath Association. Students develop comprehensive projects solving bathroom design problems. Prerequisites: ART:151 and Prior or concurrent enrollment in ARC:110 and Reading Proficiency.

ART:156  ADVANCED KITCHEN DESIGN 3
This course applies design principles and presentation standards in the planning and designing of efficient kitchen layouts. Following National Kitchen and Bath Association (NKBA) guidelines, students obtain "hands-on" experience studying proper cabinet, appliance, and fixture selection. Additional studio hours required. Prerequisites: ARC:110 and ART:151 and prior or concurrent enrollment in ARC:112 and Reading Proficiency.

ART:157  PERSPECTIVE DRAWING AND RENDERING FOR INTERIOR DESIGNERS 2
Students gain experience in perspective drawing for interior spaces. A variety of media is explored in color and pattern rendering. Finished projects can be included in the student's portfolio. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:158  WORKPLACE LEARNING: INTERNSHIP IN KITCHEN AND BATH DESIGN 3
This experiential course provides the student the opportunity to apply theory and skills learned in the classroom, learn new skills, and explore career possibilities while supervised by a professional in the field and a faculty member. Students will observe and participate in functions of the kitchen and bath industry in order to enhance their preparation for entering the kitchen and bath design field. Minimum of 160 hours in the workplace throughout the term. Prerequisites: ART:155 and ART:156 and Reading Proficiency.

ART:159  PHOTOGRAPHY I 3
An introduction to the medium of black and white photography, encompassing control of the craft and the meaning of the image. Students should have a camera with full aperture and shutter speed controls. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:160  PHOTOGRAPHY II 3
An advanced study of photographic methods, composition, and darkroom techniques. (Students must have access to a camera, preferably a 35 mm). Additional studio hours required. Prerequisite: ART:165 and Reading Proficiency.

ART:161  COLOR PHOTOGRAPHY 3
Theory of color, materials of color photography, and techniques of color printing. A portfolio of color prints will be produced by the student. Additional studio hours required. Prerequisite: ART:165 and Reading Proficiency.

ART:162  HISTORY OF PHOTOGRAPHY 3
An introduction to the understanding of photography through the study of significant historical events, pioneers, techniques, equipment, and aesthetic trends that have influenced and modulated this art form. Prerequisite: Reading Proficiency.

ART:163  VISUAL LANGUAGE 3
Perception and photography will be the central concern of this course, beginning with the ways in which we gather information from visual, particularly photographic, images and use of visual elements to form mental constructs. While the implications are vital to visual communicators, this exploration would be valuable to anyone with a desire to further their critical perception. Students will examine publications, film, photographs and television as forms affecting twentieth century thought. Prerequisite: Reading Proficiency.
ART:172  DIGITAL PHOTOGRAPHY  3  
This course is an introduction to digital photography. Students will learn digital camera basics, including the mechanics of the camera and printing with the computer. Students will follow guided exercises and projects and produce a portfolio of prints using digital printers. No darkroom work is included in this course. Students must provide their own digital cameras. Additional studio hours required. Prerequisites: Reading Proficiency.

ART:185  ART FOR CHILDREN  3  
The course will acquaint the student with art media and methods appropriate for children. The student will develop projects to promote the child’s appreciation of art and to integrate art into the total curriculum. (Same course as EDU:120.) Additional studio hours required. Prerequisite: Reading Proficiency.

ART:204  PHOTOGRAPHY III  3  
This course is a continuation of the exploration of the photographic process and techniques begun in Photography I and Photography II with a greater emphasis being placed on the creative process and the individual’s perception and understanding of the elusive nature of images. Additional studio hours required. Prerequisites: ART:165 and ART:166 and Reading Proficiency.

ART:207  DESIGN III  2  
An introduction to 3-D work, exploring the spatial qualities of mass, shape, volume. Additional studio hours required. Prerequisite: ART:108 and Reading Proficiency.

ART:208  DESIGN IV  2  
Advanced problems in various aspects of design. Additional studio hours required. Prerequisite: ART:207 and Reading Proficiency.

ART:209  DRAWING III  3  
Emphasis is placed on methods of achieving compositional unity in drawing. Balance, variety, rhythm, and repetition, some of the factors responsible for unified structure in drawing, will be examined on an advanced level. Additional studio hours required. Prerequisite: ART:110 and Reading Proficiency.

ART:210  ADVANCED DRAWING  3  
Research in drawing problems that will deal primarily with concept, media, style and composition. The human figure, still-life objects and surroundings will be used as topical sources. Prerequisites: ART:209 and ART:211 and Reading Proficiency.

ART:211  FIGURE DRAWING III  3  
Advanced figure drawing from the model. Additional studio hours required. Prerequisite: ART:112 and Reading Proficiency.

ART:213  CERAMICS II  3  
A study of the techniques of wheel-thrown ceramics and extensive experimentation with glazes and oxides. Additional studio hours required. Prerequisite: ART:113 and Reading Proficiency.

ART:214  PAINTING II  3  
A continuation of ART:114 with emphasis on composition and color. Knowledge will be developed for future individual study. Additional studio hours required. Prerequisite: ART:114 and Reading Proficiency.

ART:215  PRINTMAKING II  3  
A continuation of ART:115. In addition to continued exploration of media covered in Printmaking I, this course introduces students to additional printmaking techniques, from a selection of lithography, silk screen, photo-mechanical methods, Chinese collé and mixed media. Additional studio hours required. Prerequisite: Reading Proficiency.

ART:216  SCULPTURE II  3  
A continuation of the study of the elements of sculpture, stressing the more creative approach in terms of new methods and materials. Emphasis will be on the human and natural forms as a basis for academic and subjective analysis. Additional studio hours required. Prerequisite: ART:116 and Reading Proficiency.

ART:221  PAGE LAYOUT: QUARK/INDESIGN  3  
This course is designed to provide students with an advanced exploration and understanding of the QuarkXPress and Adobe InDesign digital page design and layout software programs. Principles of page layout design and the graphic synthesis of typographic elements will be studied with these programs on an advanced level. Additional lab hours required. Prerequisites: ART:131 and Reading Proficiency.

ART:224  PACKAGE DESIGN  2  
This course explores the concepts, techniques and concerns of graphic design as applied to package design and presentation display. Students will produce three-dimensional packaging solutions. Issues covered will include the functions of effective package design, special production processes and the creation of threedimensional package mock-ups. Additional studio hours required. Prerequisites: ART:131 and ART:233 and Reading Proficiency.

ART:233  GRAPHIC DESIGN III  3  
This class will continue to examine the subject of graphic design with the emphasis upon the “hands-on” approach to finding creative solutions to complex visual communications problems. A professional approach to the discipline will be stressed. Additional studio hours required. Prerequisites: ART:108 and ART:134 with grades of “C" or better, prior or concurrent enrollment in ART:138 with a grade of "C" or better, and Reading Proficiency.

ART:234  GRAPHIC DESIGN IV  3  
This course is an advanced exploration of graphic design, with the emphasis on creative problem solving and the use of professional practices. Students will learn to solve complex visual communication problems such as logo design, package design, point of purchase and publication design. Additional studio hours required. Prerequisites: ART:135 and ART:233 with grades of “C” or better and Reading Proficiency.

ART:235  GRAPHIC PRODUCTION II  2  
This course is a continuation of Graphic Production I but with a greater emphasis on the proper preparation of electronic pre-press files for spot-color, multi-color and process-color print production. Students will execute print projects using the computer to create pre-press files for print production. They will also examine many advanced printing techniques, multiple page document preparation and the proper methods for sending files to printers. Additional studio hours required. Prerequisites: ART:134 and ART:135 with grades of “C" or better and Reading Proficiency.

ART:236  TYPOGRAPHY  2  
This course will stress the refined use of typography as a design and communication tool. Students will study the history and classifications of letterforms and employ this knowledge base in the creation of various typographical designs and presentations. Typical projects may range from letter and alphabet design to the use of typographical forms as the feature design elements in graphic designs or page layouts. Additional studio hours required. Prerequisites: ART:131 and ART:135 with grades of “C” or better and Reading Proficiency.

ART:238  DRAWING FOR GRAPHICS II  2  
Students will build upon the principles covered in Drawing for Graphics I as they learn about additional techniques and materials necessary to explore drawing solutions to graphic design problems typically encountered in this field. Additional studio hours required. Prerequisite: ART:138 with a grade of “C" or better and Reading Proficiency.

ART:239  ILLUSTRATION I  3  
This course is a comprehensive exposure to the methods and theories of illustrative drawing and painting as it is used in reproduction. A special emphasis will be placed on its application to advertising and publication design. Additional studio hours required. Prerequisites: ART:131 and ART:138 with grades of “C” or better, or concurrent enrollment in same, and Reading Proficiency.

ART:240  ILLUSTRATION II  3  
This class exposes students to an experimental approach to illustrative drawing and painting with a strong emphasis on the creative use of materials and design principles. The use of computer drawing and painting programs may be stressed. Additional studio hours required. Prerequisite: ART:239 with grade of “C” or better and Reading Proficiency.
ART:241 PUBLICATION DESIGN 3
This course will introduce the student to the computer software used in the development of page design and layout. Emphasis will be placed on the production of basic business publications including newsletters, flyers, brochures, etc. General principles of page layout design will be studied including the placement of text, illustrations and logos and the important synthesis of these typographic elements. Additional lab hours required. Prerequisite: ART:131 and ART:133 with a "C" or better, or permission of program coordinator, and Reading Proficiency.

ART:242 DRAWING FOR GRAPHICS III 2
Students in this class will build upon the principles covered in Drawing for Graphics II and will learn techniques and materials required to explore drawing solutions using the human figure to fulfill critical needs in the illustration profession. Additional studio hours required. Prerequisite: ART:238 and Reading Proficiency.

ART:243 FIGURE ILLUSTRATION 2
Students in this class will learn to draw the human figure emphasizing the purpose or function needed for advertising or publishing assignments. Analysis will be made of the ideal human figure through structure, anatomy, expression, and its placement in an environment. Additional studio hours required. Prerequisite: ART:111 and Reading Proficiency.

ART:245 PORTFOLIO DESIGN AND PROFESSIONAL PRACTICES 2
This course will discuss the opportunities and procedures in the various fields of graphic design, illustration and advertising design. Students will be guided in the preparation of a portfolio of their work, in the development of a resume and related documents, and will learn practical interviewing techniques. The intent will be to prepare students to enter the art field with a confident and professional attitude. Additional studio hours required. Prerequisite: Permission of Program Coordinator and Reading Proficiency.

ART:251 INTERIOR DESIGN II 3
Problem analysis and design solutions for residential and commercial interiors focusing on user needs, specification procedures, and formal presentation techniques. Additional studio hours required. Prerequisites: ART:151 and prior or concurrent enrollment in ARC:112 and Reading Proficiency.

ART:252 RESIDENTIAL INTERIOR DESIGN 3
An in-depth study of residential design emphasizing the relationship of designer and client from initial consultation through the design process to the final execution of the contracted agreement. Additional studio hours required. Prerequisite: ART:251 and Reading Proficiency.

ART:253 COMMERCIAL INTERIOR DESIGN 3
Advanced study and application of the problem solving approach to design as it relates to commercial interiors with emphasis on business procedures and resources. Additional studio hours required. Prerequisite: ART:251 and Reading Proficiency.

ART:254 HISTORY OF CULTURAL ENVIRONMENTS II 3
This course is a continuation of the history of furniture, decorative arts, and architectural elements from Tudor England to current times. The emphasis is on materials, techniques, and aesthetics that make environments unique within their historical cultural environments. There will be slides with the lectures. A notebook of styles will be required. Prerequisite: ART:153 and Reading Proficiency.

ART:255 ARTIFICIAL LIGHT PHOTOGRAPHY 3
Introduction to basic theories of illumination as applied to a variety of subject compositions. Use of the view camera with Polaroid film, negative and reversal films; production of professional quality prints. Prerequisite: ART:165 and Reading Proficiency.

ART:266 BLACK AND WHITE PRINTING LAB 3
Guided study of black and white printing techniques geared to individual student needs and interests. Competence and excellence in traditional techniques of "straight" photography are stressed, with extension into refinement and alternatives. Suggested co-requisite for students in Photography I who are interested in gaining greater accomplishment in one semester. Also open to students in other photography classes and those who have a basic knowledge of darkroom processes and would like further practice and direction. Additional studio hours required. Prerequisite: ART:165 and Reading Proficiency.

ART:267 CONTEMPORARY CONCEPTS IN PHOTOGRAPHY 3
A seminar class focusing on current issues and ideas about photography. Students will actually practice the most recent trends through assignments, augmented by visits to galleries, lectures, and demonstrations. Reading, writing and discussion of latest concepts will be central to the course. Additional studio hours may be required. Prerequisite: ART:165 or ART:186 and Reading Proficiency.

ART:268 LARGE FORMAT PHOTOGRAPHY 3
An introduction to view camera techniques as it is used indoors and outdoors. Hand held light meters will be required, their use explained and practiced. Use of view camera controls, handling of 4"x5" sheet film, printing from large format negatives, the making of fine quality prints, and appropriate print presentation will be emphasized. Additional studio hour required. Prerequisite: ART:165 or departmental approval and Reading Proficiency.

ART:269 FIELD PHOTOGRAPHY 3
The unique emphasis of this course is on photographing subject matter found in nature. Trips to areas of high photographic interest will provide students the opportunity to explore and visually portray elements of natural environments. Macro and telephoto lenses would be particularly useful but not required. By calling the course “Field Photography” rather than “Nature Photography,” the attention is placed less upon subject matter than upon concern that the students learn to adapt to and photograph new situations. Prerequisite: ART:165 or departmental approval and Reading Proficiency.

ART:270 FIGURE FASHION PHOTOGRAPHY 3
Students will set up, light and photograph models in the studio. Control of lighting composition, props, different films, and other materials will be included. Additional assignments will involve photographing models in a variety of situations outdoors and other locations. Evaluation of final photographs will encourage the development of professional standards. Additional studio hours required. Prerequisite: ART:165 and Reading Proficiency.

ART:271 PORTRAIT PHOTOGRAPHY 3
Using both view cameras and small format 35 mm cameras, students will make portraits of people. Both natural and artificial studio lights will be used. Close-ups, environmental portraits, and group portraits will be covered. In class, students will use view cameras in a studio setting. Outside assignments will be done with students’ own cameras. Black and white and color materials may be used. Work will include processing of roll and sheet films, the making of quality prints and methods of print presentation. Students should have their own handheld light meters and strobe for off-camera use. Additional studio hours required. Prerequisite: ART:165 and ART:168 and Reading Proficiency.

ART:272 DOCUMENTARY PHOTOGRAPHY 3
A study of photography as it dramatizes issues and their implications. The methods of approach used by documentary photographers will be discussed. Students will view their work and consider the possible impact of it on society. Students will use their cameras to study issues in their own environments. Finished photographs will be exhibited in appropriate relation to the topics with which they are concerned. Additional studio hours required. Prerequisite: ART:165 and Reading Proficiency.

ART:273 ARCHITECTURAL PHOTOGRAPHY 3
The subject matter of this photography class will be cityscapes, buildings of all types, interiors and exteriors. View cameras will be used in class. Class will meet on campus as well as travel to various locations in the city to photograph. Use of view camera operations to control perspective will be emphasized. Assignments outside of class will be done with students’ own cameras. A moderately wide angle lens (28mm-35mm focal length on 35mm camera) would be useful but is not required. Students need their own light meters. Black and white materials will be used. Work will include processing of roll and sheet films, the making of fine quality prints and appropriate print presentation. Additional studio hours required. Prerequisites: ART:165 and ART:168 and Reading Proficiency.

ART:274 PRESENTATION GRAPHICS 3
Introduction to the creation of presentation quality charts, graphs, graphics and typographic designs and the use of vector-based computer art programs. Emphasis is on learning to use computer tools and developing skills which are necessary for effective communication of ideas through the creative use of layout and color, typography and graphic imagery. Additional lab hours required. Prerequisites: ART:240, ART:238, ART:165 and ART:127 or with permission of instructor and Reading Proficiency.
ART:275 PHOTO IMAGING I: PHOTOSHOP 3
This course is an investigation of processing of continuous tone image files. Software tools and adjustment controls will be learned. Students will investigate scanning, color and tonal management, image repair and compositing, and printing. A portfolio of prints will be created emphasizing the individual expressiveness of the student. Additional lab hours required. Prerequisite: ART:131, ART:107 (may be taken concurrently), or demonstration of proficiency by exam and Reading Proficiency.

ART:280 FINAL CUT 3
Students will produce professional quality video content using Macintosh Final Cut non-linear editing software. Students will create digital video content and process project through the software. Clips will be edited; sound, transitions and titles will be added. Students will conceive, photograph, edit and complete a short movie. Additional lab hours required. Prerequisites: ART:275 and Reading Proficiency.

ART:281 PROFESSIONAL PREPARATION 3
Opportunities in various fields of photography and business procedures will be discussed. Students will prepare a portfolio in the form of prints, slides and possible video tape format. Students will be guided in the preparation of resumes and practice interviewing techniques. Emphasis will be on orienting students to enter the field with a confident and professional attitude. Additional studio hours required. Prerequisite: ART:105 and Reading Proficiency.

AT:100 HARDWARE CONFIGURATION AND TROUBLESHOOTING: MACINTOSH/WINDOWS 1
This course will address setting up the computer and connecting peripheral devices such as cameras, scanners and printers; partitioning the hard drive, adding RAM, installing software and virus protection, and troubleshooting simple problems. Advanced topics include networking and using a server. Additional lab hours may be required. Corequisites: ART:131 or ART:127 and Reading Proficiency.

AT:101 COLOR MANAGEMENT 3
This course investigates the use of dedicated software to analyze and color calibrate the computer monitor with related peripheral devices such as cameras, scanners, printers and film recorders. Students will learn the principles of color management, and how to create color signatures or profiles for each device and to integrate the system for color accuracy and consistency. Additional lab hour required. Prerequisite: ART:275 and Reading Proficiency.

AT:104 ELECTRONIC PHOTO STUDIO 3
Investigates electronic (filmless) photography, both in the studio and on location, and high resolution scanning of traditional film media. Current camera technologies are considered. Students will examine the advantages of either direct capture or scanning original film. Students will be required to demonstrate proficiency and understanding in the application of the equipment by completing assigned projects. Additional lab hour required. Prerequisite: ART:275, ART:167 and Reading Proficiency.

AT:105 DIGITAL PRINTING 3
This course is a survey of digital printing possibilities. Methodologies for converting electronic files to printed media are investigated. Varieties of printing technologies are evaluated for appearance, color fidelity, resolution, saturation and permanence. Where applicable to the process examined, variations in media (paper, canvas or films) will be tested. Additional lab hours required. Prerequisite: ART:275, ART:165 and Reading Proficiency.

AT:106 TWO DIMENSIONAL COMPUTER ANIMATION: ADOBE AFTER EFFECTS 3
This course will instruct students in the use of digital still and motion images combined with sound and special effects to create animated, multimedia sequences. Additional lab hours required. Prerequisite: ART:275 and Reading Proficiency.

AT:108 COMPUTER PAINTING AND DRAWING: COREL PAINTER 3
Students will utilize a variety of computer drawing software programs to create life drawings utilizing digitizing tablets. Assignments will include still life as well as the human figure. The techniques of using the pressure sensitive drawing tablet will be investigated to allow the creation of expressive line, mass and shading. A portfolio of drawings in both color and monochrome will be submitted at the conclusion of the course. Additional lab hours required. Prerequisites: ART:131 with a grade of "C" or better, ART:109 and Reading Proficiency.

AT:109 UNIVERSAL DOCUMENT EXCHANGE: ADOBE ACRABOT 3
Students will create documents that can be exchanged in multiple software and web applications, while preserving fonts, colors, images, layouts and all original formats. Students will explore linking and logic tree structure for the production of interactive computer based training as well as interactive business communication and collaboration. Additional lab hours required. Prerequisite: ART:131 and Reading Proficiency.

AT:120 COMPUTER DRAWING I: ILLUSTRATOR 3
This course is an investigation of vector imaging software used for the creation of drawings, typography and logotypes. Tools, palettes and menus will be learned, and methods of creating original expressive works will be developed. Students will investigate scanning reflective arts, tracing, creating shapes, line control, color fills, and printing. Additional lab hours required. Prerequisite: ART:109 and ART:131 with grades of "C" or better, and Reading Proficiency.

AT:121 WATERCOLOR I 3
A foundation course covering basic watercolor techniques and materials including washes, wet-into-wet, glazing, shading, color mixing and layering. Course will emphasize development of skills, diverse approaches and an individual style. Through the study of both contemporary and traditional watercolors, students will become familiar with the amazing potential of this medium. Class will paint a variety of subjects including still lifes and nature. Additional studio hours required. Prerequisite: Reading Proficiency.

AT:124 BOOKMAKING 3
Students will learn about the history and aesthetics of books, and will explore (through hands-on studio production) bookmaking and binding techniques. Form, concept, craft, problem-solving ability, creative experimentation, and historical knowledge will all be stressed. Additional lab hours required. Prerequisite: Reading Proficiency.

AT:130 COMPUTER DRAWING II: ILLUSTRATOR 3
This course will refine the basic understanding of vector imaging, and incorporate specialized functions for use in professional design. Students will perform advanced work using vector imaging software that will explore techniques which will speed production and enhance the functionality of the vector application. Technical issues related to design, print and publication, charts and plans will be addressed. Additional lab hours required. Prerequisite: AT:120 with a grade of "C" or better and Reading Proficiency.

AT:131 AIRBRUSH I 2
A comprehensive study of the airbrush and its specialized uses. Illustrations, technical rendering, and advertising design projects will be demonstrated through airbrush technique. Additional studio hours may be required. Prerequisite: Reading Proficiency.

AT:135 COMMUNICATION AND DESIGN FOR THE WWW I 3
Students will learn to use the elements of graphic design to produce Web pages that effectively deliver art and information for business/organizational communications. Additional lab hours required. Prerequisite: ART:133 and ART:131 or ART:227 and Reading Proficiency.

AT:141 COMPUTER ART APPLICATIONS 3
An introduction to the use of computer graphics software for the creation of art work applicable to the advertising and graphics design industry. No previous computer experience is necessary, but some art background is required. Additional lab hours required. Prerequisite: ART:108 or equivalent work experience and Reading Proficiency.

AT:143 COMMUNICATION AND DESIGN FOR THE WWW II 3
Expand Web site interactivity. This course explores methods of refining basic web site creation and incorporating sophisticated techniques such as cascading style sheets, animation and sound plug-ins, and addressing browser differences. Additional lab hours required. Prerequisite: MCM:135 or AT:135 or IS:135 and Reading Proficiency.

AT:144 WWW SPECIAL TOPICS 3
This course specializes in advanced enhancements to World Wide Web design. Students will learn to encode properties that make the web site more dynamic and interactive. Students will use the latest software to enhance web pages with interactive and animation techniques. Additional lab hours required. Prerequisite: MCM:135 or AT:135 or IS:135 and Reading Proficiency.
AT:146  3D MODELING I: SURFACE MODELING  3
This course focuses on the development of three-dimensional models for use in
multimedia, industrial design, and character development. Creation of 3D objects
and spatial environments will be studied, in addition to photorealistic rendering,
texture mapping and lighting techniques. Additional lab hours required. Prerequisites: MCM:127 or AT:154 and Reading Proficiency. Either course may be
taken concurrently.

AT:147  3D MODELING II: SPLINES AND NURBS  3
This course expands the repertoire of 3D modeling techniques established in
Modeling I. Spline based techniques using spline patches and NURBS are the
primary emphasis. The ability to digitize physical models will also be explored,
with an eye toward the strengths and weaknesses of this alternative approach.
Texturing techniques are further explored with the use of interactive 3D paint
software. Rendering methods are investigated with an emphasis on ray-tracing.
Additional lab hours required. Prerequisite: AT:146 and Reading Proficiency.

AT:151  DESIGNER RESOURCES  3
This course is to familiarize the student or professional with industry and trade
resources available for the design of interior spaces. It will include lectures by
suppliers relating to flooring, lighting, wallcoverings, furniture, window and ceil-
ting treatment, fabric, architectural fixtures and accessories. Prerequisite: Reading Proficiency.

AT:152  LIGHTING DESIGN  3
This is a lecture/studio course where students will learn methods of successful
lighting design and applications of lighting details to working drawings for resi-
dential and commercial environments. Students will learn specifications and
how to write a lighting schedule. Additional studio hours required. Prerequisite: Reading Proficiency.

AT:153  INTERIOR DECORATION  3
A study of our heritage in homes, housing choices today, and the design of
today’s home interiors. The principles and elements of design will be applied to
the selection of color, fabric, furniture and accessories used to create functional
and aesthetic interiors. Prerequisite: Reading Proficiency.

AT:154  CAMERA AND LIGHTING TECHNIQUES FOR 3-D DESIGN  3
This course increases students’ awareness and skills in designing lighting con-
figurations for 3D software projects. Students will study lighting behavior under
actual studio conditions. The results of studio observation will be translated to
the lighting controls in 3D Design software. Additional studio hours required. Prerequisite: ART:275, ART:165 and Reading Proficiency.

AT:160  DIGITAL CAPSTONE  3
The student will enroll in the Capstone Course as the culmination of their cer-
tificate program. This course will allow the student to explore a thesis project
which will demonstrate the skills and creativity fostered in each discipline.
Capstone courses will include students from all areas of specialization. Additional lab hours required. Prerequisites: Digital Photography Option - AT:104
and Animation Option - AT:236. Reading Proficiency for all options.

AT:175  VIDEO ART I  3
An investigation into video art as a personal expressive media for the individual
artist, including work with computers, sound equipment, photography, and other
tools used in the contemporary art world. Students will have the opportunity to
investigate these technologies as they combine the various media to make artis-
tic statements based on personal concerns and aesthetic decisions. This course
is and/or “consumer” equipment as a creative media. Additional lab hours
required. Prerequisites: ART:165 and ART:239 or permission of instructor and
Reading Proficiency.

AT:201  MIXED MEDIA  3
An introduction to mixed media (assemblage) art; the complementary component
for design, drawing and figure drawing. An incorporation of all aspects of pic-
ture-making with an emphasis on experimentation, process and concepts with
paint integration in the visual arts. Additional lab hours required. Prerequisites:
ART:107 and ART:109 and Reading Proficiency.

AT:204  COMIC BOOK ILLUSTRATION I  3
Students interested in Comic Book Illustration learn the basics and techniques
associated with this popular genre. Various materials and techniques will be
explored to produce formatted comic strips. Additional studio hours required. Prerequisites: ART:138 and Reading Proficiency.

AT:205  DIMENSIONAL ILLUSTRATION I  3
Students interested in Illustration will go beyond usual two-dimensional art
methods to create dimensional art. Various material and techniques will be
explored to introduce unique three-dimensional sculpture-based art methods to
students. Additional studio hours required. Prerequisites: ART:138 and Reading Proficiency.

AT:206  3D MINIATURE STUDIO SET DESIGN  3
Students interested in creating 3D Miniature Studio Sets will learn the basics of
designing and constructing miniature sets for various entertainment venues and
other related uses. The student will utilize skills learned in Drawing for Graphics
and Illustration classes to execute imaginative sets. Additional studio hours
required. Prerequisites: ART:138 and Reading Proficiency.

AT:207  DIGITAL ILLUSTRATION I  3
Digital Illustration I is a comprehensive exposure to the methods and theories of
creating Illustrations using the computer as the final medium. A special empha-
sis will be placed on creative processes and using computer graphic software to
produce illustrations for portfolio presentation. Additional lab hours required.
Prerequisites: ART:131 and Reading Proficiency.

AT:208  FANTASY ILLUSTRATION I  3
Students interested in Illustration will learn the basics and techniques of this
popular genre used on book and gaming covers. The student will utilize skills
learned in drawing for graphics and illustration to execute imaginative and cre-
ative illustrations. Additional studio hours required. Prerequisites: ART:138 and Reading Proficiency.

AT:210  DRAWING PROBLEMS  3
This course focuses on drawing problems of an advanced nature. It will stress
the continued development of individual ideas in ART:210. Additional lab hours
required. Prerequisite: ART:210 and Reading Proficiency.

AT:212  SPECIAL TOPICS IN PHOTOGRAPHY  3
This course will offer the students a variety of topics on a rotating semester
basis that are not included in the current elective curriculum from bookmaking to
Polairoid, transfer and emulsion lifts, to medium format photography, to photo-
graphic lighting. Additional studio hours required. Prerequisites: ART:165 and
ART:166 and Reading Proficiency.

AT:213  ADVANCED CERAMICS  3
A self-directed learning experience for students. Course work may include throw-
gle, glaze formulation, hand-building and kiln firing. Additional studio hours
required. Prerequisites: ART:213 and Reading Proficiency.

AT:215  ADVANCED PRINTMAKING  3
A continuation of ART:115 and ART:215. Students will pursue a more individual
course of instruction and portfolio development in the printmaking media. The
student will choose from media taught in ART:115 and ART:215 to develop a port-
folio of professional prints. Additional studio hours required. Prerequisite: ART:215 or permission of coordinator and Reading Proficiency.

AT:219  FIGURE SCULPTURE  3
This course is an intensive exposure to creating figurative sculpture. Students
will build basic armatures for both portraits and figures and work in clay from the
model. Basic methods of plaster casting (waste molds) may be offered as an
option at the end of the semester. Additional studio hours required. Prerequisites: ART:111 and Reading Proficiency.
AT:221 WATERCOLOR II 3
An expansion and application of the basic watercolor techniques from the foundation course AT:121 through a series of paintings. Course will emphasize color theory, composition and development of an individual style along with study of master watercolorists both past and present. Students will paint a variety of subjects including still lifes, landscape and the human figure. Development of individual response and fluency of technique will be emphasized. Additional studio hours required. Prerequisite: AT:121 or permission of coordinator and Reading Proficiency.

AT:225 WATERCOLOR III 3
An expansion of AT:221. The self-motivated student will work on advanced watercolor techniques in specific assignments and in self-directed paintings. Course will emphasize advanced color theory and development of content, subject matter, personal style and the ability to self-critique, with significant input from the instructor. Additional studio hours required. Prerequisite: AT:221 or permission of coordinator and Reading Proficiency.

AT:226 WATERCOLOR IV 3
An expansion of AT:225. The advanced and self-motivated student will work on specific assignments and on self-directed paintings with significant input from the instructor. Emphasis will be on using the watercolor medium to create sophisticated compositions, a thematic body of work and a personal style. Additional studio hours required. Prerequisite: AT:225 or permission of coordinator and Reading Proficiency.

AT:227 3-D STUDIO 3
This course provides students with the opportunity to pursue extended study in 3-dimensional studio disciplines. Additional studio hours required. Prerequisites: AT:213 or ART:216 and Reading Proficiency.

AT:228 FIGURE PAINTING 3
Drawing and painting from observation of the model in a variety of media. Emphasis will be placed on understanding the inherent structural and formal problems involved with depicting the human figure in its environment. Additional studio hours required. Prerequisite: ART:112 with a grade of “C” or better and Reading Proficiency.

AT:229 ADVANCED PAINTING PROJECTS 3
This course will develop the painting and perceptual skills of students. The course is taught with an emphasis on individual study. Additional studio hours required. Prerequisite: ART:214 and Reading Proficiency.

AT:230 FIGURE SCULPTURE II 3
This course is a continuation of AT:219 and will more intensely explore methods for creating figurative sculpture. Students will continue to work from models, increasing their understanding of structural anatomy and how it relates to surface form. Additional studio hours required. Prerequisites: AT:219 and Reading Proficiency.

AT:231 AIRBRUSH II 2
A continuation of AT:131. Additional studio hours required. Prerequisite: AT:131 and Reading Proficiency.

AT:233 STORYBOARDING/ANIMATICS 2
This course is an introduction to pre-production planning for special effects and animation as applied to multimedia, interactive media, video and film. The focus of the class will be communicating the drama of movement and special effects through effective design and pacing. Course topics include story telling, storyboarding formats and flowcharts, along with sound track and script interpretation. Additional lab hours required. Prerequisite: ART:131, ART:238 with grades of “C” or better and Reading Proficiency.

AT:234 COMPUTER ANIMATION I 3
This course is an introduction to 3D computer animation. Students will learn basic computer animation techniques. By producing short animated segments, students will learn animation fundamentals such as: keyframing, lighting, camera work, texturing, sequencing, rendering, and post-production. Additional lab hours required. Prerequisites: ART:243 and ART:138 with grades of “C” or better and Reading Proficiency.

AT:235 COMPUTER ANIMATION II 3
A continuation of 3D Animation I. Students further their skills in 3D Animation II by studying new techniques such as: 3D camera tracking, advanced keyframing, photo realistic rendering, advanced post production, and an introduction to character animation. Additional lab hours required. Prerequisite: AT:234 and Reading Proficiency.

AT:236 COMPUTER ANIMATION III: CHARACTER ANIMATION 3
Advanced 3D design and animation techniques with software specifically designed for motion picture quality output. The course covers modeling, lighting, texture mapping, path and basic animation and rendering. Produce a model and an animation sequence by the end of the course. Additional lab hours required. Prerequisite: AT:235 and Reading Proficiency.

AT:237 FIGURE SCULPTURE III 3
This is a continuation of AT:230, Figure Sculpture II. As students gain experience through advanced projects, emphasis will shift from acquiring foundation skills in three-dimensional figurative sculpture to concept development and individual direction. Additional studio hours required. Prerequisites: AT:230 and Reading Proficiency.

AT:242 HISTORY OF GRAPHIC COMMUNICATIONS 3
This is a survey course on the history of Graphic Communications. This course will begin with the development of language and will trace the evolution of word and image throughout history using the works of designers and illustrators that have influenced the continuing development of the discipline. Prerequisite: Reading Proficiency.

AT:246 ADVANCED COMPUTER ART APPLICATIONS 3
This course is for individuals who wish to further explore the use of computer graphics as they can be applied to the advertising and business communication industries. Considerable latitude will be given as to areas of concentration, but all studies will stress the creative possibilities of the medium. Additional lab hours required. Prerequisite: ART:131 with a grade of “C” or better and Reading Proficiency.

AT:247 BROADCAST GRAPHICS 2
An introduction to commercial broadcast design and techniques. Students will explore methods of combining computer generated type and art with live video images for advertising, editorial, and informational purposes. The class also includes an introduction to 3-dimensional video animation programs. Additional lab hours required. Prerequisites: ART:238, ART:240, ART:165 and ART:127 or permission of instructor and Reading Proficiency.

AT:248 AUDIO/VISUAL MULTI-IMAGE PRESENTATIONS 3
This course introduces students to animated presentations which combine music and narration with photography, video, and computer art. Students will work with scripts, storyboards, soundtracks, computer graphics and photographic/videographic images to develop projects for multi-image slide shows and video presentations in the fields of advertising, motivation, education and entertainment. Additional lab hours required. Prerequisite: ART:240, ART:238, ART:240 and ART:127 or with permission of instructor and Reading Proficiency.

AT:251 COMPUTER AIDED KITCHEN AND BATH DESIGN 3
Utilizing 3-D design software, the students will learn to layout, design and specify residential kitchens and baths. They will create 2-D and 3-D visual presentations and renderings of kitchens and bath interiors. Some computer knowledge or industry based knowledge of kitchen and bath design is recommended. Prerequisite: ART:151 and Reading Proficiency.

AT:252 ADVANCED AUTOCAD FOR INTERIOR DESIGN 3
This course will reinforce AutoCAD use by designing on the computer. The students will integrate auxiliary software, do basic perspectives and color plotting of representation, and will learn vendor type add-on software. The students will use the Internet for research and drawing transmission. Prerequisite: ART:154 and Reading Proficiency.

AT:253 ADVANCED PROBLEMS IN INTERIOR DESIGN 3
Minimum of 48 hours of supervised independent work. The student will choose a project in either a residential or a commercial area; it will include a complete interior design problem and will involve both layout and client presentation techniques. Prerequisite: Satisfactory completion of first year of program and Reading Proficiency.
AT254  WORKPLACE LEARNING: INTERIOR DESIGN  3
This experiential course provides the student the opportunity to apply theory and skills learned in the classroom, learn new skills, and explore career possibilities while supervised by a professional in the field and a faculty member. Students will observe and participate in the functions of the interior design industry to enhance their preparation for entering the field. Minimum 150 hours in the work-place throughout the term. Prerequisites: Satisfactory completion of the first year of program. Departmental Approval. Reading Proficiency.

AT257  COLOR PHOTOGRAPHY II  3
Advanced instruction in the theory of color, materials of color photography, and techniques of color printing. Students will work with transparencies and color reversal materials and explore large format color processes. A portfolio of color prints will be created by the student. Additional studio hours required. Prerequisites: ART:167 and Reading Proficiency.

AT275  VIDEO ART II  3
A continued investigation into video art as a personal expressive media for the individual artist, including work with computers, sound equipment, photography, and other tools used in the contemporary art world. Students will have the opportu-nity to investigate these technologies as they combine the various media to make artistic statements based on personal concerns and aesthetic decisions. This course is specifically for the fine artist who wishes to use "low end" and/or "consumer" equipment as a creative media. Emphasis is on relatively complex projects and collaborative ventures, and further developing an individual style of personal expression with these strategies and technologies. Additional lab hours required. Prerequisites: AT:175 or permission of instructor and Reading Proficiency.

AT276  PHOTO IMAGING II: PHOTOSHOP  3
This course explores intermediate methods of working with continuous tone images in an efficient manner. Topics include refinements in tonal and color adjustment tools, masking tools, typography tools, color modes, sharpening pro-cedures, and compositing techniques. A portfolio of color images will be pro-duced by the end of the course emphasizing the individual expressiveness of the student. Additional studio hours required. Prerequisites: ART:275, ART:108 (may be taken concurrently) and Reading Proficiency.

AT277  PHOTO IMAGING III: PHOTOSHOP  3
This course explores advanced methods of working with continuous tone images. In addition to a general review of the image processing software, topics include such subjects as incorporating color management into the workflow, predictive evaluation of numeric density readings, and a survey of printing device parameters. A portfolio of color images will be produced by the end of the course emphasizing the individual expressiveness of the student. Additional lab hours required. Prerequisites: AT:276 and Reading Proficiency.

AT279  NON-SILVER PHOTOGRAPHY  3
An introduction to processes which use light sensitive materials other than silver bromide paper to produce imagery. Working from photographic negatives, students will have the opportunity to produce prints using the following methods: Van Dyke Brown printing, Cyanotype, Kwik-print and Photoscreen printing. Additional studio hours may be required. Prerequisites: ART:165 or departmental approval and Reading Proficiency.

AT280  ADVANCED PHOTOGRAPHY  1 - 4
This class is an advanced studio course that will emphasize both the conceptual and technical challenges of creating a cohesive, related body of work for either a portfolio or exhibition. Additional studio hours required. Prerequisites: ART:165 and ART:166 and Reading Proficiency.

AT281  SCULPTURAL MOLD MAKING  1 - 3
This course offers students individual attention in the variety of approaches to mold making within the field of art. Instruction may focus on any number of applications, including plaster waste, alginate, rubber, silicone, or fiberglass mold making. Objects to be molded and cast will vary along with the appropriate approach. Additional studio hours required. Prerequisites: ART:116 and AT:219 and Reading Proficiency.

AUTOMOTIVE TECHNOLOGY

AUT150  AUTOMOTIVE FUEL AND INDUCTION SYSTEMS  3
This course is a study of fuel and induction systems which includes gasoline fuel delivery systems, and diesel engines. Diagnosis and repair techniques as well as basics of the control systems will be covered. Corequisite: AUT:151

AUT151  AUTOMOTIVE ENGINE OPERATION  3
This course will be concerned with theory, design and repair procedures of the automotive engine including valves and lower engine service. Additional lab hours required.

AUT156  AUTOMOTIVE ELECTRICITY  3
This course is a study of the fundamentals of automotive electricity, magnetism, induction, and the use of wiring diagrams. This course also includes operating principles, diagnosis and repair of starting systems, charging systems, ignition systems, batteries, lighting and accessory circuits. Additional lab hours required. Prerequisite: Reading Proficiency.

AUT158  CHARTS, DIAGRAMS AND HANDBOOK USAGE  2
This course teaches the use of handbooks, with emphasis upon interpreting specifications and automotive charts and diagrams.

AUT163  COOPERATIVE WORK EXPERIENCE I  7
Theory and instruction received in the previous courses taught with a Ford emphasis are applied to work in the sponsoring dealership. Coop consists of a minimum of 280 clock hours at the dealership, typically worked at 40 hours per week for a 7 week period. Prerequisites: AUT:156 and AUT:168.

AUT164  COOPERATIVE WORK EXPERIENCE II  7
A continuation of AUT:163 with an emphasis on the theory and instruction received in the previous courses applied to work in the sponsoring dealership. Coop consists of a minimum of 280 clock hours at the dealership, typically worked at 40 hours per week for a 7 week period. Prerequisites: AUT:163, AUT:167 and AUT:169.

AUT165  COOPERATIVE WORK EXPERIENCE III  7
A continuation of AUT:164 with an emphasis on the theory and instruction received in the previous courses applied to work in the sponsoring dealership. Coop consists of a minimum of 280 clock hours at the dealership, typically worked at 40 hours per week for a 7 week period. Prerequisites: AUT:164, AUT:258, AUT:259.

AUT166  COOPERATIVE WORK EXPERIENCE IV  7
A continuation of AUT:165 with an emphasis on the theory and instruction received in the previous courses applied to work in the sponsoring dealership. Coop consists of a minimum of 280 clock hours at the dealership, typically worked at 40 hours per week for a 7 week period. Prerequisites: AUT:165, AUT:258 and AUT:259.

AUT167  AUTOMOTIVE ELECTRONICS  3
This course deals with advanced electrical systems including basics of electron-ic engine control systems, electronic functions, electronic system diagnosis and repair. Additional lab hours may be required. Prerequisites: AUT:156.

AUT168  SUSPENSION AND STEERING I  3
This course will be concerned with the design principles, diagnosis and repair of the front and rear suspension systems including front-end alignment, 4-wheel alignment, manual and power steering assemblies and related components to include gears and linkages, as well as tire and wheel balance. Additional lab hours required.

AUT169  SUSPENSION AND STEERING II  3
Continuation of AUT:168 including the design, principles of operation, diagnosis and repair of the following components: conventional brake systems, anti-lock brake systems, electronic steering and ride control systems. Attention is given to live car diagnosis and repair procedures related to frame, suspension, steering, and brake components. Additional lab hours required. Prerequisite: AUT:168.
AUT:170  INTRODUCTION TO DEALERSHIP SERVICE  2
This course will introduce the students to electronic service information and software used in the service department as well as warranty procedures and service labor time standards. Emphasis will also be placed on safety procedures and MSDS sheets. Additional lab hours required. Corequisite: AUT:166, AUT:163, AUT:168. Prerequisite: Only open to students currently enrolled in the Ford ASSET Program.

AUT:256  AUTOMOTIVE POWERTRAIN  3

AUT:257  AIR CONDITIONING AND AUXILIARY SYSTEMS  3
This course emphasizes theory, operation and design of power accessories, restraint systems and air conditioning, to include proper techniques of dispensing, recovery and recycling of R-12 and R134a refrigerants. NOTE: Students will be required to be certified in the recovering and recycling of R12 refrigerants in accordance with EPA standards. Additional costs will be required. Corequisite: AUT:273. Prerequisites: AUT:259, AUT:167.

AUT:258  MANUAL DRIVETRAINS  3
Theory of operation and service procedures of drive lines, constant velocity joints, manual transmissions and transaxles, differentials and clutches. Prerequisites: AUT:167, AUT:169; concurrent with AUT:259.

AUT:259  EMISSIONS AND DRIVEABILITY DIAGNOSIS  3
This course emphasizes proper diagnostic procedures and use of proper test equipment such as oscilloscopes, exhaust analyzers, meters, and Powertrain Control test equipment. Additional lab hours required. Prerequisites: AUT:150 and AUT:167; concurrent with AUT:258.

AUT:271  DIAGNOSTIC EQUIPMENT AND EMISSIONS  3
Students will learn proper diagnosis and trouble shooting procedures and related test equipment including oscilloscopes, infra-red exhaust analyzers, meters, gauges and diagnostic lane exposure. Additional lab hours required. Prerequisites: AUT:150 and AUT:167; concurrent with AUT:258.

AUT:272  ACCESORIES, CONTROLS AND AIR CONDITIONING  3
This course emphasizes theory, operation and design of power windows, power seats, speed controls, vacuum systems, other accessories, and air conditioning. Additional lab hours may be required. Prerequisites: AUT:271, AUT:281 and AUT:291.

AUT:273  AUTOMATIC TRANSMISSIONS AND TRANSAKLES  3
This course emphasizes the operations, theory, design and repair procedures of automatic transmissions and transaxles. Additional lab hours required. Prerequisites: AUT:150, AUT:167 and AUT:169.

AUT:281  AUTOMOTIVE FIELD WORK I  5
This is an advanced course with practical application on customer’s vehicles, involving student work on the diagnosis, testing, and repair of vehicles. Students have the responsibility of all shop functions. Emphasis of lab work will include five of the ASE service specialty areas. Additional lab hours required. Prerequisites: AUT:150, AUT:156, and AUT:169; concurrent with AUT:273, AUT:271, AUT:291.

AUT:282  AUTOMOTIVE FIELD WORK II  5
Continuation of AUT:281. Emphasis of lab work will include all eight ASE service specialty areas. Additional lab hours required. Prerequisites: AUT:273, AUT:271, AUT:281, and concurrent with AUT:292.

AUT:291  AUTOMOTIVE SERVICE MANAGEMENT  2
This is a Service Advisor training course complete with necessary management practices enabling a student to understand the set-up of the automotive service department. The studies include customer relations, repair order writing, and economics of shop operations. Additional hours required.

AVI:155  FLIGHT THEORY I: GROUND SCHOOL FOR PRIVATE PILOT  3
This course has been designed to provide a general background and understanding of flight theory and to prepare the participant to take the private pilot written examination administered by the Federal Aviation Administration. Prerequisite: Reading Proficiency.

AVI:156  INTRODUCTION TO AVIATION AND AEROSPACE  3
A study of the development of aviation and space flight, including simple explanations of flight fundamentals and a look ahead to careers in aviation and aerospace. Prerequisite: Reading Proficiency.

AVI:157  FLIGHT DEPARTMENT SYSTEMS  3
An introduction to the major aspects of the management of aviation operations. Included are management functions, dispatching, organization, manpower management and administration, physical operations, financial control, impact of regulations, marketing profit orientation, leases, community relations, and decision making. Prerequisite: Reading Proficiency.

AVI:158  AIR TRAFFIC CONTROL FOR PILOTS AND STUDENT CONTROLLERS  3
This course is designed to prepare the student for the technical knowledge portion of the Air Traffic Control exam. Topics covered will be getting started as a controller, inside the written exam, academy training, the history of air traffic control, clearances and separation, operational environs, tools of the trade, principles of flight, navigational aids and aircraft recognition. Pilots will find the material covered a great insight to the National Airspace System. Prerequisite: Reading Proficiency.

AVI:170  AVIATION WEATHER  3
This course is designed as an in-depth study of aviation weather in various simulated weather conditions. The causes, patterns and nomenclature of weather phenomena are made useful not only for aviation but also for other weather-dependent occupations. Prerequisite: Reading Proficiency.

AVI:201  FLIGHT THEORY IV: FLIGHT INSTRUCTOR GROUND SCHOOL  6
This course will prepare the flight instructor candidates to teach private, commercial, and instrument pilots. Students will acquire the necessary aeronautical knowledge, instructional background, and meet the prerequisites outlined in FAR Part 61 for the following FAA flight instructor written examination: 1.) Fundamentals of Instructing (F.O.I.); 2.) Flight/Ground Instructor (CFI-BGI); 3.) Instrument Flight Instructor (CFI-I.I.GI). Prerequisites: AVI:155, AVI:256, AVI:257, or equivalents and Reading Proficiency.

AVI:256  FLIGHT THEORY II: GROUND SCHOOL FOR THE COMMERCIAL PILOT  3
Topics will include a study of chart information and radio equipment, air navigation, performance and operation of aircraft, the navigational computer and weather. Prerequisite: AVI:155 and Reading Proficiency.

AVI:257  FLIGHT THEORY III: GROUND SCHOOL FOR THE INSTRUMENT PILOT  3
This course will present the fundamentals of instrument flying including a study of aircraft instruments, radio communication, and navigation equipment, instrument approach charts, and weather systems. Prerequisites: AVI:155 and Reading Proficiency.

AVI:261  FLIGHT SIMULATION I  3
A flight simulator used under the instructor's guidance will provide the student with instruction in the use of instruments under simulated conditions. The student will experience various simulated approach and instrument problems in the trainer under the direction of the instructor. Prerequisite: Reading Proficiency.
BIOLOGY

BIO:003 BRIDGES TO BIOLOGY 1
Bridges to Biology is a non-transferable, preliminary course which prepares students for Introductory to Biology. This course gives students experience in applying information management and study skills necessary for success in laboratory and coursework in the natural sciences. Additional hours required.

BIO:102 CLINICAL PHYSIOLOGY 3
An orientation to the human body, cell structure and function, histology of body cells, and the relationship of body systems to the overall health of the individual. Includes an introduction to the anatomy and physiology of selected organ systems. Additional lab hours required. Prerequisite: BIO:111 and Reading Proficiency.

BIO:103 PROBLEMS IN ANATOMY 3
A course dealing with the anatomy of the human body, study of the structure of cells, tissues, organs, and systems with emphasis on those subjects important to embalming. Additional lab hours required. Prerequisite: BIO:111 and Reading Proficiency.

BIO:104 BASIC LABORATORY METHODS 3
This course introduces basic laboratory skills in preparation for Biotechnology I. Topics and techniques include safety, sterile technique, laboratory math, quality systems, documentation, collection of data, metrology, filtration, centrifugation, bioseparations, computer data handling, telecommunications and the internet, solution and media prep, and other appropriate laboratory methods. Additional lab hours required. Prerequisites: Prior or concurrent enrollment in CHM:101 Fundamentals of Chemistry, OR high school chemistry within the past 3 years with a grade of “A” or “B”, and Reading Proficiency.

BIO:105 TOPICS IN EVOLUTION 3
This is an introductory course emphasizing both evolutionary mechanisms and evolutionary history. Areas of interest will include evolution as a process, the development of biological diversity, reconstructing past evolutionary events, and the evolution of major groups, including humans. Prerequisite: Reading Proficiency.

BIO:106 HUMAN HEREDITY 4
This course will introduce students to basic concepts in human heredity. Areas of emphasis will include DNA structure and function, modes of inheritance, population genetics, and the genetics of immunity and cancer. In addition, current genetic technologies such as genetic engineering, gene therapy, and reproductive technologies will also be covered. Additional lab hours required. Prerequisite: Reading Proficiency.

BIO:110 GENERAL ZOOLOGY 4
A survey of the animal kingdom with emphasis on the anatomy, physiology, ecology and evolution of the major invertebrate and vertebrate groups. Additional lab hours required. Prerequisite: Reading Proficiency.

BIO:111 INTRODUCTORY BIOLOGY I 4
A consideration of the principles of biology, with emphasis on the molecular approach to the structure and function of living organisms. For liberal arts students and majors in physical education, therapy, nursing, and other allied health areas. (Credit is not allowed for both BIO:111 and BIO:140). Additional lab hours required. Prerequisite: Reading Proficiency.

BIO:113 MODERN ASPECTS OF BIOLOGY (LECTURE) 3
A consideration of the principles of biology as they relate to socially relevant issues in nutrition, reproduction, sexuality, heredity, and disease. Prerequisite: Reading Proficiency.

BIO:117 CONSERVATION AND ECOLOGY (LECTURE) 3
This course is designed to focus attention on the forces at work in nature. The interrelationships of living things to their environment and to each other are discussed and in particular man’s impact on these relationships. Man’s use and abuse of renewable and non-renewable natural resources is also considered. Prerequisite: Reading Proficiency.

BIO:119 FIELD BOTANY 3
A natural history of plants using a wide variety of Missouri habitats. Topics will include lower plants, flowering plants (including trees and shrubs), edible and poisonous plants and man’s impact on Missouri forests and other communities. Techniques for collection, preservation and identification will be covered. Prerequisite: Reading Proficiency.

BIO:120 FIELD ZOOLOGY 3
A natural history of animals using a wide variety of Missouri habitats. Topics will include insects and other invertebrates, fish, amphibians, reptiles, birds, mammals, conservation and the history of wildlife populations in Missouri. Techniques for collection, preservation or live maintenance and identification will be covered. Not intended primarily for Biology majors. Prerequisite: Reading Proficiency.

BIO:122 HUMAN SEXUALITY 3
Human sexuality includes not only the biological component of male and female sexuality but also attitudes, values and feelings about one’s own gender and sex role. Consequently, in dealing with sex as a natural biological function, the expression of which is a dimension of psychosocial behavior, the sexual development and/or differentiation of men and women from conception to maturity will be stressed. (Same course as PSY:125 and SOC:125). Prerequisite: Reading Proficiency.

BIO:123 ANIMAL BEHAVIOR 3
Animal behavior is an introductory course in invertebrate and vertebrate animal behavior. Emphasis will be placed on biological clocks, migrational patterns, reproductive strategies hormones that drive behavior, social behavior, and the role of genetics and evolution in determining behavior. Prerequisite: Reading Proficiency.

BIO:124 GENERAL BOTANY I 4
Students will be introduced to the biological aspects of plant life, including cell structure and function, anatomy, morphology, physiology, taxonomy. (Same course as HRT:101). Additional lab hours required. Prerequisite: Reading Proficiency.

BIO:140 PRINCIPLES OF BIOLOGY I 4
Quantitatively oriented for pre-medicine, pre-dentistry, pharmacy, biology and other science majors. A consideration of the principles of biology, with emphasis on the molecular approach to the structure and function of living organisms. (Credit is not allowed for both BIO:111 and BIO:140). Additional lab hours required. Prerequisites: CHM:105 and Reading Proficiency.

BIO:141 PRINCIPLES OF BIOLOGY II 4
A continuation of BIO:140 with emphasis on selected topics in biology covering population genetics, evolution, survey of living plants and animals, ecology and conservation of natural resources. (Credit is not allowed for both BIO:112 and BIO:141). Additional lab hours required. Prerequisites: BIO:140 and Reading Proficiency.

BIO:144 MARINE BIOLOGY 3
This course introduces students to marine organisms and ecosystems. The interplay of organisms and their environment and other aspects of marine ecology are stressed. Prerequisite: Reading Proficiency.

BIO:145 FIELD EXPERIENCE IN MARINE BIOLOGY 1 - 2
This course consists of field experiences in marine biology either in Florida or a Caribbean destination. Students learn field techniques for collecting and studying a variety of marine organisms. Emphasis is placed on ecology and identification of marine organisms. The course is only offered in conjunction with or following BIO:144 Marine Biology (the prerequisite course). This course may be taken for 1 hour credit (1 week field experience) or 2 credit hours (2 week field experience). Prerequisites: BIO:144 with grade of “C” or better and Reading Proficiency.

BIO:146 DESERT ECOLOGY 3
This course is designed to acquaint the student with the special geologic and climatic conditions necessary for the creation of a desert. It will familiarize students with the unique adaptations of plants and animals to the desert environments in various parts of the world. Emphasis will be placed on characterizing and comparing the four North American Desert ecosystems. Prerequisite: Reading Proficiency.
BIO:147  FIELD EXPERIENCE IN DESERT BIOLOGY  1 - 2
This course will be a field experience to the desert Southwest. The emphasis will be
identification of landforms, plants and animals or the desert habitat. May be
1 or 2 credit depending on length of field trip. Also 1-2 week field trip. Additional
hours required. Prerequisite: Reading Proficiency.

BIO:148  OZARK ECOLOGY  3
This course introduces students to one of the most biological diverse ecosystems
in the Midwest. It will focus on the interaction of plants and animals with unique
Ozark natural communities such as oak-hickory forests, glades, bluffs, caves,
springs, and streams. Management and land use practices affecting this ecosys-
tem will be reviewed. An optional 1-2 week field experience course (BIO:149) is
available to students who successfully complete this lecture course. Prerequisite: Reading Proficiency.

BIO:149  FIELD EXPERIENCE IN OZARK ECOLOGY  1 - 2
This course focuses on first-hand field experience in the Ozark mountains and
valleys. Emphasis will be placed upon field identification of plants and animals
associated with the diverse Ozark natural communities and these organisms’
adaptations to these ecosystems. This field experience may be taken for 1 or 2
credit hours depending upon the length of the field trip (1 or 2 weeks). Prerequisites: BIO:148 with grade of “C” or better or approval of instructor and Reading Proficiency.

BIO:151  BIOLOGY OF HUMAN HEALTH AND DISEASE  3
This course examines human health and disease from a biological perspective.
We will explore the evolution of microbes and human disease. This course will
also look at the influences that regular exercise, diet, and genetic factors have
on everyday good health. The mechanisms, manifestations, and prevention of
common diseases, such as heart disease and cancer, will also be stressed. Prerequisite: Reading Proficiency.

BIO:203  GENERAL MICROBIOLOGY I  4
Introduction to microbes with emphasis on morphology, culture techniques and
biochemical activities of bacteria, viruses and fungi. A consideration of human
disease producing organisms with regard to their infection and resistance.
Additional lab hours required. Prerequisites: (1) BIO:111 with grade of “C” or bet-
ter, or (2) one year of high school biology and chemistry (with labs) within previ-
ous five years of registration date; or (3) permission of the Department Chairperson of Biology; Reading Proficiency.

BIO:207  ANATOMY AND PHYSIOLOGY I  4
A study of the organization of cells into tissues, organs, and organ systems, with
special in-depth study of the integumentary, skeletal, muscular, nervous and
endocrine system, and the sensory receptors. Additional lab hours required.
Prerequisite: (1) BIO:111 with grade of “C” or better; or (2) one year of high school biology and chemistry (with labs) within previous five years of registration date; or (3) permission of the Department Chairperson of Biology; Reading Proficiency.

BIO:208  ANATOMY AND PHYSIOLOGY II  4
A continuation of BIO:207 with consideration given to the integrative functions
of the cardiovascular, digestive, respiratory, urogenital and reproductive and
endocrine systems. Additional lab hours required. Prerequisites: BIO:207 and Reading Proficiency.

BIO:209  KINESIOLOGY  3
Kinesiology is the study of human movement. It involves applying the anatomy of
the musculo-skeletal system to functional movement as a basis to understand-
ing of exercise. Additional lab hours required. Prerequisites: BIO:207 and Reading Proficiency.

BIO:215  HUMAN BODY SYSTEMS  5
This course is a study of the organization and integration of the body’s systems.
The course progresses from the organization of cells into tissues, organs, and
organ systems, to an in-depth study of the physiology, diseases, and other abnor-
mal conditions of the body. Additional hours required. Prerequisites: BIO:111 with a C or better, or approval of department chair and Reading Proficiency.

BIO:217  INTRODUCTION TO BIOTECHNOLOGY  5
Introduces the fundamental DNA and protein manipulation techniques used in
biotechnology/bioengineering research laboratories in academia and industry.
Prerequisites: BIO:140, BIO:203, consent of the instructor and Reading Proficiency.

BIO:218  BIOLOGY OF HUMAN HEALTH AND DISEASE  3
This course examines human health and disease from a biological perspective.
We will explore the evolution of microbes and human disease. This course will
also look at the influences that regular exercise, diet, and genetic factors have
on everyday good health. The mechanisms, manifestations, and prevention of
common diseases, such as heart disease and cancer, will also be stressed. Prerequisite: Reading Proficiency.

BIO:221  BIOTECHNOLOGY INTERNSHIP  3
This internship will provide supervised work experience in a biotechnology labo-
atory. Interns must work a minimum of 150 hours during the term to reserve
credit. Prerequisites: Prior or concurrent enrollment in BIO:220 and Reading Proficiency.

BIO:223  RESEARCH TECHNIQUES IN BIOLOGY  1 - 3
Students will participate in research projects that can include introduction to
HPLC, cell culture, histology techniques, or research in molecular ecology or mol-
ecular genetics. Exposure to data processing, data analysis, poster or manuscript
preparation and presentation may also be included. Contact the instructor for
current research project information. Prerequisites: MTH:140, CHM:101, BIO:111 or BIO:140. Reading Proficiency.

BIO:224  INTRODUCTION TO BIOINFORMATICS  2
This course provides the Biotechnology undergraduate major with an under-
standing and preliminary working knowledge of the concepts, methods and tools
used in Bioinformatics. Prerequisites: BIO:219 or consent of the instructor, and Reading Proficiency.
BIOMEDICAL ENGINEERING TECHNOLOGY

BE:150  BIOMEDICAL ELECTRICAL SAFETY  2
A study of physical and physiological factors involved in medical safety, how standards have been derived, the methods and practices of preventive maintenance and safety, and the role of the BMET in a hospital situation. Prerequisites: Previous or concurrent enrollment in EE:131 and BIO:102 and Reading Proficiency.

BE:153  WORKPLACE LEARNING: BIOMEDICAL ENGINEERING TECHNOLOGY  4
This workplace-based course provides the student the opportunity to apply theory and skills learned in the classroom, learn new skills, and explore career possibilities while supervised by a professional in the field and a faculty member. Students will observe and participate in the functions of the industry to enhance their preparation for entering the field. Minimum 60 hours per credit hour in the workplace throughout the term. Prerequisites: BE:150, BIO:102, and EE:132 and Reading Proficiency.

BE:251  BIOMEDICAL ELECTRONICS  5
A continuation of EE:132 with emphasis on biomedical electronics circuits and systems such as OPAMP, Logic circuits, specific basic medical electronics systems. Additional lab hours required. Prerequisites: EE:132 and Reading Proficiency.

BE:254  BIOMEDICAL APPLICATIONS  5
This course develops competencies, including maintenance, troubleshooting and repair, with such basic hospital equipment as transducers, amplifiers, processors, display modules, and respiratory and radiography instruments. Additional lab hours required. Prerequisites: BE:251 and Reading Proficiency.

BUILDING INSPECTION TECHNOLOGY

BIC:101  BASIC BUILDING INSPECTION TECHNIQUES  3
This course offers the student an introduction to the general principles of building inspection. It includes current techniques of field inspections with emphasis on wood, steel frames, modern masonry and concrete design as employed in construction of buildings. Prerequisite: Reading Proficiency.

BIC:102  HOUSING INSPECTIONS AND PROGRAMS  3
A course covering housing codes and housing inspection techniques. The need for the implementation of housing programs and their impact on the community is included. Prerequisite: Reading Proficiency.

BIC:103  BUILDING CODES AND ORDINANCES  3
This course offers a detailed study of national, state, and local ordinances geared to public safety, land use controls, and building codes. It will include a detailed summary of use philosophy and development of the latest edition of BOCA Building Codes. Prerequisite: Reading Proficiency.

BIC:104  HOUSING INSPECTION PROBLEMS  3
Housing evaluation skills as taught in this course shall cover: space requirements, sanitation requirements, comfort requirements, electrical requirements, maintenance standards, and environmental needs. The course should prepare persons for the task of evaluating existing residential housing. This preparation shall consist of teaching: 1) requisite skills in detecting deficiencies; 2) know-how in correcting deficiencies; 3) systematic procedures for documentation and control of housing inspections. Prerequisite: Reading Proficiency.

BIC:200  PLUMBING AND MECHANICAL INSPECTION  4
An introduction to the theory of residential and commercial, industrial and institutional details of plumbing systems, safety principles, heating, cooling and ventilation, layouts and code inspection problems. Prerequisites: MTH:124 and PSI:101 and Reading Proficiency.

BIC:201  ELECTRICAL INSPECTION  2
Electrical inspection of buildings, residential, commercial, institutional, and industrial, based on the National Electrical Code, including electrical wiring procedures and layouts. Prerequisites: MTH:124 and PSI:101 and Reading Proficiency.

BIC:202  ADMINISTRATION OF BUILDING REGULATIONS  3
This course offers an introduction to the effective administration of building and zoning regulations. Particular attention will be given to the major methods and procedures for the enforcement of building codes and ordinances. Procedures for the building department operations will also be discussed. Prerequisites: BIC:101 and BIC:103 and Reading Proficiency.

BIC:203  PLAN REVIEW I (NON-STRUCTURAL)  3
This course provides the student with an understanding of building plans for residential, commercial, industrial and institutional building as related to the requirements of various codes and the zoning ordinances. Solutions to problems will be taught through the study of specific situations, employing an authentic set of plans. The student is taught to identify the problems on the plan and then to solve them by correct application of plan review. Prerequisites: FIR:210 and BIC:103 and Reading Proficiency.

BIC:204  PLAN REVIEW II (STRUCTURAL)  3
This course provides the student with an understanding of building plans with emphasis on structural elements of building design. The student will be instructed in review and calculations of loads and sizing of structural elements of a building, including footings, foundations, beams and columns, walls, roofs, and floors. Prerequisites: BIC:203 and ME:243 and Reading Proficiency.

BIC:205  SOILS, GRADING AND WASTE WATER CONTROL  3
This course offers the student the technical information necessary for the inspection of construction sites. It includes site investigations, soil analysis, solid mechanics, geology, grading, drainage, and retaining wall design and inspection. Prerequisite: MTH:124 and Reading Proficiency.

BUSINESS ADMINISTRATION

BUS:101  SMALL BUSINESS MANAGEMENT  3
A comprehensive survey course which deals with the theoretical and practical aspects of starting and operating a small business. Each major function of business (accounting, production, marketing) is discussed with particular reference to small business. Students taking this course are normally not encouraged to enroll subsequently in BUS:104 due to similarity of course content. Prerequisite: Reading Proficiency.

BUS:103  BUSINESS MATHEMATICS  3
This course includes a review of basic arithmetic, including fractions, decimals, ratios, non-decimal numbering systems, and graphical representation of numbers. Proceeds with coverage of fundamental problems involved in interest costs, mark-ups, commissions and payroll operation. Also provides comprehensive coverage of taxes, depreciation, consumer credit, insurance and security transactions. Emphasis will also be placed on analyzing simple financial statements, volume and profit relationship, trade and cash discounts, and banking records. Prerequisite: Reading Proficiency.

BUS:104  INTRODUCTION TO BUSINESS ADMINISTRATION  3
A survey course, designed to give the student a general knowledge of the modern business world and the environment within which it exists and an awareness of the principles of the major functions in managing a business, such as finance, personnel, production, and marketing. Prerequisite: Reading Proficiency.

BUS:115  PRINCIPLES OF BANKING  2
This course provides a broad perspective of the banking industry. As the foundation for further offerings in the Banking and Finance program, Principles of Banking touches on nearly every aspect of bank functions. Included is a comprehensive introduction to banking in today's economy. Discussions on specific topics are presented in an easily accessible form. The language and documents of banking, check processing, teller functions, deposit function, trust services, bank bookkeeping, and bank loans and investments are some primary topics. The course ends with a discussion of the bank's role in the community. Prerequisite: Reading Proficiency.

BUS:116  ENTREPRENEURSHIP  3
This comprehensive course deals with the theoretical and practical aspects of the student entering business for him/herself. Covers opportunities, evaluations, operations, and expansion of entrepreneurial situations. Prerequisite: Reading Proficiency.
BUS:118  CUSTOMER SERVICE  3
A survey course designed to give the student a general knowledge of the goals of
customer service, the major categories of customer service, such as decision-
making service, problem resolution service, and time-of-purchase service, the
skills required to achieve good customer service, and the rationale behind
improving customer service. Prerequisite: Reading Proficiency.

BUS:201  ELEMENTARY STATISTICS  3
This course introduces the student to the basic principles and methods of statis-
tical measurement and statistical inference. Descriptive statistical concepts
include data organization and presentation, measures of location and dispersion,
probability theory and distributions. Applications of statistical inference include
random sampling techniques and sampling distributions, interval estimation,
hybrid testing for large and small samples, ANOVA, correlation, regression
analysis, and nonparametric testing. Prerequisites: MTH:160 or MTH:160A or
MTH:160B or MTH:160C, and Reading Proficiency.

BUS:202  STATISTICAL ANALYSIS  3
This course introduces the student to statistical concepts and techniques used by
management in the decision-making process. Descriptive statistics includes the
display and summary of data, discrete and continuous probability distributions
and random variables. Inferential statistics includes parametric and nonpara-
metric tests of significance, correlation and regression analysis, confidence
intervals, and analysis of the variance. Forecasting tools include time series
analysis and the derivation and use of index numbers. Prerequisites: MTH:177 and
Reading Proficiency.

BUS:216  ANALYZING FINANCIAL STATEMENTS  3
Designed for the banker involved in the interpretation and evaluation of financial
reports of business. Provides basic skills of financial analysis to the prospective
bank lender/credit analyst together with comprehensive case studies. Prerequisite: ACC:110 and Reading Proficiency.

BUS:217  BASIC LAW FOR SMALL BUSINESS  3
This course is designed to address the legal environment of small business. Students explore the legal aspects of today's small business by studying several
topics, including the legal forms of ownership, contracts, agency law, property
law, trade laws that affect small business, intellectual property law, internet law,
consumer rights, and the legal context of human resource management. Additional focus areas include retaining legal counsel, Small Claims Court, pro-
tecting one's firm against lawsuits, risk management, and ethics in the small
business workplace. Course format may include lecture, discussion, individual
and team projects, reports, presentations, and examinations. Prerequisite: Reading Proficiency.

BUS:218  FINANCIAL ASPECTS OF SMALL BUSINESS  3
Students will be introduced to financial tools and topics relevant to small busi-
ness owners and managers. This course is a step by step approach to managing
a small firm's finances. The student will experience an applications-based
approach to learning about financial forecasting, cash flow management,
accounting statements, ratio analysis, inventory management, credit and collec-
tions, asset management, and other related topics. Students will prepare case
analyses using word-processing and spreadsheet software. An important course
project will be preparing and presenting a financial plan. Prerequisite: ACC:100 or ACC:120, or Departmental approval and Reading Proficiency.

BUS:250  BUSINESS INTERNSHIP  3
A supervised work program designated to provide students with new
skills/knowledge in the functional areas of marketing and/or management. The
internship will involve cooperative planning and reporting by the student, a fac-
ulty member, the department chair, and the employer. Internship credit will not
be awarded for work experience that is part of a student's regular employment.
Prerequisite: Departmental approval and Reading Proficiency.

BUS:2102  BUSINESS LAW II  3
A survey course which considers principles of law in the following areas: Agency,
partnership, corporations, other business organizations, negotiable instruments,
real property, personal property, decedent’s estates and bankruptcy. Prerequisite: Reading Proficiency.

BUS:103  PERSONAL LAW  3
An overview of common legal issues and questions with which everyone living
in our society has to deal. Students will learn about the legal implications of
transactions such as getting a job, buying or leasing a car, buying a house, rent-
ing an apartment, obtaining a loan, making contracts, buying insurance, getting
married and divorced, having children, and filing lawsuits as well as being sued.
Prerequisite: Reading Proficiency.

BUS:201  LEGAL ENVIRONMENT OF BUSINESS  3
This course covers an introduction to law and the judicial system, business orga-
nizations, contracts, torts, property, agency or administrative law, antitrust,
labor-management, international and other topics such as law related to energy,
health, safety and the environment. Prerequisites: ECO:152 and ACC:110 and
Reading Proficiency.

BUS:216  LAW AND BANKING: APPLICATIONS  2
Laws relating to secured loans, letters of credit and the bank collection process,
including check losses and the legal issues related to processing checks.
Material on secured transactions summarizes laws related to collateral, perfec-
tion and default. Case studies illustrate legal points related to banking practices.
Prerequisite: Reading Proficiency.

CENTRAL SERVICE TECHNOLOGY

CST:100  CENTRAL SERVICE TECHNOLOGY I  3
Central Service, once considered a very unimportant area, now cleans, inspects,
prepares, sterilizes, issues and controls most of the items used for direct patient
care in today’s hospitals. Part I covers a study of asepsis, microbiology and spe-
cific bacteria and the importance of control of infections and prevention of cont-
amination. Fundamentals of cleaning and packaging of supplies and selection of
materials are discussed. Also covered is an examination of communication skills
and the development of working relationships. Prerequisite: Reading Proficiency.

CST:101  CENTRAL SERVICE TECHNOLOGY II  3
Part II will cover the study of anatomy and its association with orthopedic trac-
tion and monitoring of the heart and a study of control, storage and distribution
systems. The basic function and maintenance of specific technical equipment
used in direct patient care are covered, and safety ethics and job relationships
for the technician are stressed. Prerequisite: Reading Proficiency.

CHEMISTRY

CHM:002  PREPARATION FOR CHEMISTRY  3
This course presents some basic science and mathematical concepts and skills
which students need to prepare them to take a college chemistry course. Prerequisite: Previous or concurrent enrollment in MTH:007 or MTH:030, or one
year of high school algebra.

CHM:101  FUNDAMENTALS OF CHEMISTRY I  5
Provides fundamental concepts and symbolism of chemistry with applications to
everyday life for students not planning to major in science. Laboratory work pre-
sents opportunity to use laboratory equipment and further illustrations of lecture
material. Prerequisite: MTH:007 or MTH:030 with grades of “C” or better or
MTH:140 on the math placement test and Reading Proficiency.

CHM:102  FUNDAMENTALS OF CHEMISTRY II  4
Continuation of CHM:101. Topics covered are of particular interest to students in
respiratory therapy, nursing, and health-related areas in general. Additional lab
hours required. Prerequisite: CHM:101 or CHM:105 with a grade of “C” or better and
Reading Proficiency.

CHM:105  GENERAL CHEMISTRY I  5
Designed for science and science-related majors. Topics include formulas and
equations, stoichiometry, atomic and molecular structure, properties of gases,
liquids, and solids, thermochemistry, and solutions. Additional lab hours
required. Prerequisites: MTH:140 (or at least one and a half years of high school
algebra) and either CHM:101 or one year of high school chemistry or physics and
Reading Proficiency.
CHM:106  GENERAL CHEMISTRY II  5
Topics include kinetics, thermodynamics, electrochemistry, equilibrium, some
descriptive chemistry, and laboratory work in qualitative and quantitative analy-
sis. Additional lab hours required. Prerequisite: CHM:105 and (MTH:160 or
MTH:160A or MTH:160B or MTH:180C) with grades of "C" or better and Reading
Proficiency.

CHM:109  CHEMISTRY FOR ENVIRONMENTAL CAREERS I  4
Basic principles, terminology, theories, calculations and laboratory operations in
chemistry for environmental careers. Additional lab hours required. Prerequisite:
Reading Proficiency.

CHM:114  INDUSTRIAL CHEMISTRY  3
This is a non-laboratory lecture and demonstration course covering elementary
chemistry with emphasis on potentially dangerous chemicals in fires and in other
industrial situations. The course is not intended for chemistry or engineering
majors. Prerequisite: Reading Proficiency.

CHM:116  CHEMISTRY FOR BIOSCIENCE I  5
This course is intended to give students enrolling in the Life Science programs
the necessary background in chemical theory, basic laboratory procedures and
techniques, as well as chemical instrumentation. Additional lab hours required.
Prerequisite: CHM:101 and Reading Proficiency.

CHM:117  CHEMISTRY FOR BIOSCIENCE II  5
This course is a continuation of Chemistry for Bioscience I which is intended to
give students enrolling in the Life Science programs the necessary background in
chemical theory, basic laboratory procedures and techniques, as well as chemi-
ical instrumentation. Additional lab hours required. Prerequisite: CHM:116 and
Reading Proficiency.

CHM:120  QUANTITATIVE ANALYSIS I  4
An introduction to gravimetric, volumetric, and photometric methods of analysis.
Students gain experience in the handling of analytical precipitates, titerations,
using acid-base and oxidation-reduction reactions, and some laboratory instru-
ments. Additional lab hours required. Prerequisite: CHM:105 with a grade of "C"
and Reading Proficiency.

CHM:121  CHEMISTRY FOR TECHNICIANS  5
The specific purpose of this course is to provide part of two years of training for
a career as a chemical technician. Topics covered in lecture and lab are: titri-
metric, volumetric, and spectrophotometric analysis (UV, visible, atomic absorp-
tion). Additional lab hours required. Prerequisite: CHM:121 and Reading Proficiency.

CHM:122  CHEMICAL TECHNOLOGY II  5
The specific purpose of this course is to provide part of two years of training for
a career as a chemical technologist. Topics covered include: basic electricity and
inorganic chemistry review will be provided with the following topics covered: statistical analysis, physical properties,
and gravimetric analysis. Corequisite: GE:101. Additional lab hours. Prerequisite:
CHM:101 and MTH:140 and Reading Proficiency.

CHM:201  QUANTITATIVE ANALYSIS I  4
An introduction to gravimetric, volumetric, and photometric methods of analysis.
Students gain experience in the handling of analytical precipitates, titrations,
using acid-base and oxidation-reduction reactions, and some laboratory instru-
tments. Additional lab hours required. Prerequisite: CHM:105 with a grade of "C"
or better and Reading Proficiency.

CHM:202  QUANTITATIVE ANALYSIS II  4
An advanced course in modern analytical methods, both chemical and physical,
with emphasis on the effective use of instruments. Additional lab hours required.
Prerequisite: CHM:201 with a grade of "C" or better and Reading Proficiency.

CHM:206  ORGANIC CHEMISTRY LECTURE I  3
An introductory course in the theory of Organic Chemistry, stressing reaction
types and mechanisms. Prerequisite: CHM:106 with a grade of "C" or better and
Reading Proficiency.

CHM:207  ORGANIC CHEMISTRY LECTURE II  3
Continuation of CHM:206 including relevant new topics such as polymers and
biochemicals. Prerequisite: CHM:206 with a grade of "C" or better and Reading
Proficiency.

CHM:210  ORGANIC CHEMISTRY LAB I  2
An introduction to the laboratory work in Organic Chemistry. Emphasis is on tech-
niques generally employed, including some instrumentation. Additional lab hours
required. Prerequisite: CHM:106 with a grade of "C" or better and Reading
Proficiency.

CHM:211  ORGANIC CHEMISTRY LAB II  2
A continuation of CHM:210. Practice, which will emphasize instrumentation and
synthetic work, including multi-step syntheses and analytical work. Additional
lab hours required. Prerequisite: CHM:210 and Reading Proficiency.

CHM:212  BIO-ORGANIC AND ANALYTICAL CHEMISTRY  4
An introduction to analytical chemistry, organic chemistry and biochemistry.
Laboratory work is primarily quantitative analysis. Primarily for students inter-
ested in the clinical laboratory technology program. Not intended for students in
pre-medicine or planning to major in chemistry. Prerequisite: Reading Proficiency.

CHM:213  CHEMICAL TECHNOLOGY SEMINAR  2
Present basic electricity and electronic theory, techniques, and hardware to
chemical technology students who have no previous formal training in this area.
Manual skills (soldering, wire splicing, minor electrical repairs, troubleshooting)
will be emphasized. This course presents a practical exposure to simple elec-
tronic schematic interpretations, location of test points and component identifi-
cation. Some elementary breadboarding using commercially available training
kits will be presented. The use of various volt/ohm meters and test equipment
will be introduced. Real and simulated electrical/electronic troubleshooting situ-
ations will be presented using actual analytical chemistry instrumentation.
Prerequisite: concurrent enrollment in CHM:221 or permission from instructor
and Reading Proficiency.

CHM:214  ADVANCED CHEMICAL TECHNOLOGY SEMINAR  2
Emphasis on specialized laboratory techniques and procedures in advances in
analytical chemistry instrumentation. An introduction to chemical literature
searches both manually and by computer will be presented using both in-house
and external consultants and facilities. This course will explore the opportuni-
ties and profession of chemical technicians. Specialized resources, advances, and
professionals will be presented in seminar format. Specialized topics (ethics,
chemical waste disposal and separations) will be included. Prerequisite: concu-
rent enrollment in CHM:222 or permission from the instructor and Reading
Proficiency.

CHM:215  SURVEY OF ORGANIC CHEMISTRY LAB  2
An introduction to laboratory work in organic chemistry. Emphasis is on tech-
niques generally employed in the organic lab, including lab experiments select-
ed from topics normally covered in a two semester lab sequence. Lab work
includes synthetic experiments, multi-step syntheses, and instrumental analysis
of organic compounds. Additional lab hours required. Prerequisite: CHM:106
with a grade of "C" or better and concurrent or previous enrollment in CHM:206
or Reading Proficiency.

CHM:216  BIO-ORGANIC AND ANALYTICAL CHEMISTRY  4
A continuation of CHM:210. Practice, which will emphasize instrumentation and
synthetic work, including multi-step syntheses and analytical work. Additional
lab hours required. Prerequisite: CHM:210 and Reading Proficiency.

CHM:221  CHEMICAL TECHNOLOGY III  5
The specific purpose of this course is to provide part of two years of training for
a career as a chemical technologist. Organic chemistry theory is introduced with
laboratory work focusing on organic separation and synthesis techniques.
Infrared spectrophotometric analysis of a variety of samples complements the
laboratory work. Additional hours required. Prerequisite: CHM:122 and Reading
Proficiency.

CHM:222  CHEMICAL TECHNOLOGY IV  5
The specific purpose of this course is to provide part of two years of training for
a career as a chemical technologist. Organic chemistry theory is continued with
nuclear magnetic resonance spectrophotometric analysis complementing the
laboratory work. Gas chromatographic techniques are covered for both qualita-
tive and quantitative analysis. Additional hours required. Prerequisite: CHM:221
and Reading Proficiency.

CHM:231  CHEMICAL TECHNOLOGY V  5
The specific purpose of this course is to provide part of two years of training for
a career as a chemical technologist. Organic chemistry theory and lab practice is
continued complemented with mass spectrophotometric analysis. High pressure
liquid chromatographic techniques for both qualitative and quantitative analysis
are covered. Additional hours required. Prerequisite: CHM:222 and Reading
Proficiency.

CHM:232  CHEMICAL TECHNOLOGY VI  5
The specific purpose of this course is to provide part of two years of training for
a career as a chemical technologist. Biochemical theory is introduced with labo-

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CE:103  STRUCTURAL DRAFTING  3
Classification of drawings and standard conventions employed. Reading of archi-
tectural drawings and how they relate to structural drawings. Structural drawing
of steel structures and reinforced concrete structures. Prerequisite: Reading Profi-
cency.

CE:104  CIVIL DRAFTING  3
Relationship of points, lines, and planes in space; techniques of map drafting
including site plans, plan and profile drawings as they apply to highways, sew-
ers, and open channels; cross sections and how they are plotted from field notes.
Additional lab hours required. Prerequisite: EGR:100 and Reading Proficiency.

CE:108  CONSTRUCTION METHODS  3
This course covers many of the principles, materials, and methods used in light
construction. Topics include building codes, construction standards and special-
izations, wood and wood products, concrete, masonry, glass, plastics, aluminum
products, bituminous products, gypsum products, asbestos cement products,
construction methods systems, foundation systems, slabs-on-ground, floor/ceili-
ging systems, wood framed floors, wall systems, masonry walls, roof/ceiling sys-
tems, stucco, and terrazzo. Prerequisite: Reading Proficiency.

CE:115  CONSTRUCTION MATERIALS AND METHODS  3
This course covers many of the principles, materials, and methods used in light
construction. Topics include building codes, construction standards and speciali-
zations, wood and wood products, concrete, masonry, glass, plastics, aluminum
products, bituminous products, gypsum products, concrete cement products,
construction methods systems, foundation systems, slabs-on-ground, floor/ceiling
systems, wood framed floors, wall systems, masonry walls, roof/ceiling systems,
stucco, and terrazzo. Prerequisite: Reading Proficiency.

CE:117  STATICS AND STRENGTH OF MATERIALS  3
This course deals with the fundamental principles of structural design. Topics
include the analysis of structures to determine internal and external forces and
the design of members and connections based on allowable bending, tension,
compression and shearing stresses. The graphical analysis of statics problems is
included. Students considering careers as architects or engineers should enroll
in this course, rather than in Structures for Technicians. Additional lab hours
required. Prerequisite: MTH:124 or equivalent and Reading Proficiency.

CE:130  INTRODUCTION TO CONSTRUCTION  3
An introductory course providing an overview of the total construction process
including city and regional planning, construction management, contracting,
labor and management relations, the design process, estimating and bidding,
scheduling and purchasing, construction, and equipment. Prerequisite: Reading Profi-
cency.

CE:131  CONSTRUCTION ESTIMATING  3
The total estimating and bidding process. Topics will include: bid form contracts,
specifications, overhead, unit costs, quantity surveys, subcontract bids, pricing,
alternates. Students should be able to read construction drawings prior to
enrolling in this course. Prerequisites: CE:116 and Reading Proficiency.

CE:132  CONSTRUCTION SCHEDULING  3
Construction scheduling methods to include bar graphs and Critical Path Method
with emphasis on manual and computerized design, calculations, and interpre-
tation using both arrow and precedence diagramming. Prerequisites: 1 year
Algebra and Reading Proficiency.

CE:230  CONSTRUCTION MATERIALS AND TESTING  3
The properties and standard tests used in construction on soils, aggregates, bitu-
minous products, and concrete. Additional lab hours required. Prerequisite:
Concurrent with ME:243 and Reading Proficiency.

CE:233  HYDRAULICS  3
The hydrological cycle as it affects the storm runoff process. Calculation of sur-
face runoff quantities. Basic fluid mechanics including pressures, hydrostatic
forces. Bernoulli’s theorem and fluid flow. Flow in pipes and open channel flow
general procedures for design of storm water, sewage, or water supply systems.
Prerequisites: MTH:144 and Reading Proficiency.

CE:234  STRUCTURAL ANALYSIS  3
Applications of loads and their transmission through structures; stability and
determinacy; shear and moment in beam/column structures; analysis of trusses;
influence diagrams; deflection of beams. Prerequisites: Concurrent with ME:243
and Reading Proficiency.

CE:235  CONSTRUCTION OFFICE PRACTICE  3
The interactive role of organizations in the construction process; the structure of
alternative construction delivery systems, such as general contractor, construc-
tion manager, and design-build contractor; specification and building codes; cost
control reporting systems for construction. Prerequisite: Reading Proficiency.

CE:236  REINFORCED CONCRETE DESIGN  3
Design and investigation of reinforced concrete beams, columns, slabs, and foot-
ings using the Strength Method in accordance with the 1977 ACI Building Code.
Prerequisites: ME:243 and Reading Proficiency.

CE:237  STRUCTURAL STEEL DESIGN  3
Investigation and design of structural steel beams, columns, tension members,
welded and bolted connections. Prerequisites: ME:243 and Reading Proficiency.

CE:238  ENVIRONMENTAL SYSTEMS  3
The general characteristics of environmental systems that includes water supply,
water waste treatment, air pollution, solid waste management, and hazardous
waste disposal. Prerequisite: Reading Proficiency.

CE:240  PLANE SURVEYING  3
The theory and practice of plane surveying, including the use and care of transit,
level, compass and tape. Emphasis is placed on laboratory problems in mea-
surements of areas, heights, and angles; calculations of traverses, topographic
mapping and field methods. Additional lab hours required. Prerequisites: MTH:124
and MTH:134 or equivalent and Reading Proficiency.

CE:241  STRUCTURAL SYSTEMS I  4
This course applies the principles of statics and strength of materials to the
analysis and design of wood, structural steel and reinforced concrete structures.
Topics include beams, columns, connections, floors and footings. Additional lab
hours required. Prerequisites: CE:117 and Reading Proficiency.

CE:242  ENVIRONMENTAL TOPICS FOR EDUCATORS  3
This course provides an overview of environmental topics in the area of water
resources, water pollution and disposal of solid/hazardous wastes. The course is
intended to increase the familiarity of problems so that the educator will feel
more confident/comfortable discussing these issues in the classroom. The topics
chosen will be relevant to current concerns and include, in the field of air pollu-
tion for example, depletion of the ozone layer, the greenhouse effect, radon,
smog, and acid rain. Prerequisite: Reading Proficiency.
CE:243 INTRODUCTION TO ENVIRONMENTAL ENGINEERING 3
This course provides an overview of environmental engineering principles as they pertain to water resources, water pollution, air pollution and solid/hazardous wastes. Initially, the focus is on population, energy, ecology, meteorology and human impacts to establish the underlying concepts that are important to the study of environmental engineering. Subsequently, the focus shifts to water resources and supply as well as pollution from water, air, and wastes. Treatment and environmental problems are presented in a quantitative manner. The course is quantitative in nature and relies on a background of chemistry, physics and mathematics. Prerequisite: Reading Proficiency.

CE:244 INTRODUCTION TO GIS 3
An integrated approach to Geographic Information Systems (GIS) mapping with a basic non-technical introduction to Global Positioning Systems (GPS). Information will be provided on GIS mapping techniques, differential GPS (DGPS), use of coordinate systems (both local & global), standard map projections, GPS receiver technology, GIS mapping software, as well as other state-of-the-art techniques and capabilities. The lecture class will provide mostly theoretical information in both of the technologies. The lab will provide practical experience in collecting GPS data as well as experience in integrating the data into a final GIS data base. Additional lab hours required. Prerequisites: CE:240 or Department Approval and Reading Proficiency.

CE:245 INTRODUCTION TO GLOBAL POSITIONING SYSTEMS (GPS) 2
A classroom introduction to the surveying application of the Global Positioning Systems (GPS); their theory, theory of operation, terminology, positioning techniques, standards; a comparison of the United States GPS and the Russian GLONASS and how they combine into the worldwide Global Navigation Satellite System (GNSS). Prerequisites: CE:240 or Department Approval and Reading Proficiency.

CE:246 GPS APPLICATION LAB 1
The lab is an application based series of exercises and supplemental information provided in class which will further enhance the formal texts and the concurrent lecture CE:508. Work may occur outside or inside depending upon the present needs of the course. Students may be required to work in adverse conditions including, but not limited to: darkness, cold, rain, etc. Additional lab hours required. Prerequisites: CE:116 or Department Approval and concurrent with CE:245 and Reading Proficiency.

CE:247 LEGAL ASPECTS OF BOUNDARY SURVEYING 3
Topics covered will include legal principles of surveying, Missouri survey law, legal principles of boundaries, property, monumentation, legal descriptions, deed interpretations, and legal aspects of surveying and professional liability. Prerequisites: CE:240 or Department Approval and Reading Proficiency.

CE:248 FUNDAMENTALS OF LAND SURVEYING 3
This course includes essential elements necessary in the initiation and follow through of any property survey; evidence of ownership, historical information in the subdivision of public lands; methods of measurements, description of property and legal requirements for recording. Prerequisites: CE:240 or Department Approval and Reading Proficiency.

CE:250 ROUTE SURVEYING 3
Theory and use of simple curves, spirals, super-elevations and earth-work computations as applied to highway and railroad surveying. Prerequisites: CE:240 and Reading Proficiency.

CLT:100 ORIENTATION TO THE MEDICAL LAB 1
Orientation to the profession of medical technology, its functions, specialties and responsibilities. The philosophy and ethics of the practice of medical technology are considered and interpersonal relationship of technologist to medical staff, laboratory staff, patient and other departments. Medical terminology will be stressed as well. Prerequisites: Admission to program and Reading Proficiency.

CLT:101 MEDICAL MICROBIOLOGY 3
Theory and principles of micro-organisms and human disease. Growth requirements of micro-organisms with consideration of media, biochemical reactions, susceptibility testing will be studied. Application of theory will be practiced in laboratory sessions. Additional lab hours required. Prerequisites: Admission to program and Reading Proficiency.

CLT:102 ROUTINE ANALYSIS 2
Theory and principles including basic physiology of the kidney and study of the body fluids such as urine, gastric contents, bile, pleural fluid. The techniques and theoretical bases of urine testing and normal and abnormal finding. Practical application will be taught. Prerequisite: Reading Proficiency. 1 lecture, 1 lab hour.

CLT:103 HEMATOLOGY 3
Theory and principles of physiology of blood forming organs, blood cell matura-
tion, blood dyscrasias, techniques of staining, counting and differentiating cell morphology. Also, the theory and principles of the mechanism of coagulation with analysis of various factors. Prerequisites: CLT:100 or CLT:101 and Reading Proficiency, 2 lecture, 1 lab hour per week.

CLT:104 PATHOGENIC BACTERIOLOGY I 4
The study of micro-organisms with emphasis on the bacteria in diseases of man. Theory and principles of identification, biochemical reactions, growth requirements, susceptibility testing will be considered. Theory and practical application will include lecture, demonstration, laboratory practice, slides, films and examinations. Additional lab hours required. Prerequisites: CLT:101 and Reading Proficiency.

CLT:105 BASIC MEDICAL LABORATORY SKILLS 4
Practice of basic skills common to most clinical laboratories with emphasis on “doing” rather than principles of laboratory testing. Skills such as staining, phlebotomy, pipetting, use of the microscope, practice of diagnostic procedures will be stressed. Prerequisites: CLT:100, CLT:101, CLT:102, CLT:103, CLT:104 and Reading Proficiency.

CLT:106 PHLEBOTOMY ESSENTIALS (BLOOD DRAWING) 5
This course is designed to provide the students with knowledge, skill, and techniques necessary to perform as a phlebotomist in the clinical setting. The student will learn basic anatomy pertinent to blood collection as well as communication skills, specimen processing and related interdisciplinary tasks. Additional lab hours required. Prerequisites: AOS:101 or AOS:105 and Reading Proficiency.

CLT:107 PHLEBOTOMY PRACTICUM 6
This course is designed to provide the student with a practical experience of various blood drawing techniques in the clinical setting. The students will spend an assigned number of weeks practicing skills and techniques learned in CLT:106. Additional hours required. Prerequisites: CLT:106 and Reading Proficiency.

CLT:108 BASIC LABORATORY SKILLS FOR HEALTH CARE PERSONNEL 3
A course designed to impart knowledge and skills in basic laboratory techniques concerning specimen collection, basic testing and reporting. Safety and quality control will be included. Prerequisites: Current enrollment in or successful completion of allied health, nursing, or medically related program. Additional lab hours required. Prerequisite: Reading Proficiency.

CLT:200 PATHOGENIC BACTERIOLOGY II 4
The role of micro-organisms in diseases of man with emphasis on differential culture methods is presented, also consideration of media, biochemical reactions, sensitivity and growth requirements. Included is bacteria rickettsia, viruses, mycology and parasitology. Theory principles and practical application will include such methodology as lecture, demonstration, laboratory practice, slides, films and examinations. Additional lab hours required. Prerequisites: CLT:101 or CLT:104 or CLT:105 and Reading Proficiency.

CLT:201 CLINICAL CHEMISTRY I 5
Stresses theory and principles of quantitative and qualitative analysis of body fluids such as blood, urine and spinal fluid as well as feces, calculi and other material. Information about physiology will be included to increase understanding of need for testing. Instrumentation and quality control will be taught. Prerequisites: CHM:101, CHM:210, CLT:105 and Reading Proficiency.

CLT:202 CLINICAL PRACTICE I 4
Practical experience is attained in one of the clinical affiliated laboratories. The students rotate through each of the major departments of the clinical (medical) laboratory and are closely supervised by bench technologists and faculty. Rotation and practical experience is gained in microbiology, clinical chemistry, blood bank, hematology, urinalysis, serology and immunology departments. Prerequisites: CLT:105 and Reading Proficiency.
CLT:204  BLOOD BANK  2
Introduction to the basic immunologic and genetic principles governing blood groups and transfusion reaction. Theory and principles of routine laboratory testing procedures will be presented. Additional lab hours required. Prerequisite: CLT:105 and Reading Proficiency.

CLT:205  PATHOLOGY CORRELATION CONFERENCE  1
The inter-relationships of laboratory tests correlated with the disease will be stressed. Significance of laboratory testing and results will be taught with a dynamic overview to diagnosis, and prognosis. Additional hours required. Prerequisites: CLT:202, CLT:204 and CLT:210 and Reading Proficiency.

CLT:206  CLINICAL CHEMISTRY II  4
Continuation of CLT:201. In addition, enzyme, hormone, and automation with some practical application will be taught. Prerequisites: CLT:201 and Reading Proficiency.

CLT:207  CLINICAL PRACTICE II  4
A continuation of CLT:202. Twenty-four hours clinical practice each week in hospital or private laboratories. Prerequisite: CLT:202 and Reading Proficiency.

CLT:210  IMMUNOLOGY AND SEROLOGY  2
Study of theory and principles of immunological reaction including antigen antibodies, complement, humoral and cellular response and other body defenses and reaction to infections and non-infectious agents. Serological methodology will also be discussed, demonstrated and practiced. Additional hours required. Prerequisite: CLT:101 and Reading Proficiency.

COL:020  COLLEGE ORIENTATION AND STUDY SKILLS  3
This course is designed to facilitate a successful college experience for the 1st year student taking developmental courses. Students will be introduced to the processes and purposes of higher education. Students will develop college-level study skills and will learn about college resources to assist them in their personal and academic adjustment to college life.

COL:100  FRESHMAN ACADEMIC ORIENTATION  1
Through interactive learning experiences, Freshman Academic Orientation introduces students to college level thinking skills, interpersonal skills, and effective study skills necessary for academic success. Students have the opportunity to participate in a faculty/student academic mentoring program. Prerequisite: Reading Proficiency.

COM:101  ORAL COMMUNICATION I  3
This is the basic, transfer course in speech communication. The course offers opportunity to explore effective one-to-one, small group communication, and large group oral communication process. Prerequisite: Reading Proficiency or concurrent enrollment in ENG:130 or ENG:170.

COM:102  ORAL COMMUNICATION II  3
This course focuses on interpersonal communication skills. The techniques used in this class will include video taping, class discussion, one-on-one encounters and group interaction. Interpersonal theory will be examined to give the student a comprehensive approach to communication. Prerequisite: Reading Proficiency.

COM:103  SMALL GROUP COMMUNICATION  3
A study of the principles and concepts of small group communication. Students are encouraged to develop and improve their skills for business management, education, community activities and interpersonal communication. Prerequisite: Reading Proficiency.

COM:104  PERSUASION  3
This course examines the principles of persuasion as they apply to relationships, jobs, and mass media. Students are given the opportunity to analyze and create persuasive messages. The course focuses on the skills necessary to become a more effective sender and receiver of persuasive communication. Prerequisite: Reading Proficiency.

COM:105  INTERVIEW PROCESS  3
This course will provide students with an understanding of the interview process, the principles involved, types of interview questions and their uses, and interview structures. Prerequisite: Reading Proficiency.

COM:106  INTERVIEW SKILLS  1
The importance of effective interviewing skills and improving individual students' skills. This course will concentrate on the employment interview. Prerequisite: Reading Proficiency.

COM:107  PUBLIC SPEAKING  3
This course applies oral communication principles in formal public speaking situations. Attention is devoted to theory and practice in informative and persuasive speaking, presenting technical reports, large group leadership, and speeches for special occasions. Prerequisite: Reading Proficiency.

COM:108  BUSINESS/TECHNICAL PRESENTATION  3
This course is designed to provide students with practical experience and application of communication skills and techniques in business and technical situations. By taking this course, students should be better prepared for the practical demands on their skills to achieve in business and technical areas. Prerequisite: Reading Proficiency.

COM:109  CONFERENCE LEADERSHIP/DECISION MAKING  3
Communication in institutions and organizations depends upon skills in effective conference leadership and the communication aspects of decision making. The student will gain information concerning the communication influences in the conference situation and the decision-making process, and develop individual skills. Prerequisite: Reading Proficiency.

COM:110  ORGANIZATIONAL COMMUNICATION  3
This course examines the communication systems and behaviors within organizations. Students should develop systematic improvement of communication skills, as employer and/or employee. Prerequisite: Reading Proficiency.

COM:111  VOICE AND ARTICULATION  3
Principles and practice of improving voice, articulation, pronunciation, foreign and regional dialects. Primary emphasis on individual speech improvement. Frequent use of audio-video tape for self evaluation. Prerequisite: Reading Proficiency.

COM:112  ARGUMENTATION AND DEBATE  3
A study of the principles of argumentation, analysis, evidence, inference and refutation. These principles are applied to significant issues of current interest. Experience provided in the practice of academic debate. Prerequisite: Reading Proficiency.

COM:114  ORAL INTERPRETATION OF LITERATURE  3
This course focuses upon effective oral communication of literature. Course goals include increasing appreciation and understanding of literature through performance and development of an expressive and responsive communication style. Video/audiotape used for self-analysis. Prerequisite: Reading Proficiency.

COM:120  GENDER COMMUNICATION  3
This course is aimed at understanding and improving how men and women communicate. Self-disclosure practices, nonverbal symbols and language style will be explored. The images of men and women in society and the media will be discussed. Students will develop strategies to improve communication behaviors. Prerequisite: Reading Proficiency.
COM:200 COMMUNICATION BETWEEN CULTURES 3
This course introduces the topic of Intercultural Communication, including the communication process, perception, verbal/nonverbal symbols, beliefs, values, world view, norms, identity, and social institutions. Barriers such as stereotyping, language, and culture shock are examined as well as case studies, cultural research, relationships, and communication skills. Prerequisite: Reading Proficiency.

COM:201 INTERPERSONAL COMMUNICATION 3
This course will take a theoretical case study examination of interpersonal communication. Relational issues as they pertain to communication will be examined in depth. These issues will include: conflict, stages of relationships, power, assertiveness, message analysis, and self-awareness. Prerequisite: Reading Proficiency.

CRIMINAL JUSTICE

CRJ:101 AMERICAN CORRECTIONAL SYSTEM 3
A study of the correctional process from law enforcement through the administration of justice, probation, parole, prisons and correctional institutions. A study of the history and philosophy of corrections. Prerequisite: Reading Proficiency.

CRJ:102 REHABILITATION, PAROLE, AND PROBATION 3
Analysis and evaluation of the concept and practices of rehabilitation in contemporary correctional systems; discussion of correctional institutions and the various field services. Development, organization, operation and result of systems of probation and parole. Prerequisite: CRJ:101 and Reading Proficiency.

CRJ:111 RULES OF CRIMINAL EVIDENCE 3
The study of basic rules of evidence applicable to the investigation of criminal activities and other related police duties. Emphasis is placed on the question of admissibility of evidence and the practical application of procedural and substantive guarantees. Prerequisite: Reading Proficiency.

CRJ:122 INTRODUCTION TO CRIMINAL JUSTICE 3
The history and philosophy of the system of criminal justice in America, identifying the various sub-systems; role expectations, and their interrelationships; theories of crime, punishment and rehabilitation. Prerequisite: Reading Proficiency.

CRJ:123 JUVENILE JUSTICE 3
The organization, functions and jurisdiction of juvenile agencies; the detention of juveniles and the processing of neglected and abused children. The intent, application, and procedures of the Missouri Juvenile Code; juvenile case disposition, rights of juveniles, crime prevention methods and reporting procedures. Prerequisite: Reading Proficiency.

CRJ:124 CRIMINAL LAW AND PROCEDURES 3
An introduction to the study of criminal, common, and statutory law within the context of enforcement. Prerequisite: Reading Proficiency.

CRJ:126 MANAGEMENT OF HUMAN CONFLICTS 3
Explores the areas of potential conflict that can occur between members of the criminal justice community and various ethnic, racial, and regional sub-cultures. The root causes of the potential conflicts in both criminal justice organizations and occupational subcultures will be investigated. Issues of prejudice and discriminatory practices, both real and perceived, will be discussed as factors contributing to conflict. Proactive and reactive intervention techniques will be addressed in order to learn how to keep potential conflict from becoming actual conflicts. Prerequisite: Reading Proficiency.

CRJ:207 POLICE SUPERVISION 3
A comprehensive overview of police personnel, recruiting, selection, training, promotion, personnel development, discipline, control, communication, labor relation issues, and current problems and theories facing the first level line police manager. Emphasis is placed on both individual and organizational development. Prerequisite: Reading Proficiency.

CRJ:208 CORRECTIONAL POLICIES AND PROCEDURES 3
The study of policies, procedures and supervision in the field of Corrections. Prerequisite: CRJ:101, CRJ:102, or consent of department and Reading Proficiency.

CRJ:209 CRIMINAL JUSTICE PRACTICUM 3
A field work experience in Criminal Justice organizations. Students are expected to commit themselves to 120 hours of work experience during the semester. Prerequisite: Corrections Option—CRJ:122, CRJ:101, and CRJ:102. Law Enforcement Option—CRJ:122, CRJ:124, and CRJ:111. Concurrent enrollment in Criminal Justice Practicum Seminar (CRJ:211). Reading Proficiency.

CRJ:211 CRIMINAL JUSTICE PRACTICUM SEMINAR 3

CRJ:212 CRIMINAL INVESTIGATION 3
The study of the criminal act and its investigation, including specific crimes against persons and property. The process of fact-gathering and problem of legally admissible proof will be considered. Prerequisite: Reading Proficiency.

DEAF COMMUNICATION STUDIES

DCS:001 CONVERSATIONAL SIGN II 3
This course is designed for anyone interested in taking only one or two courses to converse with a deaf friend, colleague, fellow student, etc. Students will learn signspelling, approximately 1000 words organized into conversational themes or topics. This is not a preliminary course to the Deaf Communication Studies program.

DCS:104 AMERICAN SIGN LANGUAGE I 5
For students planning to pursue sign language studies in depth. Intensive exposure to ASL allowing development of beginning level communication skills used with deaf persons. Emphasis on comprehension of target language, ASL. Linguistic, cultural features are presented in context of learning experiences. Prerequisite: Reading Proficiency.

DCS:105 AMERICAN SIGN LANGUAGE II 5
Intensive exposure to ASL allowing continued development of intermediate level communication skills utilized in interaction by deaf persons. Emphasis given to comprehension and production skill. Linguistic and cultural features presented in the context of language learning experiences. Prerequisites: DCS:115 and DCS:104 with grades of "C" or better and Reading Proficiency.

DCS:106 AMERICAN SIGN LANGUAGE III 5
Continued exposure to ASL allowing greater development of expressive and receptive ASL communication skills. Linguistic and cultural features presented in the context of language learning experiences. Prerequisites: DCS:115 and DCS:104 with a grade of "C" or better and Reading Proficiency.

DCS:107 FINGERSPELLING 3
This course develops expressive and receptive fingerspelling skills based on word and phrase recognition principles. Because a manual alphabet is used by deaf people, it is essential to develop communication skills in ASL and PSE. Prerequisites: DCS:104 and Reading Proficiency.

DCS:108 ORIENTATION TO INTERPRETING 3
An overview of interpreting as an occupation. Topics include interpersonal skills, professional ethics, parameters of responsibility of the paraprofessional, examination of community resources, and legal ramifications. Prerequisites: DCS:106, DCS:109 with a grade of "C" or better and Reading Proficiency.

DCS:109 ETYMOLOGY FOR INTERPRETERS 3
This course is designed to instruct students in the fundamentals of language building, to interpret and translate English idioms in the correct meaning, and to identify the variation of: verb versatility, multiple meanings, multiple signs, and contextual clues. Concentrated attention in given to English and sign vocabulary development. The student will learn discourse and comparative analysis techniques. Prerequisites: DCS:105 and ENG:101 with grades of "C" or better and Reading Proficiency.

DCS:110 DEAF THEATRE STUDIES 3
This course will address the special considerations of sign language performance. Emphasis placed on developing theatrical sign and mime skills. Lectures, field trips included. Open to hearing and deaf. Prerequisites: DCS:104 with a grade of "C" or better or permission of department and Reading Proficiency.
DCS:111  THEORY OF AMERICAN SIGN LANGUAGE  3  
A course to examine the structural and grammatical principles of ASL. An introductory study of the linguistic and semiotic problems of equivalency in English and American Sign Language will be studied. By incorporating linguistic information into the text analysis process, quality interpretation of English and ASL will result. Prerequisites: Completion or concurrent enrollment in DCS:104 and Reading Proficiency.

DCS:115  INTRODUCTION TO DEAF COMMUNICATIONS STUDIES  3  
This course surveys the aspects of deafness by familiarizing students with the physiology of the ear, causes and types of hearing losses, social and psychological aspects of deafness, national and community organizations (i.e. NAD, RID), and history of deaf education. Prerequisite: Reading Proficiency.

DCS:116  AMERICAN SIGN LANGUAGE SEMANTICS  3  
This course is designed to expand student’s knowledge, recognition, and understanding of American Sign Language semantic units. Focus will be on interpreting and translating ASL idiomatic expressions into equivalent English meaning and usage, developing a recognition of cultural variations of sentence types, time, pronominalization, subjects and objects, classifiers, locatives, pluralization and temporal and distributional aspects. Emphasis will be on cross-cultural influences on language usage and thought. Prerequisites: DCS:104 and DCS:115 with grades of “C” or better and Reading Proficiency.

DCS:117  SIGN THEATRE  3  
This class will explore and mount a small theatre of the deaf production. Theatrical sign and mime skills will be utilized. All students will be involved in developing the ASL translation of a script, building sets and props and performing. The show will perform for elementary school children on Fridays during class time. Prerequisites: DCS:106 and DCS:110 with grades of “C” or better and Reading Proficiency.

DCS:118  SIGN SEMINAR  3  
This course is designed to provide increased interactive opportunities for students to continue development of their knowledge of vocabulary and grammatical features of ASL. Instructional approaches include discussion, expansion and explanation in the target language. In addition, the course focuses on colloquialisms, varying registers and socially restricted vocabulary in numerous contexts. Prerequisites: DCS:105 with a grade of “C” or better and Reading Proficiency.

DCS:206  CONSECUTIVE INTERPRETING  3  
Introduces basic skills necessary for an individual to interpret ASL to English or English to ASL. The course is built around a sequencing of drills and incorporates video and deaf signers. The Code of Ethics is reinforced in the classroom. Prerequisite: DCS:106 and DCS:109 with grades of “C” or better, or permissions of Department and Reading Proficiency.

DCS:207  SIMULTANEOUS INTERPRETING  3  
Introduces basic skills necessary to simultaneously transliterate Contact/PSE to English or English to Contact/PSE. The course is built around sequencing of drills and incorporates video and deaf signers. The Code of Ethics will be reinforced in context. Prerequisites: DCS:106 and DCS:109 with grades of “C” or better or permission of Department and Reading Proficiency.

DCS:208  DCS PRACTICUM  3  
Introductory field experience involving observation, interpreting/translating, and interacting totaling 100 hours during the semester. Lecture portion will discuss problems encountered, development of a professional log and portfolio. Prerequisites: DCS:206, DCS:207 and DCS:218 with grades of “C” or better and Reading Proficiency.

DCS:209  INTERPRETING/TRANSLITERATING LAB  1  
Designed to reinforce concepts discussed in DCS:206/207 within individualized and small group settings. Concurrent enrollment in DCS:206 or DCS:207. Additional lab hours required. Prerequisite: Reading Proficiency.

DCS:210  SIGN TO VOICE INTERPRETING  3  
The purpose of this course is to provide the student an opportunity to build skills in interpreting and transliterating into spoken English from ASL and various contact varieties. Prerequisites: DCS:206 and DCS:207 and COM:111 with grades of “C” or better and Reading Proficiency.

DCS:211  SPECIALIZED INTERPRETING  3  
Various interpreting settings are explored, including educational, legal, medical, mental health, religious, platform, rehabilitation, and performing arts. The course also develops understanding of additional types of communication techniques, such as interpreting for those who are deaf-blind, oral or exhibit minimal language skills. Prerequisites: DCS:105 and COM:111 with grades of “C” or better and Reading Proficiency.

DCS:212  DEAF HISTORY AND CULTURE  3  
To help students understand historical values and traditions with the culture of deaf people. Traditions include use of humor, success stories and behaviors of empowerment. Values include the importance of clubs, perspectives on education of deaf children, interpreter services and the preservation of ASL. Prerequisites: DCS:211 with a grade of “C” or better and ANT:102 and Reading Proficiency.

DCS:213  PROFESSIONAL ISSUES AND ETHICS  3  
This course will explore the current role of the interpreter as a professional. Topics will include, but not be limited to, the art of cross-cultural mediation, ethical standards, application of interpreting theories, resume development and business practices. This course will prepare students for the practicum experience. Prerequisites: DCS:216, DCS:217, and DCS:211 with grades of “C” or better and Reading Proficiency.

DCS:214  INTERACTIVE INTERPRETING  3  
This skill development course will provide students with the opportunity to practice skills associated with interactive interpreting situations. Students will use both consecutive and simultaneous interpreting methods. Interactive interpreting refers to the process of initiating an interpretation both manual and verbal during a variety of interview and one-on-one situations (mental health, medical, employment, educational and business). Students will begin working with isolated cognitive subtasks (critical listening, analyzing the information, constructing the interpretation and generating the interpretation) of interpretation and work to integrate component skills to perform an interactive interpretation. Prerequisites: DCS:210, DCS:216, DCS:217 with grades of “C” or better and Reading Proficiency.

DCS:215  INTERPRETER SEMINAR  2  
This course is designed to provide increased interactive opportunities for students to continue the development of their knowledge of the interpreting process. Instructional approaches include discussion, expansion, and explanation of interpreting and transliterating. In addition, the course focuses on cross-cultural mediation and discourse analysis. Prerequisites: DCS:206 and DCS:207 with grades of “C” or better and Reading Proficiency.

DCS:216  EDUCATIONAL INTERPRETING - CLASSROOM APPLICATIONS  3  
This course is designed to focus on the principles of interpreting within the framework of an educational system. Procedures and strategies for effective communication in the educational setting are discussed. The role of the educational interpreter to facilitate communication between deaf individuals and their peers, educational instructors, staff and students is stressed. Also emphasized is the interpreter as a member of the educational team. Prerequisites: DCS:206 and DCS:207 with grades of “C” or better and Reading Proficiency. 3 lecture hours weekly.

DCS:217  TRANSLATION APPLICATIONS OF ASL  3  
This is a skill development course based on English written text analysis and American Sign Language equivalent meaning and appropriate interpretation with conceptual accuracy. Students will engage in the analysis, discussion and translation of ASL and/or English texts from one language into the other. Student demonstration of translations will be used to discuss meaning of message and degrees of equivalency. The discourse style of American English and Sign Language usage will be analyzed to distinguish the patterns of low and high context usage, linguistic structure and cultural differences. Prerequisites: DCS:216 with a grade of “C” or better or concurrent enrollment in DCS:216 and Reading Proficiency.

DCS:218  PRE-PRACTICUM  3  
This course will prepare students to enter the practicum experience. Topics will include: professional organizations, certification, contextual factors, market analysis, time management, business management, consumer attitudes and minority accommodations. Prerequisites: DCS:206 and DCS:207 with grades of “C” or better and Reading Proficiency.
DENTAL ASSISTING

DA:143 CHAIRSIDE ASSISTING: OPERATIVE DENTISTRY 2
This course provides the basic principles and theory of common restorative dental procedures. Emphasis is placed on instrumentation and materials preparation and use, and the assistant's role in chairside restorative procedures. Prerequisites: DA:144 and DA:151, current enrollment in Dental Assisting Program and Reading Proficiency. 2 lecture hours.

DA:144 PRECLINICAL PRACTICE 1
This preclinical course gives the student an opportunity to apply knowledge and practice basic dental assisting skills and clinical support functions in the laboratory setting. Additional lab hours required. Prerequisite: Current enrollment in the Dental Assisting Program and Reading Proficiency.

DA:149 DENTAL TERMINOLOGY 1
An introduction to the structure and function of teeth and oral cavity components. Additional topics include dental charting and restorative terms. Prerequisite: Current enrollment in Dental Assisting Program and Reading Proficiency. 1 lecture hour.

DA:150 INFECTION CONTROL IN DENTISTRY 1
This course will cover the process of disease transmission, methods and agents for sterilization and disinfection, universal precautions, and means of protection for the dental team and patient. Prerequisite: Current enrollment in Dental Assisting Program and Reading Proficiency. 1 lecture hour.

DA:151 FUNDAMENTALS OF CHAIRSIDE ASSISTING 2
This course introduces the student to patient and treatment room preparation, data collection, four-handed dentistry techniques common to all dental procedures, and recognition and management of medical emergencies. Prerequisite: Current enrollment in Dental Assisting Program and Reading Proficiency. 1 lecture hour.

DA:157 DENTAL RADIOLOGY 2
This course will cover radiation production, safety and protection, exposure and processing procedures, and quality assessment of radiographs. Lab emphasis placed on developing proficiency in intraoral exposure techniques. Additional lab hours required. Prerequisites: Current enrollment in Dental Assisting Program and Reading Proficiency. 2 lecture hours.

DA:159 DENTAL OFFICE PROCEDURES 1
An introduction to procedures associated with the business aspects of the dental office that include scheduling appointments, telephone and written correspondence, and records management. Prerequisites: Current enrollment in the Dental Assisting Program and Reading Proficiency. 1 lecture hour.

DA:161 DENTAL ASSISTING PRACTICUM 2
This course introduces the student to the dental office and provides an opportunity for the application of basic dental assisting skills and clinical support functions. Additional hours required. Prerequisites: DA:144, DA:164, and current enrollment in the Dental Assisting Program and Reading Proficiency.

DA:162 DENTAL SYSTEMS MANAGEMENT 1
An introduction to the use and application of dental office computer software for data entry and records management. The student will learn how to use dental software and will explore its utilization potential in the modern dental office. Prerequisites: DA:159 and current enrollment in the Dental Assisting Program and Reading Proficiency. 1 lecture hour.

DA:164 CLINICAL APPLICATIONS I 2
Theoretical knowledge is applied in the clinical lab setting. Emphasis is on developing skill in assisting with restorative procedures and manipulating dental materials. Additional lab hours required. Prerequisites: DA:144 and Reading Proficiency.

DA:165 DENTAL MATERIALS 1
This course presents the basic physical properties and technical aspects of materials used in restorative and laboratory procedures with emphasis on restorative materials, dental cements, gypsum products, and impression materials. Prerequisites: Current enrollment in the Dental Assisting Program and Reading Proficiency. 1 lecture.

DA:166 DENTAL LAB PROCEDURES 1
This course is a continued study of dental materials, focusing on those materials used in the fabrication of appliances and prostheses. Lab sessions give the student an opportunity to develop skill in manipulation of material and use of lab equipment. Additional lab hours required. Prerequisites: DA:164, DA:165, current enrollment in the Dental Assisting Program and Reading Proficiency.

DA:167 DENTAL RADIOLOGY II 1
A study of the principles of extroradial radiography, variations in intraoral radiographic procedures, physical properties and biological effects of radiation, and the appearance of normal anatomical structures and pathological conditions. Prerequisites: DA:157, current enrollment in the Dental Assisting Program and Reading Proficiency. 1 lecture hour.

DA:168 INTEGRATED DENTAL SCIENCES 2
This course presents the basic physical properties and technical aspects of materials used in restorative and laboratory procedures with emphasis on restorative proficiency. Additional lab hours required. Prerequisites: DA:149, current enrollment in the Dental Assisting Program and Reading Proficiency. 2 lecture hours.

DA:169 PREVENTIVE DENTAL HEALTH 2
A study of the principles of preventive dentistry in terms of oral health maintenance and nutrition. This course emphasizes the dental assistant's role in dental health teaching, patient motivation, and preventive intraoral procedures. Prerequisites: Current enrollment in the Dental Assisting Program and Reading Proficiency. 2 lecture hours.

DA:172 DENTAL PRACTICE MANAGEMENT 1
A study of principles and procedures related to the daily operation and management of the dental office. Additional topics include resume preparation and interviewing skills, discussion of legal and ethical issues, and interpersonal work relations. Prerequisites: DA:159, DA:162, current enrollment in the Dental Assisting Program and Reading Proficiency. 1 lecture hour.

DA:173 CHAIRSIDE ASSISTING: DENTAL SPECIALTIES 2
This course covers the scope and function of the dental specialties, as well as terminology, instrumentation, and treatment procedures unique to each specialty. Emphasis is placed on the assistant's role in chairside procedures and patient teaching. Prerequisites: DA:151, DA:161, current enrollment in the Dental Assisting Program and Reading Proficiency. 2 lecture hours.

DA:174 CLINICAL APPLICATIONS II 2
The student continues to assimilate and apply theoretical knowledge through practice and demonstration of proficiency in the clinical lab setting. Emphasis on dental specialty procedures, dental health education, dental lab procedures, and special radiographic techniques. Prerequisites: DA:161, DA:164 and Reading Proficiency. 2 lab hours.

DA:175 DENTAL ASSISTING PRACTICUM II 2
A continuation of practical experience in the general or specialty dental office. The student will acquire new skills and increase proficiency in four handed dentistry techniques, lab procedures, and clinical support functions. Additional hours required. Prerequisite: DA:161 and Reading Proficiency.

DA:176 DENTAL ASSISTING PRACTICUM III 2
The student will assume the role and responsibilities of the dental assistant as an integral member of the dental team during this final phase of clinical experience. Emphasis is placed on the assistant's role in chairside procedures and patient care. Prerequisites: DA:151, DA:161, current enrollment in the Dental Assisting Program and Reading Proficiency. 2 lecture hours.

DA:178 EXPANDED FUNCTIONS I 1
This course is a continued study of dental materials, focusing on those materials used in the fabrication of appliances and prostheses. Lab sessions give the student an opportunity to develop skill in manipulation of material and use of lab equipment. Additional lab hours required. Prerequisites: Current enrollment in the Dental Assisting Program and department approval, and Reading Proficiency.
DHY:215  PAIN CONTROL  2

Theory and clinical applications of pain control interventions appropriate for use within the context of dental hygiene care delivery. The psychology, physiology, and pharmacology of pain control are covered, with emphasis on the prevention, recognition and management of adverse reactions. Interventions within the legal scope of dental hygiene practice in Missouri are the focus of this course. Additional lab hours required. Prerequisites: Current enrollment in the Dental Hygiene program, CPR health care provider level. DHY:132, DHY:137 and Reading Proficiency.
DHY:220 CONCEPTS OF CLINICAL DENTAL HYGIENE III 2
Introduction of additional clinical dental hygiene procedures including advanced periodontal instrumentation and skills to further develop the assessment and implementation of the dental hygiene diagnosis and treatment plan. Theories and principles for the use of power scalers, air polishing, pulp vitality testers, cast and models, tooth bleaching, and tray fabrication of the current literature will continue. Prerequisites: Current enrollment in the Dental Hygiene program. DHY:142, DHY:215, ENG:101 and Reading Proficiency.

DHY:221 CLINICAL APPLICATIONS LAB III 1
Application of clinical dental hygiene concepts learned in Clinical Dental Hygiene III. Additional lab hours required. Prerequisites: Current enrollment in the Dental Hygiene program, CPR health care provider level, DHY:142, DHY:215 and Reading Proficiency.

DHY:222 CLINICAL DENTAL HYGIENE III 4
Students continue to apply the learned theories, principles and responsibilities related to the field of dental hygiene practice in the dental hygiene clinic and at community dental health facilities. Additional dental hygiene modalities will be implemented into patient treatment care. Additional lab hours required. Prerequisites: Current enrollment in the Dental Hygiene program, CPR health care provider level, DHY:142, DHY:215, COM:101 and Reading Proficiency.

DHY:223 COMMUNITY PUBLIC HEALTH 2
This course is designed to provide a study of the history, economics, and management of the public health organization, its delivery, and supportive services. Included are the assessment and control of dental disease through dental personnel roles in schools, industry, civic, and public organizations. Emphasis is placed on examinations of the principles of public health, epidemiological methods of investigation, the US health care system, basic concepts in research and biostatistics and community based program planning. Introduction to techniques for evaluating dental/dental hygiene literature is established. Prerequisites: Current enrollment in the Dental Hygiene program, ENG:101, COM:101 and Reading Proficiency.

DHY:225 PERIODONTICS II 2
Advanced study of the periodontium in disease. Periodontitis, and its various presentations, is covered in depth, with emphasis on assessment methods and dental hygiene interventions. Basic surgical concepts are introduced. Prerequisites: Current enrollment in the Dental Hygiene program, DHY:125, DHY:138, BIO:203, ENG:101 and Reading Proficiency.

DHY:226 DENTAL RADIOLOGY II 1
Advanced study of supplemental dental radiographic techniques and procedures used in contemporary dental practices and facilities. Emphasis is given to extraoral and digital radiography techniques. Supplemental procedures for endodontic and pediatric dental patients are presented. Additional lab hours required. Prerequisites: Current enrollment in the Dental Hygiene program, DHY:126 and Reading Proficiency.

DHY:228 DENTAL PHARMACOLOGY 2
A study of pharmaceutical classifications, properties and effects. Emphasis is given to the systemic effects of drugs and their implications in the management of various medical conditions. Prerequisites: Current enrollment in the Dental Hygiene program, BIO:203 and Reading Proficiency.

DHY:230 TRANSITION INTO PROFESSIONAL DENTAL HYGIENE PRACTICE 2
Dental hygiene care for cancer patients, dental implants and suspected cases of child abuse are introduced. The health care provider/patient legal relationship and state rules and regulations for the practice of dentistry and dental hygiene are emphasized. Employment-seeking skills are covered. This course includes a community service practicum learning component. Additional hours required. Prerequisites: Current enrollment in the Dental Hygiene program, DHY:220, DHY:221, DHY:222, DHY:223 and Reading Proficiency.

DHY:232 CLINICAL DENTAL HYGIENE IV 4
Patient care continues and coordinates with the application of the theories, principles, and responsibilities related to dental hygiene practice in the dental clinic and at off-campus community rotation sites. Students will also complete a community service practicum field experience as a component of this course. Additional lab hours required. Prerequisites: Current enrollment in the Dental Hygiene program, CPR health care provider level, DHY:220, DHY:221, DHY:222 and Reading Proficiency.

DIAGNOSTIC MEDICAL SONOGRAPHY

DMS:101 CLINICAL FOUNDATIONS OF ULTRASOUND 2
Topics covered in this course include general pathology and pathophysiology, ultrasound terminology, clinical laboratory tests and diagnostic procedures, patient interview and examination techniques, chart and referral evaluation and embroylogy. Prerequisites: Current enrollment in the Diagnostic Medical Sonography program or permission of the Program Director and Reading Proficiency.

DMS:102 MEDICAL ETHICS AND PROFESSIONAL ISSUES 2
This course will examine a number of topics including principles of psychological support, professional interaction skills, multicultural diversity, professional codes of conduct and scope of practice, pertinent legal principles, administrative procedures and trends in healthcare systems. Prerequisites: Current enrollment in the program or permission of the Program Director and Reading Proficiency.

DMS:103 ULTRASOUND PHYSICS AND INSTRUMENTATION I 2
Topics covered in this course include basic physical principles of ultrasound, Doppler principles and ultrasound equipment controls. Emphasis will be placed on control manipulation and parameters required for optimum sonographic examinations. Prerequisite: Current enrollment in the Diagnostic Medical Sonography program or permission of the Program Director and Reading Proficiency.

DMS:104 ULTRASOUND PHYSICS AND INSTRUMENTATION II 3
Topics in the course include transducer parameters, principles of ultrasound instruments and modes of operation, principles of Doppler techniques, methods of Doppler flow analysis and acoustical artifacts. Prerequisites: Current enrollment in the Diagnostic Medical Sonography program or permission of the Program Director and Reading Proficiency.

DMS:105 MEDICAL SONOGRAPHY I 3
This course will present normal sectional anatomy and patterns for the most common examinations within abdominal and OB/GYN sonography. An introduction to clinical applications will include the pathophysiologic basis, clinical signs and symptoms and typical sonographic patterns related to the most common abnormalities encountered in the clinical environment. Prerequisites: Current enrollment in the Medical Sonography program or permission of the Program Director and Reading Proficiency.

DMS:106 MEDICAL SONOGRAPHY SCANNING TECHNIQUES I 1
Laboratory demonstration and student performance of standard protocols for the most common abdominal, obstetric and gynecologic sonographic examinations, with emphasis on normal anatomy and pattern recognition. Additional lab hours required. Prerequisite: Current enrollment in the Medical Sonography program or permission of the Program Director and Reading Proficiency.

DMS:107 MEDICAL SONOGRAPHY PRACTICUM I 2
Observation and initial scanning experience of abdominal, obstetrical and gynecologic sonographic examinations. Additional hours required. Prerequisite: Current enrollment in the Medical Sonography program or permission of the Program Director and Reading Proficiency.

DMS:108 MEDICAL SONOGRAPHY II 3
Further study of the clinical applications of abdominal, obstetric and gynecologic sonography. Lecture topics include the pathologic basis, clinical signs and symptoms, related diagnostic procedures and typical sonographic patterns of common and rare conditions and abnormalities encountered in the clinical setting. Prerequisites: DMS:105 or permission of the Program Director and Reading Proficiency.

DMS:109 MEDICAL SONOGRAPHY SCANNING TECHNIQUES II 1
Laboratory demonstration and student performance of standard protocols for superficial structures and less common procedures within abdominal and OB/GYN sonography, with emphasis on normal anatomy and pattern recognition. Additional lab hours required. Prerequisites: DMS:106 or permission of the Program Director and Reading Proficiency.

DMS:110 MEDICAL SONOGRAPHY CLINICAL APPLICATIONS I 2
Review of abnormal abdominal sonographic examinations in order to further develop the critical thinking skills required to correlate the clinical history, clinical signs and symptoms and results of other diagnostic tests with the results of the sonographic examination. Prerequisites: DMS:105 or permission of the Program Director and Reading Proficiency.
DMS:111 MEDICAL SONOGRAPHY PRACTICUM II 3
Clinical performance of abdominal, obstetric and gynecologic sonographic examinations under the supervision of experienced sonographers. Additional hours required. Prerequisites: DMS:107 or permission of the Program Director and Reading Proficiency.

DMS:112 CARDIAC SONOGRAPHY II 3
This course will present normal sectional anatomy, hemodynamics, patient assessment and diagnostic testing related to cardiac sonography. An introduction to clinical applications will include the pathophysiologic basis, clinical signs and symptoms and typical findings related to the most common types of adult cardiac disease. Prerequisite: Current enrollment in the Cardiac learning concentration, Diagnostic Medical Sonography program or permission of the Program Director and Reading Proficiency.

DMS:113 CARDIAC SONOGRAPHY SCANNING TECHNIQUES I 1
Laboratory demonstration and student performance of standard protocols for transthoracic adult cardiac sonographic examinations, with emphasis on normal 2-D, M-Mode and Doppler pattern recognition. Additional lab hours required. Prerequisites: Current enrollment in the Cardiac learning concentration or permission of the Program Director and Reading Proficiency.

DMS:114 CARDIAC SONOGRAPHY PRACTICUM I 2
Observation and initial scanning experience of transthoracic adult cardiac sonographic examinations. Additional hours required. Prerequisite: Current enrollment in the Cardiac Sonography learning concentration, Diagnostic Medical Sonography Program or permission of the Program Director and Reading Proficiency.

DMS:115 CARDIAC SONOGRAPHY II 3
Presentation of the clinical applications of cardiac sonography including the pathophysiologic basis, clinical signs and symptoms and typical findings related to acquired and congenital adult cardiac disease. Prerequisites: DMS:112 or permission of the Program Director and Reading Proficiency.

DMS:116 CARDIAC SONOGRAPHY SCANNING TECHNIQUES II 1
Laboratory demonstration and performance of pulsed and continuous wave Doppler examinations and less common protocols in cardiac sonography including stress echo and the use of contrast agents. Additional lab hours required. Prerequisites: DMS:113 or permission of the Program Director and Reading Proficiency.

DMS:117 CARDIAC SONOGRAPHY CLINICAL APPLICATIONS I 2
Review of abnormal cardiac sonographic examinations in order to further develop the critical thinking skills required to correlate the clinical history, clinical signs and symptoms and results of other diagnostic tests with the results of the sonographic examination. Prerequisites: DMS:112 or permission of the Program Director and Reading Proficiency.

DMS:118 CARDIAC SONOGRAPHY PRACTICUM II 3
Clinical performance of transthoracic adult cardiac sonographic examinations under the supervision of experienced sonographers. Additional hours required. Prerequisites: DMS:114 or permission of the Program Director and Reading Proficiency.

DMS:119 VASCULAR TECHNOLOGY I 3
This course will present normal sectional anatomy, hemodynamics, patient assessment and diagnostic testing related to Vascular Technology. An introduction to clinical applications will include the pathophysiologic basis, clinical signs and symptoms and typical findings related to the most common vascular examinations. Prerequisites: Current enrollment in the Vascular Technology learning concentration or permission of the Program Director and Reading Proficiency.

DMS:120 VASCULAR TECHNOLOGY SCANNING TECHNIQUES I 1
Laboratory demonstration and student performance of standard protocols for the most common venous and arterial examinations, with emphasis on recognition of normal gray scale and Doppler patterns. Additional lab hours required. Prerequisites: Current enrollment in the Vascular Technology learning concentration or permission of the Program Director and Reading Proficiency.

DMS:121 VASCULAR TECHNOLOGY PRACTICUM I 2
Observation and initial scanning experience of arterial and venous vascular examinations. Additional hours required. Prerequisites: Current enrollment in the Vascular Technology learning concentration or permission of the Program Director and Reading Proficiency.

DMS:122 VASCULAR TECHNOLOGY II 3
Further study of the clinical applications of Vascular Technology including the pathophysiologic basis, clinical signs and symptoms, related diagnostic procedures and typical findings of common and rare conditions of the carotid and lower extremity vascular systems. Prerequisites: DMS:119 or permission of the Program Director and Reading Proficiency.

DMS:123 VASCULAR TECHNOLOGY SCANNING TECHNIQUES II 1
Laboratory demonstration and performance of standard protocols for both common and rare examinations, including transcranial and periborial Doppler, vein mapping and the upper extremity venous and arterial examinations. Additional lab hours required. Prerequisites: DMS:120 or permission of the Program Director and Reading Proficiency.

DMS:124 VASCULAR TECHNOLOGY CLINICAL APPLICATIONS I 2
Review of abnormal vascular examinations of the carotid and lower extremities in order to further develop critical thinking skills required to correlate the clinical history, clinical signs and symptoms and results of other diagnostic tests with the results of the sonographic examination. Prerequisites: DMS:119 or permission of the Program Director and Reading Proficiency.

DMS:125 VASCULAR TECHNOLOGY PRACTICUM II 3
Clinical performance of vascular procedures under the supervision of an experienced Vascular Technologist. Additional hours required. Prerequisites: DMS:121 or permission of the Program Director and Reading Proficiency.

DMS:201 ULTRASOUND PHYSICS AND INSTRUMENTATION III 3
Topics in this course include quality assurance procedures, biological effects, 3-D ultrasound applications and a general review in preparation for the certification examinations in Abdomen and OB/GYN sonography. Prerequisites: DMS:104 or permission of the Program Director and Reading Proficiency.

DMS:202 MEDICAL SONOGRAPHY III 2
A study of the clinical applications of superficial structures, including the pathophysiologic basis, clinical signs and symptoms, related diagnostic tests and typical sonographic patterns of common and rare conditions encountered in the clinical setting. Additional hours required. Prerequisites: DMS:108 or permission of the Program Director and Reading Proficiency.

DMS:203 MEDICAL SONOGRAPHY PRACTICUM III 4
A continuation of clinical experience achievement of minimal competency in the most common examinations. Additional hours required. Prerequisites: DMS:111 or permission of the Program Director and Reading Proficiency.

DMS:204 MEDICAL SONOGRAPHY IV 4
This course will present normal sectional anatomy and patterns, and the clinical applications for neonatal neurosonography and the pediatric abdomen and pelvis. The remainder of the course will consist of review in preparation for the certification examinations in Abdomen and OB/GYN sonography. Prerequisites: DMS:202 or permission of the Program Director and Reading Proficiency.

DMS:205 MEDICAL SONOGRAPHY CLINICAL APPLICATIONS II 2
A further review of less common sonographic examinations in order to further develop the critical thinking skills required to correlate the clinical history, clinical signs and symptoms and results of other diagnostic tests with the results of the sonographic examination. Prerequisites: DMS:110 or permission of the Program Director and Reading Proficiency.

DMS:206 MEDICAL SONOGRAPHY PRACTICUM IV 3
Students will complete all clinical competency requirements for the specialties of abdomen, OB/GYN and superficial structures. Additional hours required. Prerequisites: DMS:203 or permission of the Program Director and Reading Proficiency.

DMS:207 CARDIAC SONOGRAPHY III 2
Further study of the clinical applications of cardiac sonography including pediatric applications and other advanced and/or rare imaging techniques. Additional hours required. Prerequisites: DMS:115 or permission of the Program Director and Reading Proficiency.

DMS:208 CARDIAC SONOGRAPHY PRACTICUM III 4
A continuation of clinical experience with achievement of minimal competency in the most common types of examinations. Additional hours required. Prerequisites: DMS:118 or permission of the Program Director and Reading Proficiency.

DMS:209 CARDIAC SONOGRAPHY IV 4
Further study of the clinical applications of cardiac sonography, including fetal echocardiography. The remainder of the course will consist of review in preparation for the certification examination in cardiac sonography. Prerequisites: DMS:207 or permission of the Program Director and Reading Proficiency.

DMS:210 CARDIAC SONOGRAPHY CLINICAL APPLICATIONS II 2
A further review of more rare abnormal cardiac sonographic examinations in order to further develop the critical thinking skills required to correlate the clinical history, clinical signs and symptoms and the results of other diagnostic tests with the results of the sonographic examination. Prerequisites: DMS:117 or permission of the Program Director and Reading Proficiency.
DMS:211 CARDIAC SONOGRAPHY PRACTICUM IV
This course will introduce the student to current repair and information systems proficiency. Additional hours required. Prerequisites: DMS:208 or permission of the Program Director and Reading Proficiency.

DMS:212 VASCULAR TECHNOLOGY III
Further study of the clinical applications of vascular technology including abdominal Duplex applications and other advanced and/or rare examinations. Additional hours required. Prerequisites: DMS:122 or permission of the Program Director and Reading Proficiency.

DMS:213 VASCULAR TECHNOLOGY PRACTICUM III
A continuation of clinical experience with achievement of minimal competency in the most common vascular examinations. Additional hours required. Prerequisites: DMS:125 or permission of the Program Director and Reading Proficiency.

DMS:214 VASCULAR TECHNOLOGY IV
Topics in this course will include therapeutic interventions, intraoperative monitoring and the use of ultrasound contrast agents. The remainder of the course will consist of review in preparation for the certification examinations in Vascular Technology. Prerequisites: DMS:212 or permission of the Program Director and Reading Proficiency.

DMS:215 VASCULAR TECHNOLOGY CLINICAL APPLICATIONS II
Review of abnormal vascular examinations of the cerebrovascular system, upper and lower extremity, and the abdomen in order to further develop the critical thinking skills required to correlate the clinical history, clinical signs and symptoms and the results of other diagnostic tests with the results of the sonographic examination. Prerequisites: DMS:124 and Reading Proficiency.

DMS:216 VASCULAR TECHNOLOGY PRACTICUM IV
Students will complete all clinical competency requirements for the specialty of Vascular Technology. Additional hours required. Prerequisites: DMS:213 and Reading Proficiency.

DIESEL TECHNOLOGY

DIE:101 DIESEL ENGINE OPERATION AND REPAIR
This course examines through practical application the theories of operation, construction, maintenance, disassembly, and assembly of the diesel engine and its supporting systems; including lubrication system, cooling system, and engine brakes. Additional lab hours required. Prerequisite: Reading Proficiency.

DIE:102 MEDIUM/HEAVY TRUCK SUSPENSION AND STEERING
This course examines through practical application the types of suspension and steering systems found on medium and heavy trucks. Emphasis will be in areas of manual steering gears and columns, power steering gears, suspension system components, wheel alignment diagnosis, and wheel & tire diagnosis and repair. Additional lab hours required. Prerequisite: Reading Proficiency.

DIE:103 MEDIUM/HEAVY TRUCK ELECTRICITY
This course examines through practical application the theories of basic electricity and the diagnostic equipment used to perform general electrical system diagnosis of medium and heavy truck batteries, starting systems, charging systems, and lighting systems. Additional lab hours required. Prerequisite: Reading Proficiency.

DIE:104 ELECTRONIC INFORMATION SYSTEMS AND MANUALS
This course will introduce the student to current repair and information systems for trucks. Emphasis will be on computer based systems and on interpreting specifications in both metric and English systems of measurement. Prerequisite: Reading Proficiency.

DIE:105 DIESEL FUEL SYSTEMS
This course examines through practical application the theories of operation, construction, maintenance, and service of diesel engine fuel systems including; air induction and exhaust systems, mechanical fuel injection systems, and electronic fuel injection systems. Additional lab hours required. Prerequisite: Reading Proficiency.

DIE:106 MEDIUM/HEAVY TRUCK BRAKES
This course examines through practical application the types of brake systems found on medium and heavy trucks. Emphasis will be in areas of air brakes, foundation brakes, parking brakes, anti-lock brakes, and power brakes. Additional lab hours required. Prerequisite: Reading Proficiency.

DIE:107 MEDIUM/HEAVY TRUCK ELECTRONICS
This course examines through practical application the theories of electronics and diagnostic equipment used to perform general electronic system diagnosis and repair of medium and heavy truck gauge and warning devices, electronic fuel injection, anti-lock brakes, and electrical accessories. Additional lab hours required. Prerequisite: DIE:103 and Reading Proficiency.

DIE:201 PREVENTIVE MAINTENANCE INSPECTION
This course examines through practical application the areas of inspection and maintenance on medium and heavy trucks. To include; engine, fuel system, cooling system, lubrication system, cab and hood, electrical, drive train, brakes, and tires and wheels. Additional lab hours required. Prerequisite: Reading Proficiency.

DIE:202 CO-OP WORK EXPERIENCE I-DIESEL TECHNOLOGY
A cooperative education work experience at a local truck or bus repair facility which allows students to apply skills learned in diesel technology courses. Students will also learn new skills and explore employment possibilities while supervised by employer and by a faculty member. Additional hours required. Prerequisites: 15 credit hours of DIE courses or departmental approval and Reading Proficiency.

DIE:203 TRUCK HEATING, VENTILATION AND AIR CONDITIONING
This course examines through practical application the types of air conditioning, heating, and ventilation systems found on medium and heavy trucks. Emphasis will be on the areas of system diagnosis, component repair, and refrigerant recovery, recycling, and handling. Additional lab hours required. Prerequisite: Reading Proficiency.

DIE:204 SERVICE AND PARTS MANAGEMENT
This course will introduce the student to current management practices of parts and service departments in modern truck repair shops. Shop tools, equipment, and safety will also be emphasized. Prerequisite: Reading Proficiency.

DIE:205 CO-OP WORK EXPERIENCE II - DIESEL TECHNOLOGY
Continuation of DIE:202. Additional hours required. Prerequisite: DIE:202 and Reading Proficiency.

DIE:206 MEDIUM/HEAVY TRUCK DRIVETRAINS
This course examines through practical application the types of manual and automatic transmission drivetrains found on medium and heavy trucks. To include: clutches, drive shaft and universal joints, and drive axles. Additional lab hours required. Prerequisite: Reading Proficiency.

DIETIC TECHNOLOGY

DIT:102 THE SCIENCE AND PREPARATION OF FOOD
Basic principles of food science and preparation with emphasis on recognition and evaluation of standard products and function of ingredients. Food science experiments and food preparation exercises focus on adherence to precise procedures. Nutritional concerns in food preparation, cultural aspects of foods, and recipe analysis using computer software will be explored. Additional lab hours required. Prerequisite: Reading Proficiency.

DIT:103 FOOD MANAGEMENT
Students will study the components of food service management. Course emphasis is on menu planning and evaluation with a basic overview and application of concepts in procurement and receiving, production, distribution, meal service, equipment, facility design, cost control, quality control, and sanitation. Sanitation certification exam is given. Prerequisite: Reading Proficiency.

DIT:104 CLINICAL NUTRITION
Study of the roles of dietetics professionals in the nutrition care process, focusing on patient interviewing and counseling, conducting nutritional assessments, nutrition support and documentation in medical records. Dietary modifications for calorie and nutrient control, and various disease states, such as diabetes, cancer, cardiovascular disease and AIDS will be studied. Prerequisites: DIT:115 and Reading Proficiency.

DIT:106 FOOD MANAGEMENT PRACTICUM
Experience in food service departments of designated food service facilities. Assigned experiences are designed to complement and reinforce the corresponding lecture courses. Additional hours required. Prerequisites: DIT:100, DIT:103, Permission of the Program Coordinator and Reading Proficiency.
DIT:107  CLINICAL NUTRITION PRACTICUM  
Experience in patient care areas of designated health care facilities. Assigned experiences are designed to complement and reinforce the knowledge gained in the corresponding lecture courses. Additional hours required. Prerequisites: DIT:100, DIT:104 (may be taken concurrently), permission of the Program Coordinator and Reading Proficiency.

DIT:108  FOOD: PREPARATION AND SCIENCE LECTURE  
This course explores the basic principles of food science, preparation and selection. Recognition and evaluation of standard products, function of ingredients, and the link of food service to nutrition and health will be emphasized. Discussions and demonstrations will focus on the nutrient content of food and principles of food science and preparation for nutrient retention and quality. Prerequisite: Reading Proficiency.

DIT:109  FOOD: PREPARATION AND SCIENCE LAB  
Food science principles will be reinforced and applied in lab experiments and recipe production. The scientific method will be used in the exploration of food science and food preparation methods. Experiments and preparation will focus on nutrition retention and high quality products. Material from Food: Preparation/Science Lecture course will be reinforced. Additional lab hours required. Prerequisite: Reading Proficiency.

DIT:111  APPLIED FOOD SERVICE SANITATION  
Proper sanitation and safety practices in food service facilities. Successful completion of course certifies the student to meet St. Louis City and County law. Prerequisite: Reading Proficiency.

DIT:114  PRINCIPLES OF NUTRITION  
This is an introductory nutrition class that relates to individual and family health. Topics include the functions and sources of food nutrients, how the body handles foods through digestion, absorption and metabolism, and planning health diets for a variety of people. Appropriate methods of weight control, sports nutrition, and eating disorders will be covered, as well as an overview of nutrition throughout the life cycle, food safety, and ethnic influences on the American diet. Prerequisite: Reading Proficiency.

DIT:201  FOOD SYSTEMS MANAGEMENT  
Students will study the organization and management in the field of dietetics, with an emphasis on personnel management, staffing, scheduling, labor relations, diversity issues, communication, and performance appraisal. Management and leadership theories and concepts will be explored. Students will use computer software to assist with management functions. Prerequisites: DIT:103 and Reading Proficiency.

DIT:202  MEDICAL NUTRITION THERAPY  
Study of the pathophysiology of selected disease states, the evaluation of nutrition status and appropriate nutrition intervention during various disease processes. Emphasizes the application of clinical nutrition skills, including counseling clients, interpretation of laboratory values, taking vital signs and documentation in the medical record. Prerequisites: DIT:104 and Reading Proficiency.

DIT:204  SEMINAR: STRATEGIES FOR PROFESSIONAL PRACTICE  
This course covers techniques for teaching and learning in the field of dietetics, including the development of curricula, use of audio-visual materials, and public speaking. Communication with diverse populations, behavior modification and motivational skills in nutrition counseling will be addressed. Ethical practice in dietetics, personal management, and care of the terminally ill patient will also be covered. Prerequisite: 20 hours into the Dietetic Technology Program or Permissions of Program Coordinator and Reading Proficiency.

DIT:206  SEMINAR: DIETETIC PRACTITIONER ISSUES  
Discussion of the components of the health care delivery system, including alternative medicine, and private and governmental regulatory and provider agencies. Professional self-development, health care issues and trends, preparation for employment, and registration examination information will also be included. Prerequisites: DIT:204 and Reading Proficiency.

DIT:207  QUANTITY FOODS  
Students will apply food preparation and management skills to a quantity food production system. Food preparation, sensory evaluation, menu planning, recipe development and expansion, food production and procurement, personnel management, sanitation, quality improvement, equipment, food cost calculation/control, and marketing techniques are emphasized. Facility design and financial management are discussed. Additional lab hours required. Prerequisites: DIT:103 and Reading Proficiency.

DIT:208  FOOD SYSTEMS MANAGEMENT PRACTICUM  
Practical application of management concepts and tools. Provides an opportunity to observe and participate in food service management situations and use management tools, especially those related to budget and personnel administration. Additional hours required. Prerequisites: DIT:106, DIT:201 (may be taken concurrently), Permission of the Program Coordinator and Reading Proficiency.

DIT:209  COMMUNITY NUTRITION PRACTICUM  
Advanced nutrition practicum, with emphasis on staff performance. Students will function as staff members in patient care or community education settings. Additional hours required. Prerequisites: DIT:107, DIT:210 (may be taken concurrently), Permissions of Program Coordinator and Reading Proficiency.

DIT:210  COMMUNITY NUTRITION  
Study of the roles and resources of community/public health nutrition professionals promoting wellness in the community. Assessment of community nutritional needs, and planning, implementing and evaluating nutrition education programs for various age groups under different socio-economic conditions. The legislative process, health care insurance industry, and domestic food assistance programs will also be covered. Prerequisites: DIT:115 or Permission of the Program Coordinator and Reading Proficiency.

DIT:214  NUTRITION THROUGH THE LIFE CYCLE  
A study of every stage of the life cycle, normal growth and development, common nutritional deficiencies, and nutrient needs, including the impact of lifestyles, culture, economics and values of nutritional intake. Basic assessment and practical methods of delivering nutrition education are also addressed. Prerequisites: DIT:115 and Reading Proficiency.

DIT:215  THE CULTURAL FEAST: AN INTRODUCTION TO FOOD AND SOCIETY  
This course will examine, through the common ground of food, how cultural influences mold society. A central goal of the course-to broaden students’ horizons and to make them aware of their own ethnocentric assumptions—will be accomplished through experiencing different foods and customs and through discussing cultural practices and values. Prerequisite: Reading Proficiency.

ECE:101  INTRODUCTION TO EARLY CARE AND EDUCATION  
An overview of early childhood programs and curricula, history, trends, and career opportunities are introduced. Quality characteristics of the environment and the role of the professional are examined. Five clock hours (minimum) of observation of children in various settings is required. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:102  CREATIVE EXPERIENCES IN EARLY CARE AND EDUCATION  
This course introduces the expressive philosophy of creativity. Students explore materials and tools useful in creative expression across the curriculum. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:103  LANGUAGE AND LITERACY IN EARLY CARE AND EDUCATION  
Students examine quality literature appropriate for children from infancy through age eight. Appropriate literacy experiences of reading, writing, and language are practiced. Students also examine methods of presentation and the creation of literature-based settings. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.
ECE:109 PRESCHOOL EQUIPMENT AND MATERIALS 3
A survey course dealing with the elements of the preschool classroom and the outdoor play area for the preschool child. Includes the relationship between program goals and the choice and arrangement of materials. Prerequisite: Reading Proficiency.

ECE:110 HEALTH AND SAFETY IN THE PRESCHOOL 2
Designed for persons responsible for the health and safety of preschool children, the course deals with physical safety, symptoms of illness, and first aid. Prerequisite: Reading Proficiency.

ECE:111 SELF CONCEPT OF THE YOUNG CHILD 3
A course dealing with the development of a child's identity as it relates to sex, family, and ethnic group. The equivalent of seven hours each week. Prerequisite: Reading Proficiency.

ECE:112 SOCIAL DEVELOPMENT 3
Students will learn to provide an atmosphere to help children enjoy playing and working and will develop skills in diagnosing and dealing with problems children have in group situations. Prerequisite: Reading Proficiency.

ECE:113 CLASSROOM MANAGEMENT 3
Students will study their own experiences in an attempt to experience group dynamics and group interaction as they work with young children. Methods include case studies, videotaping, group sharing and conversations with experienced practitioners. Prerequisite: Reading Proficiency.

ECE:114 CULTURAL AND ETHNIC VARIETY 2
A course designed to help care-givers develop sensitivity to the needs of persons and the expression of these needs as they relate to race and ethnic origin. Course deals with the challenges and opportunities offered by cultural and ethnic variety in a child care facility. Prerequisite: Reading Proficiency.

ECE:115 HOME-SCHOOL COORDINATION 2
The importance of the family in a child's life and the ways in which the school and family should work together for the child's development are covered. Prerequisite: Reading Proficiency.

ECE:116 ADMINISTRATION: CHILD CARE 3
The operation of a child care facility including staff relations, budgeting, ordering, planning and evaluation of center operation. Prerequisite: Reading Proficiency.

ECE:117 EARLY CHILDHOOD LEARNING MODELS 2
A study of how children learn, including theories and the formulating and programming of learning objectives. Prerequisite: Reading Proficiency.

ECE:118 STIMULATION OF LEARNING 2
A course dealing with the stimulation of observation, experiment, and problem solving in the young child. Material geared toward curriculum concerns and curriculum building for preschool programs. Prerequisite: Reading Proficiency.

ECE:119 DEVELOPMENT OF PHYSICAL COMPETENCE 1
The means of helping children discover their own bodies, develop coordination and controlling and using their bodies is covered. Prerequisite: Reading Proficiency.

ECE:120 DEVELOPMENT OF CREATIVE EXPRESSION 2
Developing creative expression in the young child through such activities as music, art and dance. Prerequisite: Reading Proficiency.

ECE:121 PLAY AND THE YOUNG CHILD 2
The value of children's play, particularly as a learning opportunity, is covered in this course. Prerequisite: Reading Proficiency.

ECE:122 INDIVIDUAL DIFFERENCES IN THE YOUNG CHILD 3
Through observation and case study, students will learn about individual differences in children, identifying learning styles and special needs and developing tasks for children to master. Prerequisite: Reading Proficiency.

ECE:123 PLANNING AND SCHEDULING IN PROGRAMS FOR YOUNG CHILDREN 2
Scheduling to meet the needs of children is a major focus in this course. Students will learn how their scheduling can be tempered by weather, energy levels, attention span and other variables. Prerequisite: Reading Proficiency.

ECE:124 CHILD NUTRITION, HEALTH AND SAFETY 3
This course will focus on health, nutrition and safety issues in early care and education. Topics will include nutrition and nutrition education, menu planning, indoor and outdoor safety, childhood diseases and injuries and appropriate health and hygiene practices for caregivers, as well as for children. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:125 CHILD GROWTH AND DEVELOPMENT I 3
Students will study human development from conception to age eight, including physical and motor, cognitive, language, social and emotional development. There is an emphasis on the interrelationship of growth and behavior in young children. Eight clock hours (minimum) of observation is required. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:126 CHILD GROWTH AND DEVELOPMENT II 3
The student will study human development from age eight throughout the life span. An examination of children's behavior, typical and atypical issues facing adolescents, adults, and older adults will occur. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:127 FAMILY AND TEACHER INTERACTIONS 3
Students will examine strategies and develop skills in effective communication with individual parents and families. Reflections on the contemporary American family, developing partnerships, utilizing community resources, parent education meetings, and home visiting will be included. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:120 GUIDING YOUNG CHILDREN 3
A practical study of child guidance literature which includes normative development, theory, and strategies for guiding children's behavior at home and in diverse child care settings. Observation and field study of children from infancy through age eight will be the foundation of this course. A minimum of eight clock hours of observation will be required. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:121 MATH AND SCIENCE IN EARLY CARE AND EDUCATION 3
Students will design and implement developmentally appropriate experiences that enhance math and science concepts for children birth to age eight. Various cognitive theories and stages of development are integrated throughout the course. Topics include implementation strategies, sensory awareness, problem solving, thinking and questioning skills, exploration and discovery learning. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.
ECE:202  MOVEMENT AND MUSIC IN EARLY CARE AND EDUCATION 3
The student will explore movement and music as it relates to the development and interests of young children. Students will prepare appropriate experiences in gross motor, fine motor, perceptual motor and auditory perception, targeted toward young children in diverse populations and settings. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:203  EARLY CARE AND EDUCATION PRACTICUM I 3
The student will continue practice in developmentally appropriate lesson planning, leading individual and group experiences, utilizing observation and reflection techniques, and demonstrating the ability to guide young children in positive ways. The student will participate in an early childhood setting for 9 hours each week, with additional seminar meetings. Prerequisites: ECE:104 and ECE:105 with minimum grades of "C" and Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:204  MANAGEMENT OF EARLY CARE AND EDUCATION SETTINGS 3
This course focuses on the organizational and managerial structure of various center and home-based settings. Topics include licensing and accreditation standards, spatial design, fiscal responsibilities, employment procedures, staff development, marketing, and the planning and evaluation of center operations. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:205  CHILD AND SOCIETY 3
This course is an introduction to the sociology of child development, emphasizing the role of the family, school, and community in the socialization process. The effect of culture and political forces upon the delivery of appropriate early care and education is discussed, as well as available community resources for a diverse society. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:206  EARLY CARE AND EDUCATION PRACTICUM II 3
The student will demonstrate the ability to execute all teaching and caregiving aspects of the assigned early childhood setting. Planning, implementation, developmentally appropriate guidance methods, as well as professional job searching preparation is included. The student will participate in an early childhood setting for nine hours each week, with additional seminar meetings. Prerequisite: ECE:203 with a minimum grade of "C" and Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:207  ACTIVITIES FOR SPECIAL INDIVIDUALS 3
Covers practical techniques for working with exceptional individuals including task analysis and behavior modification. Experience with screening instruments and charting behavior as part of developing and implementing individualized programs will be emphasized. Prerequisites: ECE:107 and Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:208  BEFORE AND AFTER SCHOOL CARE 3
This course focuses upon the development expectations and unique needs of the five through twelve-year-old in before and after school settings and summer programs. Legal issues, community resources, personnel relationships, nutrition and health concerns, communication with families, administrative procedures, and curriculum are discussed. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

ECE:209  CAPACITIES/QUALITIES: PHYSICAL LEARNING ENVIRONMENT 1
Review of Competency I. Relating to the set-up of a safe and healthy learning environment for young children. Prerequisite: Reading Proficiency.

ECE:210  CAPACITIES/QUALITIES: THE PROGRAM 1
Review of Competency II. Relating to the advancement of physical and intellectual competency of young children. Prerequisite: Reading Proficiency.

ECE:211  CAPACITIES/QUALITIES: INDIVIDUAL CHILD 1
Review of Competency III. Relating to building the individual strength and positive self-control of the children. Prerequisite: Reading Proficiency.

ECE:212  CAPACITIES/QUALITIES: SOCIAL ENVIRONMENT 1
Review of Competency IV. Relating to organizing and sustaining the functioning of children and adults in group learning situation. Prerequisite: Reading Proficiency.

ECE:213  CAPACITIES/QUALITIES: HOME AND CENTER 1
Review of Competency V. Bringing about coordination of child-rearing practices in the home and in the center. Prerequisite: Reading Proficiency.

ECE:214  CAPACITIES/QUALITIES: SUPPLEMENTARY RESPONSIBILITY 1
Review of Competency VI. On carrying out supplementary responsibilities related to children's program. Prerequisite: Reading Proficiency.

ECE:215  SKILL BUILDING WORKSHOP 3
Working in groups, students will study in-depth, special interest areas (motor development, creative activities, language development). Prerequisite: Reading Proficiency.

ECONOMICS

ECO:103  ECONOMICS OF THE BLACK EXPERIENCE 3
This course examines the economic forces that effect African-Americans and other people of African descent. Some of the topics included are: slavery, discrimination, labor markets, education, affirmative action, and Pan-African issues. Prerequisite: Reading Proficiency.

ECO:140  INTRODUCTION TO ECONOMICS 3
A study of basic economic concepts, institutions, and policies, (both macro and micro) necessary for a general understanding of the economy. Normally, Business Administration students and other students who need a six-hour undergraduate sequence in Economics, should take ECO:151 and ECO:152 instead of ECO:140. Prerequisite: Reading Proficiency.

ECO:151  PRINCIPLES OF MACROECONOMICS 3
This course presents an introductory description and analysis of economics from a national perspective. Included are the basic concepts relating to supply, demand, income, taxation, exports, imports, money and banking, consumption, savings and investment. The course applies these concepts and their inter-relationships to such problems as the general level of economic activity, employment and unemployment, inflation, monetary and fiscal policies, and economic growth and development. Prerequisite: Reading Proficiency.

ECO:152  PRINCIPLES OF MICROECONOMICS 3
Principles of Microeconomics is an introductory course that describes and analyzes the behavior of households and business firms in the economy. The course includes, among others, the following topics: analysis of the demand and supply of goods and services; price and output determination in competitive and non-competitive markets; the cost of production of goods and services; determination of the level of rents, wages, interest rates, and profits; international trade and comparative advantage. Prerequisite: Reading Proficiency.

ECO:200  CONTEMPORARY ECONOMIC ISSUES 3
A more intensive examination of such economic problems as inflation, employment and manpower policies, housing, poverty, education, pollution, Medicare, transportation and agriculture than is given in the introductory and principles courses. Prerequisite: ECO:140 or ECO:151 or ECO:152 and Reading Proficiency.

ECO:215  MONEY AND BANKING 3
This course presents the basic economic principles most closely related to the subject of money and banking in a context of topics of interest to present and prospective bank management. The emphasis is on the practical application of the economics of money and banking for the individual bank. Subjects covered include structure of the commercial banking system; the nature and functions of money; banks and the money supply; cash assets and liquidity management; bank investments; loans, earnings and capital; the Federal Reserve System and its policies and operations; Treasury Department operations; and the changing international monetary system. Prerequisite: ECO:151 and Reading Proficiency.
EDUCATION

**EDU:101  LITERACY TUTORING  1 - 3**
This course will introduce the college student to tutoring techniques and provide tutoring experiences. The student participates in 10 hours of tutoring training prior to placement. The student will apply what was learned during 30-90 hours of tutoring. The student will be observed tutoring and will participate in three reflective meetings. This course is an elective in teacher education and is not required for teacher certification. Prerequisite: PSY:200 and Reading Proficiency.

**EDU:120  ART FOR CHILDREN  3**
The course will acquaint the student with art media and methods appropriate for children. The student will develop projects to promote the child's appreciation of art and to integrate art into the total curriculum. (Same course as ART:185.) Prerequisite: Reading Proficiency.

**EDU:129  MUSIC FOR THE CLASSROOM TEACHER  3**
Designed for elementary education students without regard to previous musical training. Students are prepared to use music functionally and developmentally in the elementary classroom through singing, through playing the piano and informal instruments, and through responding to music rhythmically. Creative aspects and values of music are emphasized and materials are studied in relation to their future uses in the classroom. (Same course as MUS:129.) Prerequisite: Reading Proficiency.

**EDU:211  FOUNDATIONS OF EDUCATION  3**
This course is designed to examine the historical, philosophical, sociological, political, economic, and legal foundations of American public education. 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. Prerequisites: ENG:101 and Reading Proficiency.

**EDU:212  ASSISTING IN THE CLASSROOM  4**
This course introduces students to the skills and knowledge necessary to be a classroom assistant. The student will spend two hours each week in a college classroom studying teaching techniques, classroom management, and assisting responsibilities that will be applied during six hours of field experience with children. This course is an elective in teacher education and is not required for teacher certification. Additional hours required. Prerequisites: EDU:200 and PSY:203 and Reading Proficiency.

**EDU:213  BEHAVIOR INTERVENTIONS WITH THE EXCEPTIONAL CHILD  4**
This course provides students the information and experience necessary to becoming a classroom assistant working with exceptional children. The student will spend two hours each week in a college classroom studying communication skills, behavior management techniques and assisting responsibilities that will be applied during six hours per week of field experience with children. This course is an elective in teacher education and is not required for teacher certification. Contact an advisor to determine transferability of the course. Additional hours required. Prerequisites: EDU:200 and PSY:203 and Reading Proficiency.

**EDU:216  TEACHER EDUCATION PORTFOLIO DEVELOPMENT  1**
This course is the culminating course in the Associate in Arts in Teacher Education Degree. Students complete a Mid-Preparation Portfolio containing documents that demonstrate their mastery of the competencies required for entry into an undergraduate teacher preparation program and detailed in the Missouri Standards for Teacher Education Programs (MoSTEP). Prerequisites: EDU:102, EDU:200, EDU:211, and prior or concurrent enrollment with EDU:215 and Reading Proficiency.

**EDU:217  EDUCATIONAL PSYCHOLOGY  3**
This course is designed to help students apply psychological principles to teaching, learning, assessment and other educational practices 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. Prerequisites: PSY:203 or PSY:205 or PSY:214. Reading Proficiency.

**EDU:218  TECHNOLOGY FOR TEACHERS  3**
In this course students will learn how to integrate instructional technology into the P-12 classroom. Students will study a variety of software programs, presentation technology, and telecommunication tools. The focus will also be on social, ethical, legal, and human issues surrounding the use of technology. Prerequisites: ENG:101 and Reading Proficiency.

**EDU:219  EDUCATION OF EXCEPTIONAL LEARNERS  3**
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. Prerequisites: EDU:217 and Reading Proficiency.

**EDU:220  TEACHING PROFESSION WITH FIELD EXPERIENCE  3**
This course provides students an opportunity to observe teaching and learning for 30 hours or more in P-12 classrooms. Students are introduced to the requirements for teacher preparation and certification. Students will examine characteristics of effective teaching. The course is designed to assist students in determining if a career in teaching is an appropriate goal. Prerequisites: ENG:101 and Reading Proficiency.

**EDU:221  CHILDREN'S LITERATURE  3**
This course will familiarize students with examples of good children's books, for children from infancy to adolescence. It will also help students develop the ability to evaluate a book, analyze its appeal, and present it effectively. (Same course as ENG:226.) Prerequisite: Reading Proficiency.

**ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY**

**EE:101  TECHNICAL ELECTRICITY  5**
DC and AC circuits, Ohm's Law, Kirchoff's Law and other network theorems; principles of vacuum tubes and semi-conductor devices and their application in various electronic systems; study of DC and AC machines, their applications and controls. Additional lab hours required. Prerequisites: MTH:124 or MTH:144 or above and Reading Proficiency.

**EE:106  IBM PERSONAL COMPUTER INSTALLATION AND REPAIR  1**
This course will help you learn how to install and repair the popular IBM series of personal computers. Connection and setup of monitors, printers, hard disks, and memory will be covered. Some previous electronics or computer experience is recommended but not required. Prerequisite: Reading Proficiency.

**EE:107  ADVANCED TROUBLESHOOTING AND COMMUNICATIONS  1**
This course will cover in depth the hardware, software and peripheral equipment and miscellaneous accessories involved in computer interaction and possible problems that can develop and how to systematically eliminate the problems. This course will also emphasize diagnostic and analysis of simultaneous problems in computers. Additional hours required. Prerequisite: EE:106 and Reading Proficiency.

**EE:108  PC TECHNICIAN INTERNSHIP  3**
This course requires 240 hours of practical experience in a work environment functioning as a PC repair technician. Experiments must be jointly supervised by an on-site supervisor and a college faculty member. Prerequisites: IS:130, EE:106, EE:107 and Reading Proficiency.

**EE:109  PERSONAL COMPUTER CONFIGURATION  1**
This course is designed to teach the student to configure the IBM-compatible personal computer for optimum performance. Emphasis will be placed on the interaction between peripheral equipment and applications. Prior experience with personal computers and DOS is highly recommended. Additional lab hours required. Prerequisite: EE:106 and Reading Proficiency.

**EE:110  TECHNICAL ELECTRIC CIRCUITS I  4**
This combination classroom and laboratory course is a study of the basics of electricity and electrical circuits. It includes such fundamentals as static electricity, resistance, Ohm's Law, Kirchoff's Laws, power, series and parallel circuits, voltage dividers, magnetism and electromagnetic induction as well as an introduction to generators. Additional lab hours required. Prerequisite: concurrent enrollment in MTH:124 and Reading Proficiency.
EE:111  TECHNICAL ELECTRIC CIRCUITS II  4
This course is the continuation of EE:110. The basic meter types as to construction and operation are first studied. The concepts of alternating current as to frequency, period, amplitude wave length, phase relationship, maximum instantaneous, average and peak values are then considered. Inductance, capacitance and reactance are then studied from simple parallel or series circuits to complex circuits. Transformers, power and resources are also included. Additional lab hours required. Prerequisites: EE:110 and Reading Proficiency.

EE:112  TECHNICAL ELECTRONICS I  5
The basic principles of electronics will be introduced in this course. Semi-conductor theory with emphasis on diodes and transistors. The diode and bipolar devices will be studied in their applications to rectifiers, small signal amplifiers and power amplifiers. Additional lab hours required. Prerequisites: Concurrent enrollment in EE:110 and EE:111 and Reading Proficiency.

EE:114  PERSONAL COMPUTER COMMUNICATIONS  1
This course focuses on computer connectivity to the electronic information systems. The course will highlight on the hardware, software and service providers end of this technology. Prior experience with personal computers is recommended. Additional hours required. Prerequisite: Reading Proficiency.

EE:121  FUNDAMENTALS OF DIGITAL ELECTRONICS  3
This course is an introduction to Digital Electronics. Students will learn basic safety, electron theory, Ohm's and Kirchoff's Laws, logic, number systems, binary addition and Boolean Expression applications. Students will design, construct, troubleshoot and evaluate design problems, and will present oral reports of their results. Students will also study PLDs, Flip-Flops, microprocessors, and shift registers and encoders. Prerequisites: GE:121 or Department Approval.

EE:130  ELECTRIC CIRCUITS I  4
This course begins with the basic physical and electrical units and proceeds to network theorems. Emphasis is on analysis and understanding of circuits. Laboratory experiments parallel classroom work. Additional lab hours required. Prerequisite: Previous or concurrent enrollment in MTH:144 and Reading Proficiency.

EE:131  ELECTRIC CIRCUITS II  4
A continuation of EE:130, it begins with single phase alternating voltages and currents and proceeds through non-sinusoidal voltages and currents to polyphase circuits. Additional lab hours required. Prerequisite: EE:130 and MTH:144 and Reading Proficiency.

EE:132  ELECTRONIC DEVICES  5
Theory and characteristics of most of the electronic devices used in industry. Basic practical circuits will be presented to reinforce the theory. Additional lab hours required. Prerequisite: Previous or concurrent enrollment in EE:131 and Reading Proficiency.

EE:201  COMPUTER PERIPHERALS  4
A study of the principal peripheral devices used with computers to produce digital operating systems. The devices studied will be dynamic and static rams, led displays, keyboards, memory disks, modems, printers and analog to digital and digital to analog conversions. Additional lab hours required. Prerequisites: EE:233 and EE:242 and Reading Proficiency.

EE:202  LOGIC AND SWITCHING CIRCUITS  4
A study of the production and analysis of nonsinusoidal waveforms and how they are applied to digital systems. Topics covered will consist of transistor switching circuits, pulse shaping networks multivibrators, timing circuits, and counters. Additional lab hours required. Prerequisites: EE:131 and EE:132 and Reading Proficiency.

EE:203  OPERATING SYSTEMS  3
This course consists of a study of the relations between microprocessors, bus structures, interfacing procedures, input output networks, digital communication systems, and programming languages. This information should provide the student with a knowledge of how digital subsystems are combined to form operating systems. Prerequisites: EE:233 and EE:242 and Reading Proficiency.

EE:207  INDUSTRIAL INSTRUMENTATION  3
This course covers the use and function of various electronic instruments used in industry. Topics include measurement errors, analog meters, oscilloscopes, signal generators, transducers, noise, and digital instrument. Additional lab hours required. Prerequisite: EE:112 and Reading Proficiency.

EE:208  TECHNICAL ELECTRONICS II  5
A continuation of EE:112 with emphasis on Field effect transistors and their circuits. A study of frequency effects. Integrated circuits and op amps. Negative and positive feedback. Frequency domain analysis. Additional lab hours required. Prerequisite: EE:112 and Reading Proficiency.

EE:210  TECHNICAL ELECTRIC MACHINES  4
Direct current and alternating current motors and generators construction and characteristics are studied, as well as the associated starting and control circuitry. The laboratory experiments will deal with related classroom work. Additional lab hours required. Prerequisite: EE:111 and Reading Proficiency.

EE:211  TECHNICAL POWER TRANSMISSION-DISTRIBUTION  3
Considers basic wiring fundamentals, applications of series and parallel circuits, purpose of electrical testing instruments, feeder and branch circuit protection, fuse and circuit breaker protection, grounding practices and lightning protection; outline various types of power generating plants, hydro, steam, nuclear, and their purposes; defines transmission and distribution circuits and their functions of bringing electrical energy from generating plants to customers. Prerequisite: EE:111 and Reading Proficiency.

EE:221  ELECTRONIC TROUBLESHOOTING  3
This course will present various techniques for electronic troubleshooting. It will attempt to coordinate all of the isolated facts taught in prior courses so the student will have an organized approach to problems on the job. Actual problems on fairly current industrial equipment will be used to practice these skills. Additional lab hours required. Prerequisite: EE:208 and Reading Proficiency.

EE:230  ANALOG AND DIGITAL ELECTRONICS  3
A study of the operational amplifier as a scanner and integrator. The "bootstrap method" of analog computer patching. Digital fundamentals include number systems, Boolean algebra, logic circuits, memory devices, binary elements and input/output devices. Additional lab hours required. Prerequisite: PHY:115 and Reading Proficiency.

EE:233  DIGITAL LOGIC  4
Digital computer fundamentals from the systems and circuit approach and an introduction to the basic theory of analog computers. Additional lab hours required. Prerequisites: EE:112 or EE:132 or EE:101 and MTH:124 and Reading Proficiency.

EE:234  APPLIED ELECTRONICS  5
The conversion of electrical energy from AC to DC, types of amplifiers and techniques of analyzing them, audio input/output devices. Additional lab hours required. Prerequisites: EE:132 and Reading Proficiency.

EE:235  ELECTRONIC COMMUNICATIONS  4
The fundamental theory and application of communications circuits and devices. The study of radar fundamentals, transmission lines, and electromagnetic interference will be included. Additional lab hours required. Prerequisites: EE:234 or BE:251 and Reading Proficiency.

EE:236  PLC/PROGRAMMABLE LOGIC CONTROLLER  3
This course presents the fundamentals of ladder logic (formerly relay logic) used in modern industrial controllers. Basic elements such as timers, counters, and sequencers are studied, as well as traditional methods of applying them to machine control. Students will program and perform laboratory experiments with programmable logic controllers, using the Allen Bradley SLC 500 family and the Micrologic series, with an introduction to control logic. Additional lab hours required. Prerequisites: GE:101 or EE:233 or ME:140 or departmental approval and Reading Proficiency.

EE:240  ELECTRICAL MACHINES  4
Direct current and alternating current motors and generators construction and characteristics are studied, as well as the associated starting and control circuitry. The laboratory experiments will deal with related classroom work. Additional lab hours required. Prerequisite: EE:131 and Reading Proficiency.
EE:242 INTRODUCTION TO MICROPROCESSORS 3
The microprocessor is the principal unit in control apparatus in industry today. Structure of a microcomputer input/output central processor and control units, memory programming techniques, logic circuits and arithmetic operations. Additional lab hours required. Prerequisite: EE:101 or EE:223, previous or concurrent enrollment and Reading Proficiency.

EE:244 MICROPROCESSOR APPLICATIONS 3
A continuation of EE:242, emphasizing real-world applications of microprocessors and problems encountered during interfacing to external devices. Software subroutines required to drive external devices will be introduced. Prerequisites: EE:242 and Reading Proficiency.

EE:260 ELECTRONIC PROJECT DESIGN AND FABRICATION 3
This course provides techniques in safety precautions, use of laboratory equipment and component familiarization. Students receive experience in soldering techniques, chassis fabrication such as bending, drilling and punching, wiring, harnessing, and general shop practice. This course also provides the student with specialized training in printed circuit board layout and production procedures. Students are required to select a project which must be assembled on PCB, tested for proper operation, and mounted in an appropriate housing. Students must submit the completed project with documentation of the fabrication procedures for final grade assignment. Additional lab hours required. Prerequisites: EE:132 or EE:208 and EGR:104 and Reading Proficiency.

EMERGENCY MEDICAL TECHNOLOGY

EMT:120 EMT INTERNSHIP 6
An intermediate, transition course designed to solidify and reinforce the knowledge and skills gained in EMT:121 while introducing paramedic topics. Classroom topics include in-depth medical terminology, introduction to paramedic procedures, and situational review of both hypothetical and real situations encountered in ambulance field work. In addition, students are required to practice EMT skills in assigned pre-hospital settings for an average of approximately twelve (12) hours a week in order to satisfy State requirements for admission to Paramedic programs. Additional hours required. Prerequisite: EMT:121 and Reading Proficiency.

EMT:121 EMERGENCY CARE, PRINCIPLES, AND TECHNIQUES 8
This course meets all the current requirements for Missouri State EMT-Basic licensure. It includes the assessment and care of the sick and injured, pediatric and geriatric emergencies, childbirth, defibrillation, lifting and moving of patients, hazardous material situations and the use of adjunctive EMS equipment. Prerequisites: American Heart Association Cardiopulmonary Resuscitation (CPR) for Health Care Providers, and Reading Proficiency.

ENGINEERING GRAPHICS

EGR:050 FUNDAMENTALS OF DRAFTING 3
First course in drafting for persons with little or no previous drafting coursework. Practice of using drafting tools, board skills, good line work, lettering, geometric construction, accurate layout of multiview and pictorial drawings and basic dimensioning will be emphasized. Additional lab hours required. Prerequisites: EGR:104, previous drafting work, or permission of Department and Reading Proficiency.

EGR:104 ELECTRONIC DRAFTING 2
Review of basic drafting with emphasis on technical sketching and lettering. Topics include schematic diagrams, block diagrams, electronic symbols, etched circuit layout, wiring diagrams, mechanical and electronic detail and assembly drawings. Additional lab hours required. Prerequisite: Reading Proficiency.

EGR:110 DESCRIPTIVE GEOMETRY 3
An advanced drafting course for developing graphic problem skills in applications of architectural, civil, and mechanical technology. Emphasis on logical sequences in theory of reference planes, points, lines and planes in space, intersections of lines and planes, angles between lines and planes and curved surfaces in space. Additional lab hours required. Prerequisites: EGR:100 and Reading Proficiency.

EGR:132 INTRODUCTION TO AUTOCAD I 2

EGR:135 CADD MANAGEMENT 2
CADD System setup and management. Hard disk setup and management, file storage management, system customization, archiving, drafting translation between versions. Standardization of layering, naming, numbering and plotting conventions, networking. Prerequisites: EGR:123 and Reading Proficiency.

EGR:137 CUSTOMIZING AUTOCAD 2
Installing AutoCAD. Creating DOS batch files for system startup. Running multiple configurations. Customizing screen and tablet menus, creating macro instructions. Customizing, font and shape files. Introduction to LISP programming. Prerequisites: EGR:141 and Reading Proficiency.

EGR:139 3-D AUTOCAD WITH AUTOSHADER 2
3-D drawing concepts using AutoCAD Version 10, generation of objects using true 3 dimensional database. User coordinate system, X,Y,Z coordinate system and X,Y,Z point filters. Extensive practice with various 3-D surfaces. Use of viewport and view commands to select viewing angle or perspective view. Settings lights, camera, and scenes to generate shaded images and movies. Prerequisites: EGR:133 and Reading Proficiency.

EGR:140 COMPUTER AIDED DRAFTING AND DESIGN I 3
This course provides the student with knowledge and implementation of skills used in Computer Aided Drafting. Computer drawings will include geometric constructions, multiple views, sectional views, and dimensioning. Computer operations will include editing, filing and retrieving drawings to produce an industrial quality drawing using a plotter. Additional lab hours required. Prerequisites: EGR:100 and GE:101 or departmental approval and Reading Proficiency.

EGR:141 INTRODUCTION TO AUTOCAD II 2
Continuation of Introduction to AutoCAD 1. DOS for AutoCAD, Blocks, attributes, symbol libraries, bill of material extraction, screen and tablet menus, digitizing drawings, slides and slide shows, introduction to LISP language. Prerequisites: EGR:133 and Reading Proficiency.

EGR:143 INTRODUCTION TO MICROSTATION 2
The student will learn to use Microstation drafting software to set up drawings; control the levels, colors and linetypes; place and modify elements and patterns; dimension; plot; and link drawing files. The student should possess basic knowledge of technical drafting. Prerequisite: Reading Proficiency.

EGR:144 MICROSTATION II 2
This course is a continuation of Introduction to Microstation building on the fundamentals with more advanced drafting techniques. 3-D drawing will also be included. Adapting the Microstation software will be studied in simple menu customization and user commands. Prerequisites: EGR:143 and Reading Proficiency.

EGR:145 COMPUTER SOLIDS MODELING 2
Students will learn to design and model objects using three dimensional solids modeling computer software. Extrusion, revolution, and swept form are examples of techniques that will be studied. Students will model individual parts and assembly of parts. The projection of working drawing and shaded pictorial will also be completed. Additional hours required. Prerequisite: Reading Proficiency.
EGR:147 INTRODUCTION TO ENGINEERING DESIGN 3
This course is an introduction to the elements of Engineering Design. Students will learn the history of design, design process, sketching and visualization, geometric relationships, and modeling. Elements of manufacturing production, marketing, analysis, and quality control will also be studied. Students will learn presentation techniques and develop a portfolio.

EGR:255 ADVANCED COMPUTER AIDED DRAFTING 3
Topics covered in this course will include 2-D and 3-D drawing concepts, customizing menus, creating macros, symbol libraries, bill of material extraction, creating production drawings, modeling and shading. Assigned labs will include an extended project and portfolio development. Prerequisites: EGR:141 or EGR:140 and EGR:144 and Reading Proficiency.

ENGINEERING SCIENCE

ESC:100 ENGINEERING COMPUTER APPLICATIONS AND DESIGN 3
This course provides the student with basic skills in the use of Computer Aided Drafting (CAD), word-processing, spreadsheets, and computer math software. Students will be divided into teams to solve an engineering related design problem. They will need to conceptualize and build their project/product, and prepare and present a report. They will utilize the computer and applications software they have learned in the class as a tool in preparation and presentation of their report. Prerequisite: Reading Proficiency.

ESC:101 SCIENTIFIC COMPUTER PROGRAMMING 3
This course emphasizes instruction in computer programming language to solve engineering problems. Instruction will include such topics as: study of digital computer systems, programming techniques, program structure, coding, execution, debugging and verification of programs. Computer laboratory exercises will be conducted to analyze, interpret and synthesize engineering data. Prerequisites: MTH:160 (A, B or C) or higher, and Reading Proficiency.

ESC:200 ENGINEERING CIRCUITS I 4
This is a problem-solving course that develops analytical skills important for all engineering disciplines as well as fundamental circuit theory for electrical engineers. The course covers circuit elements and the fundamental laws governing their behavior, network theorems, and analysis techniques, including transient responses. Circuit simulation using computer models and practical circuit testing are included in the laboratory work. Additional lab hours required. Prerequisites: PHY:122 and concurrent enrollment in MTH:230 and Reading Proficiency.

ESC:201 ENGINEERING CIRCUITS II 4
This is a problem solving course that develops analytical skills important for all engineering disciplines as well as all fundamental circuit theory for electrical engineers. The course covers sinusoidal AC circuit analysis (including AC power and three-phase systems, mutual inductance and transformers, complex frequency, and filters. The primary focus of this course is on phasors and frequency-domain responses. Circuit simulation using computer models and practical circuit testing are included in the laboratory work. Additional lab hours required. Prerequisites: MTH:230 and Reading Proficiency.

ESC:202 THERMAL ANALYSIS 3
Basic principles of thermodynamics and heat transfer. First and second laws of thermodynamics and application to engineering systems. Fundamentals of heat transfer by conduction, convection and radiation with applications. Prerequisites: MTH:230 and PHY:223 and Reading Proficiency.

ESC:203 ENGINEERING MECHANICS I 3
Application of the principles of mechanics to the solution of engineering problems involving particles and systems in equilibrium. Topics include force systems in equilibrium, centers of gravity, friction, moments of inertia. Where appropriate, vector analysis is used. Prerequisites: PHY:122 and Reading Proficiency.

ESC:204 ENGINEERING MECHANICS II 3
Application of the principles of mechanics to the solution of engineering problems involving particle and rigid body motion. Topics include linear, curvilinear relative motion, energy, impulse, and momentum. Where appropriate, vector methods are used. Prerequisites: ESC:203 and Reading Proficiency.

ESC:205 MECHANICS OF MATERIALS 3
Application of principles of mechanics to engineering problems of strength and stiffness. Topics include stress, strain, thin cylinders, beams, torsion, columns, and combined stresses at a point. Prerequisites: ESC:203 and Reading Proficiency.

ESC:206 STRENGTH OF MATERIALS LAB 1
This is the laboratory component of the Mechanics of Materials course (ESC:205). Students will perform tension, compression, shear, torsion, bending, and hardness tests on various materials in a materials testing laboratory. The students will be required to document their test data and write reports summarizing the test and results. Prerequisites: Concurrent or prior enrollment in ESC:205 (ME:276) and Reading Proficiency.

ESC:207 ENGINEERING THERMODYNAMICS 3
Energy transformations and the relation of energy to the states of matter. Fundamental laws, concepts and modes of analysis which underlie all applications of energy conversion in engineering. Prerequisites: MTH:230 and PHY:223 and Reading Proficiency.

ENGLISH

ENG:001 THE SENTENCE 1
This course will help students master the fundamentals of sentence writing and punctuation. It is a skill-building course.

ENG:002 SPELLING 1
This course will point out to the student specific spelling problems as well as provide the student with the means to eliminate such spelling problems.

ENG:003 SENTENCE COMBINING 1
Using a selected sequence of sentence building exercises, this course will help students develop a feel for both sentence structure and paragraph organization. It is a "skill-building" course, whose main purpose is to help students hear the stylistic options available to them and to help them see patterns of development, both in sentences and paragraphs.

ENG:004 GRAMMAR REVIEW 1
This course will provide instruction for students who need extensive help with writing problems which may include punctuation, capitalization, usage, sentence construction, coherence and organization.

ENG:005 WRITING IMPROVEMENT 1
Students work individually on writing style, documentation, and other problems of advanced expository writing.

ENG:006 WRITING EFFECTIVE PARAGRAPHS 1
This course will help students who have already mastered the writing of sentences to learn about writing longer forms. Beginning with the writing of good topic sentences, it will proceed to consider such issues as paragraph development, unity and coherence. Thus, it will provide an additional valuable support for students who intend to write essays, business letters, stories and other longer prose forms.

ENG:007 BUSINESS WRITING REVIEW 1
Writing Center will provide instruction in business writing formats: e-mails, letters, memos, and/or reports.

ENG:013 ESL: ACADEMIC ENGLISH PREP 1
This course is designed for non-native English speakers who need to improve basic language skills before beginning the ESL Academic sequence. Students will work individually with the assistance of the designated ESL support staff. Prerequisite: Michigan test and writing sample.

ENG:014 ESL: ACADEMIC LISTENING COMPREHENSION 1
This course is designed to help non-native English speakers increase their ability in listening comprehension. Students will work individually with the assistance of the designated ESL support staff.

ENG:015 ESL: VOCABULARY DEVELOPMENT FOR NON-NATIVE SPEAKERS 1
This course is designed to help non-native English speakers increase their knowledge of English vocabulary, especially idioms and general academic vocabulary. Students will work individually with the assistance of the designated ESL support staff.
ENG:016  ESL: GRAMMAR REVIEW FOR NON-NATIVE ENGLISH SPEAKERS 1
This course provides practice for non-native English speakers who need supplementary instruction in English grammar. Students will apply grammar rules through writing and editing activities. Students will work individually with the assistance of the designated ESL support staff. Prerequisites: ENG:051 and/or ENG:061.

ENG:017  ESL: WRITING SKILLS 1
This course is designed for students who need to demonstrate improved skills in academic English outcomes before proceeding to the next level. Students will work individually with the assistance of the designated ESL support staff. Prerequisites: ENG:050, ENG:060, or ENG:070 and recommendation of instructor.

ENG:020  DEVELOPMENTAL ENGLISH 3
This course provides comprehensive review and intensive drill in the fundamentals of English sentences and paragraphs. Near the end of the semester, students will be counseled concerning their progress and what additional work they may need to accomplish their particular writing goals. Prerequisite: Previous or concurrent enrollment in appropriate reading course.

ENG:022  DEVELOPMENTAL ENGLISH LAB 2
This course offers the students practice in identifying parts of the sentence, correcting sentence structure, punctuation, and agreement. Prerequisite: Recommendation of the Department.

ENG:030  INTRODUCTION TO COLLEGE WRITING 3
This course is designed primarily to help prepare students for successful work in College Composition I, though it may benefit anyone desiring to improve basic grammar and writing skills. The course focuses on fundamental writing problems through extensive work in the construction of sentences, paragraphs, and short essays. Previous or concurrent enrollment in a developmental reading course is encouraged. Near the end of the semester, students will be counseled concerning their progress and what additional work they may need to accomplish their particular writing goals. Prerequisite: ENG:020 with grade of “C” or better, or recommendation of Department.

ENG:032  INTRODUCTION TO COLLEGE WRITING LAB 2
Students study a series of grammatical elements in order to eliminate structural and grammatical mistakes in their writing. Topics include sentence patterns, punctuation, and sentence combining.

ENG:050  ACADEMIC ENGLISH FOR NON-NATIVE SPEAKERS I 6
This course is designed for non-native English speakers who wish to develop basic English grammar, with emphasis on application of rules to academic reading and writing tasks. Additional hours in lab or with ESL tutor may be recommended. Prerequisites: ENG:050 and ENG:051 with grades of “C” or better.

ENG:051  ENGLISH GRAMMAR FOR NON-NATIVE SPEAKERS I 3
This course provides non-native English speakers with an intensive review of basic English grammar, with emphasis on application of rules to academic reading and writing tasks. Prerequisite: ENG:050 and ENG:051 with grades of “C” or better.

ENG:060  ACADEMIC ENGLISH FOR NON-NATIVE SPEAKERS II 6
This course is designed for non-native English speakers who have demonstrated general fluency in reading and writing English, and need to develop clarity in using English for academic purposes. Instruction in the course will focus on reading and writing responses to texts. Additional hours in lab or with ESL tutor may be recommended. Prerequisites: ENG:050 and ENG:051 with grades of “C” or better.

ENG:061  ENGLISH GRAMMAR FOR NON-NATIVE SPEAKERS II 3
This course provides non-native English speakers with an intensive review of basic English grammar, with emphasis on application of rules to academic reading and writing tasks. Prerequisite: ENG:050 and ENG:051 with grades of “C” or better.

ENG:062  SPOKEN COMMUNICATION AND PRONUNCIATION FOR NON-NATIVE SPEAKERS 3
This course is designed for non-native English speakers who wish to improve their comprehensibility in communicating in English. The course will provide practice in stress, rhythm, and intonation patterns, and in troublesome consonant and vowel sounds. Prerequisite: Recommendation of ESL staff.

ENG:063  COLLEGE COMPOSITION I 3
This course is designed to facilitate non-native English speakers’ performance in college-level courses which require moderate to heavy amounts of reading, writing, and note-taking. Students recommended to take ENG:063 will have achieved the reading and writing performance outcomes of ENG:050 and ENG:060, but still need to improve grammatical and lexical accuracy in a variety of writing tasks. Reading and writing assignments will be linked to assignments in content areas. Prerequisite: ENG:060 and ENG:061 with grades of “C” or better, and ENG:053.

ENG:090  ENGLISH 1
This is a course in longer units of composition including the documented research paper, argumentation, and criticism. Prerequisite: ENG:060 with a grade of “C” or better.

ENG:100  CAREER ENGLISH 3
This course is designed to meet the writing needs of a wide variety of students in the following ways: 1) prepares students who will continue in college to write acceptable college-level expository essays; 2) provides career students with a strong base for technical and business writing; 3) familiarizes all students with the kinds of writing skills that will be valuable in their everyday experience; 4) provides students with some awareness of the way language functions and affects their lives. To help reach these goals, the course will focus on the elements of clear writing, well-organized expository essays, the necessary critical thinking that must always precede expository writing, analytical reading, and, when necessary, a review of the principles of grammar. Prerequisite: ENG:030 with a grade of “C” or better, or recommendation of Department and Reading Proficiency or concurrent enrollment in RDG:030.

ENG:101  COLLEGE COMPOSITION II 3
This is a course in longer units of composition including the documented research paper, argumentation, and criticism. Prerequisite: ENG:100 or ENG:101 with a grade of “C” or better or departmental approval and Reading Proficiency.

ENG:102  REPORT WRITING 3
This course offers instruction in the kinds of writing required in fields such as business, technology, and health science. Students plan, write, and revise letters, memos, reports, abstracts, and other forms of practical writing. Emphasis is given to writing for particular audiences to solve “real world” writing problems. Prerequisite: ENG:100 or ENG:101 with a grade of “C” or better or departmental approval and Reading Proficiency.

ENG:104  HONORS COLLEGE COMPOSITION I 3
This course is designed for students who have demonstrated above average ability. It covers the same subject matter as ENG:101, but offers a more challenging and a more rewarding experience for the students recommended for this course. Prerequisite: Reading Proficiency.
ENG:105 HONORS COLLEGE COMPOSITION II 3
This course is designed for students who have demonstrated above average ability in ENG:101. It covers the same subject matter as ENG:102, that is, argumentative writing, critical analysis, and research papers. But ENG:105 offers a more challenging and a more rewarding experience for the students recommended for this course. Prerequisite: ENG:101 and recommendation of the Department and Reading Proficiency.

ENG:110 CREATIVE WRITING 3
This is a workshop for beginning and experienced writers. It is designed to encourage and guide students interested in writing poetry, fiction, and drama. Students will be required to produce a certain number of manuscripts, depending upon the form in which they are writing, and to read occasional brief selections. Prerequisite: Reading Proficiency.

ENG:114 WRITING PLAYS AND FILMSCRIPTS 3
This course is designed for the student who has already experimented with several types of creative writing and who wishes special work in a single area. A workshop format will be used with emphasis on the discussion of student work in class. Some lectures will be given, involving the various facets of the writer’s role from planning to publication. Prerequisite: Reading Proficiency.

ENG:201 INTRODUCTION TO FICTION 3
The enjoyment, appreciation, and understanding of American, European, African, and Oriental fiction are the goals of this course. The class will explore imagery, symbolism and style, as well as other elements of fiction in short stories and novels. Prerequisite: Reading Proficiency.

ENG:202 INTRODUCTION TO POETRY AND PLAYS 3
This course focuses on the pleasures of poetry and drama. By reading, analysis, discussions and student projects, the student should gain a familiarity with the statements and craft of a selection of American, European, African and Oriental poems and plays. Prerequisite: Reading Proficiency.

ENG:203 AMERICAN LITERATURE 3
American Literature will provide the students with an opportunity to confront a significant part of their literary heritage. This course examines the broad social and ethnic diversity of American writers; it shows how Americans live now and how they used to live. It covers a broad range of subject matter and literary types. It concentrates on appreciation. Also, it pays some attention to the ways in which the works experienced relate to our historical and cultural values. Prerequisite: Reading Proficiency.

ENG:204 AMERICAN LITERATURE BEFORE 1865 3
Presenting the literature written prior to 1865 in the United States, this course covers pre-colonial, colonial, revolutionary and national literature through the Civil War. The course includes writers such as Bradford, Bradstreet, Cooper, Emerson, Franklin, Hawthorne, Irving, Melville, Paine, Poe, Thoreau and Wheatley. Prerequisite: Reading Proficiency.

ENG:205 AMERICAN LITERATURE BETWEEN 1865 AND 1945 3
Presenting United States literature written between 1865 and 1945, this course includes writers such as Adams, Cather, Chopin, Crane, Cullen, Cummings, Dickinson, DuBois, Eliot, Faulkner, Fitzgerald, Frost, Gilman, H.D., Hemingway, Hughes, James, Jewett, Millay, Moore, O’Neill, Porter, Pound, Stevens, Twain, Washington, Wharton, Whitman, Williams. Prerequisite: Reading Proficiency.

ENG:206 AMERICAN LITERATURE AFTER 1945 3
Presenting United States literature after 1945, this course includes writers such as Albee, Baldwin, Bellow, Bishop, Brooks, Ellison, Erdrich, Ginsberg, Gluck, Kingston, Levertov, Lowell, Malamud, Miller, Morrison, Plath, Rich, Sexton, Shepard, Silko, Snyder, Updike, Vonnegut, Welty, Williams, and Wright. Prerequisite: Reading Proficiency.

ENG:207 HUMOR IN AMERICAN LITERATURE 3
This course explores American humor primarily in written sketches, short stories, and novels by authors from Twain and Thurber to Bombeck and Vonnegut. It also analyzes jokes, movies, comic strips, stand-up comedians, and television sitcoms. The course questions what American humor is, what forces have shaped its growth, what personal and social functions it serves, and what value it might have for contemporary Americans. Prerequisite: Reading Proficiency.

ENG:210 BRITISH LITERATURE BEFORE 1800 3
An investigation into the best literature written in the British Isles, starting with the rough, oral Anglo-Saxon tales of warriors, to the chivalric romances of and bawdy stories about knights and common people, to the searching but exciting poems and plays of the English Renaissance, and finally to the carefully refined 18th Century Literature. This course emphasizes finding the ways in which literature explores the virtues and foibles of human nature and relating these qualities to modern experiences. Prerequisite: Reading Proficiency.

ENG:211 BRITISH LITERATURE AFTER 1800 3
This course covers representative works of major British writers from William Blake at the beginning of the nineteenth century to James Joyce in the twentieth century. The material may consist of poetry, prose essays, short stories, novels and plays. Upon successful completion of the course, students should be aware of the dominant social, cultural and artistic concerns of the period as reflected in the literature. Prerequisite: Reading Proficiency.

ENG:213 THE SHORT NOVEL 3
Some of the greatest fiction is neglected because of its length—too long for short story collections and too short to be included in courses on the novel. This is the short novel or novella—a distinct literary type. Students in this course will study works by such writers as Melville, Tolstoy, Baldwin, Dostoyevski, Chopin, Conrad, Faulkner, Porter, Wright and others. Prerequisite: Reading Proficiency.

ENG:214 CONTEMPORARY FICTION 3
This course focuses on the post-WWII novel and short story with emphasis on the fiction of the past fifteen years. In it, students will look at each fictional work as an artistic creation and also as a social document and will, thereby, consider the ways in which contemporary art reflects and is reflected by the customs and values of contemporary society. Prerequisite: Reading Proficiency.

ENG:215 POPULAR LITERATURE: FANTASY AND HORROR 3
The course will focus on major themes and writers in the horror and fantasy genre (science fiction may be discussed but will not be the primary aim of the course). By looking at major works of fantasy and horror from the gothic romances to the 20th century, students will study the causes, effects and nature of the genre. Readings will be supplemented by films. Prerequisite: Reading Proficiency.

ENG:216 WOMEN IN LITERATURE 3
An exploration of the role of women in fiction, drama, poetry and other literary genres, with primary emphasis on works written by women. Prerequisite: Reading Proficiency.

ENG:217 MAJOR BLACK WRITERS 3
An examination of a selection of works by major black authors whose writings have gained public attention by virtue of their excellence or historical significance. Discussions will include considerations of topical relevance and literary form and style. Prerequisite: Reading Proficiency.

ENG:218 LITERATURE OF AMERICAN MINORITIES 3
A study of American minority (racial and religious) experience and cultural contributions to the nation by explaining them through literature. Prerequisite: Reading Proficiency.

ENG:219 ADVANCED REPORT WRITING 3
This course provides detailed instructions in planning, writing, and editing longer reports, especially complex formal reports designed for a diverse group of readers. A logical sequence of report-preparation activities, ranging from audience and problem-solving analysis through research and follow-up activities, will be the core of this course. Emphasis will be placed on designing professional reports. The course will also review mechanics, grammar, rhetoric, and style. Students will write one report in a small committee structure in order to simulate industrial and business working conditions. Prerequisites: ENG:103 and Reading Proficiency.

ENG:222 MAJOR BRITISH WRITERS 3
A survey of the works of major British writers from Chaucer to Joyce, this course will analyze themes and techniques in poetry, drama, and prose. The student will discover central issues in British culture and gain an enriched appreciation of the British roots and parallels of American culture. Prerequisite: Reading Proficiency.
ENG:223 ADVANCED EXPOSITION 3
Advanced Exposition is designed to upgrade each student’s writing proficiency with special focus on the multiple perspectives that shape writing. The nature of the subject, purpose(s), the reader-audience, prescribed or self-initiated writing situation, formal or informal style. Assignments will correlate with students’ writing goals and will be adapted to different program requirements. Prerequisite: ENG:102 with a grade of “C” or better, or ENG:103, or MCM:112 and Reading Proficiency.

ENG:224 FICTION WRITING 3
This is a workshop for the student who has already experimented with several forms of creative writing and who wishes special, focused work in writing stories. The workshop format will allow for in-depth discussion of student work in class. Some lectures and other kinds of presentations will be given, involving various aspects of the writer’s activity from initial inspiration to preparation of manuscripts for publication. Prerequisite: Reading Proficiency.

ENG:225 POETRY WRITING 3
This course is designed for the student who has already experimented with several types of creative writing and who wants special work in the writing of poems. A workshop format will emphasize consideration of student works. Some lectures and presentations will be given, involving the various facets of the writer’s role from inspiration to preparing manuscripts for publication. Prerequisite: Reading Proficiency.

ENG:226 CHILDREN’S LITERATURE 3
This course will familiarize students with examples of good children’s books, for children from infancy to adolescence. It will also help students develop the ability to evaluate a book, analyze its appeal, and present it effectively. (Same course as EDU:226.) Prerequisite: Reading Proficiency.

ENG:227 LITERATURE OF THE SOUTH 3
Although the South is an integral part of America, it has always considered itself a place set apart from the rest. This course will explore whether Southerners do have a particular point of view. It will examine whether Southern literature is different from literature written in other parts of the country and the nature of that difference. This course will analyze these issues by examining works written by Southern men and women, both black and white. Although the course will include works from the 19th century, the majority will come from the 20th century. Prerequisite: Reading Proficiency.

ENG:228 STUDIES IN LITERATURE 3
This course offers a basic introduction to literature, by being organized around specific themes, historical periods, or genres, which may vary from semester to semester. Students will learn how to read, analyze, write about, and appreciate literature by focusing on particular issues raised by the related works that the course addresses. Refer to “Schedule of Credit Courses” for current course topics. Prerequisite: Reading Proficiency.

ENG:229 INTERMEDIATE WRITING WORKSHOP 3
This is a workshop for students of all ages and backgrounds with some creative writing experience who want to begin or continue creative writing projects with the support and help of an instructor and peers. Projects may include poetry, fiction, scripts, personal essays, memoirs, and career-related writing. Students will contract to do the kinds of writing projects they choose. Prerequisite: ENG:110 or permission of the instructor and Reading Proficiency.

ENG:230 ENVIRONMENTAL LITERATURE 3
This college-level course is a study of literature about nature and the environment. The students will read and discuss a selection of non-fiction, fiction, and poetry written by prominent authors about the natural world and related topics. Prerequisite: Reading Proficiency.

ENG:231 WORLD LITERATURE 3
This course offers an introduction to literature organized around works by writers from outside the United States. Its geographical focus varies from semester to semester, as do its choices of literary genres. Students will learn how to read, analyze, write about, and enjoy literature. They will learn to see literature in its historical and cultural contexts. They will also grow by learning about literature of other cultures. Prerequisite: Reading Proficiency.

ENG:232 LITERATURE OF THE CARIBBEAN 3
This course is a survey of Caribbean literature that represents varied periods and cultural groups. Focus will be on the English-speaking Caribbean literary works, but literature in translation from the Spanish-, Dutch-, and French-speaking islands may be included. Through a study of a range of short stories, poetry, novels, plays, and essays, students will be introduced to major themes in Caribbean writing, including race, ethnicity, identity formation, migration, colonialism and its legacies, myths of Africa, and transnational identities. Prerequisite: Reading Proficiency.

ENG:233 WRITING CREATIVE NONFICTION 3
This course is for the student who wants to focus on nonfiction prose forms such as personal essays, travel narratives, and/or biographies. This workshop format will allow for in-depth discussion of students’ writings in class. Some lectures and presentations will be given, involving various aspects of the writer’s activity from initial inspiration to preparation for publication. Prerequisite: ENG:101 with a grade of “C” or better, and Reading Proficiency.

FASHION

FSH:208 FASHION MERCHANDISING INTERNSHIP I 3
Supervised experience and in-service training in various divisions of an approved retail establishment. Emphasis on human relations skills, apparel selection and merchandise sales. Assigned experiences designed to complement and reinforce knowledge. Additional lab hours required. Prerequisite: Reading Proficiency.

FSH:209 FASHION MERCHANDISING INTERNSHIP II 3
Continuation of Internship I with student assigned to more specific responsibilities in specialized area of interest in the fashion industry. Emphasis on leadership skills and supervisory interaction. Additional lab hours required. Prerequisite: Reading Proficiency.

FINANCE

FIN:100 PERSONAL FINANCE 3
This course involves the study of personal financial planning and is intended to provide the student with a basis of knowledge that will enable the individual to better manage their income while maximizing the value received for the expenditures made. This course also addresses the safeguarding of assets and will provide the student with the tools for developing their own financial plan. Topics may include financial planning, developing personal financial statements and plans, insurance needs, basic tax theories, and stock market options for personal financial planning. Prerequisite: Reading Proficiency.

FIN:101 INTRODUCTION TO INVESTMENTS 3
A survey course, designed for the novice investor with a rigorous examination of the workings of the financial markets. Among the topics covered are an overview of financial markets from the investor perspective, analysis and valuation of equity securities, fixed income and leveraged securities, mutual funds, and overall portfolio management. Prerequisite: Reading Proficiency.

FIN:201 FUNDAMENTALS OF FINANCE 3
Basic methods and principles of finance, such as money and banking, financing working capital and fixed capital needs, stocks and bonds, the marketing of securities, and the working of financial institutions. Prerequisite: ACC:110 or departmental approval. Prerequisite: Reading Proficiency.

FIRE PROTECTION

FIR:100 FIRE DEPARTMENT APPARATUS 2
A study of the description and specification of the various fire department apparatus found in the modern organization, special emphasis is given to manufacturer’s specifications, analysis of the various codes and standards of construction and methods of writing specifications for various pieces of equipment. In addition, the instruction covers the principles of care maintenance, and operation of the various types of apparatus including principles of pumping, pumps, and accessories, power development and transmissions and pumping practices. Prerequisite: Reading Proficiency.
FIR:102 FIRE CHARACTERISTICS 3
Characteristics and behavior of fire found in ordinary materials and special materials such as oils and other combustible chemicals. A review of basic chemistry with emphasis on combustion and internal combustion. Hazards of liquids and gases, special techniques in regard to oxygen supplies. Prerequisite: CHEM:114 and Reading Proficiency.

FIR:103 FIRE SERVICE MANAGEMENT AND ADMINISTRATION 3
Instruction in management and administration for the fire service including the functions of management, planning, organizing, directing, controlling, the management cycle, motivation, behavioral science, executive development, educational development, and labor relations. Prerequisite: Reading Proficiency.

FIR:105 INSPECTION AND FIRE PREVENTION 3
Inspection surveying and mapping procedures associated with the organization and function of fire prevention. A survey of the various codes and standards; how these various standards are used in inspecting buildings for fire hazards; how to actually inspect a building with respect to existing fire protection equipment-structural details that must be known to avoid undue loss in case of fire. Opportunity will be provided to make at least one complete inspection and report on an operating industry. Prerequisite: Reading Proficiency.

FIR:106 TEACHING TECHNIQUES FOR FIRE DEPARTMENT PERSONNEL 3
The basic theories of learning and methods of instruction are discussed. The use of lectures, demonstrations, and visual aids as applied to the instruction of fire department personnel is illustrated. Practice is provided in the use of lesson plans, visual aids, tests, and other teaching devices including module on the use of microcomputers as an instructional device. Each student’s application of a teaching procedure is critically discussed and evaluated. Prerequisite: Reading Proficiency.

FIR:110 BASIC FIRE PROTECTION AND ALARM SYSTEMS 3
A study of modern fire protection, including water supply, private fire protection methods, chemical extinguishers, and a study of various types of fixed and portable fire detection and alarm systems. This will include municipal, central station, proprietary and local alarm systems; heat, flame and smoke detectors; telephone, teletype and radio systems. Prerequisite: MTH:124 and Reading Proficiency.

FIR:202 FIRE INVESTIGATION 3
Methods determining point of origin, path of fire travel and fire causes; motives and methods for fire setting, recognizing and preserving evidence; arson laws, and types of arson fires, court testimony, reports and records. Prerequisite: Reading Proficiency.

FIR:204 FIRE FIGHTING TACTICS AND STRATEGY 3
Fundamental strategy and method of attack employed for various fire problems. Principles of fire fighting as applied to small and large scale fire problems and problems that are complex or unique in nature. Some practice with problems involving the use of tactics and strategy that employ equipment and manpower at various organizational levels. Prerequisite: Reading Proficiency.

FIR:205 FIRE SCIENCE HYDRAULICS 3
A study of the mechanics of liquids, particularly as pertains to water flow, hydrants, pumps, standpipes, hoses, nozzles, sprinkler systems as adapted to fire fighting practices. This involves interpretation of readings from various kinds of manometers, pressure gauges, and hydrostatic devices. Fluids in motion, head calculations, pumping problems, friction losses, cavitation, velocity of flow, use of pitot and venturi meters, are studied. Also the problems of supplying fire service pumps and efficiently using them is studied. Prerequisite: MTH:124 and Reading Proficiency.

FIR:207 CODES AND ORDINANCES 3
A detailed study of national, state and local ordinances applicable to the fire service and electrical, plumbing and building codes. Some coverage of problems in mutual aid pacts and agreements with other fire departments, and relations with civil defense and other government agencies. Prerequisite: Reading Proficiency.

FIR:209 HAZARDOUS MATERIALS 3
A second semester of basic fundamentals of chemistry used in fire science with emphasis on less common special hazards. Topics covered will include nuclear reactions, ionization, radiation detection equipment, peacetime uses of radioactive materials and control of resulting hazards. Prerequisite: Reading Proficiency.

FIR:210 ARCHITECTURAL STRUCTURAL REPRESENTATION-MATERIALS 3
Basic fundamentals of building plan reading including conventional delineation, symbols, abbreviations, methods of showing floor plans, elevations, and dimensions. Also basic characteristics of various materials and building structural systems when subjected to fire. Prerequisite: MTH:124 and Reading Proficiency.

FRENCH

FRE:101 ELEMENTARY FRENCH I 4
A beginning course presenting the basic sentence structure and vocabulary necessary to participate in elementary French conversation and to begin reading short French passages. Additional lab hours required. Prerequisite: Reading Proficiency.

FRE:102 ELEMENTARY FRENCH II 4
A continuation of FRE:101. Students complete basic elements of French grammar, increase their vocabulary and gain added facility in speaking and reading French. Additional lab hours required. Additional lab hours required. Prerequisite: FRE:101 or 2 years of high school French and Reading Proficiency.

FRE:105 INTRODUCTION TO FRENCH CULTURE 3
This course closely examines the provinces, cities, geography, early settlement, and climate of France in the first half of the semester. The second half is a study of the government, economics, educational system, and The European Community. Emphasis is on present-day France. The course is taught in English. Prerequisite: Reading Proficiency.

FRE:201 INTERMEDIATE FRENCH I 4
A continuation of FRE:102. Emphasis is on becoming proficient in using the language so that students can function in a francophone culture. Primary concentration is on developing speaking and listening skills. Testing is both oral and written. Prerequisites: FRE:102 or 3 or more years of high school French and Reading Proficiency.

FRE:202 INTERMEDIATE FRENCH II 4
The major emphasis is preparing students to be functioning members of a French speaking community. The student will gain the linguistic skills necessary to perform in everyday situations. Speaking and listening skills are further developed. Testing is both oral and written. Additional lab hours required. Prerequisites: FRE:201 or 4 or more years of high school French and Reading Proficiency.

FRE:206 ADVANCED FRENCH CONVERSATION AND COMPOSITION 3
Designed to increase written and oral fluency in French. This course gives the student the opportunity to express himself/herself in a wide variety of everyday topics. Short compositions will be written and brief oral reports presented to the class. A relaxed, informal atmosphere is created to stimulate conversation. Prerequisite: FRE:202 or equivalent and Reading Proficiency.

FUNERAL DIRECTING

FD:101 FUNERAL MANAGEMENT/MERCHANDISING 6
The practices and procedures of establishing a funeral home are covered including personnel management, vital statistics, records and forms. Government regulations of OSHA, FTC and ADA are studied. An in-depth study of merchandising funeral goods including caskets and vaults is covered. Prerequisite: Admitted to Funeral Director Program and Reading Proficiency.

FD:102 FUNERAL SERVICE PSYCHOLOGY 3
This course studies the implications of grief and bereavement and the role of the funeral director in counseling the bereaved. The social role of the funeral director in the dynamics of grief and an investigation into the changing attitudes toward death is also studied. Prerequisite: Prior admissions to Funeral Director Program and Reading Proficiency.

FD:103 HISTORY OF FUNERAL SERVICE 3
The historic role of the funeral director is investigated from ancient to present day as well as projected directions and functions of the funeral profession. Ethical and legal implications of these changing trends are discussed. Various religious, ethnic, fraternal and military practices are studied. Prerequisite: Admission to Funeral Director Program and Reading Proficiency.
FNL:104  FUNERAL SERVICE LAW  3
This course identifies the methods of disposing of human remains and the legal responsibilities of the funeral director. Principles of both mortuary and business law are covered from the local, state and federal level. Cemetery regulations, liability and pre-need are also studied. Prerequisite: Admitted to Funeral Director Program and Reading Proficiency.

FUNERAL SERVICE EDUCATION

FNL:101  ORIENTATION TO FUNERAL SERVICE  2
An introduction to funeral service; ancient history, historical development, present funeral practices; values of funeral service; personal qualifications; ethics. Field trips to investigate current problem areas in funeral service. Prerequisite: Must have permission of program director and Reading Proficiency.

FNL:102  MORTUARY LAW  3
Principles of mortuary law; duties, rights and liabilities for final disposition. Business law; public and personal liability; business organization; licensing and zoning regulations. Probate proceedings, social security and life insurance benefits. Prerequisite: Must have permission of program director and Reading Proficiency.

FNL:103  EMBALMING CHEMISTRY  3
This course is a survey of the basic principles of chemistry as they relate to funeral service. In this course there is a major emphasis on chemical principles and precautions involved in sanitation, disinfection, public health and embalming practice. The government regulation of chemicals currently used in funeral service is reviewed. Prerequisite: MTH:007 or MTH:030 and currently enrolled in Funeral Service Program and Reading Proficiency.

FNL:104  FUNERAL SERVICE EQUIPMENT  3
Designed to give the student a working knowledge of equipment items, manufacturing and use of such items. Study of caskets and vaults. Field trips and guest lectures. Prerequisite: Must have permission of program director and Reading Proficiency.

FNL:106  DYNAMICS OF GRIEF  3
This course examines the dynamics of grief and its effect on the survivors following the death of a loved one. Various theories related to grief will be examined, as well as public attitudes about death and the funeral service profession. Specific helping skills utilized by the funeral director will be studied and practiced. Prerequisite: Reading Proficiency.

FNL:200  RESTORATIVE ART  4
Study of facial anatomy, color relationships and restorations. Development of skill in anatomical modeling and cosmetics. Additional lab hours required. Prerequisite: Sophomore standing in Funeral Service Education and Reading Proficiency.

FNL:201  EMBALMING  3
Procedures and techniques of embalming, embalming theory and consideration of special treatments. Prerequisite: BIO:111, FNL:102, sophomore standing in Funeral Service Education and Reading Proficiency.

FNL:202  FUNERAL MANAGEMENT  3
Current practice and procedures, funeral direction, psychological and sociological aspects of funeral service, funeral home operation, professional overview and image, professional regulations and effective personnel management. Prerequisite: Must have permission of program director and Reading Proficiency.

FNL:205  FUNERAL SERVICE SEMINAR  1
Advanced management techniques and advanced technical procedures; research into current problems in funeral service; group discussion and problem solving. Practical applications and demonstrations of management counseling and funeral arrangement techniques. Prerequisite: Sophomore standing in Funeral Service Education and Reading Proficiency.

FNL:206  EMBALMING PRACTICUM I  2
One laboratory session for one semester in an appropriate situation. Practical experience in all phases of embalming. Additional lab hours required. Prerequisite: Previous or concurrent enrollment in FNL:201 and Reading Proficiency.

FNL:207  EMBALMING PRACTICUM II  2
Students placed in local funeral homes to work under the direct supervision of licensed embalmer to gain knowledge of procedures used in embalming human remains for funeral services. Continuation of Embalming Practicum I with special emphasis on funeral directing and funeral home management. Prerequisite: Previous or concurrent enrollment in FNL:201 and Reading Proficiency.

FNL:208  PATHOLOGY FOR FUNERAL SERVICE  3
Divisions and importance of pathology, nature and causes of diseases, to include: inflammation, repair and recuperation of tissue, tumors, diseases of the heart, respiratory and digestive systems are covered as well as microscopic examination of autopsy and surgical specimens. Prerequisite: Sophomore standing in FSE or Departmental approval and Reading Proficiency.

GENERAL ENGINEERING

GE:056  FUNDAMENTALS OF TECHNOLOGY  3
This course relates the fundamentals of technology to down-to-earth, everyday occurrences, problems, and devices. A unique instructional approach ties together parallel concepts for mechanical, electrical, fluid, and thermal systems. Skills used by all technicians are developed in practical hands-on laboratory experiences. Prerequisite: One year of high school algebra or MTH:140 or higher.

GE:101  TECHNICAL COMPUTER APPLICATIONS  3
This course is an introduction to the use of personal computers in technology. Topics of this course include PC hardware, operating systems, word processing, spreadsheets, graphics and the Internet. Prerequisite: Reading Proficiency.

GE:121  PRINCIPLES OF ENGINEERING  3
This course is an introduction to the opportunities and responsibilities of Engineering. Students will learn the field of Engineering, and explore Engineering Careers. They will complete projects in Design, Engineering Systems, Thermodynamics, Fluid Systems, Electrical and Control Systems, Strength and Properties of Materials, and Production Process and Quality Control.

GE:122  ENGINEERING DESIGN AND DEVELOPMENT  3
Students will work in teams to design and build solutions to authentic engineering problems. Student teams will make progress reports to their peers, mentor and instructor, and will present their research paper and defend their projects to a panel of engineers, business leaders and instructors for professional review and feedback. Prerequisites: GE:121 and EGR:147 or ME:121; or ME:151 and EGR:100.

GE:131  ENGINEERING TECHNOLOGY ORIENTATION  1
An introduction to the opportunities and responsibilities of an engineering technician. Exposure to the various fields of technology will be made by field trips, movies and guest lectures. Introduction to materials, techniques and college services which will assist the student in completing a technology program will be presented. Prerequisite: Reading Proficiency.

GE:132  TECHNOLOGY APPLICATIONS  4
This course is an applications driven investigation of technological concepts and devices. Mechanical, electrical, fluid, and thermal systems applications are demonstrated and investigated for each topic area in practical hands-on laboratory exercises. Topics include force transformers, energy converters, transducers, optical systems, and vibrations. Prerequisite: GE:056 and Reading Proficiency.

GE:181  MODERN TECHNOLOGY  3
This course is concerned with the social and environmental impact of recent advances in science and technology. Since technological change is rapid and science literacy is required to understand the changes, this course is designed for non-technical as well as technical majors. Various branches of technology, their processes and implementation are examined. Discussions will follow on the need for technology, its development, how it serves us and the problems that are its by-products. This course may not count as a natural science lab course for general education requirements. Additional lab hours required. Prerequisite: Reading Proficiency.

GE:290  WORKPLACE LEARNING: GENERAL ENGINEERING  1 - 6
This workplace based course provides the student the opportunity to apply theory and skills learned in the classroom, learn new skills, and explore career possibilities while supervised by a professional in the field and a faculty member. Students will observe and participate in the functions of the industry to enhance their preparation for entering the field. Minimum 50 hours per credit hour in the workplace throughout the term. Prerequisite: Departmental Approval and Reading Proficiency.
GEOLOGY

GEO:100  EARTH SCIENCE  3
This introductory geoscience course will focus on the geologic events since the origin of the earth, the interior structure of the earth, plate tectonics, earthquakes, volcanoes, rocks, minerals, and surface processes. Prerequisite: Reading Proficiency.

GEO:101  EARTH SCIENCE (LABORATORY)  2
Laboratory and field exercises illustrating the principles of earth science. Additional lab hours required. Prerequisite: GEO:100 concurrent enrollment and Reading Proficiency.

GEO:102  INTRODUCTION TO GEOLOGY  3
An introduction to the physical and historical development of life and earth through 3 to 5 billion years of time. Prerequisite: Reading Proficiency.

GEO:103  ENVIRONMENTAL GEOLOGY  3
Geologic hazards, natural resources and land-use planning will be considered with emphasis on problems caused by man. Prerequisite: Reading Proficiency.

GEO:104  PREHISTORIC LIFE  3
This general paleontology course is a survey of the fossil record of the history of life and its development on earth through four billion years of geologic time. Prerequisite: Reading Proficiency.

GEO:105  FIELD TRIPS IN MISSOURI GEOLOGY  3
An elective science course utilizing the unique geology of the Missouri Ozarks as a field laboratory. Prerequisite: Reading Proficiency.

GEO:111  PHYSICAL GEOLOGY  5
Introduction to the theoretical and practical aspects of the composition and structure of the earth. Additional lab hours required. Prerequisite: Reading Proficiency.

GEO:112  HISTORICAL GEOLOGY  4
Historical Geology is a continuation of GEO:111. The course considers the origin of the earth, its geologic history and the history and evolution of animal and plant life as recorded in the rocks. Additional lab hours required. Prerequisite: GEO:111 and Reading Proficiency.

GEO:113  OCEANOGRAPHY  3
This is a course covering all areas of oceanographic study. The primary emphasis is physical oceanography, i.e. waves, tides, currents, shoreline ocean basins, ocean sediments, and properties of salt water. A portion of the course (approximately 1/4) covers marine ecology and marine life. A student completing this course should have a much heightened awareness of the water mass that covers over 70% of the earth's surface. Man's interactions with this environment are constantly emphasized. Prerequisite: Reading Proficiency.

GEO:200  GEOMORPHOLOGY  3
Study of the origin and classification of land forms. Regional geomorphic problems and physiographic regions emphasized. Prerequisite: GEO:111 and Reading Proficiency.

GEO:201  GENERAL MINERALOGY  3
Fundamental principles of crystallography and mineralogy with an introduction to structures and optical properties. Additional lab hours required. Prerequisite: GEO:111 or CHM:101 and Reading Proficiency.

GEO:202  INTRODUCTION TO PETROLOGY  3
Thorough study of rock types and standard nomenclature. Additional lab hours required. Prerequisite: GEO:201 and Reading Proficiency.

GERMAN

GER:101  ELEMENTARY GERMAN I  4
A beginning course presenting the basic sentence structure and vocabulary necessary to participate in elementary German conversation and to begin reading short German passages. Additional lab hours required. Prerequisite: Reading Proficiency.

GER:102  ELEMENTARY GERMAN II  4
A continuation of GER:101. Students complete the basic elements of German grammar, increase their vocabulary and gain added facility in speaking and reading German. Additional lab hours required. Prerequisite: GER:101 or 2 years of high school German and Reading Proficiency.

GER:201  INTERMEDIATE GERMAN I  4
A continuation of GER:102. Emphasis is on speaking German. A review of grammar assists the student in perfecting basic skills. A variety of up-to-date literary and cultural selections are read and form the basis for classroom discussions. Additional lab hours required. Prerequisite: GER:102 or 3 or more years of high school German and Reading Proficiency.

GER:202  INTERMEDIATE GERMAN II  4
A continuation of GER:201. Emphasis is on spoken German with continued grammar review. A variety of short stories and contemporary cultural selections are read and discussed in class. Additional lab hours required. Prerequisite: GER:201 or 4 or more years of high school German and Reading Proficiency.

GER:206  ADVANCED GERMAN CONVERSATION AND COMPOSITION  3
Students with a good command of the spoken and written language have an opportunity to increase their fluency by regularly writing and speaking about various subjects of daily interest. Prerequisite: GER:202 or equivalent and Reading Proficiency.

GLOBAL EDUCATION

GLE:101  GLOBAL EDUCATION STUDIES  1 - 3
This course will present an opportunity for students to travel to and to engage in the direct study of international cultures in order to foster an enhanced sensitivity to, appreciation of, and an understanding of the global community. Prerequisite: Permission of instructor and Reading Proficiency.
HEALTH INFORMATION TECHNOLOGY

HIT:101 MEDICAL TERMINOLOGY 4
This course provides a broad survey of the language of medicine and health technologies. Students learn to accurately spell and define common medical terms related to major disease processes, diagnostic procedures, laboratory tests, abbreviations, drugs, and treatment modalities. Emphasis is placed on formation, definition and pronunciation. Prerequisite: Reading Proficiency.

HIT:102 HEALTH INFORMATION MANAGEMENT TECHNOLOGY 4
This course introduces healthcare data content and structure including its collection, arrangement, presentation, and verification. Healthcare data sets, primary and secondary record systems, and legal and ethical issues are introduced. Students learn how information technology supports healthcare delivery and are introduced to information systems concepts and components such as hardware, software, data, and network resources. Prerequisite: Reading Proficiency.

HIT:103 HEALTHCARE DELIVERY SYSTEMS 2
This course describes the organization, financing and delivery of healthcare services in the United States. Students are introduced to the major settings in which healthcare services are provided including public health services, ambulatory care, institutional hospital services, long-term care, and mental health services. Billing and reimbursement procedures for individual providers and institutions are also studied. Prerequisite: Reading Proficiency.

HIT:104 BASIC PRINCIPLES OF DISEASE 2
This course provides an overview of disease processes affecting the human body via an integrated approach to specific disease entities, including the study of causes, diagnosis and treatment of disease. Typical health record data is interpreted. Prerequisites: BIO:215 and HIT:101 and Reading Proficiency.

HIT:105 PHARMACOLOGY FOR HEALTH INFORMATION TECHNOLOGY PROFESSIONALS 1
This course provides an overview of pharmacy therapy available for clinical management of patient care. Specific disease states and the drugs used to alleviate them are studied. Prerequisites: BIO:215 and HIT:101 and Reading Proficiency.

HIT:106 DIAGNOSIS CODING SYSTEMS I 3
This course is an introduction to the clinical coding and classification systems used to code and report illnesses, injuries, and patient encounters with healthcare practitioners for services. Students learn to read and interpret healthcare documentation to classify diagnoses in the International Classification of Diseases - Ninth Revision - Clinical Modification (ICD-9-CM) system. ICD-10-CM, DSM-IV, and Diagnosis Related Groups (DRG) and their relationship to coding are also introduced. Emphasis is placed on the interrelationship between providing healthcare services to patients and receiving payment for those services. Prerequisites: HIT:101, HIT:102, BIO:215, and Reading Proficiency.

HIT:107 PROCEDURE CODING SYSTEMS I 3
This course is an introduction to the clinical coding and classification systems used to code and report diagnostic and therapeutic procedures in the ambulatory care setting. Students learn to read and interpret ambulatory healthcare documentation to classify services and procedures in the Current Procedural Terminology (CPT) System and the Healthcare Common Procedural Coding System, HCPCS, Level II. ICD-9-CM Volume III and ICD-10-PCS are also introduced. Emphasis is placed on the interrelationship between providing health care services to patients and receiving payment for those services. Prerequisites: HIT:101, HIT:102, BIO:215, and Reading Proficiency.

HIT:109 MEDICAL TRANSCRIPTION 3
This course is designed to develop skill in keyboarding/formating and in transcribing from machine dictation in a variety of medical documents, such as forms, correspondence, consultation and simple reports. Reinforcement of medical terminology and language skills, use of reference materials, ethics, and confidentiality are emphasized. Additional lab hours required. Prerequisites: HIT:101 and IS:102 and Reading Proficiency.

HIT:201 HEALTH INSURANCE BILLING AND REIMBURSEMENT 3
This course explores the uses of coded data and health information in reimbursement and payment systems. Procedures of various commercial, major non-profit, and government insurance carriers are studied. Students examine the impact of the Prospective Payments System on reimbursement and the interrelationship of coding, Diagnostic Related Groups, Ambulatory Payment Classifications and healthcare providers. Prerequisites: HIT:103 and HIT:106 and Reading Proficiency.

HIT:206 DIAGNOSIS CODING SYSTEMS II 3
This course is a continuation of Diagnosis Coding Systems I. Students are introduced to additional Diagnosis Related Groups (DRGs) and their relationship to coding. Prerequisites: HIT:106 and Reading Proficiency.

HIT:207 PROCEDURE CODING SYSTEMS II 3
This course is a continuation of Procedure Coding Systems I. Students use computerized encoding systems and healthcare data/content to assign appropriate CPT/HCPCS codes including Level II National Codes developed by the Centers for Medicare and Medicaid Services. Prerequisites: HIT:107 and Reading Proficiency.

HIT:208 ADVANCED CODING APPLICATIONS 2
Students will apply their knowledge of anatomy, the clinical disease process, diagnosis and procedural terminology and pharmacology for correct code assignment and sequencing using various clinical classification systems. Prerequisites: HIT:206 and HIT:207, and Reading Proficiency.

HIT:209 MEDICAL TRANSCRIPTION II 3
This is an intensive course with emphasis on expanding medical terminology related to various specialties and on gaining skill in transcribing medical reports (history and physical examinations, consultations, operative notes, discharge summaries). Professionalism, decision-making, quality/productivity standards, and work priority are stressed. Additional lab hours required. Prerequisites: HIT:109 and Reading Proficiency.

HIT:210 CO-OP WORK EXPERIENCE - HEALTH INFORMATION TECHNOLOGY 2
A cooperative education work experience consisting of a work assignment with an employer or agency (minimum of 120 hours per semester), which allows students to apply skills learned in the classroom. Students are also able to learn new skills and to explore career possibilities while supervised by the employer and by a faculty member. Prerequisites: Permission of Department Chair and Reading Proficiency.

HISTORY

HST:100 AMERICAN CIVILIZATION 3
A study of American history, institutions and government. Special consideration will be given to the constitutions of the United States and Missouri. Intended primarily for students in career curricula. Credit not allowed for this course if credit is given for HST:101, HST:102, HST:103 or HST:104. Prerequisite: Reading Proficiency.

HST:101 AMERICAN HISTORY I 3
A survey of the cultural, economic, institutional, political, and social forces and events which have shaped the United States through the Civil War. Credit not allowed for this course if credit is given for HST:100. Prerequisite: Reading Proficiency.

HST:102 AMERICAN HISTORY II 3
A survey of the cultural, economic, institutional, political, and social forces and events which have shaped the United States from the Civil War to the present. Credit not allowed for this course if credit is given for HST:100. Prerequisite: Reading Proficiency.

HST:103 AMERICAN HISTORY I, HONORS 3
This course is a survey of American history from the European discovery of the Americas through the American Civil War. It explores the cultural, economic, political and social forces which have shaped the nation during that period. As an honors course it emphasizes small-group interaction in a seminar setting. Credit not allowed for this course if credit is given for HST:100. Prerequisite: Department Approval and Reading Proficiency.
HST:104  AMERICAN HISTORY II, HONORS  3
This course is a survey of American history from the Civil War through the pre-
sent. It explores the cultural, economic, political and social forces which have
shaped the nation during that period. As an honors course it emphasizes small-
group interaction in a seminar setting. Credit not allowed for this course if cred-
it is given for HST:100. Prerequisite: Department permission and Reading
Proficiency.

HST:105  U.S. IN THE TWENTIETH CENTURY  3
An investigation of the social, economic, political and intellectual forces which
have shaped contemporary American life and institutions. This course will focus
on changes within America during the period 1898 to the present and will con-
sider the effects of those changes on the United States and its relations with the
rest of the world. Prerequisite: Reading Proficiency.

HST:107  HISTORY OF BLACK AMERICA  3
This course covers the role of Black people in the development of American his-
tory from early American origins to the present. The basic aim is to promote a
better understanding of America’s past by developing increased awareness of
the history of African Americans, their problems and their accomplishments both
individually and as a group. Prerequisite: Reading Proficiency.

HST:108  U.S. MILITARY HISTORY  3
Surveys the military history of the United States from the Revolutionary War
through the post-Vietnam era. Some general background from European history
is included by way of introduction to the art and science of warfare. Topics also
include are military technology, tactics and strategies, civilian-military relation-
ships in peace and war, as well as detailed study of representative battles in
American history. (The course is designed to meet the military history require-
ment of ROTC students, but is open to all students without prerequisite. It does
not meet the history survey requirement satisfied by HST:100, American
Civilization, and should not be regarded as a substitute). Prerequisite: Reading
Proficiency.

HST:115  ANCIENT AND MEDIEVAL HERITAGE  3
Ancient and Medieval Heritage is a survey of the Western World from Antiquity
through the Renaissance, with concentrations on Egypt, Mesopotamia, Hebrews,
the classical civilizations of Greece and Rome, Christianity and Medieval Europe
and Islam. Attention is given to political developments, cultural achievements
and literary sources and philosophical impact of each area as it applies to today’s
world. Prerequisite: Reading Proficiency.

HST:117  EARLY MODERN EUROPE  3
Early Modern Europe is a survey introducing the history of Western Civilization
from the later Middle Ages through the French Revolution. Attention is given to
the cultural, economic, intellectual, political, religious, and social forces which
shape the Western World and its spheres of influence. Prerequisite: Reading
Proficiency.

HST:119  THE MODERN WORLD  3
An examination of the major cultural, technological and ideological changes
which have helped to mold the complex, scientific, urban and materialistic world
in which we live. Prerequisite: Reading Proficiency.

HST:128  WESTERN TRADITION II  3
This course will weave together the history, art, philosophy, literature, religion,
geography, society, government and economics that evolved into European his-
tory from the Reformation: 1500 to the present. Prerequisite: Reading Proficiency.

HST:130  AFRICAN HISTORY I  3
This course will deal with the history of black Africans from the time of ancient
Egypt to contemporary Africa. It will be concerned with the chronological pro-
gression of African civilization, covering individuals, events and the ideas of the
various periods. Prerequisite: Reading Proficiency.

HST:131  AFRICAN HISTORY II  3
This course will encompass the interaction of Africa with the West and will eval-
uate the influence of black society on western society. Prerequisite: Reading
Proficiency.

HST:137  AFRICAN AMERICAN HISTORY I  3
A survey of African American History from its African background through the
Civil War and Reconstruction. The course will investigate African-American lead-
ers, socio-cultural institutions, as well as the Black community’s relationship
with the larger community. Prerequisite: Reading Proficiency.

HST:138  AFRICAN AMERICAN HISTORY II  3
A survey of African American history from the era of Jim Crow to the present.
The course will investigate African-American leaders, socio-cultural institutions,
as well as the Black community’s relationship with the larger community.
Prerequisite: Reading Proficiency.

HST:139  BRITISH HISTORY  3
This course is a survey of British history from the time of Roman rule until the
union of England and Scotland in 1707. Through lectures, videos, text assign-
ments, and field trips, students will trace the historical development of the
United Kingdom. Prerequisite: Reading Proficiency.

HST:140  MODERN LATIN AMERICAN HISTORY  3
This course examines the rise and development of nations and nationalism in
nineteenth and twentieth-century Latin America. The struggles of women, peas-
ants, workers, and minorities for political, social, and economic inclusion will be
the central focus. Emphasis is placed on the role United States foreign policy
played in the region. Prerequisite: Reading Proficiency.

HST:201  HISTORY OF THE FAR EAST  3
A survey of East Asian civilizations focusing on institutional continuity and
change, problems of indigenous response and adaptation to western influence,
and contemporary problems. Prerequisite: Reading Proficiency.

HST:203  THE AMERICAN WEST  3
The focus of this course is on the frontier as a factor in the development of
American institutions and culture. Attention is given to such topics as explo-
raton, the westward movement from the earliest settlements to the passing of
the frontier, the plight of the Indians, and Frederick Jackson Turner and his crit-
ics. Prerequisite: Reading Proficiency.

HST:204  THE U.S. IN CRISIS AND CIVIL WAR  3
An in-depth study of the events and development in U.S. History between 1820
and 1865. The course will highlight the sectional differences and developments
which led to the outbreak of the Civil War and the 1862-1865 war itself with all
its national and international implications. Prerequisite: Reading Proficiency.

HST:205  HISTORY OF MODERN MIDDLE EAST  3
This course traces modern political, economic, and cultural developments in the
Middle East. Special emphasis is placed on development and trends of contem-
porary importance. Prerequisite: Reading Proficiency.

HST:206  WOMEN IN THE TWENTIETH CENTURY  3
This U.S. History course studies the Twentieth century experience of American
women, who have often been neglected in traditional political and diplomatic
histories. Women’s contributions to public life will be examined, as will the con-
tributions and experiences of women who remained exclusively within the fam-
ily. Women’s struggle for the vote and for political, legal and economic rights will
be considered, along with changing values, Freudian psychology, domestic archi-
tecture and other influences on women’s lives. The course will deal with such
topics as immigration, labor, economic change, and education. While the course
will begin with a textbook in women’s history, students will be encouraged to
choose their own topics for original research. Prerequisite: Reading Proficiency.

HST:207  AMERICA IN VIETNAM  3
A survey of the Vietnam War (1945-1975) with emphasis on U.S. involvement in
the 1960’s. This course will combine military history with social and political his-
tory of the period. Vietnam will be seen as a case study in U.S. foreign policy.
Prerequisite: Reading Proficiency.
### HORTICULTURE

**HRT:101 INTRODUCTORY HORTICULTURE**  
Beginning horticulture students will be introduced to the biological aspects of plant life, including cell structure, anatomy, morphology, physiology and taxonomy, and to the environmental factors which affect plant growth, including light, temperature, moisture, soils and the essential elements. (Same course as BIO:124.) Additional lab hours required. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

**HRT:102 SOILS**  
This course is designed to give the student an understanding of soil formation, the chemical and physical properties of natural soils and soil management. Topics include soil use as it relates to plant growth and nutrition, fertility, drainage, and soil sampling and testing. Additional lab hours required. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

**HRT:103 PLANT PROPAGATION**  
This course is designed to give students an understanding of the various methods of plant propagation. Propagation by seed as well as vegetative propagation including cutting, grafting, layering, propagation of specialized structures and tissue culture will be presented. Additional lab hours required. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

**HRT:104 LANDSCAPE DESIGN I**  
This course is an introduction to the basic principles of landscape design. It will emphasize learning computer aided design (CAD) programs that will be utilized professionally. Traditional drafting skills will also be developed to enhance plan presentation to clients. Additional lab hours required. Prerequisite: HRT:101 or BIO:124 and approval of Horticulture Department and Reading Proficiency. Weekly contact hours by arrangement.

**HRT:105 COOPERATIVE HORTICULTURE I**  
Field work in commercial or institutional horticulture enterprises provide the student with experience in different areas of horticulture and enables him/her to acquire actual work skills. Students are required to obtain their own job (either paid or volunteer) with the aid of the horticulture staff. Prerequisites: HRT:101 or BIO:124 and approval of Horticulture Department and Reading Proficiency.

**HRT:110 FUNDAMENTALS OF HORTICULTURE**  
Students will learn the practical applications of the science of horticulture. Ornamental plant culture will be considered in relation to environmental factors such as light, temperature, moisture and soil conditions. Prerequisite: Reading Proficiency.

**HRT:111 SELECTED TOPICS IN GARDENING**  
Students enroll in classes on special topics in horticulture through the adult education program at Missouri Botanical Garden. Classes must be approved by the Horticulture Program Coordinator. A total of 16 hours of instruction is required. Tuition rebates may apply. Prerequisites: HRT:110 and approval of Program Coordinator and Reading Proficiency.

**HRT:112 PLANT IDENTIFICATION: ANNUALS AND PERENNIALS**  
Students will learn the identification, culture and uses of annuals and herbaceous perennials in the landscape. Emphasis will be on plants that perform well in the Midwest and on the study of native species. Prerequisite: HRT:110 and Reading Proficiency.

**HRT:125 PLANT IDENTIFICATION: TREES**  
This course will study deciduous and evergreen landscape trees. Identification through study of botanical characteristics will be emphasized. Landscape uses and plant culture will also be covered. Prerequisite: HRT:110 and Reading Proficiency.

**HRT:126 PLANT IDENTIFICATION: SHRUBS AND VINES**  
This course will study ornamental deciduous and evergreen shrubs and vines. Plant identification through study of botanical characteristics will be emphasized. Landscape uses and plant culture will also be covered. Prerequisite: HRT:110 and Reading Proficiency.

**HRT:127 SOIL MANAGEMENT**  
Soil as a growth medium for plants will be discussed. Special emphasis will be given to soil chemistry, water and physics. Aspects of soil testing and fertility management will also be presented. Prerequisite: HRT:110 and Reading Proficiency.

**HRT:128 TURFGRASS CULTURE**  
Turfgrass culture and management will be discussed. Specific practices as they relate to residential and commercial lawn care will be emphasized. Prerequisite: HRT:110 and Reading Proficiency.

**HRT:130 PRINCIPLES OF LANDSCAPE DESIGN**  
Basic principles of landscape design will be presented. Application of these principles will be demonstrated through the study of landscape plans. Prerequisite: HRT:110 and Reading Proficiency.

**HRT:131 PLANT PEST IDENTIFICATION AND MANAGEMENT**  
Various aspects of insect and disease management will be discussed as they pertain to ornamental plants. Special consideration will be given to identification and control of specific plant pests. Prerequisite: HRT:110 and Reading Proficiency.

**HRT:132 LANDSCAPE MANAGEMENT**  
This course will address management practices for residential and commercial landscapes. Establishment and care of landscape plants will be covered and my include turf grass, trees, shrubs and herbaceous plants. Fertilization and irrigation practices will be discussed. Prerequisite: HRT:110 and Reading Proficiency.

**HRT:133 PLANT IDENTIFICATION: TREES AND VINES**  
This course is a study of ornamental landscape plants with an emphasis on deciduous and evergreen woody vines and deciduous trees. Botanical characteristics of plants will be emphasized for identification purposes. Landscape use and plant culture will also be discussed. Additional lab hours required. Prerequisite: HRT:110 or BIO:124 and Reading Proficiency.

**HRT:205 NURSERY AND GARDEN CENTER PRACTICES**  
This course is an overview of the nursery and garden center industries. Discussion of nursery operations will include practices from propagation through growing to final product production and distribution. Garden center topics will include merchandising, garden center layout, product trends and specialty items. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

**HRT:206 ORNAMENTAL PLANTS - TREES AND VINES**  
This course is a study of ornamental landscape plants with an emphasis on deciduous shrubs and evergreen shrubs and trees. Botanical characteristics of plants will be emphasized for identification purposes. Landscape use and plant culture will also be discussed. Additional lab hours required. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

**HRT:207 ORNAMENTAL PLANTS - SHRUBS AND EVERGREENS**  
This course is a study of ornamental landscape plants with an emphasis on deciduous shrubs and evergreen shrubs and trees. Botanical characteristics of plants will be emphasized for identification purposes. Landscape use and plant culture will also be discussed. Additional lab hours required. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

**HRT:214 GROUNDS MANAGEMENT**  
This course is designed to provide students the skills necessary to manage and maintain the varied aspects of landscapes in residential and commercial settings. Specific topics will include planting techniques, soil preparation, pruning, fertilizing, water and irrigation management, and other related subjects. Additional lab hours required. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

**HRT:217 LANDSCAPE DESIGN II**  
This course is a continuation of HRT:104. Emphasis will be on applying the principles of art and design in developing landscape plans. Plant selection and use will be emphasized. CAD training will continue. Landscape construction plan details will be introduced. Prerequisite: HRT:104 and Reading Proficiency.

**HRT:218 LANDSCAPE DESIGN III**  
This course is a continuation of Landscape Design II with emphasis on the application of the principles of art and design in developing landscape plans. This class will detail conceptual and planting design and emphasize construction plans. CAD training will continue. Additional lab hours required. Prerequisite: HRT:217 and Reading Proficiency.
HRT:220 LANDSCAPE IRRIGATION 3
This course will provide an overview of the components, management, design and use of irrigation systems used in various landscape situations. Specific applications for turf and garden irrigation will be addressed. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

HRT:227 PLANT PEST MANAGEMENT 4
This course is a study of the insect and disease pests that affect ornamental plants. Emphasis is on pest identification and treatment through knowledge of signs, symptoms and pest life cycles. Preparation for the Missouri Pesticide Applicator License is also included. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

HRT:230 ORNAMENTAL PLANTS: HERBACEOUS PERENNIALS 3
Students will study the uses of perennials in the landscape and the role of perennials in commercial and residential garden design. Plant identification including specific characteristics such as growth habit, foliage and flowers will be emphasized. Gardening and cultural practice will be discussed. Prerequisites: HRT:101 or BIO:124 and Reading Proficiency.

HRT:235 ANNUALS AND ORNAMENTAL GRASSES 3
Students will be introduced to the identification of annual landscape plants and their use in private, public and commercial gardens. Ornamental grasses, their identification, use and culture will also be covered. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

HRT:240 GOLF COURSE MANAGEMENT 3
This course will cover the varied aspects of management of private and public golf courses. Course content will include primary cultural practices of putting greens, tees, fairways, rough and bunkers as well as address routine course maintenance and operations. Topics in specialized golf course equipment will be presented. Prerequisite: HRT:201 and Reading Proficiency.

HRT:241 GREENHOUSE MANAGEMENT 3
Students will learn techniques for producing a variety of ornamental crops. Greenhouse structures, and greenhouse environmental factors and their effect on plant growth will also be studied. Wholesale production and retail marketing will be presented. Special attention will be paid to the St. Louis and Midwest markets. Additional lab hours required. Prerequisite: HRT:101 or BIO:124 and Reading Proficiency.

HRT:242 URBAN TREE MANAGEMENT 3
This course will introduce students to the management of urban forest greenspaces emphasizing the social value of urban trees, street and park tree inventories, tree ordinances and program administration. Tree selection, site evaluation, soil, planting, pruning and hazard tree evaluation will be included. Prerequisite: HRT:101 or BIO:124, and HRT:206 and Reading Proficiency.

HRT:245 SPECIAL APPLICATIONS IN LANDSCAPE DESIGN 3
Students will learn to design specialty gardens such as woody and herbaceous borders, small urban spaces, special access gardens, woodland gardens and public display gardens. Designs may be developed using CAD or traditional drafting methods. Course content will include construction techniques. Additional lab hours required. Prerequisites: HRT:206 and HRT:207 and HRT:230 and Reading Proficiency.

HOSPITALITY, RESTAURANT MANAGEMENT

HRM:119 GARDE MANGER 2
Instruction in Garde Manger work including sandwiches, vegetable carving, canapes, hors d’oeuvres, aspic, chaud froid, ice carving and buffet presentation by lab instructor. Additional lab hours required. Prerequisite: HRM:145 and Reading Proficiency.

HRM:122 BAKING 3
This course is an introduction in fundamental baking including breads, cookies, and danish. The student will learn the principles and procedures of baking theory and practice of high quality crafted bakery items. Additional lab hours required. Prerequisite: HRM:145 and Reading Proficiency.

HRM:123 PASTRY 3
This course is an introduction to pastry with fundamentals in icings, creams, cakes, sugars, and decorating. The course will offer theory and practice of step-by-step procedures of makeup, assembly and production of quality bakery products. Additional lab hours required. Prerequisite: HRM:122 and Reading Proficiency.

HRM:128 NUTRITION 3
The study of food and its effect on the body. This course will provide the student with practical guidelines for preparing nutritious meals in a foodservice establishment. Prerequisite: Reading Proficiency.

HRM:129 GLOBAL CUISINE 2
This course explores various international cuisines. The student will gain not on the hands-on-training, but the history and development of foods in those regions. Also, the impact on American cuisine such as fusion cooking will be examined. Additional lab hours required. Prerequisites: HRM:119, HRM:122, HRM:145, and Reading Proficiency.

HRM:134 INTRODUCTION TO THE HOSPITALITY INDUSTRY 3
A survey course of the hospitality industry. Lectures from outstanding foodservice and hotel operators will help to give the student an overview of opportunities available to them upon graduation. Other aspects covered include the following: history of the industry, current and future trends. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

HRM:135 FOOD PREPARATION THEORY 3
The student will gain familiarity with tools, equipment, kitchen organization, recipe conversions, and professionalism. The student will receive theory in the preparations of stocks, soups, sauces, classical vegetable cuts, and basic cooking principles for meat, poultry, seafood, sandwiches, hors d’oeuvres, Garde Manger, beverages and an introduction to baking principles. Corequisites: HRM:116 and HRM:134. Prerequisites: ENG:101 and MTH:108, Reading Proficiency or concurrent enrollment in RDG:030.

HRM:140 FOOD PREPARATION PRACTICAL I 3
The student will master competencies for tools and equipment, kitchen organization, converting and following recipes, applying safety and sanitation, vegetable cuts (American Culinary Federation competition cuts), stocks, soups, sauces, basic cooking methods, and introduction to meat and poultry preparation. Additional lab hours required. Prerequisites: HRM:135 and HRM:116 and Reading Proficiency.

HRM:141 WORKPLACE LEARNING I 1
This experiential course provides the student opportunity to apply theory and skills learned in the classroom while supervised by both a professional in the field and a faculty member. Student is required to complete 50 hours of supervised work experience in a position related to their academic or career goal. Corequisite: Must be currently enrolled in at least one class which is related to student’s major or career interest or with permission of instructor. Prerequisite: HRM:134 and completion of at least twelve (12) college credits, minimum 2.6 GPA, and must be able to obtain a position related to student’s academic or career goals (student’s present job may qualify); or permission of instructor and Reading Proficiency.

HRM:145 FOOD PREPARATION PRACTICAL II 3
The student will master competencies in the basic cooking principles for meat, poultry, seafood, sandwiches, hors d’oeuvres, Garde Manger, beverages, and intermediate baking techniques. Additional lab hours required. Prerequisite: HRM:140 and Reading Proficiency.
HRM:201 PROBLEMS OF HOSPITALITY MANAGEMENT 3
A survey of the personnel and general management concerns of those at the mid-management level of the hospitality industry. Students will learn to make judgments and decisions through the use of management theories. Basic fundamentals and principles of management will be readily and easily applied to the hotel, restaurant and institutional field. Prerequisite: Reading Proficiency.

HRM:202 HOSPITALITY LAW 3
A course structured to meet the student’s needs concerning hospitality law, current state and federal employment and wage status, and tax provisions of all levels of government; credit philosophy and procedures; a survey of insurance needs and selection of most advantageous coverage; fundamentals of union organization, including contracts and bargaining; as well as general principles of business organization and organizational structure. Prerequisite: Reading Proficiency.

HRM:205 OPERATIONAL COST CONTROL 3
Methods of audit against established operational standard costs are developed and use of these methods to determine daily operational levels and break-even points are taught. Food, bar and labor cost control are included. Prerequisite: HRM:123 and Reading Proficiency.

HRM:209 HOSPITALITY SALES AND MARKETING 3
This course will be structured into three sections: Salesmanship, Advertising, and Marketing. All aspects of the course will specifically focus on the Hospitality and Tourism career fields. Salesmanship section will develop specific steps of the selling process from prospecting to closing. Effective and efficient marketing strategies and marketing activities are emphasized as well as the illustration of what advertising is and how advertising is used to achieve market penetration. A survey of the advertising process, advertising, agencies, media, and consumer is shown. Prerequisite: Reading Proficiency.

HRM:210 GUEST SERVICES MANAGEMENT 3
This course examines the organization and management of the hotel front office and guest service operations. It explores key front office functions and related systems and skills necessary to ensure guest satisfaction and efficient operations. Additional lab hours required. Prerequisite: HRM:134 and Reading Proficiency.

HRM:211 HOTEL FACILITIES MANAGEMENT 3
This course covers the fundamental duties and responsibilities of hotel facilities management. Topics include personnel, cleaning, purchasing, equipment, textiles, maintenance, safety, and basic systems for hotel facility management record keeping. Prerequisite: HRM:134 and Reading Proficiency.

HRM:212 BAR AND BEVERAGE MANAGEMENT 3
This is an introductory course in how to set up, operate, and manage a bar. Students will learn about wines, spirits, and beers. Additional material covers layout and design, equipment, marketing, and staffing. Prerequisite: Reading Proficiency.

HRM:214 HOSPITALITY HUMAN RESOURCES MANAGEMENT 3
This course examines concepts and applications of human resource management in the hospitality industry. Topics include recruitment, selection, training and evaluation. Emphasis will be placed on current management methods and productivity in the service environment. Prerequisite: HRM:134 and Reading Proficiency.

HRM:215 CHOCOLATES AND CONFECTION 3
This course introduces you to the principles involved in tempering chocolate, creating chocolate sculptures, forming simple centerpieces, and preparing chocolates and other confections with soft, hard, and liquid centers. You’ll learn to use both traditional and contemporary production methods in creating confections by hand. Additional lab hours required. Prerequisite: HRM:123 and Reading Proficiency.

HRM:216 CONFECTIONERY ART 3
This course will introduce you to classically applied mediums used in display work and decoration. You’ll learn to execute specific designs in pastillage, rolled fondant, gum paste, royal icing, as well as with poured, pulled, and blown sugar. Prerequisite: HRM:215 and Reading Proficiency.

HRM:217 NUTRITIONAL BAKING AND PASTRY 3
This course will introduce you to how to bake for health-conscious patrons as well as those with restricted diets. You’ll conduct nutritional analysis of breads and cakes as well as the study of vegan, diabetic, wheat-free, and other diets. You will learn to interpret nutritional labels as well as to prepare and present a wide range of products for someone with special dietary needs. Additional lab hours required. Prerequisites: HRM:123 and HRM:128 and Reading Proficiency.

HRM:219 SPECIALTY CAKES 3
This course will cover the origin of classical cakes, variations from classical method, and customer-driven deviations from traditional preparations. You’ll work with glazed, icod, molded, and cream-filled cakes as well as tarts, parfaits, bombe, and flans of various types. Additional lab hours required. Prerequisite: HRM:123 and Reading Proficiency.

HRM:220 DECORATED AND WEDDING CAKES 3
This course explores the ingredients, styling, and preparation of occasion cakes, seasonal cakes, and both modern and classically decorated wedding cakes. You will learn about pieces monstees, flush stack, and separated styles of wedding cakes, including three-dimensional decorations and centerpieces. Emphasis will be placed on applying design principles and skills such as piping, icing, and presentation. Additional lab hours required. Prerequisite: HRM:123 and Reading Proficiency.

HRM:221 WORKPLACE LEARNING II 1
This experiential course provides the student opportunity to apply theory and skills learned in the classroom while supervised by both a professional in the field and a faculty member. Student is required to complete 50 hours of supervised work experience in a position related to their academic or career goal. Corequisite: Must be currently enrolled in at least one class which is related to student’s major or career interest or with permission of the instructor. Prerequisite: HRM:141 and must be able to obtain a position related to student’s academic or career goals (student’s present job may qualify); or permission of instructor and Reading Proficiency.

HRM:222 WORKPLACE LEARNING III 1
This experiential course provides the student opportunity to apply theory and skills learned in the classroom while supervised by both a professional in the field and a faculty member. Student is required to complete 50 hours of supervised work experience in a position related to their academic or career goal. Corequisite: Must be currently enrolled in at least one class which is related to student’s major or career interest or with permission of the instructor. Prerequisite: HRM:221 and must be able to obtain a position related to student’s academic or career goals (student’s present job may qualify); or permission of instructor and Reading Proficiency.

HRM:225 NUTRITIONAL COOKING 2
This course is a study of nutritional cooking. We know that a healthy diet is based on eating a wide variety of high quality foods that provide balanced nutrition. This course is designed to acquaint foodservice professionals with the knowledge and skills to do so. Additional lab hours required. Prerequisites: HRM:126 and HRM:145 and Reading Proficiency.

HRM:230 AMERICAN REGIONAL CUISINE 2
The American Regional Cuisine course documents the history and culture that led to the development of American Regional Cuisine and identifies the vast and wide variety of foods indigenous to our country. The recipes, specialized skills, and procedures presented in this course are authentic and unique to each region. Additional lab hours required. Prerequisites: HRM:119 and HRM:122 and Reading Proficiency.

HRM:235 ICE CARVING 2
In this course, the student will learn the process of making Ice Sculptures. The student will learn the process of making ice, the tools used, and safety. The student will gain the experience of transforming a transparent, fragile, cold and wet block of ice into something “alive”. Additional lab hours required. Prerequisite: HRM:119 and Reading Proficiency.

HRM:241 WORKPLACE LEARNING III 1
This experiential course provides the student opportunity to apply theory and skills learned in the classroom while supervised by both a professional in the field and a faculty member. Student is required to complete 50 hours of supervised work experience in a position related to their academic or career goal. Corequisite: Must be currently enrolled in at least one class which is related to student’s major or career interest or with permission of the instructor. Prerequisite: HRM:221 and must be able to obtain a position related to student’s academic or career goals (student’s present job may qualify); or permission of instructor and Reading Proficiency.
HRM:245 SALON COMPETITION  
2
The student will expand skills that were taught in Garde Manger and Baking. This course will focus on competition techniques in accordance to the American Culinary Federation guidelines. The students will enter into at least one Culinary Salon Competition during the semester. Additional lab hours required. Prerequisites: HRM:119 and HRM:122 and Reading Proficiency.

HRM:250 FOODSERVICE DESIGN AND LAYOUT  
3
Survey of the basic essentials necessary for a successful layout and design of a foodservice establishment. Topics to be covered include: planning, design, selection, operation, maintenance, and layout of equipment used in various types of foodservice operations. Prerequisite: HRM:134 and Reading Proficiency.

HRM:260 RESTAURANT OPERATIONS  
6
The course will be operated in nature by requiring the student to use both technical knowledge and managerial ability to organize and complete a commercial simulation of a one meal operation. Theory application of menu development, physical set-up, and service will be discussion topics for lecture section. The application of theory will be used and tested in the lab sections. Additional lab hours required. Prerequisite: Department Chair Approval and Reading Proficiency.

HUMAN SERVICES

HMS:100 INTRODUCTION TO HUMAN SERVICES  
3
A survey course to introduce students to human and community needs and to the concepts of the helping profession. Students examine community resources, the relationship of agencies and bureaucracies to the total community, and the worker's role and responsibility in the helping profession. Prerequisite: Reading Proficiency.

HMS:101 HUMAN SERVICES: THEORIES AND SKILLS  
3
An overview of methodology used in the helping profession. Course will include an analysis of helping relationships, a study of interpersonal skills and practice techniques. A process-oriented approach to solving individual, family and community problems will be stressed. Prerequisite: Reading Proficiency.

HMS:102 HUMAN SERVICES: POLICY AND POLITICS  
3
An analysis of the political process involved in the formulation of social welfare policies from a historical point of view. Federal state and local programs will be examined in terms of skills and knowledge to affect program planning and delivery. Prerequisite: Reading Proficiency.

HMS:103 INTRODUCTION TO YOUTH SERVICES MANAGEMENT  
3
Course designed to meet the needs and issues of potentially and presently employed residential treatment workers. Will address philosophy of residential services, observation and recording skills, problem-solving, group skills and team approach. Prerequisite: Reading Proficiency.

HMS:110 INTRODUCTION TO GERONTOLOGY  
3
This course will explore the complex forces that shape an older person's experiences and circumstances. It will help students to assess the impact of economics, social forces, cultural value systems, and social institutions on the needs and characteristics of the elderly. Prerequisite: Reading Proficiency.

HMS:111 GROUP PRACTICE IN HUMAN SERVICES  
3
This course will focus on the basic issues of group work in Human Services settings. The theory behind group work practice, a study of the various types of groups, ethical issues, group leadership and the process of forming and working with groups will be covered. Prerequisite: HMS:100 recommended and Reading Proficiency.

HMS:112 INTERVIEWING IN THE HELPING RELATIONSHIP  
3
Provides students with an integrated approach to basic helping skills, utilizing theories, practice and case application. An introduction to interviewing skills for use in both professional and paraprofessional settings. Prerequisite: Reading Proficiency.

HMS:118 AGING AND DISABILITIES  
3
This course will focus on the aging process and the manifestations of aging in persons with congenital or acquired disabilities. Current habitation, rehabilitation programs and recent technologies will be explored. Discussions will also center on aging care providers and their concerns and needs. Prerequisite: Reading Proficiency.

HMS:119 INTRODUCTION TO THE FIELD OF DISABILITIES  
3
A course designed to provide an overview of issues in the field of disabilities. Discussions focus on the service delivery system and ways in which current legislation, inclusionary models, and other trends impact the lives of persons with disabilities and their care givers. Resources and careers in disabilities will be explored. Prerequisite: Reading Proficiency.

HMS:120 TEAM BUILDING: WORKING WITH CARE GIVERS  
3
Focus is on communication, cooperation, and collaboration with care givers of persons with disabilities. Presented will be choices, decision-making, support systems, which aid persons with disabilities and their caregivers with full inclusion into society. Prerequisite: Reading Proficiency.

HMS:121 WORKING WITH CHALLENGING BEHAVIORS  
3
This course provides students with the learning and application of intervention skills to assist individuals with disabilities to achieve their full potential. Focus is on providing support in community settings to persons with disabilities whose behaviors pose challenges. Prerequisite: Reading Proficiency.

HMS:122 HEALTH ISSUES AND PERSONS WITH DISABILITIES  
3
Introduction to the basic principles of the health, etiology, and prognosis of specific disabilities. First aid, CPR, medicine administration and other emergency concerns will be explored. Experiences focusing on personal care assistance, positioning, transferring, feeding, etc. for disabled will be learned. Prerequisite: Reading Proficiency.

HMS:123 INCLUSION IN THE COMMUNITY  
3
Designed to help care givers and/or paraprofessionals prepare individuals with disabilities for maximum empowerment and self-advocacy in their respective communities. Introduction to and discussion of alternative living situations and supports needed for inclusion. Staff career competencies explored. Prerequisite: Reading Proficiency.

HMS:201 HUMAN SERVICES PRACTICUM I  
3
A field work experience in a social, educational, law enforcement (corrections) or other community service organization. The student will be supervised by a practicum site professional and by a college faculty member. Ten or more hours of work experience each week. Concurrent enrollment in HMS:203 required. Prerequisites: HMS:100 and HMS:101 with grades of “C” or better and Reading Proficiency.

HMS:202 HUMAN SERVICES PRACTICUM II  
3
Continuation of HMS:201. Depending on the student and his or her objectives, Human Services Practicum II may be in the same organization or in a different one. Ten or more hours of work experience each week. Concurrent enrollment in HMS:204. Prerequisites: HMS:201 and HMS:203 with grades of “C” or better and Reading Proficiency.

HMS:203 HUMAN SERVICES PRACTICUM SEMINAR I  
3
Discussion and analysis in small groups of the human services practicum experience. There will be special learning objectives related to the kind of work the student will do in an organization after completion of the program. Concurrent enrollment in HMS:201 required. Prerequisites: HMS:100 and HMS:101 with grades of “C” or better and Reading Proficiency.

HMS:204 HUMAN SERVICES PRACTICUM SEMINAR II  
3
Continuation of HMS:203 with different learning objectives. These objectives will be related to the work the student will do after completion of the program. Current enrollment in HMS:202 is required. Prerequisites: HMS:201 and HMS:203 with grades of “C” or better and Reading Proficiency.

HMS:205 CRISIS INTERVENTION  
3
Course designed as a beginning training unit for people who anticipate or are presently working with individuals in crisis situations such as suicide, rape, spousal abuse, death and drugs. Will focus on theory and practical application of crisis intervention techniques. Prerequisite: Reading Proficiency.

HMS:291 CO-OP WORK EXPERIENCE I: HUMAN SERVICES  
3
A cooperative education work experience consists of a work assignment with an employer or agency (minimum of 15 hours per week), which allows students to apply skills learned in the classroom. Students are also able to learn new skills and to explore career possibilities while supervised by the employer and by a faculty member. Prerequisite: Reading Proficiency.

HMS:292 CO-OP WORK EXPERIENCE II: HUMAN SERVICES  
3
Continuation of HMS:291. Prerequisite: Reading Proficiency.

HMS:293 CO-OP WORK EXPERIENCE III: HUMAN SERVICES  
3
Continuation of HMS:292. Prerequisite: Reading Proficiency.
HUMANITIES

HUM:101 HUMANITIES I 4
This course explores the development of Western culture from its beginnings to the early modern period. Its focus is on the basic attitudes, feelings and ideas expressed in art music, literature philosophy, and religion. A major objective of the course is to help students develop the ability to understand and enjoy diverse cultural styles. Prerequisite: Reading Proficiency.

HUM:102 HUMANITIES II 4
This course focuses on understanding the human meaning of the many different cultural styles in our modern Western world. The course will trace the development of classical and popular music, art, literature, and philosophy, and the growing impact of science on our beliefs and attitudes. The arts and ideas of the last 100 years will receive special attention, and recent developments such as rock music and jazz will be explored. Prerequisite: Reading Proficiency.

HUM:106 BLACK HUMANITIES 3
A study of neo African, African and African American philosophies as expressed nationally and internationally in literature, art and song. Prerequisite: Reading Proficiency.

HUM:109 ARTS AND IDEAS IN THE ANCIENT WORLD 3
This interdisciplinary humanities course will use the arts and literature to trace the development of belief systems from the earliest expressions found in prehistoric remains through the rise of the great civilizations of Egypt, Greece and Rome. Prerequisite: Reading Proficiency.

HUM:110 THE MIDDLE AGES AND THE RENAISSANCE 3
This interdisciplinary humanities course will explore the arts and ideas that infused and created the cultural periods known as the Middle Ages and the Renaissance in Western Europe. Prerequisite: Reading Proficiency.

HUM:112 CREATIVE THINKING 3
This interdisciplinary course helps students develop their capacities to observe clearly, to generate ideas and alternatives, to overcome blocks to recognize and solve problems, and to assess results. The skills taught apply to all arts and sciences, to business, and to personal interests. Prerequisite: Reading Proficiency.

HUM:113 INTRODUCTION TO IRISH STUDIES 3
Introduction to Irish Studies is an interdisciplinary survey of Irish history and culture from prehistoric times to the present, with special emphasis on the role of the arts in the struggle for independence and the outstanding achievements of Irish writers and poets. Prerequisite: Reading Proficiency.

HUM:114 EXPLORING THE ARTS 3
This course concentrates on appreciating, understanding, and interpreting the creative and performing arts: painting, sculpture, music, dance, theatre and film. The focus is on the arts in contemporary life, though some historical background is included. Prerequisite: Reading Proficiency.

HUM:115 LIFE AND DEATH DURING THE NAZI ERA 3
An interdisciplinary approach to the study of life in Nazi Germany. Literary, psychological and historical texts on such topics as education, racial prejudice and propaganda are read and interpreted in class. Supplementary slides and documentary films are used. Prerequisite: Reading Proficiency.

HUM:201 PSYCHOLOGY THROUGH LITERATURE 3
The primary goal of the course is the study of psychology through literature, studying a few primary psychological sources and a wide range of literature that has demonstrated a great depth of understanding of the human condition. Prerequisite: PSY:200 and Reading Proficiency.

HUM:204 FREUD, JUNG AND THE WORLD OF FICTION 3
The purpose of this course is to examine selected works of prose fiction as products of the literary imagination and as psychological case studies. Special attention will be paid to the contributions of Freud and Jung to depth psychology insofar as their theories can be applied to the short story and the novel. Prerequisite: Reading Proficiency.

HUM:205 UTOPIAN SOCIETIES AND IDEALS 3
This interdisciplinary course examines three kinds of utopian societies: utopias of nature, utopias which exalt technology, and utopias which take an ambiguous position between these extremes. Throughout the course we discuss such utopian ideals as human freedom versus control of human behavior, living close to a natural world versus living in a highly organized technology and the advantages of centralization versus decentralizing. Strinuous efforts are made to see interrelationships between ideas of a political scientist, psychologist and a philosopher as applied to utopias. Each student will write his/her own utopia as a final project. Prerequisite: Reading Proficiency.

HUM:207 MISSOURI FOLKLORE 3
Students will learn the value and role of traditions in defining culture. Traditions describe a community's standards for organizing daily life, fulfilling social roles, making and doing things, celebrating, and even talking. We draw examples from students' families as well as from local and regional cultures. To facilitate this Missouri focus, we research a different theme each year. In researching and writing collaboratively, students learn fieldwork basics and produce an article intended for publication. Prerequisite: Reading Proficiency.

HUM:208 LIBERAL ARTS SEMINAR: THEMES IN THE LIBERAL ARTS 3
The seminar will draw together the main themes of a liberal arts education: the consideration of the impact of science, technology and the humanities on societies over time, values and ethics appropriate to a new age, the future consequences of present policies, the enjoyment and importance of both the arts and the sciences. The theme may change semester by semester. Prerequisite: 32 hours or consent of Liberal Arts Coordinator/Instructor and Reading Proficiency.

HUM:209 BLACKS AND THE WORLD OF CINEMA 3
This course examines the historical and social evolution of blacks in the film industry. It traces the impact of African-Americans as actors, technicians, directors, producers, and audience of short and feature length films. Prerequisite: ENG:101 and Reading Proficiency.

HUM:210 VIETNAM: FACT, FICTION, FILM 3
An interdisciplinary investigation of America's longest and most divisive foreign war as it has been portrayed in video and print media. Course materials include personal accounts, historical and cultural studies, poems, short fiction, documentaries, and feature-length films. Prerequisite: Reading Proficiency.

HUM:220 HONORS COLLOQUIUM 3
This interdisciplinary, team-taught course is designed as a capstone experience for students in their last semester of honors study. The course topic, which changes periodically, will be examined from various perspectives using the theories and methodologies of both the humanities and the sciences. Students will develop a research project related to their major, program, or field of interest. Prerequisite: ENG:105 or ENG:102 and Reading Proficiency.

INFORMATION REPORTING TECHNOLOGY

IRT:101 PRINCIPLES OF JUDICIAL REPORTING I 3
This course introduces the student to the role of the reporter in trials, depositions, and administrative hearings. All phases of format and design are taught as it pertains to the production of trials, depositions, and administrative hearings. The student will receive instruction in reference materials, related jobs, NCRA Code of Professional Conduct, and basic proofreading techniques. Prerequisite: IRT:122 and Reading Proficiency.

IRT:121 MACHINE SHORTHAND I 3
This course introduces the student to the basic conflict-free theory for writing on the stenotype machine. The student will develop the ability to write simple words and sentences. Additional lab hours required. Prerequisite: IS:122 or 30 wpm typing and Reading Proficiency.

IRT:122 MACHINE SHORTHAND II 3
This course completes the introduction of the basic conflict-free theory for writing on the stenotype machine. The student will continue to develop their ability to write as question and answer dictation is used to build speed to 50 wpm. Additional lab hours required. Prerequisite: Reading Proficiency.
IRT:123  MACHINE SHORTHAND III  3
This course covers speedbuilding of literary, testimony, and jury charge material with emphasis on accurate transcription. The student will build speed to 90 wpm on testimony, 70 wpm on jury charge and 50 wpm on literary. Additional lab hours required. Prerequisite: IRT:122 and Reading Proficiency.

IRT:124  MACHINE SHORTHAND IV  3
This course continues to cover speedbuilding of literary, testimony, and jury charge material with emphasis on accurate transcription. The student will build speed to 120 wpm on testimony, 110 wpm on jury charge, and 90 wpm on literary. Additional lab hours required. Prerequisite: IRT:123 and Reading Proficiency.

IRT:125  MACHINE SHORTHAND V  3
This course continues to cover speedbuilding of literary, testimony, and jury charge material with emphasis on accurate transcription. The student will build speed to 140 wpm on testimony, 130 wpm on jury charge, and 110 wpm on literary. Additional lab hours required. Prerequisite: IRT:124 and Reading Proficiency.

IRT:126  MACHINE SHORTHAND VI  3
This course covers speedbuilding of literary, jury charge, and two-voice testimony with emphasis on accurate transcription. The student will build speed to 170 wpm on testimony, 150 wpm on jury charge, and 130 wpm on literary. Additional lab hours required. Prerequisite: IRT:125 and Reading Proficiency.

IRT:127  MACHINE SHORTHAND VII  3
This course covers speedbuilding of literary, jury charge, medical and technical testimony, and two-voice and trial testimony with emphasis on accurate transcription. The student will build speed to 200 wpm on testimony, 170 wpm on jury charge, and 150 wpm on literary. Additional lab hours required. Prerequisite: IRT:126 and Reading Proficiency.

IRT:128  MACHINE SHORTHAND VIII  3
This course covers speedbuilding of literary, jury charge, medical and technical testimony, and two-voice and trial testimony with emphasis on accurate transcription. The student will build speed to the graduation requirements of 225 wpm on testimony, 200 wpm on jury charge, and 180 wpm on literary. Additional lab hours required. Prerequisite: IRT:127 and Reading Proficiency.

IRT:138  INTRODUCTION TO COMPUTER-AIDED TRANSCRIPTION  2
This course introduces the student to computer terminology and gives instruction to the operation of a computer-aided transcription system. The student will receive instruction in the computer hardware data input device, system support, related software packages, application of realtime writing for the court, depositions, classroom, seminars and broadcast as well as how to produce a transcript and maintain a dictionary. Prerequisites: IRT:122 and IS:123 and Reading Proficiency.

IRT:140  LEGAL TERMINOLOGY  3
This course will teach the student the meaning of legal and Latin terms. It will also cover instruction on civil and criminal law, the judicial system (including discovery, trial, and appellate processes), the legislative process, hearings, and arbitrations, research and citations, and the notary public law. Prerequisite: Reading Proficiency.

IRT:142  EDITING OF LEGAL DOCUMENTS  3
This course covers the basic rules of English grammar, punctuation, spelling, numbers, capitalization, vocabulary development, proofreading of the spoken word, and the transcription of legal documents. Prerequisites: ENG:101 and IRT:122 and Reading Proficiency.

IRT:143  INTRODUCTION TO CAPTIONING  3
This course teaches the student to write spoken words, with punctuation, by means of realtime translation, conflict-free writing system to provide instantaneous translation that will be used for broadcast captioning for the television. Prerequisite: IRT:128 and Reading Proficiency.

IRT:146  REALTIME APPLICATIONS FOR CART/CAPTIONING  3
This course will introduce the student to realtime translation and its application in CART and the captioning environment. Prerequisite: IRT:138 and Reading Proficiency.

IRT:150  LITERARY I  3
This course covers speedbuilding of literary dictation at speeds of 100 and 120 words per minute. Instruction will include writing the spoken word with punctuation by means of an NCRA Task Force approved Phase I and Phase II realtime translation theory to provide instantaneous, realtime translation, with special emphasis on dictionary building/management. Prerequisite: IRT:124 and Reading Proficiency.

IRT:156  JUDICIAL REALTIME APPLICATIONS  3
This course will introduce the student to realtime translation and its applications in court, depositions, hearings, and classrooms. The student will learn about videotaping in depositions for trial purposes, and litigation support. The student will learn about the different software systems that are available. Prerequisite: IRT:138 and Reading Proficiency.

IRT:166  JUDICIAL REPORTING INTERNSHIP  1
This course introduces the student to judicial reporting in the courtroom and freestyle through the supervision of reporters and faculty. The actual internship will commence when the student has met the prerequisites for this course. The student shall complete at least 40 verified hours of actual writing time during internship. Prerequisites: IRT:127 or passing one 200 wpm testimony material test and Reading Proficiency.

IRT:167  COLLOQUY  2
This course covers the multi-voice identification of speakers in literary and testimony material, with emphasis on accurate identification of speakers. The student will build on speaker identification from two-voice identification to three-voice, four-voice, five-voice, six-voice, seven-voice, and eight-voice identification, and more. Prerequisite: IRT:125 and Reading Proficiency.

IRT:168  CART/CAPTIONING INTERNSHIP  1
The objective of the CART/Captioning internship is to spend time applying learned skills and knowledge to real world and simulated applications in the workplace. Prerequisite: IRT:250 and Reading Proficiency.

IRT:201  PRINCIPLES OF JUDICIAL REPORTING II  2
This course covers advanced phases of formatting, design, and creating including pages to be inserted in trial, deposition, and administrative hearings. The student will receive advanced instruction on developing and using parenthetical phrases, punctuating the spoken word while using computer-aided transcription, and proofreading techniques. Prerequisites: IRT:101 and IRT:126 and Reading Proficiency.

IRT:202  BROADCAST CAPTIONING I  3
This course is designed to teach students the basics of broadcast captioning. Students will learn about dictionary management, researching for a show, captioning style and format, evaluating their writing, and the basic formats for writing news, weather, sports, and other broadcasts. Additional lab hours required. Prerequisite: IRT:128 or IRT:251 and Reading Proficiency.

IRT:203  BROADCAST CAPTIONING II  3
This course is designed to teach students the basics of broadcast captioning for all sports captioning. Students will learn about dictionary management, researching for a show, captioning style and format, evaluating their writing, and all the formats for writing all the sports shows. Additional lab hours required. Prerequisite: IRT:202 and Reading Proficiency.

IRT:250  LITERARY II  3
This course offers speedbuilding of literary dictation at speeds of 140 and 160 words per minute. Instruction will include writing the spoken word with punctuation by means of an NCRA Task Force approved Phase I and Phase II realtime translation theory to provide instantaneous, realtime translation, with special emphasis on dictionary building/management. Prerequisite: IRT:150 and Reading Proficiency.
ST. LOUIS COMMUNITY COLLEGE

INFORMATION SYSTEMS

IS:101 KEYBOARDING 1
This course is designed for the beginning student to develop touch control of the keyboard, to use proper techniques, to build skill to a minimum of 25 words per minute for one minute. Emphasis is on learning the alphabetic, numeric, and symbol keys and on building basic skill. Pass/Fail grading. Additional hours may be required.

IS:102 KEYBOARDING AND FORMATTING 3
This course is designed for the beginning student to develop touch control of the keyboard, to use proper techniques, to build basic skill to a minimum level of 35 words per minute for three minutes, and to apply basic formatting skills to the production of letters, memorandums, reports, and tables. Additional hours may be required.

IS:103 INFORMATION SYSTEMS FOR BUSINESS 3
A study of computers and information systems for business functions. Topics include computer technology and its impact on business organization, role of people in an information system environment, programming fundamentals, information systems and the computer in solving business management problems. Credit not allowed for this course if credit is given for IS:100. Prerequisite: Reading Proficiency.

IS:109 PROOFREADING AND EDITING SKILLS 1
This course is designed to assist the office professional control the quality of business communication through proofreading for accuracy in mechanics, format, and content as well as editing documents for correctness, conciseness, and clarity. Reference materials are used as a source in applying spelling, word division, grammar, capitalization, punctuation, number and word usage. Prerequisites: IS:102 or IS:101 or IS:164 and Reading Proficiency.

IS:110 PROGRAM DESIGN AND DEVELOPMENT 3
Study in problem solving methods used in computer based systems including systems flowcharting, decision tables, and specialized techniques of procedural computer programming and systems analysis. Prerequisite: IS:103 and Reading Proficiency.

IS:111 PROGRAMMING IN BASIC 3
Study of the use of the BASIC computer programming language to solve business oriented information systems problems. This course will cover introductory programming topics. Additional lab time may be required. Prerequisite: IS:110 or concurrent enrollment in IS:110 and Reading Proficiency.

IS:112 SOFTWARE AND HARDWARE CONCEPTS 3
A survey of technical topics related to computer systems with emphasis on the relationships between hardware architecture and systems software. Covers binary and hexadecimal arithmetic, data representation, and introduces machine code and symbolic language. Prerequisite: IS:103. Completion of MTH:140 recommended and Reading Proficiency.

IS:116 MICROCOMPUTER LITERACY 3
Introduction to microcomputer hardware, software, terminology and applications; includes hands-on use of popular application software. Additional lab time required. Prerequisite: Reading Proficiency.

IS:117 PASCAL PROGRAMMING 3
Course covers programming through multidimensional arrays, function and procedures with parameters, number systems, data representation, input and output of data, conditional flow of control and loops; program construction, testing and debugging programs; files and text processing. Programming examples and assignments in Pascal in a computer lab environment will be required. Prerequisite: MTH:140 and Reading Proficiency.

IS:118 MICROCOMPUTER APPLICATIONS-DATABASES 1
Studies the use of a relational data base system on the microcomputer with business and personal applications. Additional lab time may be required. Prerequisite: IS:123 or equivalent experience.

IS:119 MICROCOMPUTER APPLICATIONS-WORD PROCESSING 1
This class is an introduction to word processing using a current software program. Included in this course are the basic functions of creating, formatting, editing, and printing documents. Additional lab assignments will be required outside of class. Prerequisite: IS:123 or equivalent experience.

IS:120 MICROCOMPUTER APPLICATIONS-SPREADSHEETS 1
Studies the use of a spreadsheet program with business and personal applications. Additional lab time may be required. Prerequisite: IS:123 or equivalent experience and Reading Proficiency.

IS:123 INTRODUCTION TO WINDOWS 1
This course introduces basic concepts of the Windows environment beginning with the anatomy of a Window. The relationship between various PC operating systems, and the advantages and disadvantages of the Windows interface will be discussed. Students will learn how to create and manage files within the organizational structure of a Windows environment. The desktop, accessories, and navigational tools are among the topics to be covered.

IS:124 WINDOWS-ADVANCED TOPICS 1
This course provides students with an advanced approach to understanding and using a Windows operating system. Students will learn how to create and share files and folders and how to customize and maintain a workstation. Prerequisite: IS:132 and Reading Proficiency.

IS:125 EXCEL FOR WINDOWS 2
An introductory course in using Excel for Windows Worksheet for applications in accounting, budgeting, expense tracking, what-if analysis, charting, database development, queries and other applications. Prerequisite: IS:123 or equivalent experience.

IS:126 E-MAIL AND INFORMATION MANAGEMENT 1
This course examines, through practical application, the creation and management of information received through electronic mail and networks. Prerequisites: IS:123 and IS:102 and Reading Proficiency.

IS:127 INTRODUCTION TO THE AS/400 3
This course is designed to introduce the student to the AS/400. The course presents the architecture of the AS/400 system and the concepts of the AS/400 operating system. Other features which are covered include AS/400 menus, system displays, logical and physical files, and introduction to the Command Language. IS:103 or IS:116 or equivalent computer experience. Prerequisite: Reading Proficiency.

IS:129 HTML 1
This course covers the essentials of creating HTML documents such as those used on the World Wide Web. Students will create basic pages which include simple text, links, and in-line images. Prerequisite: IS:123 or experience using a graphical user interface and Reading Proficiency.

IS:130 HARDWARE AND SOFTWARE SUPPORT 3
This course offers the student through lecture, demonstrations, and hands-on exercises the in-depth knowledge and concepts necessary to perform microcomputer-based hardware and software support. Topics include hardware fundamentals and troubleshooting; operating system concepts, software installation and troubleshooting; documentation; and help desk issues. This class requires an average of three additional hours for research and reading assignments per week. Prerequisite: IS:103 and Reading Proficiency.

IS:131 ADVANCED HTML 2
This course is a continuation of IS:129, Hypertext Markup Language and is designed to introduce the student to the more advanced techniques of HTML. Use of tables; creation and use of frames; construction of forms; imagemaps; working with external media (sound and animation); incorporating counters, guestbooks, and search engines; use of “meta information” tags; and a discussion of HTML editors and converters will be presented. Prerequisite: IS:129 and IS:118 or IS:129 and IS:151 and Reading Proficiency.

IS:132 WINDOWS-INTERMEDIATE TOPICS 1
This course is a continuation of Introduction to Windows. Students will become more familiar with the Windows interface and will learn how to manage and manipulate programs, files, folders and objects. The accessories will be covered in depth. Prerequisite: IS:123 or equivalent experience.

IS:133 INTRODUCTION TO SQL 3
This course covers the concepts of SQL and relational databases. Students will learn how to create tables, enter and manipulate data, query data in tables and format the results using SQL commands. Advanced techniques to retrieve data writing SQL scripts and security issues will also be taught. Additional lab time may be required. Prerequisite: IS:225 and Reading Proficiency.
IS:135 COMMUNICATION AND DESIGN FOR THE WWW I 3
Students will learn to use the elements of graphic design to produce Web pages that effectively deliver art and information for business/organizational communications. Additional lab hours required. Prerequisite: ART:133, ART:131 or ART:227 and Reading Proficiency.

IS:136 INTERNET FUNDAMENTALS 1
This hands-on course allows students to discover the most utilized features of the Internet. Students learn to use E-mail, the World Wide Web, FTP, Gopher sites, List serves, News groups and Chat rooms. Searching for information and evaluating the results of these searches is emphasized. Students will be provided with a college E-mail account valid for the entire semester. Prerequisite: IS:123 or equivalent knowledge of Windows and Reading Proficiency.

IS:137 MICROCOMPUTER APPLICATIONS-PRESENTATION SOFTWARE 1
This course introduces the student to the concept of using a graphics presentation program to create effective, customized business presentations. Students will create on-screen slide shows, audience handouts, speaker's notes and outlines for selected case studies. Emphasis will be placed on mastering the word processing, drawing, color palette and graphing tools used in a Windows environment. A discussion of incorporating multimedia elements into on-screen presentations will be included. Additional lab time may be required. Prerequisite: IS:123 or equivalent experience.

IS:139 WEB PUBLISHING USING ADVANCED HTML 3
This course is a continuation of IS:129 and is designed to introduce the student to the more advanced techniques of HTML, Dynamic HTML and XML. Use of tables; creation and use of frames; construction of forms, imagemap; working with external media (sound and animation); incorporating counters, guestbooks, style sheets, and search engines; use of meta information tags; and a discussion of HTML editors will be presented. Students will learn to maintain their own web site. Prerequisites: IS:129 and IS:118 or IS:129 and IS:151 and Reading Proficiency.

IS:141 GRAPhICS FOR THE WEB 3
This course focuses on generating graphics that can be utilized within the context of the Internet. Topics will include use of graphics at the appropriate times, performance issues, button creation, animated graphics, and multimedia tools. Prerequisite: IS:129 and Reading Proficiency.

IS:150 MICROCOMPUTER APPLICATIONS-MICROSOFT PUBLISHER 1
This course instructs the student with no prior design experience in developing professional quality publications using Microsoft Publisher. Topics include designing and producing documents which combine text, graphics, illustrations, and photographs. Students will employ desktop publishing tools to produce high-quality color publications such as newsletters, flyers, logos, signs and forms. Laboratory assignments will be required outside of class. Additional hours required. Prerequisite: IS:123 and Reading Proficiency.

IS:151 MICROCOMPUTER APPLICATIONS IN BUSINESS 4
Survey of frequently used programs for the business environment. No programming knowledge is required. Software packages from these categories will be studied: operating system, electronic spreadsheet, database management, word processing, and presentation software. Additional lab time may be required. Prerequisite: IS:123 or equivalent experience.

IS:155 OFFICE TECHNOLOGY 2
This course examines electronic equipment utilized to load specialized software, to enter, retrieve, and update data on a PDA (Personal Digital Assistant), to scan, fax, and present data on a large screen, and to conduct videoconferencing and teleconferencing sessions. Prerequisites: IS:151 or IS:118 and IS:119 and IS:125 and IS:137 or IS:118 and IS:119 and IS:120 and IS:137. Reading Proficiency.

IS:156 MICROCOMPUTER APPLICATIONS-INTERMEDIATE DATABASES 1
Continuing on the building blocks of IS:118 the student will learn about action queries, inner/outer joins, mail merge, importing and exporting specifications, queries that "prompt" for criteria, and additional formatting techniques for reports. Macros will also be introduced. Prerequisites: IS:118 or IS:151 and Reading Proficiency

IS:157 MICROCOMPUTER APPLICATIONS-INTERMEDIATE WORD PROCESSING 1
This course is a continuation of IS:119. The students will merge documents, create and sort tables, insert images, utilize drawing objects, use special formatting features, and prepare charts and web pages. In addition, students will create basic macros and integrate/import other applications into documents. Prerequisites: IS:119 or IS:151.

IS:158 MICROCOMPUTER APPLICATIONS-INTERMEDIATE SPREADSHEETS 1
This course is a continuation of IS:120. In it, students will utilize spreadsheet productivity features to create, modify, and format charts; add and format graphic objects to enhance worksheets and charts; sort and filter data; and include workbooks on web pages. Prerequisites: IS:120 or IS:151 and Reading Proficiency.

IS:161 MICROCOMPUTER APPLICATIONS-ADVANCED WORD PROCESSING 1
This course is a continuation of IS:157. In it additional emphasis will be placed on advanced word processing features. Students will create advanced macros, style sheets, outlines, master documents, fill-in orders, table of contents, and shared documents. Prerequisite: IS:157 and Reading Proficiency.

IS:164 VOICE RECOGNITION TECHNOLOGY 1
This course is an introduction to Voice Recognition Technology, which is a program that trains the computer to recognize voice input as an alternative to typing. Voice Technology is an important tool to assist companies and institutions in meeting ADA requirements. The student will learn how to use voice commands to create, edit and print documents. Time saving macros and templates will be created. Stored documents will be retrieved and edited by voice. Additional lab time will be required. Prerequisites: IS:119 or IS:151 and Reading Proficiency.

IS:165 MICROCOMPUTER APPLICATIONS-MICROSOFT PROJECT 1
This course introduces students to the Microsoft Project software application. Microsoft Project allows students, professionals, volunteers, or an individual managing or working on a project to organize all the details of a project into one central repository. Students learn to easily plan, communicate, track, and close projects. Classes consist of lectures, demonstrations, and hands-on case studies. Additional hours required. Prerequisite: Reading Proficiency.

IS:200 ELECTRONIC RECORDS MANAGEMENT 2
This course is designed to familiarize students with records management procedures from creation through processing, maintenance, retention, retrieval, protection, and disposition. Electronic and manual filing rules are covered. Alphabetical, numeric, subject, and geographic filing methods are emphasized. Topics include database management. Prerequisites: IS:118 or IS:151 and Reading Proficiency.

IS:202 INFORMATION SYSTEMS FIELD WORK 3
A course to provide the student with practical experience in data processing. Assignments will be made at selected local data processing installations. Evaluation of the student's performance will be a cooperative effort of the local installation management and the instructional staff. Prerequisite: 15 hours of Information Systems courses and Reading Proficiency.

IS:203 BUILDING SPEED AND ACCURACY 1
This course is designed for students to improve inputting skills (speed and accuracy) through timed copy analysis, goal setting and corrective drill practice. Prerequisite: IS:102 or AOS:101, or IS:164 or AOS:516, or 25 wpm and Reading Proficiency.

IS:204 BUILDING TEN-KYE Numeric SKILLS 1
This course teaches the fundamentals of operating the ten-key number pad using proper touch techniques with emphasis on speed and accuracy development. Prerequisites: IS:101 or IS:102 or IS:164 or 25 wpm and Reading Proficiency.
Prerequisites: IS:235 and IS:236 and Reading Proficiency.

This course will be used to expose students to a number of commercially available products. Server performance will be presented. Hands-on activities and demonstrations will be introduced. The theories behind network performance tuning will also be covered. Prerequisites: IS:231 and IS:232 and Reading Proficiency.

IS:209 DEVELOPMENT OF END-USER MICROCOMPUTER SYSTEMS

This course teaches integration techniques used to share information between Microsoft Word, Excel, and Access. Templates, workgroup features and other time-saving techniques are explored to enable students to work with greater efficiency. Case studies and independent projects provide practical experience in the development and implementation of business models. Prerequisites: IS:119, IS:125, IS:118 or IS:151. Reading Proficiency.

IS:210 OFFICE PROCEDURES

This is an advanced course that expands competencies in business communication, processing information via technology, and coordinating office information. Students will learn human relations skills and will be introduced to computer-based tools including Internet applications and groupware. Prerequisites: IS:102 or AOS:101, IS:109 or AOS:120, and IS:151 and Reading Proficiency.

IS:211 COBOL PROGRAMMING I

Study of COBOL (Common Business Oriented Language). Programs covering applications with sequential file techniques will be written by the student and compiled and executed on the computer. Additional lab time may be required. Prerequisite: IS:110 or concurrent enrollment in IS:110 and Reading Proficiency.

IS:212 COBOL PROGRAMMING II

Continuation of IS:211. Programs of increased complexity covering random file techniques, multiple input files and program optimization will be written, compiled and executed on the computer. Additional lab time may be required. Prerequisite: IS:211 and Reading Proficiency.

IS:214 SPREADSHEET MACROS AND ADVANCED TOPICS

Students will study more complex functions of spreadsheets including table lookups, graphics, data base functions, and macros. Prerequisites: IS:226 and IS:120 or IS:125 and Reading Proficiency.

IS:215 INTRODUCTION TO LOCAL AREA NETWORKS

This course presents concepts of local area networking including terminology, architectures, topologies, standards and protocols, cables, and operating systems. Criteria for selecting, organizing and maintaining a LAN will be introduced. Planning a network installation, connecting physical components, and configuring basic network features will also be presented. Students will master course objectives through a combination of lectures, demonstrations, case studies and/or hands-on exercises. Prerequisites: IS:103 and IS:130 (may be a corequisite) and Reading Proficiency.

IS:216 NETWORK PERFORMANCE MONITORING

This course introduces students to industry network management standards and to various mechanisms for implementing a standards-based network management system. Configuration and performance implications of network interconnection devices will be introduced. The theories behind network performance tuning, problem identification and resolution, and methods for analyzing link and server performance will be presented. Hands-on activities and demonstrations will be used to expose students to a number of commercially available products. Prerequisites: IS:235 and IS:236 and Reading Proficiency.

IS:217 NETWORK INTERNSHIP

A course to provide students with practical experience in computer network environment. Assignments will be selected from a variety of projects. Evaluation of students' performance will be a cooperative effort between the internship sponsor and a faculty member of the class. Total of 120 working hours required. Prerequisite: IS:235 and permission of instructor and Reading Proficiency.

IS:220 DATABASE MANAGEMENT

This course will cover the concepts, skills, methodology and database technologies necessary to design and implement a database management system. Topics include types of databases, data structures, relational modeling and designing techniques and tools. Additional lab time may be required. Prerequisite: IS:241 and Reading Proficiency.

IS:221 C PROGRAMMING LANGUAGE I

Study of the C programming language. Topics to be covered include logic structures, data structures, files, pointers, system and user defined functions, and input arrays. Programs will be written and executed on the computer. Additional lab time may be required. Prerequisite: IS:110, IS:111 or IS:117 or IS:211 or IS:245 and Reading Proficiency.

IS:227 UNIX

This course is an introduction to the UNIX operating system with special emphasis on the creation, organization, and maintenance of files. Students will be introduced to shell programming and to the standard UNIX utilities. System administration and script writing will also be presented. Students will be expected to create functional and efficient scripts. Prerequisites: IS:111 or IS:117 or IS:227 or comparable experience and Reading Proficiency.

IS:231 INTRODUCTION TO DATA COMMUNICATIONS

The goals, history and purposes of Data Communication will be explored. The components of a network, hardware, software, and connecting logic will be presented individually and then interrelated to provide an understanding of a communication system concept. Different types of networks and the technology that makes them function will be presented. Case studies will be employed to provide practical experience in the Data Communications area. Prerequisite: IS:103 and Reading Proficiency.

IS:232 INTRODUCTION TO TELECOMMUNICATIONS

History, regulation and technology as applied to the telecommunications industry will be studied to provide a foundation from which sound decisions relating to the selection of telecommunications equipment can be made. Methods of analyzing a site's needs regarding telecommunication hardware will be explored. In addition the student will be made aware of the various information and product resources available within the industry. This course is slanted toward the business management applications of telecommunications, not the engineering technical electronic aspects. Prerequisite: Reading Proficiency.

IS:233 COMPONENTS OF VOICE/DATA COMMUNICATIONS

This course will explore the basics of telecommunications equipment including instruments, PBXs, switching, transmission, and customer equipment and services. Telecommunications networks equipment also will be discussed, including coaxial cable, microwave satellite and fiber optics. Students also will review current vendor offerings and compare and contrast services. Prerequisites: IS:231 and IS:232 or department approval and Reading Proficiency.

IS:234 DATA/VOICE TRAFFIC ANALYSIS

This course will cover evaluating and management of a voice/data systems, identifying costs, establishing a corporate telecommunications policy, and selecting, implementing and controlling a telecommunication system. Principles and procedures of traffic engineering, the impact of competition and fine system tuning will also be covered. Prerequisite: IS:231 and IS:232 and Reading Proficiency.
IS:235 NETWORK DESIGN AND INSTALLATION 3
This course provides students with the knowledge and practical experience to
design and install a scalable computer-based network that provides end-user
connectivity to local and remote servers. The course emphasis is on the installa-
tion of network servers and network operating systems. LAN and WAN design
and interconnection issues will also be examined. Prerequisites: IS:215 and
IS:231 and Reading Proficiency.

IS:236 NETWORK ADMINISTRATION 3
This course provides students with the knowledge and practical experience to
administer local and enterprise-wide computer networks. Control of desktop sys-
tems, organization and maintenance of user accounts, multiprotocol client sup-
port and network security will be introduced. High speed internetworking tech-
nologies and protocols will also be presented. Prerequisites: IS:215 and IS:231
and Reading Proficiency.

IS:237 COMPUTER SYSTEM AND NETWORK SECURITY 3
This course presents a survey of computer system and network security tools and
mechanisms. The focus is on the terminology, technologies, and standards used
to implement modern security systems, including internet-related security.
Prerequisite: IS:231 and Reading Proficiency.

IS:238 WEB SERVER IMPLEMENTATION 3
Businesses are increasingly using the World Wide Web as a basis for customer
support, electronic marketing, and electronic commerce. This course prepares
students to implement the servers that are needed to support these specialized
applications. Requirements of both Internet and Intranet server implementation
will be examined. Hands-on activities will be performed on a variety of plat-
forms. Prerequisite: IS:235 and Reading Proficiency.

IS:239 ROUTER ADMINISTRATION 3
This course prepares students to configure routers with a variety of interfaces
and protocols. Specific topics include the Cisco Internetworking Operating
System (IOS) commands, routed protocols, routing protocols including RIP and
IGRP, and applicable components of the TCP/IP protocol suite. Prerequisites:
IS:215 and IS:231 and Reading Proficiency.

IS:241 SYSTEMS ANALYSIS AND DESIGN 3
This course will cover the concepts, skills, methodologies, techniques and per-
spectives essential to analyze and design information systems. Visual and
emerging development tools will be used to focus on object-oriented and visual
development of information systems. Additional lab time may be required.
Prerequisite: IS:103, IS:110 and a programming language is recommended and
Reading Proficiency.

IS:246 VISUAL BASIC PROGRAMMING 3
Visual Basic programming will be introduced and the use of objects, events,
properties, methods, and the concept of inheritance will be explained. Projects
will be completed using Visual Basic. Topics such as creating forms, executable
files, control structures, and linking to DLL's will be covered. Additional lab time
may be required. Prerequisite: IS:111 and Reading Proficiency.

IS:250 SCRIPTING FOR THE INTERNET WITH PERL 3
This course will introduce the student to script writing for the Internet via the
Common Gateway Interface (CGI) using the programming language Perl as the
scripting language. The basics of Perl will be presented, including language ele-
ments (variables, control flow, functions, built-in operators) as well as the con-
cepts of event driven programming and server-side processing of HTML forms.
Students will learn to create web-based forms and program the associated CGI
scripts to construct dynamic, interactive Websites. Prerequisite: IS:129 and
IS:227, (or other high-level programming language) and Reading Proficiency.

IS:251 INTRODUCTION TO JAVA 3
This course is an introduction to JAVA, a cross-platform, object-oriented pro-
gramming language that is used to produce "applets" to provide animation, live
updating and secure two-way interaction in World Wide Web pages. Students are
offered extensive hands-on experience with the JAVA language and its run-
time development environment. During the hands-on exercises, JAVA is used to
create an assortment of applets, integrate them into a dynamic interactive Web
site, and build architecture-neutral applications. Prerequisite: IS:111 or IS:117 or
IS:227 (or comparable programming experience and a basic familiarity with
a graphical user interface, the Internet and the World Wide Web) and Reading
Proficiency.

IS:252 ADVANCED JAVA 3
The class starts with an in-depth look at operators, assignments, modifiers, flow
control, object oriented programming, threads, layout managers, event handling,
files, and Java utility classes. Students will learn this by creating Java programs
that make extensive use of threads, layout managers, and event processing. An
introduction to Swing is also presented. This course follows the subject areas
presented on most industry Java certifications, and will help a student prepare
for such a certification. Prerequisite: IS:251 and Reading Proficiency.

IS:254 ADVANCED MICROCOMPUTER OPERATING SYSTEMS 3
This course presents advanced topics related to the selection, installation and
support of operating systems for individual personal computers and computer
workstations on a network. Highly technical material covering disk partitioning,
I/O interrupts, DLLs, peripheral drivers, registry editing and security techniques
will be presented. Students will master course objectives through a combination of
lectures, demonstrations, case studies, and/or hands-on exercises.
Prerequisites: IS:103 and IS:124 and Reading Proficiency.

IS:255 ADVANCED VISUAL BASIC PROGRAMMING 3
This course will build upon the basic fundamentals taught in IS:246 Visual Basic
Programming using relational databases for designing and building client/server
projects. Topics such as basic SQL will be used to access relational database
models. Database access controls, third party custom controls, and ODBC speci-
fication will be covered. Additional lab time may be required. Prerequisite: IS:246
and prior or concurrent enrollment in IS:261 and Reading Proficiency.

IS:256 C++ OBJECT-ORIENTED PROGRAMMING 3
Study of the C++ Object-Oriented Programming Language. Topics to be covered
include include classes, class objects, derived types, encapsulation, inheritance, abstrac-
tion, and the derived classes. Program will be written and executed on the com-
puter. Additional lab time may be required. Prerequisite: IS:227 and Reading
Proficiency.

IS:257 ADVANCED DATABASE DESIGN 3
This course is a continuation of the database design course. It will cover imple-
mentation concepts such as client server architectures, middleware, SQL func-
tionality, distributed databases and data warehousing concepts. A project will be
implemented in this course to allow students to apply database concepts.
Additional lab time may be required. Prerequisite: IS:225 and Reading
Proficiency.

IS:258 APPLIED INFORMATION SYSTEMS 3
This course is a continuation of the database design course. It will cover imple-
mentation concepts such as client server architectures, middleware, SQL func-
tionality, distributed databases and data warehousing concepts. A project will be
implemented in this course to allow students to apply database concepts.
Additional lab time may be required. Prerequisite: Minimum of 15 hours of IS
courses including IS:241 and a two semester sequence of a programming lan-
guage and Reading Proficiency.

IS:259 INTRODUCTION TO JAVASCRIPT 3
This course is an introduction to JavaScript, an object-oriented programming lan-
guage interpreted by most Web browsers; it serves as an extension to HTML.
JavaScript allows easy access to the browser's features and enables Web pages
to be interactive and intelligent. JavaScript works directly with HTML elements
in a Web page, and utilizes event handlers and various high-level pro-
gramming features to give HTML pages the power to process user actions.
Additional lab time may be required. Note: Either IS:131 or IS:139 would be
excellent preparation for the HTML knowledge component needed for success in
IS:259. Prerequisite: (IS:111 or IS:117 or IS:227) and (IS:131 or IS:139) or depart-
ment approval and Reading Proficiency.

IS:260 VISUAL C++ APPLICATION DEVELOPMENT 3
This course is an introduction to Windows programming using Visual C++ to pro-
gress Microsoft Foundation Classes (MFC) and the Windows API. Microsoft
Foundation Classes is a set of objects that allow C++ programmers to create
object-oriented Windows applications. During the hands-on exercises, Visual
C++ will be used to create an assortment of applications that use forms, graph-
ics, printing, documents and message based programming. The Visual C++ code
generation tools AppWizard and the ClassWizard will be used to generate a
framework from which complete applications can be composed. Additional lab
time may be required. Prerequisite: IS:256 and Reading Proficiency.
IS:261 OBJECT-ORIENTED PROGRAM DESIGN 3
This course focuses on programming design that develops an application’s data and the methods you need to manipulate that data. Topics covered will include defining a class, instantiating and using objects, using inheritance, and understanding polymorphism. Code examples will be presented as part of the class discussions. Benefits of object-oriented programming will also be discussed. A strong understanding of modular procedural programming concepts such as variables, modules, and passing values to modules is required as a starting point for this course. Prerequisites: IS:111 or IS:127 or IS:117 or IS:211 and Reading Proficiency.

IS:262 ADVANCED WEB DEVELOPMENT 3
This course focuses on hands-on exercises in order to help the student gain an in-depth knowledge of the concepts and tools needed to write professional, multi-tiered, client-server Web applications. The course will introduce standard based Web concepts such as Object Models. “Active Server” programming, and tools and techniques for connecting Web sites to “back-end” databases. One or more industry standard SQL engines will be used in project development along with scripting languages, programming interfaces, and “remote” data objects (such as ASP/ADO). Prerequisites: IS:209 or previous HTML/Web development experience and demonstrated proficiency using procedural programming languages preferably C/C++ or Java. Reading Proficiency.

IS:264 ADVANCED UNIX: SYSTEM ADMINISTRATION I 3
This course is designed to prepare students to perform basic UNIX Systems Administration tasks at the System Administrator I level. Students will learn how to perform System Administrator software, hardware, and network tasks and advanced shell programming techniques including job scheduling with cron. They will also learn about user, group, file, and directory security, physical and logical device configuration, and system backups and restores. Prerequisite: IS:229 and Reading Proficiency.

IS:266 UNIX SHELL PROGRAMMING 3
This class is for experienced UNIX users with programming experience who wish to learn about UNIX scripting in depth. The class covers Bourne (sh), Bourne again (bash), Korn (ksh) C shell (csh), and TC shell (tcsch) scripting and the scripting languages awk and sed. Students will write, debug, and run shell scripts using the UNIX operating system. Prerequisite: IS:229 and Reading Proficiency.

IS:270 ORACLE PL/SQL 3
This course covers the concepts of Oracle PL/SQL and developing databases applications. Students will learn how to master PL/SQL syntax and the structured programming language. Advanced techniques in table handling, cursors, triggers, procedures and functions will be taught. Additional lab time may be required. Prerequisite: IS:133 and Reading Proficiency.

IS:271 USER INTERFACE DESIGN 3
This course covers the development of GUI applications in Oracle. Students will use Developer/2000 tools such as Oracle Forms, Oracle Reports and Oracle Graphics to develop object-based, database applications. Practical solutions for typical business situations will be discussed, demonstrated and developed in a lab environment. Additional lab time may be required. Prerequisite: IS:225 or equivalent business experience and Reading Proficiency.

IS:272 ORACLE DATABASE ADMINISTRATION 3
This course covers the activities performed while administering an Oracle database. Students will be installing and customizing the database, perform backup and recovery procedures, apply database tuning techniques and implement database security methods. Students will be exposed to real world examples of the various tasks that a DBA performs on a daily basis. Additional lab time may be required. Prerequisite: IS:225 or equivalent business experience and Reading Proficiency.

IS:273 ORACLE DESIGN AND IMPLEMENTATION 3
This course covers the concepts, fundamental issues and techniques for the design and development of an Oracle database. Students will be exposed to all the phases and tasks of the design process, including business modeling, conceptual and physical modeling strategies in developing application systems in Oracle. Requirements of data warehouse design and implementation will be discussed along with design methods for distributed database and Web-based applications. Students will gain hands-on experience in Oracle designer tools. Prerequisite: IS:225 or equivalent business experience and Reading Proficiency.

IS:274 PROGRAMMING IN C# 3
Students will study the C# object-oriented programming language. Topics to be covered include classes, class object, derived types, encapsulation, inheritance, abstraction and derived classes. Programs will be written and executed on the computer. Outside lab hours are required. Prerequisites: IS:227 or IS:246 or IS:251. Reading Proficiency.

IS:291 CO-OP WORK EXPERIENCE I - INFORMATION SYSTEMS 3
A cooperative education work experience consists of a work assignment with an employer or agency (minimum of 15 hours per week), which allows students to apply skills learned in the classroom. Students are also able to learn new skills and to explore career possibilities while supervised by the employer and by a faculty member. Prerequisite: Reading Proficiency.

IS:292 CO-OP WORK EXPERIENCE II - INFORMATION SYSTEMS 3
Continuation of IS:291. Prerequisite: IS:291 and Reading Proficiency.

IS:293 CO-OP WORK EXPERIENCE III - INFORMATION SYSTEMS 3
Continuation of IS:292. Prerequisite: IS:292 and Reading Proficiency.

INFORMATION TECHNOLOGY

IT:101 CISCO NETWORKING ACADEMY I: NETWORKING BASICS 5
This is the first of four courses offered as preparation for the Cisco Certified Network Associate (CCNA) certification exam. The focus is on network terminology, communication protocols, local-area networks (LANs), wide-are networks (WANs), Open System Interconnection (OSI) model, cabling, Ethernet, internet protocol (IP) addressing, and network standards. Upon successful completion of this course, students will be able to perform tasks related to networking mathematics, IP addressing and subnetting, copper, optical, and wireless connections, and operation of 10/100/1000/10 G versions of Ethernet and Ethernet switching. Prerequisites: Reading Proficiency or Departmental Approval.

IT:201 CISCO NETWORKING ACADEMY II: ROUTERS/ROUTING BASICS 5
This is the second of four courses offered as preparation for the Cisco Certified Network Associate (CCNA) certification exam. The focus is on initial router configuration, Cisco IOS software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Students will develop the skills to configure a router, manage Cisco IOS software, configure RIP and IGRP routing protocols, and create and set ACLs to control user access. Prerequisites: IT:101 and Reading Proficiency.

IT:202 CISCO NETWORKING ACADEMY III: SWITCHING BASICS AND INTERMEDIATE ROUTING 5
This is the third of four courses offered as preparation for the Cisco Certified Network Associate (CCNA) certification exam. The focus is on IP variable length subnet masking (VLSM), routing protocols such as RIP v2, single-area OSPF and EIGRP, the command-line interface configuration of switches and routers, Ethernet switching, virtual LANs (VLANs), spanning tree protocol (STP), and VLAN trunking protocol (VTP). Students will be required to apply lessons from Cisco Networking Academy I and II to a network and explain how and why a particular strategy is used. Prerequisites: IT:201 and Reading Proficiency.

IT:203 CISCO NETWORKING ACADEMY IV: WAN TECHNOLOGIES 5
This is the last of four courses offered as preparation for the Cisco Certified Network Associate (CCNA) certification exam. The focus is on advanced IP addressing techniques, network address translation (NAT), port address translation (PAT), dynamic host configuration protocol (DHCP), WAN technology and terminology, PPP, ISDN, DDI, Frame Relay, and network management. Students are required to apply knowledge and skills taught in Cisco Networking Academy courses I, II, and III to a network. Prerequisites: IT:202 and Reading Proficiency.

IT:204 CISCO NETWORKING ACADEMY V: ADVANCED ROUTING 5
This course is offered as preparation for students seeking the Cisco Certified Network Professional (CCNP) certification. It 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 relates to implementation of RIP, EIGRP, OSPF, IS-IS, and BGP routing protocols. In addition, the course details the important techniques used for route filtering and route redistribution. This course will help students prepare for the Building Scalable Cisco Internetworks (BSCI) exam which applies toward the CCNP, CCIP, and CCDP certifications. Prerequisites: IT:203, or CCNA Certification, or Departmental Approval. Reading Proficiency.
IT:205  CISCO NETWORKING ACADEMY VI: IMPLEMENTING SECURE CONVERGED WIDE AREA NETWORKS (ISCW)  5
This course is offered as preparation for students seeking the Cisco Certified Network Professional (CCNP) certification. Students will acquire the knowledge and skills necessary to secure and expand the reach of an enterprise network to teleworkers and remote sites while focusing on securing remote access and VPN client configuration. Topics include the Cisco hierarchical network model as it pertains to the WAN, teleworker configuration and access, fram mode MPLS, site-to-site IPSec VPN, Cisco EZVPN, strategies used to mitigate network attacks, Cisco device hardening and IOS firewall features. This course will help students prepare for the Implementing Secure Converged Wide Area Networks (ISCW) exam, which applies toward the CCNP certification. Prerequisites: IT:203, or CCNA Certification, or Department Approval. Reading Proficiency.

IT:206  CISCO NETWORKING ACADEMY VII: MULTILAYER SWITCHING  5
This course is offered as preparation for students seeking the Cisco Certified Network Professional (CCNP) certification. It introduces students to the deployment of 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 stresses the design, implementation, operation, and troubleshooting of switched and routed environments. This course will help students prepare for the Building Cisco Multilayer Switched Networks (BCMSN) exam, which applies towards the CCNP and CCDP certifications. Prerequisites: IT:203, or CCNA Certification, or Department Approval. Reading Proficiency.

IT:207  CISCO NETWORKING ACADEMY VIII: OPTIMIZING CONVERGED CISCO NETWORKS  5
This course is offered as preparation for students seeking the Cisco Certified Network Professional (CCNP) certification. Students will acquire the knowledge and skills to optimize and provide effective QoS techniques for converged networks. Topics include implementing a VoDIP network, implementing QoS on converged networks, specific IP QoS mechanisms for implementing the DiffServ QoS model, AutoQoS, wireless security and basic wireless management. This course will help students prepare for the Optimizing Converged Cisco Networks (ONT) exam, which applies toward the CCNP certification. Prerequisites: IT:203, or CCNA Certification. Reading Proficiency.

IT:208  CISCO NETWORKING ACADEMY: NETWORK SECURITY I  5
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, security products and solutions, firewall and secure router design, installation, configuration, maintenance, AAA implementation using routers and firewalls, securing the network at layers 2 and 3 of the OSI model. This hands-on, lab-oriented course stresses documentation, design, and installation issues. Cisco Networking Academy: Network Security I and Cisco Networking Academy: Network Security II will help prepare students for the Cisco Firewall Specialist designation. Prerequisites: IT:203 , CCNA certification, or departmental approval.

IT:209  CISCO NETWORKING ACADEMY: NETWORK SECURITY II  5
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 Prevention (IPS) implementation using routers and firewalls, VPN implementation using routers and firewalls, PIX Security Appliance Contexts, Failover, and Management. The Cisco Networking Academy: Network Security I together with the Cisco Networking Academy: Network Security II course will prepare students for the Cisco Firewall Specialist designation. Prerequisites: IT:208, CCNA Certification. Reading Proficiency.
ITALIAN

ITL:103 ELEMENTARY ITALIAN I 4
A beginning course presenting the basic sentence structure and vocabulary necessary to participate in elementary Italian conversation and to begin reading short Italian passages. Prerequisite: ENG:030 and Reading Proficiency.

ITL:104 ELEMENTARY ITALIAN II 4
A continuation of ITL:103. Students complete basic elements of Italian grammar, increase their vocabulary and gain added facility in speaking and reading Italian. Prerequisite: ITL:103 and Reading Proficiency.

ITL:205 INTERMEDIATE ITALIAN I 4
A continuation of ITL:104. Emphasis is on speaking Italian. A review of grammar assists the student in perfecting basic skills. A variety of up-to-date literacy and cultural selections are read and form the basis for classroom discussions. Prerequisite: ITL:104 and Reading Proficiency.

ITL:206 INTERMEDIATE ITALIAN II 4
A continuation of ITL:205. Emphasis remains on the spoken language. A variety of literacy and cultural selections are read and discussed in class in Italian. Prerequisite: ITL:205 and Reading Proficiency.

JAPANESE

JPN:100 INTRODUCTION TO JAPANESE LANGUAGE 3
This course introduces students to the basics of the Japanese language with emphasis on oral communication using everyday conversation topics. The course also integrates discussion and exploration of various cultural topics into learning the language. Prerequisite: Reading Proficiency.

JPN:101 MODERN JAPANESE I 4
This course focuses on the construction and practice of fundamental vocabulary, basic sentence structures and social conventions necessary for simple interpersonal communication in Japanese. The emphasis is on the use of Japanese in everyday situations. Prerequisite: Reading Proficiency.

JPN:102 MODERN JAPANESE II 4
This course is a continuation of JPN:101. Students will further practice speaking and writing the language through the acquisition of new vocabulary and the learning of Japanese sentence structure. Students will also continue to learn cultural aspects necessary for effective interpersonal communication. Prerequisite: JPN:101 and Reading Proficiency.

LEGAL STUDIES

LGL:104 INTRODUCTION TO CIVIL TRIAL PROCEDURES 3
This course includes study of composition, location and jurisdiction of all courts, examination of all aspects of trial preparation and process, and some legal drafting and writing. Prerequisite: LGL:108 and Reading Proficiency.

LGL:106 COMPUTERS AND THE LAW 3
This course will help the Paralegal become familiar with the possible applications of the computers in law offices of different sizes and provide a general introduction to the varieties of hardware and software available and the creation of appropriate systems for a law office. Prerequisite: Reading Proficiency.

LGL:107 ALTERNATIVE DISPUTE RESOLUTION 1
Alternative dispute resolution is a method for using out-of-court alternative forums to resolve disputes. This course will examine the historical, statutory, and economic basis of ADR. Topics to be covered in both business and dissolution of marriage are: mediation, arbitration, mini trials, and summary jury trials. Prerequisite: LGL:108 and Reading Proficiency.

LGL:108 INTRODUCTION TO LAW FOR THE PARALEGAL 3
This course includes a general discourse on the training and purpose of Paralegals, examines the role of the law in modern society, the ethical and professional practice standards applicable to lawyers and paralegals, surveys the various fields of law and examines legal resource materials and the processes of legal research. Prerequisite: Reading Proficiency.

LGL:202 WILLS, TRUSTS AND PROBATE ADMINISTRATION 3
Study of the more common forms of wills and trusts and a survey of the fundamental principles of law applicable to each; a study of the organization and jurisdiction of a Missouri Probate Court; a detailed analysis of the administration of estates in Missouri Probate; a review of estate and inheritance taxes applicable to such estates. Prerequisite: LGL:108 and Reading Proficiency.

LGL:205 LAW OF REAL PROPERTY AND REAL ESTATE TRANSACTIONS 3
A study of the law of real property and in-depth survey of the more common types of real estate transaction and conveyances, such as deeds, contracts, leases, deeds of trust; drafting problems involving various of these instruments; and special research projects related to the subject matter; study of the system of recording and search of public documents. Prerequisite: LGL:108 and Reading Proficiency.

LGL:206 BUSINESS ORGANIZATION AND GOVERNMENT REGULATION 3
A study of the formation and operation of corporations, partnerships, business trusts and other business vehicles, including a survey of the fundamental principles of law applicable to each; special research projects related to the subject matter; a study of the impact and regulation of taxation and other forms of government regulation of business. Prerequisite: LGL:108 and Reading Proficiency.

LGL:211 TORTS 3
A study of the fundamental principles of the law of torts including special research assignments related to the subject matter, consideration of the techniques of investigation involved in the lawyer’s handling of tort claims; a study of the various forms of pleadings involved in commencing such claims in court actions. Prerequisite: LGL:108 and Reading Proficiency.

LGL:215 BANKRUPTCY, UNIFORM COMMERCIAL CODE, SALES AND CREDIT TRANSACTIONS 3
A study of the law of bankruptcy, sales, credit transactions, and a survey of the Uniform Commercial Code and its effect on the subject matter of this course. This course will include special drafting problems of the various legal documents and complying with the regulatory and statutory procedures. Prerequisites: BLW:101 and LGL:108 and Reading Proficiency.

LGL:216 ADVANCED CIVIL TRIAL PROCEDURES 3
This course is designed as an advanced course for those students who have completed Introduction to Civil Trial Procedures. The focus will be a detailed examination of court rules pertaining to discovery, intervention, interpleading in trial procedures and appellate procedures. Prerequisites: LGL:104 and LGL:108 and Reading Proficiency.

LGL:217 LEGAL RESEARCH 3
This course is designed as an introduction to the process of legal research, and an introduction to the connection between research and legal writing. The course involves several research projects to be completed both in the lab (Internet, CD-ROM and CAR) and in a law library. A moderate amount of legal writing will be integrated into the course assignments. This course is a prerequisite to LGL:218 Legal Writing. Both courses are required courses in the Paralegal Program. This course requires students to travel off campus to a local law library. Prerequisite: LGL:108 and Reading Proficiency.

LGL:218 LEGAL WRITING 3
This course is designed as a continuation of LGL:217 Legal Research and is intended to expand on principles involved in legal reasoning as it relates to legal analysis and the preparation of legal memoranda. Students will be responsible for completing several writing projects which involve a legal research component. This course requires students to travel off campus to a local law library. Prerequisite: ENG:101 or equivalent, LGL:108 and LGL:217 and Reading Proficiency.

LGL:219 PARALEGAL INTERNSHIP 3
Under the supervision of an attorney, the student will have the opportunity to participate in the daily operation of a law office, corporate legal department, or governmental law related office. Working as an intern for one hundred hours, the student will be exposed to all aspects of the management of a legal problem, including client contact, legal research, file preparation, drafting of legal documents, and all duties that might be performed by a paralegal in that situation. Prerequisite: Student must have completed nine credit hours in Paralegal courses and have the approval of the campus Program Coordinator and Reading Proficiency.
LGL:220 CRIMINAL LAW AND PROCEDURE FOR THE PARALEGAL 1
This course will cover the substantive elements of major crimes, the requisite intent and defenses. The criminal procedures will be discussed and the role of the paralegal in the criminal process analyzed. Prerequisite: LGL:108 and Reading Proficiency.

LGL:221 ADVANCED ONLINE-DATABASE LEGAL RESEARCH 1
Students will learn to use advanced query techniques using Westlaw and Lexis databases. Keyword, term search, and natural language searching will be taught. Assignment of complex legal problems will require students to understand and use the extensive library structures of these databases. Additional lab hours will be required. Prerequisites: LGL:108 and LGL:214 or LGL:217 and LGL:218 and Reading Proficiency.

LGL:222 LEGAL RESEARCH ON THE INTERNET 1
This course will demonstrate the use of the Internet as a legal research tool. Using various browsers and search engines, students will learn basic Internet maneuver skills. Students will learn the process of searching and retrieving information to build a file of relevant legal sites. Current legal issues on Internet use will be examined. Considerable time will be required on-line to meet the requirements of this class. Prerequisite: LGL:108 and Reading Proficiency.

LGL:223 EVIDENCE 1
This course is the study of the gathering and admissibility of various types of evidence. The theories of relevance, materiality, hearsay, and competency that apply to all evidence will be explored in detail. Prerequisite: LGL:108 and Reading Proficiency.

LGL:224 ENVIRONMENTAL LAW 1
This course will explore the issues of business and consumer generated pollution, hazardous, and toxic waste. The student will learn how the federal and state governments are trying to contain levels of pollution and to clean up hazardous waste sites and examine the major environmental protection laws applicable to businesses and individuals. Prerequisite: LGL:108 and Reading Proficiency.

LGL:225 ADMINISTRATIVE LAW 1
An examination of the nature and scope of Administrative Law. The authority of administrative agencies, Administrative Procedures Act, rules and rule making, administrative hearings, and the role of the paralegal will be examined in this course. Prerequisite: LGL:108 and Reading Proficiency.

LGL:226 LAW OFFICE ADMINISTRATION 1
A study of the function, management, and administration of the law office or legal department. It includes office environment, structures, personnel supervision, financial management, records management, and management theories. Prerequisite: LGL:108 and Reading Proficiency.

LGL:227 REMEDIES 1
This course will cover legal and equitable remedies in property, contract and tort litigation and settlement, measurement of damages, injunctive relief, and specific performance. Prerequisite: LGL:108 and BLW:101 and Reading Proficiency.

LGL:228 FAMILY LAW 3
The student will become familiar with stature and case law regarding the dissolution of marriage action, termination of parental rights, adoption law, court appointment of guardians and guardian ad litem. The student will develop skills in client interviewing and counseling; learn in detail the preparation of necessary forms and documentation to be filed in court; learn the discovery devices such as interrogatories and deposition and emphasize their utilization in family law matters. Prerequisite: LGL:108 and Reading Proficiency.

LGL:229 ADVANCED COMPUTER UTILIZATION 1
This course will extend the paralegal student’s computer knowledge to the new and advanced areas of computer utilization in law offices and corporate legal departments. Topics will include network based application software, database management, integration of word processing, spreadsheets and databases, and presentation software. Prerequisite: LGL:108 and LGL:108 and Reading Proficiency.

LGL:230 EMPLOYMENT LAW 3
The study of the employer and employee relationship and the laws governing the employment agreement. This course will examine the specific areas of employment discrimination, Worker’s Compensation, and regulation of union activity. Prerequisite: LGL:108 and Reading Proficiency.

LGL:231 CD-ROM LEGAL RESEARCH 1
This course will demonstrate the use of CD-ROMs as a legal research tool. Using CD-ROMs from West’s, Lawyer’s Cooperative Publishing and other legal publishers, students will learn the basic skills required for searching these large databases. Students will be expected to develop an organized research process that locates appropriate information relative to the assigned topic. Considerable time will be required in the campus computer labs to meet the requirements for this course. Prerequisite: LGL:108 and Reading Proficiency.

LGL:232 CONTRACTS 1
A study of the types and kinds of contracts and an in-depth analysis of the basic elements of contract law. The proper form and manner of entering into a lawful contract will be analyzed. Prerequisite: Reading Proficiency.

LGL:233 BANKRUPTCY 1
A study of the law of bankruptcy and the filing procedures. The elements of bankruptcy and completion of the debtor forms will be emphasis points. Prerequisites: LGL:108 or BLW:101 or LGL:232 and Reading Proficiency.

LGL:234 UNIFORM COMMERCIAL CODE (UCC) 1
A survey of the UCC which governs all commercial transactions involving the sale and lease of personal property, negotiable instruments, bank deposits and secured transactions. Prerequisites: LGL:108 or BLW:101 or LGL:232 and Reading Proficiency.

LIBRARY AND INFORMATION STUDIES

LIB:101 INTRODUCTION TO LIBRARY AND ONLINE RESEARCH 1
This course offers students instruction in using library resources, including the Internet, online databases, and the library catalog. Through a combination of hands-on practice and lectures, students will learn to locate, evaluate, and manage information efficiently and effectively. Prerequisite: Reading Proficiency.

MANAGEMENT

MGT:101 INTRODUCTION TO SUPERVISION 3
This course is designed to provide the student with the latest leadership skills to function as a supervisor in today's modern organizations. Special emphasis is placed on coaching, motivation, positive reinforcement, achieving high productivity and the latest court decisions and laws that affect management decisions. This course will give the student confidence and skills needed to succeed in today's workplace. Prerequisite: Reading Proficiency.

MGT:104 INTRODUCTION TO SUPERMARKET MANAGEMENT 3
The primary objectives of the course are to give the student a general survey of the supermarket industry and develop an understanding of the dimension and responsibilities of contemporary supermarket management. Emphasis will also be placed upon the development of skills and abilities to function effectively in a management position in a supermarket. Prerequisite: Reading Proficiency.

MGT:106 HUMAN RESOURCES MANAGEMENT 3
The emphasis is on the development of knowledge, skills, attitudes of managers, supervisors and employees in resolving human problems and in developing effective employee motivation and productivity in both union and nonunion settings. Topics include: sexual harassment, EEO, ethics, cultural diversity, grievance and conflict resolution, legal issues, compensation and benefits, turnover, employment and team building. Prerequisite: Reading Proficiency.

MGT:107 LABOR RELATIONS 3
This introductory course reviews current U.S. labor-management relationships and discusses the conditions, events and legislation which have brought them about. It explores the fundamentals of negotiating the labor agreement and its day-to-day administration. Prerequisite: Reading Proficiency.
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MARKETING

A general survey of the values, purposes and techniques of advertising in its many forms, including all of the major and minor media. The managerial viewpoint will be emphasized in the analysis. Prerequisite: Reading Proficiency.
MKT:215  MARKETING FINANCIAL SERVICES  2
This course is designed for the financial services employee interested in ways to develop new business and retain current customers. The marketing concept will be the core of the course, but emphasis will be placed on practical information rather than on marketing theory. Topics include advertising and promotion, marketing research, pricing of products, sales planning, alternative ways to deliver financial services, and public relations. Prerequisite: BUS:115 and Reading Proficiency.

MKT:216  NEW MEDIA IN BUSINESS AND MARKETING  3
An introductory course examining the use of technology in business transactions and how traditional business practices are evolving with the growth of networking technology. The course involves the extensive use of computers and Internet sources. Prerequisite: IS:103 and MKT:203 and Reading Proficiency.

MKT:217  EVALUATING NEW MEDIA APPLICATIONS IN MARKETING  1
An in-depth look at samples of electronic business and marketing programs, commercial web sites and identification of hardware and software used to create and support these types of business applications. Students prepare most hands-on computer assignments in hours other than class time. Prerequisite: MKT:216 and Reading Proficiency.

MKT:218  MARKETING WITH A WEB SITE  1
Design and develop a sample commercial web site. Survey of electronic applications, direct marketing and advertising used for development of commercial web sites. Discussion of security, copyright and financial management issues used in electronic commerce transactions. Students prepare most hands-on computer assignments in hours other than class time. Prerequisite: MKT:216 and Reading Proficiency.

MKT:219  E-COMMERCE: STRATEGIES  3
This course examines the strategic operating theories behind using electronic commerce, presentation, networking, and interactive technologies to gain a competitive advantage in the marketplace. Topics are contemporary in nature and include: the Internet, Electronic Data Interchange (EDI); rapid product prototyping; data-mining and warehousing; digital presentation/capture technologies; and customer service relationship management. Prerequisite: Reading Proficiency.

MKT:220  E-COMMERCE: METHODOLOGIES  3
Students will explore how businesses and organizations use electronic commerce, presentation, networking, and interactive technologies to differentiate themselves from their competitors and to enhance their marketing, public relations, advertising, and human resource efforts. Within this framework, the student will have an opportunity to develop a hands-on project, or to further study an area of his/her choice. Prerequisite: Reading Proficiency.

MASS COMMUNICATIONS

MCM:101  INTRODUCTION TO MASS COMMUNICATIONS  3
This general course examines the nature and influence of mass media in our society. Students will analyze the impact media has throughout the world. Topics include mass media foundations, media’s role in culture, ethics, influence on society, media methods, controls, gatekeeping, and world impact. Prerequisite: Reading Proficiency.

MCM:102  MEDIA LITERACY  3
This course focuses on approaches through which students can develop a sensitivity to media messages, as well as enhance their appreciation of media programming. This course devotes attention to the process and impact of media on the individual and society. The class will analyze applied media formats, including: journalism, advertising; and political communications. (Personal media, mass media, and telecommunication.) Prerequisite: Reading Proficiency.

MCM:110  JOURNALISM I: WRITING AND REPORTING  3
Contemporary newspaper writing and reporting techniques will be covered in this introductory course through discussions, readings, and practical exercises. The concepts of news coverage in the American press will be emphasized. Students are required to write news stories on a regular basis. Prerequisite: ENG:100 or ENG:101 or permission of instructor and Reading Proficiency.

MCM:111  JOURNALISM II: EDITING AND DESIGN  3
By studying the functions of the news editor and the copy editor, the student is exposed to the practical and theoretical techniques of editing and designing contemporary newspapers, magazines, and other print media. Students are required to write, rewrite, and edit copy on a regular basis. Prerequisites: ENG:100 or ENG:101 and MCM:110 or permission of the instructor and Reading Proficiency.

MCM:112  FEATURE WRITING  3
Students will be exposed to the professional and marketing possibilities of feature writing. They will learn the theories and techniques of writing newspaper and magazine features. Students are required to write on a regular basis. Prerequisite: ENG:100 or ENG:101 or permission of the instructor an Reading Proficiency.

MCM:113  APPLIED JOURNALISM  3
Students are given the opportunity to gain practical experience in journalistic concepts and techniques through work on available campus publications. Students are required to write and edit copy on a regular basis. Prerequisites: ENG:100 or ENG:101 and MCM:110 or permission of the instructor and Reading Proficiency.

MCM:114  PHOTOJOURNALISM  3
Students will study the professional techniques of photojournalists and history of news photography both for photographers and non-photographers. Prerequisite: ART:105 or permission of the instructor and Reading Proficiency.

MCM:115  ACTING FOR THE CAMERA  3
This course includes the following: (1) exploration of the aesthetics and principles of acting for the camera; (2) analysis of diverse acting styles and outstanding performances in film and television; and (3) acting exercises for the camera. Some acting exercises will be videotaped and edited for analysis. (Same course as HT:115). Prerequisite: Reading Proficiency.

MCM:120  INTRODUCTION TO BROADCASTING  3
This course examines the background and operation of the broadcasting industry, including history, regulations, social and economic settings and the organization of radio and television stations. New technologies will also be a focus of this course. Some hands-on experience might be included. Prerequisite: Reading Proficiency.

MCM:121  TELEVISION PRODUCTION  3
The course instructs the student in the effective and creative use of television equipment also providing students with practical experience in technical areas including lighting, graphics, and field production. Students will cooperate in producing projects such as a newscast, advertisement, interview, or investigative feature. Prerequisite: Reading Proficiency.

MCM:122  APPLIED BROADCASTING  3
This is a skills-content course in which students will develop skills in broadcasting principles and practice. It may include the campus radio and/or television facilities. Prerequisite: Reading Proficiency.

MCM:123  BROADCAST JOURNALISM  3
Students in this course study the principles and skills of radio and television journalism, including work in the news operations of the campus radio or television facilities. Prerequisite: ENG:100 or ENG:101 or permission of the instructor and Reading Proficiency.

MCM:124  RADIO PRODUCTION  3
The primary objectives of this course are to introduce students to basic professional concepts of radio broadcast theory and techniques and to provide students with hands-on experience. Some additional time in the lab or studio may be required. Prerequisite: Reading Proficiency.

MCM:125  SCRIPTWRITING FOR TV AND FILM  3
This course is designed to provide practical instruction in writing short scripts for TV and film for the beginning student and the student interested in the creative aspects of scriptwriting. Basic terminology and script formats will be presented as well as analysis of a variety of scripts. Prerequisite: ENG:100 or ENG:101 and Reading Proficiency.
MCM:126 VIDEO PRODUCTION - FIELD 3
Students will learn video skills in pre-production (concept development), production (camera shooting) and post-production (editing). On-location, single camera shooting will be emphasized. Class includes lectures, discussions, practical applications and evaluations. Prerequisite: Reading Proficiency.

MCM:127 VIDEO PRODUCTION - STUDIO 3
This course instructs the student in the effective and creative use of the television studio. It provides practical experience in nontechnical areas like scripting and program development and technical areas including lighting, audio, graphics and camera operation. Class includes lectures, discussions, practical applications and evaluations. Prerequisite: Reading Proficiency.

MCM:130 FILM APPRECIATION 3
Students study a variety of films: contemporary and classic, narrative and non-narrative, animated and live action, American and international, short and feature-length. Topics include: camera movement, composition, sound, editing, lighting, special effects, and social issues such as violence and stereotyping. Class includes lectures, discussions, written analysis, and in-class screenings. Prerequisite: Reading Proficiency.

MCM:131 HISTORY OF FILM 3
Students study film history from the magic lantern to contemporary films through technical, artistic, sociological, and economic factors in fiction and nonfiction, feature-length and short works. Topics include various styles and movements as well as issues such as violence and politics. Class includes lectures, discussion, writing, and in-class screenings. Prerequisite: Reading Proficiency.

MCM:132 MAJOR THEMES IN FILM 3
Each semester this course focuses on one film theme or type. Examples include Academy Award winning films, animation, comedy, musicals, and women in film. Classes include lectures, discussion, written analysis, and in-class screenings of films illustrating the semester's topic. This course may be retaken for credit with different topics. Prerequisite: Reading Proficiency.

MCM:133 FILM AND PEOPLE: ENJOYING FOREIGN FILM 3
Students study foreign films which illustrate the art of cinema and provide insight into the cultures they represent. Topics considered include daily life, politics, war and peace, love, and interpersonal conflict. Class includes lectures, discussion, written analysis, and in-class screenings. Prerequisite: Reading Proficiency.

MCM:134 FILMMAKING 3
Using super-8 technology, students plan, shoot, edit, and mix sound for short works. All equipment is provided, including cameras, projectors, and editing stations, both digital (Avid) and film. Students pay for their film and for processing. Class includes lectures, discussion, and screenings. Some time in the editing lab is required. Prerequisite: Reading Proficiency.

MCM:135 COMMUNICATION AND DESIGN FOR THE WWW I 3
Students will learn to use the elements of graphic design to produce Web pages that effectively deliver art and information for business/organizational communications. Additional lab hours required. Prerequisite: ART:133, ART:131 or ART:227 and Reading Proficiency.

MCM:136 INTRODUCTION TO MULTIMEDIA 2
Students will survey the current field of computer hosted multimedia with an emphasis on the use of multimedia corporate training, business presentations, classroom instruction and supplemental instruction, advertising, and the World Wide Web. Additional lab hours required. Prerequisite: IS:103 or concurrent enrollment in IS:103 or permission of instructor and Reading Proficiency.

MCM:137 MULTIMEDIA PRODUCTION 4
Students will work with digital type and text, graphics, photographs, video, and sound using current “authoring” software to produce computer hosted multimedia. In the process students will learn to use the various hardware and software tools required. Attention will be devoted to various multimedia delivery options including compact disc and the World Wide Web. Additional lab hours required. Prerequisite: MCM:136 or permission of instructor and Reading Proficiency.

MCM:138 APPLICATIONS OF MULTIMEDIA 3
This course will further the student's knowledge of multimedia application development, including compact disc and the World Wide Web. Additional lab hours required. Prerequisite: MCM:136 or permission of instructor and Reading Proficiency.

MCM:140 INTRODUCTION TO ADVERTISING 3
Students learn about advertising theories and techniques by studying history, functions, the importance of marketing, behavioral science, and aesthetics. Topics include ad agency organization, campaign planning, and media placement and production (radio, television, print, point of purchase). This will be accomplished through lectures, discussions, and campaign analysis. Prerequisite: Reading Proficiency.

MCM:141 PUBLIC RELATIONS 3
This introductory course focuses on the role of public relations as communications specialist. Topics include the techniques of effective public relations and the demands of the field. Students will explore the ways segments of the public form opinions and the ways public relations should influence that attitude building. Students also write press releases and examine field/case studies. Prerequisite: Reading Proficiency.

MCM:142 APPLIED ADVERTISING 3
This course will further the student's knowledge of advertising practices, campaigns, strategies, and production. Along with lectures, discussions, and other activities, this course includes scripting, storyboarding and executing radio, television and/or print ads. Class involves lectures, discussions, and video production activities. Prerequisite: Reading Proficiency.

MCM:201 MEDIA INTERNSHIP I 3
This course allows students to gain practical experience through an arrangement with selected media outlets. Students must apply for the internship through the Communication Department for entrance into the course. Prerequisite: Reading Proficiency.

MCM:202 MEDIA INTERNSHIP II 3
This course allows students to continue gaining practical experience through an arrangement with selected media outlets. Students must apply for the internship through the Communications Department for entrance into the course. Prerequisite: Reading Proficiency.

MCM:209 BLACKS AND THE WORLD OF CINEMA 3
This course examines the historical and social evolution of Blacks in the film industry. It traces the impact of African-Americans as actors, technicians, directors, producers, and audience of short and feature-length films. Prerequisite: Reading Proficiency.

MCM:210 PUBLIC AFFAIRS REPORTING 3
Through lectures, research and practical experience, students are exposed to more extensive news gathering and advanced writing techniques. Prerequisite: ENG:100 or ENG:101 and MCM:110 or permission of instructor and Reading Proficiency.

MCM:211 APPLIED PUBLIC RELATIONS 3
Applied Public Relations provides for the integration and application of public relations theories and practices studied in the prerequisite public relations course. Through further study and practical application the student will develop a greater understanding of the purpose, function and importance of effective public relations activity in today's increasingly complex society. Prerequisite: MCM:141 and Reading Proficiency.

MCM:212 SPECIALIZED PUBLICATION PRODUCTION 3
This course will further the student's knowledge of multimedia application development, including compact disc and the World Wide Web. Additional lab hours required. Prerequisite: MCM:136 or permission of instructor and Reading Proficiency.

MCM:213 ADVANCED VIDEO PRODUCTION 3
Students will develop their skills in preproduction, production and post-production video work, both multi-camera studio and on location. The course will include concept development, scripting, storyboarding, shooting and editing video projects. Class involves lectures, discussions, and video production activities. Prerequisite: MCM:121 or permission of instructor and Reading Proficiency.
MTH:215 MAJOR FILM DIRECTORS 3
Students study a major director's landmark films. Topics include consideration of the selected director's style, themes, cinematography, stars, and social as well as other artistic factors that have made this an influential director. Class includes lectures, discussion, written analysis, and in-class screenings of films. Prerequisite: Reading Proficiency.

MCM:217 PUBLICATIONS WRITING 3
This course focuses on the specialized and distinctive writing skills employed in technical and corporate publications. Students will master the basic skills needed to write simple reports, product descriptions and price lists. In the corporate area, students will research and write news and feature stories for newsletters, as well as press release and brochure copy. All writing requires basic word processing skills. Prerequisite: ENG:102 or ENG:103 or equivalent work experience and Reading Proficiency.

MCM:218 ADVANCED FILMMAKING 3
Students develop filmmaking expertise through super-8, 16mm, and digital productions. Topics include: concept development, scripting, storyboard, composition, lighting, sound, editing both as film and on nonlinear digital. Avid stations, special effects, and film exhibition. All equipment is provided; students pay for film and processing. Class includes lectures, discussions, and screenings.
Prerequisite: MCM:134 or permission of instructor and Reading Proficiency.

MCM:219 MULTIMEDIA APPLICATIONS 1 - 3
This course covers selected topics in multimedia production. Students use state-of-the-art equipment to produce beginning, intermediate or advanced level projects in the area emphasized. Topics may include, but are not limited to, nonlinear video editing, video animation, digital audio production, etc. Course may be retaken for credit with different topics. Prerequisite: Reading Proficiency.

MCM:220 ADVANCED AUDIO PRODUCTION 3
Students will develop their skills in Audio Production through usage of computer based digital audio editing systems. This course will include concept development and scripting, recording techniques, and advanced editing techniques. Class includes lectures, discussion, and audio production activities.
Prerequisites: MCM:124 or Permission of instructor. Reading Proficiency.

MATHEMATICS

MTH:004 HANDS-ON ARITHMETIC WORKSHOP 3
This course is designed to help students experiencing difficulty with mathematics in general and arithmetic in particular. Students progress at their own pace using manipulatives in a guided discovery mode to gain an understanding of numbers, arithmetic operations (on whole numbers, integers, fractions, decimals, and involving percents) and metric measurement. Additional lab hours required.
Prerequisites: RDG:020 and ENG:020.

MTH:020 PRE ALGEBRA 3
This course is for students who need to review the basic fundamentals of mathematics. Topics include operations on whole numbers, fractions, decimals, percents, signed numbers, word problem applications and an introduction to algebra.

MTH:025 HANDS-ON ALGEBRA WORKSHOP 3
The purpose of this course is to help students who have experienced great difficulty with mathematics in general and algebra in particular. Working individually and in small groups, students use various mathematics manipulatives in a guided discovery mode to explore algebraic concepts in order to gain an understanding of integers, linear equations, polynomials, graphing, and functions. In this hands-on lab course, students proceed at their own pace. This course does not replace Elementary Algebra. This course is also valuable for teachers who want to teach mathematics with a goal of preparing students for algebra. Prerequisites: MTH:020 or MTH:001 with grade of "C" or better, or satisfactory score on the placement test; an appropriate score in Reading and English on the placement test.

MTH:027 BRIDGES TO ELEMENTARY ALGEBRA 1
This course is designed for students who qualify for Elementary Algebra. Completion of this course will greatly enhance a student's chance for success in Elementary Algebra. This course offers a brief review of operations on whole numbers, fractions, decimals and percents. Also included is an intense review of applications of ratios, geometry, signed numbers, like terms, simplifying algebraic expressions and solving basic equations. Prerequisites: Placement into MTH:030 or completion of MTH:020 with a grade of "C" or better.

MTH:030 ELEMENTARY ALGEBRA 3
This course is for students who have not taken a full year of algebra in high school or wish to review algebra. Topics include operations on whole numbers, operations on polynomials, operations on rational expressions, and solving equations. Prerequisites: MTH:001 or MTH:020 with grade of "C" or better; or satisfactory score on placement test.

MTH:040 ELEMENTARY ALGEBRA AND BASIC MATH 5
This course combines the topics of Basic Mathematics (operations on whole numbers, fractions, decimals, percents, signed numbers, and word problem applications) with those of Elementary Algebra (operations on polynomials, operations on rational expressions, and solving equations) and is intended for students who need to review the materials in these two courses. Prerequisite: Satisfactory score on placement test.

MTH:070 ELEMENTARY APPLIED MATHEMATICS 5
This course includes operations on algebraic expressions, solving linear equations, the Cartesian coordinate system in two dimensions, slope of a line, and graphing techniques. Prerequisite: MTH:020 with a grade of "C" or better, or satisfactory score on placement test and Reading Proficiency.

MTH:092 TECHNICAL MATHEMATICS I 3
This course includes operations on algebraic expressions, solving linear equations, the Cartesian coordinate system in two dimensions, slope of a line, and graphing techniques. Prerequisite: MTH:007 or MTH:030 with a grade of "C" or better, or satisfactory score on placement test and Reading Proficiency.

MTH:108 TECHNICAL MATHEMATICS II 3
The course content includes complex numbers, solution of quadratic equations, and a study of exponential logarithmic and trigonometric functions. Vectors in the Cartesian plane and applications are also among the topics included.
Prerequisite: MTH:124 with a grade of "C" or better and Reading Proficiency.

MTH:134 TECHNICAL MATHEMATICS III 3
This course will provide the transition from elementary algebra into college algebra. Operations on rational expressions, operations on radicals, solving quadratic equations, and the rectangular coordinate system are among the topics covered. Prerequisite: MTH:030 with a grade of "C" or better or satisfactory score on placement test and Reading Proficiency.

MTH:140 INTERMEDIATE ALGEBRA 3
This course will provide the transition from elementary algebra into college algebra. Operations on rational expressions, operations on radicals, solving quadratic equations, and the rectangular coordinate system are among the topics covered. Prerequisite: MTH:030 with a grade of "C" or better or satisfactory score on placement test and Reading Proficiency.

MTH:144 TECHNICAL ALGEBRA AND TRIGONOMETRY 5
This course includes basic algebraic skills, complex numbers, quadratic equations, linear systems, and a study of the trigonometric functions. Applications for engineering technology students are included in the course content. Prerequisite: MTH:140 with a grade of "C" or better or satisfactory score on placement test and Reading Proficiency.

MTH:154 TECHNICAL ANALYTIC GEOMETRY AND CALCULUS 4
This course is designed primarily for engineering technology students. Among the topics included are plane analytic geometry, limits, derivatives, integration, and applications. Prerequisite: MTH:144 with a grade of "C" or better and Reading Proficiency.
MTH:155 SURVEY OF COLLEGE MATHEMATICS 4
This course contains topics from the development of the structure of the real number system and college algebra, and selected topics from geometry, probability statistics, or mathematical modeling, with emphasis on applications of mathematics. Prerequisite: MTH:140 with a grade of “C” or better and Reading Proficiency.

MTH:157 BRIDGES TO COLLEGE ALGEBRA 1
This course is designed for students who qualify for College Algebra. Completion of this course will greatly enhance a student’s chance for success in College Algebra. This course offers a brief review of rational expressions, exponents, roots and radicals, inequalities, and systems of equations. Also included is an intense review of functions and function notation, including linear and non-linear functions. Prerequisites: Placement into MTH:160A or MTH:160B or MTH:160C or completion of MTH:140 with a grade of “C” or better and Reading Proficiency.

MTH:160A COLLEGE ALGEBRA WITH TECHNOLOGY 4
Computers or graphing calculators will be used to study: theory of equations; systems of equations; functions and graphs including polynomial, rational, exponential, and logarithmic; matrices; sequences and series; binomial theorem. Applications will include linear and non-linear regression. Credit will be granted for only one of the following: MTH:160, MTH:160A, MTH:160B, MTH:160C, MTH:185. Prerequisites: MTH:140 with grade of “C” or better, or satisfactory score on placement test and Reading Proficiency.

MTH:160B COLLEGE ALGEBRA: NON-TECH MAJORS 4
Computers or graphing calculators will be used to study: theory of equations; systems of equations; functions and graphs including polynomial, rational, exponential, and logarithmic; matrices; sequences and series; binomial theorem. Applications will be chosen primarily from non-technical content areas. Credit will be granted for only one of the following: MTH:190, MTH:190A, MTH:190B, MTH:190C, MTH:195. Prerequisites: MTH:140 with grades of “C” or better, or satisfactory score on placement test and Reading Proficiency.

MTH:160C COLLEGE ALGEBRA 4
Topics include: theory of equations; systems of equations; functions and graphs including polynomial, rational, exponential, and logarithmic; matrices; sequences and series; binomial theorem. Applications will be primarily from science and business. Credit will be granted for only one of the following: MTH:160, MTH:160A, MTH:160B, MTH:160C, MTH:185. Prerequisites: MTH:140 with grade of “C” or better, or satisfactory score on placement test and Reading Proficiency.

MTH:165 STRUCTURES OF MATHEMATICAL SYSTEMS I 3
Introduction to problem solving and logic. A study of the development and construction of mathematical systems, including whole numbers, integers, and rational numbers. Suggested for students planning to transfer into early childhood education, elementary education, or special education programs. Prerequisite: MTH:160 or MTH:160A or MTH:160B or MTH:160C with a grade of “C” or better, or satisfactory score on placement test and Reading Proficiency.

MTH:166 STRUCTURES OF MATHEMATICAL SYSTEMS II 3
Continuation of MTH:165. Includes an intuitive study of elementary geometry, the deductive theory of geometry, graphing, probability and statistics, with applications in the area of elementary education. Suggested for students planning to transfer into early childhood education, elementary education, or special education programs. Prerequisite: MTH:165 with a grade of “C” or better and Reading Proficiency.

MTH:170 TRIGONOMETRY 3
This course uses an analytic approach to the definitions and graphs of the functions of an angle. It includes formulas and identities, trigonometric functions, inverse functions, and radian measure. Prerequisite: MTH:160 or MTH:160A or MTH:160B or MTH:160C with grade of “C” or better, or satisfactory score on placement test. Note: Credit will not be granted for both MTH:170 and MTH:185. Reading Proficiency.

MTH:173 TRIGONOMETRY REFRESHER 1
This course is designed for students who have taken trigonometry in the past, but would benefit from a review of important topics and applications. This course includes a review of right triangle trigonometry, trigonometric functions and identities. Prerequisites: MTH:170 or MTH:185, and Reading Proficiency.

MTH:177 FINITE MATHEMATICS 4
This course includes a study of matrices, linear programming, and probability, along with several types of applications. Prerequisite: MTH: 160 or MTH:160A or MTH:160B or MTH:160C with grades of “C” or better and Reading Proficiency.

MTH:185 PRECALCULUS 5
A unified study of college algebra and trigonometry. Emphasis is placed on the development of algebraic and trigonometric concepts. Prerequisite: MTH:140 with a grade of “C” or better or satisfactory score on placement test and Reading Proficiency. Note: Students will be granted credit for either MTH:185 or MTH:160 and MTH:170.

MTH:186 SURVEY OF CALCULUS 4
An introduction to plane analytic geometry and the basic techniques of the differential and integral calculus. Applications are business oriented. Prerequisite: MTH:160 or MTH:160A or MTH:160B or MTH:160C all with grades of “C” or better and Reading Proficiency.

MTH:210 ANALYTIC GEOMETRY AND CALCULUS I 5
Topics included are limits and continuity of functions of a single variable, derivatives and antiderivatives of algebraic functions and trigonometric functions, and applications. Prerequisite: MTH:185 or (MTH:160 or MTH:160A or MTH:160B or MTH:160C and MTH:170) with grades of “C” or better or satisfactory score on placement test and Reading Proficiency.

MTH:212 DISCRETE MATHEMATICS 3
Students will learn the important topics in discrete mathematics which are particularly relevant to computer science. Topics include, but are not limited to, logic, elementary number theory, modular arithmetic, methods of proof, sets, probability and combinatorics, recurrence relations, algorithmic efficiency, elementary graph theory, and trees. Prerequisites: Previous completion of MTH:210 or equivalent with a grade of “C” or better and Reading Proficiency.

MTH:215 LINEAR ALGEBRA 3
Topics include systems of linear equations, properties of matrices and determinants, vector spaces, linear transformations, inner products, and eigenvalues, as well as selected applications. Prerequisite: MTH:210 with a grade of “C” or better and Reading Proficiency.

MTH:220 ANALYTIC GEOMETRY AND CALCULUS II 5
Differentiation and integration of transcendental functions, techniques of integration, improper integrals, parametric equations, polar coordinates, and infinite and power series are among the topics covered. Prerequisite: MTH:210 with a grade of “C” or better and Reading Proficiency.

MTH:230 ANALYTIC GEOMETRY AND CALCULUS III 5
Solid analytic geometry, vectors in two and three dimensions, differential calculus of functions of more than one variable, partial derivatives, directional derivatives, gradients, multiple integration, and an introduction to the calculus of vector fields. Prerequisite: MTH:220 with a grade of “C” or better and Reading Proficiency.

MTH:240 DIFFERENTIAL EQUATIONS 3
This course introduces methods of solving ordinary differential equations including Laplace transforms and differential operators with applications. Prerequisite: MTH:230 with a grade of “C” or better and Reading Proficiency.

MECHANICAL ENGINEERING TECHNOLOGY

ME:101 WELDING TECHNOLOGY 3
The major objective of this course is to provide a comprehensive coverage of current welding practices. A variety of welding processes will be covered including shielded metal-arc, gas shielded-arc, resistance and other special techniques intended specifically for welding sophisticated metals. Additional lab hours required. Prerequisite: Reading Proficiency.

ME:102 WELDING INSPECTION 3
The major objective of this course is to provide the fundamental principles of the actual welding operation and subjects related to the process. Included are such factors as the basic properties of welds and base metals, testing methods, and interpretation of drawings and specifications. Inspection of assemblies fabricated by weldings involves a great many factors that cannot be outlined in a code or specification. Prerequisite: Reading Proficiency.
ME:103 MECHANICAL MAINTENANCE
Identifies and explains the various types and functions of mechanical power transmission components such as gears, couplings, chains, belting, bearings, and clutches. Manufacturer handbooks will be utilized to reinforce the proper installation, inspection, and maintenance specifications. In addition, pumps and compressors will be emphasized including repair and preventive maintenance. Additional lab hours required. Prerequisite: MTH:007 or MTH:030 and Reading Proficiency.

ME:104 PLUMBING DESIGN I
This course will cover the following items: contract documents, regulatory agencies, plumbing materials, piping methods, pipe insulation, plumbing fixtures, architectural/structural problems, hydraulic principles, and sizing plumbing systems. Prerequisite: Reading Proficiency.

ME:105 PLUMBING DESIGN II
This course will cover the following: basic graphics, supply systems, domestic hot water systems, water treatment, storm water systems, site utilities, waste systems, pool systems, and pump systems. Prerequisite: ME:101 and Reading Proficiency.

ME:106 PLUMBING DESIGN III
This course will cover the following: food service systems, hospital plumbing, public building plumbing, irrigation systems, gas systems, compressed air systems, vacuum systems, cost estimating and specifications. Prerequisite: ME:102 and Reading Proficiency.

ME:108 PRINCIPLES OF PLUMBING/PIPEFITTING
The principles of water supplies and sewage systems are presented. The course covers alteration, repair, and maintenance methods of commercial and domestic plumbing systems. Nomenclature of the various connecting devices for metal and plastic pipe and proper assembly such as soldering, threading, and gluing are included. Laboratory exercises and assembly projects provide the practice and methodology required to successfully repair and maintain fixtures and systems. Additional lab hours required. Prerequisite: Reading Proficiency.

ME:109 ELECTRICAL FUNDAMENTALS AND MAINTENANCE
Presents basic DC and AC elementary circuitry and electrical schematics. The electrical properties and relationships of voltage-ampere-resistance-power and measurement techniques are covered. The applications portion emphasizes wiring and wiring materials, electric controls and switches, DC and AC motor fundamentals and electrical troubleshooting. Additional lab hours required. Prerequisite: Reading Proficiency.

ME:110 HVAC OPERATOR I
A practical course dealing with the basic operation, maintenance and troubleshooting of heating, ventilating and air conditioning equipment including air, closed water systems and control systems. The dynamic equipment components of various systems will be studied with special emphasis upon preventive maintenance. Prerequisite: Reading Proficiency.

ME:121 COMPUTER INTEGRATED MANUFACTURING
This course applies principles of robotics and automation. Students will use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are included. Prerequisites: EGR:145 or EGR:147 or Departmental Approval.

ME:135 MECHANICS - STATICS
A study of forces and their effects on motionless objects. Applications to stresses, beams, frames, and other topics are presented. Basic theory for structural design in mechanical and civil programs is studied. Prerequisite: MTH:140 and Reading Proficiency.

ME:138 MECHANICAL MEASUREMENT
This course is designed to provide the fundamentals of dimensional measurement for the technician. Measurement terms, equipment, and tools will be explained and laboratory activities will provide the student an opportunity to master the basic skills of measuring devices. Scaled, vernier, micrometer instruments and dial indicators with gage blocks will be used. Measurement standards will be reviewed. Prerequisite: Reading Proficiency.

ME:140 INTRODUCTION TO ROBOTICS
This course is an introduction to the field of robotics. It will provide the student with a historical overview of the use and development of robotics. Topics to be studied include: specific types and application of industrial robots, the effects of industrial robots and technology on employers and employees, and Numerical Control (N.C.) and Computer Numerical Control (C.N.C.), information as it relates to the programming and functioning of robotic simulators. Additional lab hours required. Prerequisite: MTH:124 or equivalent and Reading Proficiency.

ME:151 MANUFACTURING PROCESSES I
Teaching theory and manipulative skills in the basic processes of manufacturing: lathes, milling machines, shapers, drill presses, welding, foundry, sheet metal, precision instrument reading, and hand tools. Additional lab hours required. Prerequisite: Reading Proficiency.

ME:152 MANUFACTURING PROCESSES II
This course is a continuation of Manufacturing Processes I with emphasis in Flexible Manufacturing Systems (FMS). Instruction includes Computer Numerical Control (CNC) programming, Robotics applications of Programmable Logic Controllers (PLC), and Computer Integrated Manufacturing (CIM). Students will develop a CIM cell project. Additional lab hours required. Prerequisite: ME:151 and Reading Proficiency.

ME:153 LATHE AND MILL OPERATIONS AND SAFETY
This course is designed to teach fundamental machining operations on a Lathe and Mill. The course will emphasize general shop safety practices and machine operating procedures that is safe for the operators and other workers. Prerequisite: Reading Proficiency.

ME:201 PROGRAMMABLE LOGIC CONTROLLERS
This course presents the fundamentals of ladder logic (or relay logic) used on modern industrial controllers. Basic elements such as timers, counters, and sequences are studied, as well as traditional methods of applying them to machine control. Students will program and perform laboratory experiments with programmable logic controllers, such as the Allen Bradley SLC-100 controllers and interface them to various input and output devices. An industrial robot also is available in class for lab experiments. Use of IBM/Allen Bradley personal computer interface software will be covered as well. Additional lab hours required. Prerequisite: ME:140 and EE:242 or department approval and Reading Proficiency.

ME:223 BASIC HYDRAULICS I
This course is arranged to give the student a general knowledge of the basic components of hydraulic systems, as well as a general understanding of the basic laws and formulas used in simple hydraulic calculations. It includes such topics as pumps, control valves, control assemblies, actuators, the use of standard hydraulic symbols, and maintenance procedures. Prerequisite: Reading Proficiency.

ME:225 FIXTURE DESIGN
Design of machining fixtures for drilling, milling, turning, welding, and numerical control processes. Use of standard components, accurate location of parts, and correct clamping are stressed. Procedures range from freehand sketching to accomplishing accurate working drawings of fixtures. Additional lab hours required. Prerequisite: ME:151 and EGR:100 and Reading Proficiency.

ME:226 AIR CONDITIONING AND HEATING
This course covers the operation of air conditioning and heating equipment and the calculation of cooling/heating loads for residential and commercial buildings. Laboratory experiments will supplement classroom work. Additional lab hours required. Prerequisite: MTH:124 and Reading Proficiency.
ME:230  INTRODUCTION TO 3-D SOLID MODELING FOR DESIGN  4
This course is designed to teach the use of 3D solid modeling CAD packages. Instruction includes how to use a 3D CAD package to develop solid models in order to generate assemblies and 2D drawings. CAD package used in a particular semester or a section of this course may depend on the industry or student’s demand. Some of the commonly used 3D solid modeling packages in the industry are: SOLIDWORKS, Pro-E, and Solid Edge. It is suggested that prior to registering for this course, students would inquire with the department as to which CAD will be emphasized in a given semester or a section of the course. Additional lab hours required. Prerequisite: Department Approval and Reading Proficiency.

ME:231  INTRODUCTION TO RAPID PROTOTYPING  3
This course will examine various Rapid Prototyping Processes such as Stereolithography (SLA), Selective Laser Sintering (SLS), Fused Deposition Modeling (FDM), and Laminated Object Modeling (LOM). Laboratory activities will involve hands-on practice orienting, slicing and editing solid model files in order to generate 3D SLA and FDM physical models. Additional lab hours required. Prerequisite: ME:230 or department approval and Reading Proficiency.

ME:232  GEOMETRIC DIMENSIONING AND TOLERANCING  2
This course will provide an introduction to consistent and clear application of dimensions and tolerances as outlined in the ASME standards dealing with GD&T. Complete documentation of product requirements will consist of symbols, feature control frames, geometric tolerances, datums, and material condition modifiers. The course will also include methods of tolerance verification and basic design considerations. Prerequisite: Department Approval and Reading Proficiency.

ME:241  NUMERICAL CONTROL PROGRAMMING  3
This course will include a brief summary of machine types and their application with movies and local field trips; also, basic CNC programming language and preparation of part programs. Students will program and operate three axis vertical mills with sequential and word address controls. Prerequisite: ME:151 and Reading Proficiency.

ME:242  MECHANICS-DYNAMICS  3
Dynamics extends the study of mechanics from forces and their effects on motionless objects to motion and the forces required to produce motion. Energy, impulse and momentum are included. Prerequisite: ME:135 and Reading Proficiency.

ME:243  STRENGTH OF MATERIALS  3
This course consists of the study of the reaction of materials to tension, compression torsion and flexure. Applications to the design of beams, columns, shafts and fasteners are presented. The students perform various materials tests in a fully-equipped laboratory. Additional lab hours required. Prerequisite: ME:135 and Reading Proficiency.

ME:244  MECHANICAL DESIGN I  3
This course applies the principles of engineering graphics to problems dealing with the drawing and design of machines and parts. The emphasis is to produce accurate and complete detail and assembly drawings utilizing the latest industrial drafting procedures and practices which include GD&T methods. Additional lab hours required. Prerequisite: EGR:100 and Reading Proficiency.

ME:246  MECHANICAL DESIGN II  3
This course presents the design of various machine elements. The topics include: survey of engineering materials, weldments, fasteners, linkages, indexing mechanisms, cams, belt and chain drives, gear and gear trains, shafts, keys and splines, bearings and lubrication, couplings, clutches, brakes, power units, and springs. Additional lab hours required. Prerequisite: ME:243 and ME:244 and Reading Proficiency.

ME:249  MATERIALS AND METALLURGY  3
This course is a survey of the sources, preparation, properties and uses of engineering materials. Topics include the following: the iron-carbon system, ferrous metallurgy, nonferrous metallurgy, ceramics, plastics, elastomers, composites, and finishes. Practical laboratory activities are performed to clarify and enhance text material. Additional lab hours required. Prerequisite: Reading Proficiency.

ME:253  ENERGY CONVERSION  2
This course is a fundamental study of the conversion of energy into work and heat. The principles of thermodynamics used in the analysis of engines, air conditioning systems, turbines, pumps and fans are reinforced through laboratory experiments. Additional lab hours required. Prerequisite: Reading Proficiency.

ME:254  ELECTRICITY AND CONTROLS  3
A basic course in AC-DC electricity and controls for non-electrical students. Study of DC, AC and magnetic circuits used for electric motor drives and transformers introduction to solid state and electromagnetic controls. Laboratory experiments parallel classroom material covered. Additional lab hours required. Prerequisite: Reading Proficiency.

ME:255  FLUID POWER  3
This course is that portion of fluid mechanics which deals with its application and has been termed “Fluid Power.” It emphasizes the study of components of hydraulics and pneumatics systems as used for industrial power transmission and control purposes. Additional lab hours required. Prerequisite: MTH:144 or equivalent and Reading Proficiency.

MUSIC

MUS:101  MUSIC THEORY I  4
An integrated course in musicianship. Diatonic harmony with reference to 18th-century style. Combines written and keyboard harmonization. Develops rhythm, pitch and harmony through sight-singing and dictation. Additional studio hours required. Prerequisite: MUS:101 or permission of instructor and Reading Proficiency.

MUS:102  MUSIC THEORY II  4
Continuation of MUS:101. Enlargement of vocabulary to comprise inversion of triads, non-harmonic tones, chord extensions, harmonic analysis and modulation. Additional studio hours required. Prerequisite: MUS:101 or permission of instructor and Reading Proficiency.

MUS:103  BASIC MUSIC  3
A course in the fundamentals of music including note reading, scales, keys, intervals, rhythmic activities and simple keyboard study.

MUS:104  INTRODUCTION TO MUSIC THEORY  3
Review of musical notation, major and minor keys and scales, intervals, triad types, elementary sight-singing, rhythm drills, dictation, ear training and introduction to keyboard work. Prerequisite: MUS:103 or equivalent and Reading Proficiency.

MUS:111  INTRODUCTION TO MUSIC LITERATURE I  3
The elements of music and basic listening techniques. Representative composers and their music. Discussion of extramusical factors bearing upon their lives and works. Prerequisite: Reading Proficiency.

MUS:112  INTRODUCTION TO MUSIC LITERATURE II  3
Continuation of MUS:111. Prerequisite: Reading Proficiency.

MUS:113  HISTORY OF JAZZ  3
A study of main eras of jazz: New Orleans Dixieland, Ragtime, Chicago Dixieland, Swing, Bop, Cool, Third Stream, Improvisation. Emphasis on listening to the various styles and artists. Prerequisite: Reading Proficiency.

MUS:114  THE ENJOYMENT OF MUSIC  3
An introduction to a wide variety of musical styles moving from more familiar examples toward a greater understanding of more unfamiliar styles. A survey of the uses and historical evolution of music including discussion of the composers and their works. Prerequisite: Reading Proficiency.

MUS:115  VOICE I  2
Introduction to the fundamentals of singing. Attention directed to tone production, breath control, diction, phrasing, rhythmic and melodic precision stage department. Prerequisite: Reading Proficiency.

MUS:116  VOICE II  2
A continuation of Voice I. Efficient breath control, improvement of tone quality, and song interpretation are stressed. Songs in English and Italian will be studied. Prerequisite: MUS:115 and Reading Proficiency.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS:121</td>
<td>CLASS PIANO I</td>
<td>2</td>
<td>A course designed to develop basic skills and techniques in piano playing applicable to various types of music. For the student with no previous keyboard experience.</td>
</tr>
<tr>
<td>MUS:122</td>
<td>CLASS PIANO II</td>
<td>2</td>
<td>Continuation of MUS:121. Prerequisite: MUS:121 or demonstrated proficiency and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:127</td>
<td>CLASS VOICE</td>
<td>1</td>
<td>A study of the fundamentals of tone production, diction, posture and breathing. Simple songs and part singing. Prerequisite: ability to read music. Additional studio hours required. Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:128</td>
<td>SURVEY OF ROCK MUSIC</td>
<td>3</td>
<td>A year-by-year review of the music, artists, composers, record producers, and others associated with rock ‘n’ roll from 1954 to the present with emphasis on the controversies surrounding this genre. Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:129</td>
<td>MUSIC FOR THE CLASSROOM TEACHER</td>
<td>3</td>
<td>Designed for elementary education students without regard to previous musical training. Students are prepared to use music functionally and developmentally in the elementary classroom through singing, through playing the piano and instrumental materials, and through responding to music rhythmically. Creative aspects and values of music are emphasized and materials are studied in relation to their future uses in the classroom. (Same course as EDU:129.) Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:130</td>
<td>BEGINNING GUITAR</td>
<td>2</td>
<td>Course objective is to acquire a classical playing technique. Emphasis on correct seating and hand positions, note reading, chording and basic music theory. Students must supply their own guitar (nylon string recommended). Prerequisite: Ability to read music is recommended and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:131</td>
<td>CHORUS</td>
<td>1</td>
<td>Study and performance of representative choral literature. Emphasis on vocal technique and development. Additional studio hours required.</td>
</tr>
<tr>
<td>MUS:132</td>
<td>ORCHESTRA</td>
<td>1</td>
<td>Study and performance of representative chamber and symphonic literature. Additional studio hours required. Prerequisite: Audition and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:133</td>
<td>JAZZ LAB BAND</td>
<td>1</td>
<td>Study and performance of the best in recent big band jazz compositions. Additional studio hours required. Prerequisite: Audition and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:134</td>
<td>SYMPHONIC BAND</td>
<td>1</td>
<td>Study and performance of representative symphonic band literature. Additional studio hours required. Prerequisite: Experience in playing a band instrument and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:135</td>
<td>CHOIR</td>
<td>1</td>
<td>A study of advanced choral literature. Emphasis on vocal technique and development. Additional studio hours required. Prerequisite: Audition.</td>
</tr>
<tr>
<td>MUS:138</td>
<td>JAZZ IMPROVISATION I</td>
<td>2</td>
<td>The study and application of beginning jazz theory and improvisation to the performance of jazz music in a combo setting with little emphasis on concert performance. Additional studio hours required. Prerequisites: Performance ability; audition; permission to enroll and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:139</td>
<td>JAZZ IMPROVISATION II</td>
<td>2</td>
<td>The study and application of intermediate jazz theory and improvisation to the performance of jazz music in a combo setting with greater emphasis on concert performance. Additional studio hours required. Prerequisites: MUS:138 or equivalent and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:140</td>
<td>GOSPEL CHORUS</td>
<td>1</td>
<td>This course will study choral music from the African-American gospel tradition. The emphasis will be on historical awareness and stylistic practice. Additional hours required.</td>
</tr>
<tr>
<td>MUS:141</td>
<td>APPLIED MUSIC I</td>
<td>2</td>
<td>Individualized study of instrument or voice. Prerequisite: demonstrated proficiency and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:142</td>
<td>APPLIED MUSIC II</td>
<td>2</td>
<td>Continuation of MUS:141. Prerequisite: MUS:141 and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:143</td>
<td>INTRODUCTION TO DESKTOP MUSIC PUBLISHING</td>
<td>3</td>
<td>This course is an introduction to the software called “Finale” as it is applied to desktop publication of printed music. Students will learn music printing techniques and will use digital keyboards to enter and play back musical scores. Additional studio hours required. Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:144</td>
<td>AFRICAN DRUM ENSEMBLE</td>
<td>1</td>
<td>Students will learn and perform the dance music of West African countries. Special emphasis will be placed on the hand techniques of the djembe. Students will, however, perform on many other instruments as well, including: bells, dununs, and shakers. Additional hours required. Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:145</td>
<td>PERCUSSION ENSEMBLE</td>
<td>1</td>
<td>Students will compose, learn, and perform chamber music for a wide variety of percussion instruments. Each semester will culminate in an on-campus concert. Additional hours required. Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:150</td>
<td>FUNDAMENTALS OF MUSIC TECHNOLOGY</td>
<td>2</td>
<td>This course teaches the fundamentals of computer-based music and sound production. Topics covered include the computer operating system, file manipulation, basic MIDI sequencing, basic audio recording, data archiving and CD creation. Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:151</td>
<td>MUSIC INDUSTRY: MARKETING AND PROMOTION</td>
<td>2</td>
<td>This course presents a survey of careers and business practices in the music industry. Emphasis is placed on the student’s role, responsibilities, and expectations as a professional in this field. Marketing, publicity, and contracts are covered. Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:152</td>
<td>AUDIO ENGINEERING</td>
<td>3</td>
<td>Students will learn how to run a recording session from set-up, to tracking, to tear-down. They will learn the theory of compressors, EQ, delays, reverbs, chorus, and other effects. Microphone design, selection, and placement are emphasized. This course combines theory with practical experience in digital studio. Prerequisites: MUS:150 and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:153</td>
<td>DRUM MACHINE PROGRAMMING</td>
<td>2</td>
<td>Students will learn to create drum patterns, beats, and loops using a variety of music software and hardware. Traditional drum instrumentation, experimental techniques, groove settings, and editing in a variety of styles will be explored. Prerequisite: Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:154</td>
<td>MUSIC RECORDING WITH PRO TOOLS I</td>
<td>2</td>
<td>In this course students will learn how to use the Pro Tools digital audio workstation to record music. They will learn to use plugin effects, mix automation, and studio hardware. The Audio Engineering class is helpful, but not required. Prerequisites: MUS:150 and Reading Proficiency.</td>
</tr>
<tr>
<td>MUS:202</td>
<td>MUSIC THEORY IV</td>
<td>4</td>
<td>Continuation of MUS:201. Advanced chromatic harmony, 19th and 20th century practices. Analysis of written and keyboard harmonization. Development of rhythm, pitch and harmony through sight-singing and dictation. Additional studio hours required. Prerequisite: MUS:201 or permission from instructor and Reading Proficiency.</td>
</tr>
</tbody>
</table>
MUS:211  MUSIC HISTORY I  3
The history of music in Western civilization from its origins to the Baroque era. Emphasis on listening to and analyzing the music with score. Prerequisite: ability to read music and Reading Proficiency.

MUS:212  MUSIC HISTORY II  3
The history of music in Western civilization from the Baroque era to the present. Emphasis on listening to and analyzing the music with score. Prerequisite: Ability to read music and Reading Proficiency.

MUS:213  THE SYMPHONY  3
Great symphonies analyzed and discussed as to style, form, compositional techniques and content. Directed listening and visits to live rehearsal and concerts. Prerequisite: Reading Proficiency.

MUS:214  THE OPERA  3
Principles of opera including plots, characters and music of operas from the 18th century to the present time. Prerequisite: Reading Proficiency.

MUS:216  JAZZ IMPROVISATION III  2
The study and application of advanced techniques in jazz improvisation in a combo setting with emphasis on concert performance. This course may be re-credited for additional credit. Additional studio hours required. Prerequisite: MUS:139 or equivalent and Reading Proficiency.

MUS:221  CLASS PIANO III  2
Continuation of MUS:122. Prerequisite: MUS:122 or demonstrated proficiency and Reading Proficiency.

MUS:222  CLASS PIANO IV  2
Continuation of MUS:221. Prerequisite: MUS:221 or demonstrated proficiency and Reading Proficiency.

MUS:225  BEGINNING CHORALconducting  3
This course is an introduction to the art of Choral Conducting. The course stresses the development of fundamental skills as well as the application of practical solutions to problems found in everyday rehearsals. Throughout the course, emphasis will be placed on each participant developing a personal musical methodology based upon creative problem solving. The course provides a direct assessment of individual musicianship skills acquired in earlier core music classes such as ear training, theory, and music history. Additional studio hours required. Prerequisites: MUS:130 and Reading Proficiency.

NUR:101  FUNDAMENTALS OF NURSING  5
This course is an introduction to the role of the nurse in meeting needs common to all patients through knowledge, skill, and attitudes essential for the practice of nursing, based on principles of physical, biological and behavioral sciences, and nursing theory. Additional lab hours required. Corequisite: NUR:102. Prerequisites: Enrollment in Nursing Program, Passing of Dosage Calculation Test, Grade of “C” or better in BIO:207 or permission of chairperson, Grade of “C” or better in PSY:205 or permission of chairperson, Reading Proficiency.

NUR:102  NURSING LABORATORY PRACTICUM I  1
This course is designed to provide the student with the practice of nursing skills in the College Nursing Laboratory and to reinforce principles introduced in Fundamentals of Nursing. Additional lab hours required. Prerequisite: Reading Proficiency.

NUR:105  NURSING LABORATORY PRACTICUM II  1
This course is designed to provide the student with the practice of nursing skills in the College Laboratory and to reinforce nursing principles introduced in NUR:108. Additional lab hours required. Corequisite: NUR:108. Prerequisite: Reading Proficiency.

NUR:106  LICENSED PRACTICAL NURSE TO ASSOCIATE DEGREE:NURSING BRIDGE I  1
This course is designed to provide a bridging transition for licensed practical nurses who are pursuing an associate degree in nursing. Emphasis is on assessing, reinforcing, and expanding the existing nursing competencies of the student. The theoretical component will focus on the following areas: role change of LPN, communication skills, the nursing process, pharmacology and I.V. therapy and nutrition. The clinical activity will be an assessment of existing skills in basic patient care and medication administration. There will be a classroom and college laboratory component with a clinical laboratory assessment. Prerequisite: Current practical nurse license with recent clinical or education experience; enrollment in nursing program; PSY:208, BIO:207, ENG:101 with grades of “C” or above and Reading Proficiency.

NUR:107  LICENSED PRACTICAL NURSE TO ASSOCIATE DEGREE:NURSING BRIDGE II  4
This course is designed as a continuation of the LPN transition started in NUR:106. Emphasis is placed on utilization of the nursing process to meet the nursing needs of clients throughout the life span receiving fluid and electrolyte therapy, pre- and post-operative care or have problems of immobility or decreased body defenses. The nursing care of the mother and the newborn in the maternal cycle also is included in this course. Both classroom and clinical experience are provided. The instructional methods will include lecture, audio-visual presentations, computer simulations, demonstrations and clinical laboratory activities. This course may be taught during the regular summer session as a sequence to NUR:106. Prerequisite: Current enrollment in nursing program; NUR:106, BIO:203, BIO:208, PSY:200 with grades of “C” or above and Reading Proficiency.

NUR:108  NURSING OF ADULTS AND CHILDREN I  8
This course is designed to assist the student to acquire knowledge and skills in meeting the needs of adults and children with an emphasis on adaptation to illness and hospitalization in medical-surgical nursing, and mothers and newborns during the maternity cycle. Additional lab hours required. Prerequisites: BIO:207, PSY:205, NUR:101, all with grades of “C” or better, and Grade of “C” or better in BIO:208 or permission of chairperson and Reading Proficiency. Co-requisite: NUR:105.

NUR:119  LPN EXPERIENTIAL CREDIT I  5
This course is designed to transcript LPN experiential credit for first semester nursing. LPN’s must be enrolled in LPN Bridge Program and must have successfully completed NUR:106. Prerequisite: Enrolled in LPN Bridge and completion of NUR:106 with a grade of “C” or better and Reading Proficiency.

NUR:120  LPN EXPERIENTIAL CREDIT II  5
This course is designed to transcript LPN experiential credit for second semester nursing. LPN’s must be enrolled in LPN Bridge Program and must have successfully completed NUR:107. Prerequisite: LPN enrolled in LPN Bridge and completion of NUR:107 with a grade of “C” or better and Reading Proficiency.
NUR:201  NURSING OF ADULTS AND CHILDREN II  9
This course is designed to assist the student to further develop knowledge and skills necessary to meet the needs of adults and children with selected medical-surgical problems and exaggerated behavior problems. Additional lab hours required. Prerequisites: NUR:108 or NUR:107 and BIO:203 and BIO:208 all with grades of "C" or better. Co-requisite: NUR:209 and Reading Proficiency.

NUR:203  CONTEMPORARY NURSING  1
This course is a study of selected topics related to the development of nursing practice and education, professional organizations, ethical legal aspects, Current issues and trends. Prerequisites: NUR:108 or NUR:107 with grades of "C" or better. Co-requisite: NUR:201 and Reading Proficiency.

NUR:204  MANAGEMENT SKILLS IN NURSING  3
This course includes theory and practicum in principles of managing the care of a group of patients. The student will participate actively in the role of a beginning staff nurse under the guidance of agency staff and instructor. Prerequisites: NUR:201 and NUR:203 both with grades of "C" or better and Reading Proficiency. Co-requisite: NUR:205. 1 lecture, 6 clinical hours per week.

NUR:205  NURSING OF ADULTS AND CHILDREN III  8
This course is designed to assist the student to further develop knowledge and skills necessary to meet the needs of adults and children with selected medical-surgical problems. Additional lab hours required. Prerequisites: NUR:201 and NUR:203 both with grades of "C" or better and Reading Proficiency. Co-requisite: NUR:204. 5 lecture, 9 clinical hours per week.

NUR:206  RN FIRST ASSISTANT - DIDACTIC COMPONENT  3
This course is designed for the experienced perioperative nurse preparing for practice as an RN First Assistant (RNFA). Course content shall emphasize the expanded functions unique to the RNFA during operative and other invasive procedures. Additional lab hours required. Prerequisites: Proof of licensure to practice as an RN in the state in which the clinical internship will be undertaken. Certification in one of the above must be submitted before program completion. Prerequisites: NUR:201 and NUR:203 both with grades of "C" or better. Reading Proficiency.

NUR:207  RN FIRST ASSISTANT - CLINICAL INTERNSHIP  4
The clinical internship provides the perioperative nurse the opportunity to apply in the practice setting the expanded functions unique to the RNFA during operative and other invasive procedures. Additional hours required. Prerequisites: Successful completion of all requirements of NUR:206. Evidence of current employer or personal professional liability insurance for RNFA practice.

OCCUPATIONAL THERAPY ASSISTANT

OTA:101  FUNDAMENTALS OF OCCUPATIONAL THERAPY ASSISTANT I  3
An introduction to occupational therapy, its philosophy, goals and focus in relation to basic treatment in geriatrics, psychosocial dysfunction, physical disabilities and developmental pediatrics. Beginning skills in practice of occupational therapy are learned. Prerequisite: Reading Proficiency. (3 hours per week clinical assignments to be arranged).

OTA:102  FUNDAMENTALS OF OCCUPATIONAL THERAPY ASSISTANT II  4
Beginning skills in occupational therapy treatment in geriatrics and psychosocial dysfunction are introduced. Group dynamics, work and leisure principles and activity analysis are included. Prerequisite: Reading Proficiency. (4 hours per week clinical assignment to be arranged).

OTA:103  ADAPTIVE ACTIVITIES I  2
The use of activities in occupational therapy including those that address sensory motor, cognitive, and psycho-social performance components. The student is introduced to activity analysis, methods of instruction, goal setting and cost and supply factors. Prerequisite: Admission to the OTA Program and Reading Proficiency.

OTA:104  ADAPTIVE ACTIVITIES II  2
The student will learn beginning skills in designing and fabricating a piece of adaptive equipment. Adaptive activities as they apply to seating, positioning, splinting, and functional tasks will be taught. Additional lab hours required. Prerequisite: OTA:101, OTA:103 and Reading Proficiency.

OTA:203  FUNDAMENTALS OF OCCUPATIONAL THERAPY III  4
Occupational therapy evaluation and treatment procedures including self-care, therapeutic exercise, home management, use of adaptive equipment, work and leisure skills. Clinical assignments to be arranged. Prerequisite: OTA:102 and Reading Proficiency.

OTA:204  FUNDAMENTALS OF OCCUPATIONAL THERAPY IV  4
Occupational therapy evaluation and treatment procedures including developmental and perceptual motor skills, self-care, design and use of adaptive equipment and play/leisure. Field trips to be arranged. Prerequisite: OTA:102 and Reading Proficiency.

OTA:207  HEALTH AND DISEASE  4
This course is an overview of disease conditions commonly seen for treatment in occupational and physical therapy departments. Acceptance into the PTA or OTA Program is required. Prerequisite: BIO:207 and Reading Proficiency.

OTA:208  ADAPTIVE LIVING SKILLS  2
The course presents principles of adapting environments for persons with disabilities. The student will learn basic treatment techniques that are used with persons with physical disabilities across the lifespan. Prerequisite: BIO:209 and OTA:207 and Reading Proficiency.

OTA:213  OCCUPATIONAL THERAPY ASSISTANT PRACTICUM I  4
Field work experience in the treatment of geriatric clients, physically disabled children or adults or clients with psycho-social dysfunction. The student is supervised by an on-site occupational therapist. 8 weeks fulltime clinical assignment. Prerequisite: OTA:204, OTA:208, and OTA:215 and Reading Proficiency.

OTA:214  OCCUPATIONAL THERAPY ASSISTANT PRACTICUM II  4
Field work experience in the treatment of geriatric clients, physically disabled, children or adults, or clients with psychosocial dysfunction. The student is supervised by an on-site occupational therapist. 8 weeks fulltime clinical assignment. Prerequisite: OTA:204, OTA:208, and OTA:215 and Reading Proficiency.

OTA:215  THE MANAGEMENT OF OCCUPATIONAL THERAPY  2

OTA:216  LEVEL II FIELDWORK SEMINAR  1
The study of topics related to Level II fieldwork and employability skills including organizational structures, regulation, continued professional development, job preparation skills. Prerequisites: OTA:203, OTA:204 and OTA:215 and Reading Proficiency.

PARAMEDIC TECHNOLOGY

PAR:201  PRINCIPLES OF PARAMEDIC TECHNOLOGY I  8
This course is an overview of Paramedic practice integrating the theory behind the use of advanced diagnostic and treatment procedures into the management of organic, life-threatening emergencies. Prerequisites: EMT:121 and BIO:207 and Departmental Approval and Reading Proficiency.

PAR:202  PRINCIPLES OF PARAMEDIC TECHNOLOGY II  8
This course serves as an overview of paramedic practice as well as integrating the theory behind the use of advanced diagnostic and treatment procedures in the management of organic, life-threatening emergencies. Topics include cardiovascular, cerebrovascular and other medical emergency and their relationship to their respective disease processes. Prerequisite: PAR:201 and Reading Proficiency.
PAR:203  PHARMACOLOGY FOR PARAMEDICS  3
This course discusses drug theory and usage by paramedical personnel. Areas of emphasis are general principles of drug action, the mathematics of dosage calculation, the therapeutic effects, indications, contraindications, dosages, administration routes, and possible side effects of emergency drugs. Discussion of important prescription medications and their relationship to emergency treatment. Prerequisite: Reading Proficiency.

PAR:211  PARAMEDIC LABORATORY I  1
This course covers the practical skills relating to PAR:201 including assessment and history taking techniques, parental infusion techniques, antishock trousers, oxygen administration, airway adjuncts to include endotracheal intubation and cricothyrotomy techniques. Prerequisite: Admission to the Paramedic Program and Reading Proficiency.

PAR:212  PARAMEDIC LABORATORY II  1
This course covers the practical skills relating to PAR:202 and PAR:226, including patient assessment and history taking techniques with emphasis on ECG interpretation as well as special OB/GYN techniques. At the completion of the semester all skills covered previously will be reviewed. Additional lab hours required. Prerequisite: Reading Proficiency.

PAR:221  PARAMEDIC CLINICAL I  1
Students provide advanced therapy to hospitalized patients under the supervision of licensed personnel. Additional hours required. Prerequisites: Admission to the Paramedic program and Reading Proficiency.

PAR:222  PARAMEDIC CLINICAL II  2
Student provides advanced therapy to hospitalized patients under the supervision of licensed personnel. Additional hours required. Prerequisite: PAR:201 and Reading Proficiency.

PAR:223  PARAMEDIC INTERNSHIP I  1
This course is designed specifically for those students who are currently enrolled in Paramedic Technology. Arrangements are made for the student to work with a pre-hospital, advanced life support system under the supervision of licensed personnel. Students will observe and practice the application of paramedic skills. Additional hours required. Prerequisite: Admission to the Paramedic program and Reading Proficiency.

PAR:224  PARAMEDIC INTERNSHIP II  1
This course is designed specifically for the student who is currently enrolled in PAR:202 and PAR:226. Arrangements are made for the student to work with a pre-hospital, advanced life support system under the supervision of licensed personnel. Students will observe and practice the application of paramedic skills. Additional lab hours required. Prerequisite: PAR:201 and Reading Proficiency.

PAR:225  PARAMEDIC INTERNSHIP III  4
This course is designed specifically for the student who is currently enrolled in Paramedic Technology. Arrangements are made for the student to work with a pre-hospital advanced life support system under the supervision of licensed personnel. Students will observe and practice the application of paramedic skills. Additional hours required. Prerequisite: PAR:226 and Reading Proficiency.

PAR:226  PRINCIPLES OF PARAMEDIC TECHNOLOGY III  3
This course integrates the theory behind the use of advanced diagnostic treatment procedures into the practice of the paramedic. Areas of emphasis include infectious disease, OB/GYN, behavior, abuse, geriatrics, hematology and patients with special considerations. Prerequisite: PAR:201 and Reading Proficiency.

PAR:227  PRINCIPLES OF PARAMEDIC TECHNOLOGY IV  4
This course integrates the theory behind the use of advanced diagnostic treatment, assessment based management, counseling, rescue and communication procedures into the practice of the paramedic. Areas of emphasis include pediatrics, management of the chronically ill patient, extraction and rescue and communication techniques. Prerequisites: PAR:201, PAR:202, PAR:226 and Reading Proficiency.

PAR:228  PARAMEDIC CLINICAL III  1
Student provides advanced therapy to hospitalized patients under the supervision of licensed personnel. Additional hours required. Prerequisite: PAR:226 and Reading Proficiency.

PERSONAL DEVELOPMENT

PRD:100  HELPING SKILLS  1
The focus will be on improving listening skills learning alternative ways of dealing with friends, family or co-workers and learning to help people help themselves.

PRD:101  INTERPERSONAL DYNAMICS TRAINING  1
This course will provide students with an opportunity to assess their competencies and deficiencies in the process of communicating with others. Through role playing and practice, students will utilize the skills and techniques that are valuable in improving their ability to interact in a productive manner with other people. These skills and techniques will include listening, responding and initiating in personal interactions.

PRD:102  CAREER EXPLORATION  1
Career Exploration emphasizes students learning about themselves as well as about the world of work. Students will learn to identify accurate career information and resources. They will also learn a decision making model to assist them in their career selection process.

PRD:103  ASSERTIVE TRAINING I  1
The aim of this course is to make non-assertive or aggressive persons aware of alternative responses and to give them support and experience in trying out new responses. There will be stress on developing a belief system in order to be able to make a choice of what kind of response one wants to make in any situation. Some videotape use in role-playing practice may be utilized.

PRD:104  ASSERTIVE TRAINING II  1
Assumes cognitive or theoretical background from PRD:103. Focus is upon practice of assertive skills with videotape of both simulated and personal realistic situations for which students want to develop assertion skills and practical criteria for choosing appropriate responses. Prerequisite: PRD:103.

PRD:106  RELAXATION TRAINING  1
This is a course for students who are dealing with increasing expectations and pressures. Participants will learn to identify when and how they experience stress in themselves. The material covered will include the causes of stress, individual assessments, relaxation techniques, methods of handling interpersonal stress, and audio tapes. Students will be asked to actively practice and utilize the techniques.

PRD:107  EXPLORATIONS FOR WOMEN I  1
In a group setting women will be provided the opportunity to explore their self-concepts and expectations of themselves and of the world, as well as to experiment with new directions for their personal growth. The group will use a variety of activities to help each member to become aware of her strengths, her needs and her patterns of communication and behavior, and to formulate personal goals and experiment with programs to achieve them.

PRD:108  PERSONAL GROWTH AND IDENTITY  1 - 2
This course is designed to involve participants in the process of seeing themselves more clearly having more available alternatives in their interaction with others, together with a clear perception of their own uniqueness. This class will be organized with a group discussion format emphasizing self-exploration.

PRD:109  HABIT CHANGE  1
Learn what the experts have discovered about changing a habit; use this information to overcome a self-defeating habit or develop a healthy habit. Possible goals: quitting smoking or drinking, starting an exercise program, controlling overeating, etc. Topics will include the stages of change, twelve change processes, and rebounding from relapse.

PRD:110  LEARNING TO COPE WITH TEST ANXIETY  1
This course is designed to help students learn to desensitize themselves (systematically) to the anxieties associated with the taking of tests. In the academic setting these "tests" may come in the form of quizzes, exams, oral reports, or contributions to class discussions. Students who find this course helpful are those who typically "freeze up" or "go blank" because of excessive anxiety leading up to and during testing situations, and as a result do not attain their level of competence.
PRD:114 COPEING WITH STRESS 1
An exploration of the nature and causes of stress and presentation of alternative ways of relieving stress, to include yoga, meditation, systematic desensitization, hypnosis and biofeedback.

PRD:120 STUDENT LEADERSHIP DEVELOPMENT 1
Provides the student with a basic understanding of the processes of leadership and decision-making in an educational setting. Topics include orientation to college procedures, time management, chairing skills, and group dynamics. Class consists of eight lecture/workshops and field experience by serving on or attending student association or college committees and class projects.

PRD:121 PERSONAL SUCCESS 1
The focus of this course is the enhancement of the student's self-esteem. The opportunity is provided for students to review their self-esteem in a variety of life areas (family, work, friends, education) and consider ways in which they work to enhance it. A number of self-initiating behaviors that persons of all ages may adopt to enhance self-esteem will be explored.

PRD:122 LEARNING THROUGH SERVICE 1
This course is designed for students who are seeking to expand learning in a designated academic or personal development course they are taking, reinforce academic and career goals, continue previous Service-Learning Projects, enhance their level of civic engagement and to learn more about the world of work in a non-profit agency. Additional hours required.

PRD:125 COLLEGE ORIENTATION FOR OLDER ADULTS 1
This course will focus on what may be special interests and concerns of the 60+ population. It is designed to familiarize older persons with relevant SLC resources and broader community resources and to discuss interests related to education and aging.

PHARMACY TECHNICIAN

PHT:101 PHARMACY TECHNICIAN ORIENTATION 3
This course defines the role of pharmacy technicians and includes an overview of the standards and regulations that govern technician practice. Prerequisite: Admission to the program. Additional lab hours required. Prerequisite: Reading Proficiency.

PHT:103 PHARMACY CALCULATIONS 3
This course presents the practical application of mathematics for pharmacy technician students. Prerequisite: Admission to program and Reading Proficiency.

PHT:104 PHARMACY LAW 1
This course examines the state and federal regulations that govern technician practice. Prerequisite: PHT:101 and Reading Proficiency. 1 lecture hour per week.

PHT:110 PHARMACY TECHNICIAN INTERNSHIP I 1
This course provides students with a minimum of 160 contact hours of supervised work experience in 1 or 2 different pharmacy practice settings.Malpractice insurance is required. This course must be taken concurrently with PHT:111. Additional hours required. Prerequisite: PHT:101 and Reading Proficiency.

PHT:111 PHARMACY TECHNICIAN INTERNSHIP I - SEMINAR 1
This course is the classroom part of the students' job-site training. The past week's experiences will serve as the topic for discussion and problem-solving exercises. This course must be taken concurrently with PHT:110. Prerequisite: Reading Proficiency. 1 lecture hour per week.

PHT:115 FUNDAMENTALS OF PHARMACY PRACTICE 6
This course prepares technicians to work specifically in a community or retail pharmacy. Prerequisite: Reading Proficiency. 3 lecture, 4 lab, 1 recitation hours per week.

PHT:116 PHARMACY TECHNICIAN PRACTICUM 1
This course provides students with a minimum of 80 contact hours of supervised work experience in a community or retail pharmacy. Malpractice insurance is required. This course must be taken concurrently with PHT:115. Additional hours required. Prerequisite: PHT:115 and Reading Proficiency.

PHT:117 PHARMACY TECHNICIAN PRACTICUM SEMINAR 1
This course is the classroom part of the students' job-site training. The past week's experiences will serve as the topic for discussion and problem-solving exercises. This course must be taken concurrently with PHT:116. Prerequisite: Reading Proficiency. 1 lecture hour per week.

PHT:201 PHARMACOLOGY 4
This course examines the effects of medication and alternative therapies that are commonly used to treat diseases and other abnormal conditions of the human body. Prerequisite: PHT:101 and BIO:215 and Reading Proficiency. 5 lecture, 1 recitation hours per week.

PHT:203 PHARMACY PRACTICE 4
This lab course simulates the daily activities in the following pharmacy practice settings: hospital, retail, and long-term-care. Additional lab hours required. Prerequisites: PHT:101 and PHT:103 and Reading Proficiency.

PHT:205 STERILE COMPOUNDING 4
Students learn to prepare sterile products according to the appropriate techniques, and to perform their work in accordance with the laws, regulations, and standards which govern the preparation of sterile products. Prerequisites: PHT:101 and PHT:103 and Reading Proficiency. 2 lecture, 3 lab, 1 recitation hours per week.

PHT:220 PHARMACY TECHNICIAN INTERNSHIP II 2
This course provides students with a minimum of 160 contact hours of supervised work experience in 2 or 3 different pharmacy practice settings. Malpractice insurance is required. This course must be taken concurrently with PHT:221. Additional hours required. Prerequisite: PHT:101 and Reading Proficiency.

PHT:221 PHARMACY TECHNICIAN INTERNSHIP II SEMINAR 1
This course is the classroom part of the students' job-site training. The past week's work experience will serve as the topic for discussion and problem-solving exercises. This course must be taken concurrently with PHT:220 and Reading Proficiency.

PHILSOPHY

PHL:101 INTRODUCTION TO PHILOSOPHY 3
An introduction to philosophical inquiry through a study of such perennial problems as the nature of truth and the possibility of knowledge, the various conceptions of the mind-body relation; the nature and basis of morality; the problem of free will and an analysis of the main arguments for the nature and existence of God. Emphasis upon methods and/or certain problems vary with the instructor. Prerequisite: Reading Proficiency.

PHL:102 INTRODUCTION TO LOGIC 3
An introduction to the methods for critically evaluating reasoning and constructing valid arguments. The course may include the techniques of both traditional (syllogistic) and symbolic logic. Informal logic (language definition and fallacies) may also be covered. Prerequisite: Reading Proficiency.

PHL:103 WORLD RELIGIONS 3
An orientation course examining the nature and function of religion in human experience and culture and an introduction to the history, content and present status of selected world religions such as Hinduism, Buddhism, Taoism, Confucianism, Islam, Judaism and Christianity. Prerequisite: Reading Proficiency.

PHL:104 ETHICS 3
An introductory survey of basic issues and approaches in the field of ethics, with the aim of showing the relevance of philosophical inquiry to contemporary moral concerns. Questions concerning the good life, the nature and content of morality, and the relation of the individual to the standards of society will be considered. Prerequisite: Reading Proficiency.

PHL:105 BLACK PHILOSOPHY 3
This course looks at the major philosophical and ideological themes manifested in Black life in the Western world. Black theology, Black nationalism, communalism, panAfricanism, Consciencism, African socialism, and Black values are some of the topics that may be included, as well as an introductory survey of African views. Prerequisite: Reading Proficiency.
PHL:112 BUSINESS ETHICS 3
This is a study of the nature and function of religion in the lives of black people. This course will include the relationship of Christianity, Islam, and other African Philosophies to the ongoing struggles of black people. Prerequisite: Reading Proficiency.

PHL:109 BIO-MEDICAL ETHICS 3
An examination of some moral problems such as patients’ rights, abortion, euthanasia, cloning, artificial insemination, the definition of death, the allocation of medical resources, experimentation with human subjects, behavior control and genetic engineering. The relevance of both traditional and modern ethical theories will be explored. Prerequisite: Reading Proficiency.

PHL:111 ENVIRONMENTAL ETHICS 3
First examines the history of ideas in the environmental movement. It next considers our human centered perspective and three alternatives to it: animal rights, reverence for life, and Aldo Leopold’s land ethic. Finally it discusses wilderness, endangered species, and global warming from the perspective of these three alternatives. Prerequisite: Reading Proficiency.

PHL:112 BUSINESS ETHICS 3
The ethical dimensions of the world of business are analyzed from a philosophical perspective. Using theories drawn from philosophy, students will evaluate business case studies with respect to such topics as personal and corporate responsibility and the obligations of justice. Prerequisite: Reading Proficiency.

PHYSICAL EDUCATION

PE:101 ADAPTIVE ACTIVITIES I 1
Individual therapeutic exercise programs including aquatic and resistance type activities, limited individual and team games, cardiovascular fitness instruction. Prerequisite: Department chair approval.

PE:102 ADAPTIVE ACTIVITIES II 1
Continued supervised program involving development of individualized therapeutic exercise programs including aquatic activities, strength building activities, flexibility or cardiovascular fitness instruction and training. Designed for students who may be limited in the amount/type of activity they can do. Prerequisite: PE:101

PE:103 AEROBIC FITNESS 1
A program of exercise designed to develop cardiovascular fitness. A variety of activities may be involved ranging from walking, jogging, calisthenics, and stretching to stationary cycling. The student is introduced to the basic principles of developing, assessing, and evaluating aerobic fitness.

PE:104 ARCHERY 1
Archery conducted in 25 yard indoor archery area includes shooting techniques, target shooting, Columbia rounds and intraclass competition. Archery classes sometimes held outdoors.

PE:105 DEEP WATER EXERCISE 1
A program of deep-water exercise designed to promote cardiovascular fitness. Assisted by a flotation device students will engage in warm-up, aerobic, and toning exercises in a suspended state, thereby avoiding hard impact on joints. Recommended for individuals who have excess weight, knee or back problems. Additional hours required.

PE:106 BACKPACKING AND HIKING 1
Introduction to outdoor living skills; menu planning, choice of proper hiking-camping apparel, camping development, safety and sanitation. Practicum includes two one-day trail walks and one weekend camping trip. (Each student is responsible for his/her own equipment).

PE:107 BASEBALL I 1
Indoor/outdoor instruction in hitting, fielding, throwing, baserunning, conditioning, bunting, strategy, position play.

PE:109 BASIC FITNESS I 1
Cardiovascular-neuromuscular development emphasizing focusing on the individual. Various methods of exercise are introduced.

PE:110 BASIC FITNESS II 1
Continuation of PE:109 format with additional variety of fitness modes - may include gymnastics, parcours fitness running course, aerobic dance.

PE:111 BASKETBALL I 1
Basics of ball handling, shooting, offense, defense, team play, Conditioning.

PE:112 BASKETBALL II 1
Advanced individual and team skills: offenses, defenses, special situations, coaching techniques and strategy. Prerequisite: PE:111 or Instructor approval.

PE:113 BICYCLING /ROAD TRACK AND TOURING 1
Bicycling includes campus and college area touring, fitness development, selection and maintenance of equipment. Instruction on safety, camping, competition.

PE:114 BILLIARDS 1
Pocket and cushion billiards techniques, breaking, bridging and cushion shots, individual and partner competition.

PE:116 BOWLING I 1
Bowling is held at a nearby lane (nominal fee). Instruction includes approach, delivery, scoring, handicapping.

PE:117 BOWLING II 1
Continued emphasis on skills including adjustments to lane conditions, approach, developing a strike ball, picking all spare and split combinations; individual and team competition.

PE:118 CAMPING AND FLOATING 1
Students are introduced to fundamentals of outdoor living (i.e. cooking, campsite development, shelter, canoeing, selection and care of equipment). The course includes float trips on Missouri Rivers. Each student should be a confident swimmer.

PE:119 CARE AND PREVENTION OF ATHLETIC INJURIES 1
The course is designed to introduce the student to selected aspects of athletic training. Material presented has sufficient introductory information so that comprehensive background knowledge of anatomy, physiology, and kinesiology is not required. Student participation enhances the meaning of information presented. Student observation and participation in the use of therapeutic modalities and opportunities to follow the sequence of care, treatment and rehabilitation of athletic injuries are provided. Guest speakers add insight and variety to the students. Prerequisite: Reading Proficiency.

PE:120 COMMUNITY CPR 1
Physiological principles of cardio-pulmonary function with practicum in administering this lifesaving technique. ARC Certification for those who qualify.

PE:121 CYCLING ERGOMETRY FOR FITNESS 1
A complete controlled aerobic training program for any age, sex, or fitness level. Course is designed to improve lung capacity, stimulate metabolism, effect body composition through the loss of fat, and reduce stress. This supervised program involves the development of individualized workload programs. Course is conducted in the Fitness Center and utilizes ergometry equipment especially for stationary bicycles.

PE:122 DANCE AEROBICS 1
Exercise to music. Involves full muscle activity combined with vigorous cardiovascular activity.

PE:123 DANCE AEROBICS II 1
Advanced movements of exercise set to music. Full muscle activity plus cardiovascular activity is a part of the program. A low impact component is included. Prerequisite: PE:122

PE:124 DANCE-CONTEMPORARY SOCIAL DANCE 1
The student will be exposed to contemporary and social dance steps/patterns. Content may include dance terminology, common step patterns/movements, rhythm and timing, and balance. Examples of dance include: East & West Swing, Imperial, Country Line and Slow Dancing.
PE:126  **FENCING I**  1
Introduction to fencing. Attacks, parries, strategy, and rules. Intraclass competition.

PE:127  **FENCING II**  1
Refinement of techniques learned in Fencing I. Introduction of advanced parries and attacks. Use of electric equipment.

PE:128  **FENCING III**  1
Students develop fundamental offensive and defensive techniques for sabre fencing. Rules, terminology and etiquette are addressed. The rules and basic strategy of bouting are introduced.

PE:129  **FIRST AID**  2
American Red Cross Standard First Aid and adult CPR. Emergency treatment for sick and injured including bleeding, breathing, poisoning, and fractures. Preventative concepts and cardiovascular resuscitation (CPR) also included. ARC certification available. This course may be taken to satisfy one credit hour of the physical education degree. Prerequisite: Reading Proficiency.

PE:130  **FITNESS CENTER I**  1
Proper technique and routines are presented for the development of strength, flexibility and endurance. Individualized programs are developed and personal progress is charted by student and monitored by instructor. The program is designed to produce maximal gains in all areas of fitness with a minimal time commitment.

PE:131  **FITNESS CENTER II**  1
Elements of strength training, flexibility, muscular endurance, cardiovascular conditioning and weight control are introduced. (Some variance by campus). Individualized programs are developed with instructor supervision and students participate and progress in a self-guided manner within parameters set and supervised by the instructor. Prerequisite: PE:130.

PE:132  **TOTAL FITNESS**  1 - 2
Participants develop a self-directed program based on sound principles of fitness and wellness. The course may include basic fitness tests and activities outside of the Fitness Center. Prerequisite: PE:130 and PE:131.

PE:133  **GOLF**  1
Basic fundamentals such as swing, club selection, putting, rules and etiquette are covered. Clubs are not provided.

PE:134  **HEALTH AND PERSONAL HYGIENE**  3
Lecture discussion course covering the interrelatedness of the body systems, the nature and communication of disease and the recovery process. Includes nutrition, fitness, sexuality, drugs and the wellness. Recommended for students intending to major in teacher education. Satisfies Missouri Teacher Certification. Prerequisite: Reading Proficiency.

PE:135  **ICE SKATING**  1
Instruction in basic fundamentals and techniques of ice skating including proper dress and equipment. Course is held at local skating rink.

PE:136  **ICE SKATING**  1
Basic techniques of hand-to-hand defense including jujitsu and karate. Basic throws, attacks, blocks and releases. General rules of safety and prevention of attack situations are covered.

PE:137  **PERSONAL DEFENSE I**  1
Continuation of defense skills with increased emphasis on preventative measures.

PE:138  **PERSONAL DEFENSE II**  1
Students participate in classroom and pool sessions as well as five supervised open water dives in various environments, utilizing equipment and skills beyond the scope of Scuba I - Open Water. Course is designed to prepare students for PADI Advanced Open Water Certification. Prerequisites: PE:153 or permission of instructor and Reading Proficiency.

PE:139  **SOFTBALL**  1
Indoor and outdoor soccer activity- instruction in ball handling, dribbling, trapping, passing, shooting, heading, throwing, goal tending, position play, team play, rules of the game. Hoc-soc is a 6-person game played indoors with modified rules, smaller goal, no out-of-bounds or off-side rule.

PE:140  **SOFTBALL**  1
Indoor instruction in hitting, fielding, throwing, baserunning, bunting, strategy, conditioning, position play.
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PE:161  STRESS MANAGEMENT  3
This course presents an overview of the effect of stress on the body including its
nature, physiology, role in disease and impact on one's health and wellness. A
variety of coping strategies will be explored with an emphasis on exercise, tai
chi, yoga, nutrition and diaphragmatic breathing. Prerequisite: Reading
Proficiency.

PE:162  SWIMMING I (BEGINNING/ELEMENTARY)  1
Fundamentals of breathing, kicking, strokes, entries, water games, stunts.
Strokes covered include crawl, back, side, elementary back, sculling, some
endurance swimming and introduction to diving.

PE:163  SWIMMING II (ALL LEVELS)  1
Intermediate course in swimming includes all strokes survival swimming,
endurance, elementary rescues, plus recreational water games.

PE:165  TAI CHI I  1
Taiji Quan is an ancient Chinese form of health and self-defense exercise that is
a combination of internal and external activities. Participants will learn a basic
form to serve as a solid foundation for future study.

PE:166  TAI CHI II  1
This course is a continuation of first level activities of Chen Style Taiji Quan.
Students will complete the Chen Style form, including Chen Style theory, and will
begin to learn other aspects of Taiji Quan practice, including Chen style pushing
hands and Taiji Zhuang (Taiji meditation), which will give a base for learning the
complete Chen style Taiji Quan system. Prerequisite: PE:165.

PE:167  TEAM SPORTS I  1
Indoor/outdoor sports activities may include: Flag football, field hockey, softball,
volleyball, hoc-soc, modified water polo and basketball.

PE:168  TEAM SPORTS II  1
Winter indoor team sports: iceless hockey, hoc-soc, power volleyball, basketball,
modified water polo. Spring outdoor team sports: softball, field hockey, soccer.
Selection based on availability of facilities.

PE:169  TENNIS I  1
Introduction to basic strokes: forehand, backhand, serve, volley, lob; position
play, strategy, singles and doubles matches, history, rules and intraclass compe-
tition included.

PE:170  TENNIS II  1
Extension of PE: 169 with added emphasis on competitive aspect singles-dou-
dles, play-serving game, strategy-ladder competition.

PE:171  VOLLEYBALL I  1
Techniques in serving, volleying, setting-up, spiking, position play, scoring, intra-
class competition.

PE:172  VOLLEYBALL II  1
Basic competitive skills including bumping, setting, hitting, blocking, serving,
passing; plus history, rules and team play. Prerequisite: PE: 171.

PE:173  WALKING FOR FITNESS  1
Emphasis on techniques of walking, cardiovascular fitness, weight control, safe-
ty and equipment.

PE:174  WATER AEROBICS  1
Water Aerobics fitness, a program of water exercise designed to develop car-
diovascular fitness. A variety of water exercises for all ages and swimming lev-
els. Non-swimmers can participate; all activities are done in the shallow end of
pool.

PE:176  WATER SAFETY INSTRUCTION - NEW METHOD  1
Certifies students to teach progressive swim classes. The course incorporates the
ARC methods of teaching. Prerequisites: PE:142 and 17 years of age or cur-
rent ARC Emergency Water Safety or ARC Lifeguard Training. Prerequisite: Reading Proficiency. 1/2 hour lecture, 1 1/2 hour lab per week.

PE:177  WEIGHT TRAINING I  1
General muscular development through circuit weight training utilizing universal
weight machines. Progression measured on the 18 stations.

PE:178  WEIGHT TRAINING II  1
Advanced training on newest weight training techniques utilizing the latest
weight machines. Increased muscular development through lifting more weight.

PE:181  YOGA I (BEGINNING)  1
Introduction to Hatha Yoga (the Yoga of physical well-being). Designed for stu-
dents of all physical conditions. Tones and molds the body, reduces the effects of
everyday physical and mental strain. Written observations included in course
requirements.

PE:182  YOGA II (ALL LEVELS/INTERMEDIATE)  1
Course for beginners and intermediates. Course deals with Hatha Yoga (the Yoga
of physical well-being). Improves flexibility and muscle tone, working toward
reduction of effects of everyday strain.

PE:183  FIGURE CONTROL AND FLEXIBILITY  1
Extension of Figure Control. Introduction of more extensive routines, cardiovas-
cular principles, principles of static versus ballistic exercise, addition of more
variable resistance work.

PE:186  SCUBA DIVING IV - RESCUE DIVER  1
Students acquire the knowledge and skills necessary to organize, implement, and
supervise a rescue operation including underwater and surface rescue tech-
niques, search patterns for locating a missing diver and administering first aid
and/or CPR. The ability to organize and function as part of a team is highly
stressed. Prerequisite: PE:154 or equivalent national certification and Reading
Proficiency.

PE:187  SCUBA DIVING V - DIVEMASTER I  1
Divemaster I is an internship program where students observe and assist with
beginning students in the pool, classroom, and open water sessions under direct
supervision of current instructors. Divemaster candidates learn to identify poten-
tial problems and effect tactful corrective measures as well as learning how to
instruct beginning scuba students in academic and skill development. Candidates
must hone their aquatic skills to “demonstration” quality and will
demonstrate various open water skills for beginning classes throughout the
semester. Prerequisite: PE: 186 and Reading Proficiency.

PE:189  SCUBA DIVING VI: DIVEMASTER II  1
Divemaster II is an internship program where students observe and assist with
advanced scuba students in the pool, classroom, and open water sessions under
direct supervision of current instructors. Divemaster candidates enhance their
abilities through extended diving experiences. This course is designed to
familiarize the student with advanced level students on a variety of diving topics.
Candidates must be current students of the well-recognized, well-respected
mainstream diving programs.

PE:195  JAZZ I  1
This is an introductory dance class that involves learning basic jazz techniques
such as jumps, pirouettes, battements and leaps. Students will develop body
awareness and gain flexibility, strength, and coordination by executing warm-up,
progressions and combinations set to contemporary music.

PE:197  CARDIO-FLEX  1
Emphasis in cardiovascular fitness, techniques of walking, low impact movement
patterns set to music, weight control, and conditioning stretches to improve flex-
ibility.

PE:199  SCUBA DIVING VI: DIVEMASTER II  1
This is an introductory dance class that involves learning basic jazz techniques
such as jumps, pirouettes, battements and leaps. Students will develop body
awareness and gain flexibility, strength, and coordination by executing warm-up,
progressions and combinations set to contemporary music.

PE:200  FIGURE CONTROL AND FLEXIBILITY  1
Extension of Figure Control. Introduction of more extensive routines, cardiovas-
cular principles, principles of static versus ballistic exercise, addition of more
variable resistance work.

PE:201  BODY CONTOURING  1
Exercise class using resistance in the form of free weights and elastic bands to
develop the figure, posture, flexibility and muscle tone. Nutrition strategies will
be discussed.

PE:202  WELLNESS AND FITNESS CONCEPTS  3
This course is designed to assist the individual to develop a personalized well-
ness program. Topics will include exercise, nutrition, substance abuse, weight
management, stress management, sexually transmitted disease, and other rele-
vant topics. An exercise component will be included. Additional hours required.
Prerequisite: Reading Proficiency.

PE:203  WATER AEROBICS  1
A variety of water exercises for all ages and swimming lev-
els. Non-swimmers can participate; all activities are done in the shallow end of
pool.

PE:204  WATER SAFETY INSTRUCTION - NEW METHOD  1
Certifies students to teach progressive swim classes. The course incorporates the
ARC methods of teaching. Prerequisites: PE:142 and 17 years of age or cur-
rent ARC Emergency Water Safety or ARC Lifeguard Training. Prerequisite: Reading Proficiency. 1/2 hour lecture, 1 1/2 hour lab per week.

PE:205  WEIGHT TRAINING I  1
General muscular development through circuit weight training utilizing universal
weight machines. Progression measured on the 18 stations.

PE:206  WEIGHT TRAINING II  1
Advanced training on newest weight training techniques utilizing the latest
weight machines. Increased muscular development through lifting more weight.

PE:207  WELLNESS AND FITNESS CONCEPTS  3
This course is designed to assist the individual to develop a personalized well-
ness program. Topics will include exercise, nutrition, substance abuse, weight
management, stress management, sexually transmitted disease, and other rele-
vant topics. An exercise component will be included. Additional hours required.
Prerequisite: Reading Proficiency.
PED:107 BASIC KAYAKING SKILLS AND WATER SAFETY 1
This course provides the fundamentals of Kayaking. Content covered includes
environmental safety in an indoor facility, flatwater skills on a lake, and ends
with moving water skills on a river. Other topics include boat designing/fitting,
paddling and stroke introduction. Additional hours required. Prerequisite: Entry
Test Requirements: must demonstrate comfort in swimming in the deep end of
the pool and display ability to swim the length of the pool continuously.

PED:116 PILATES 1
Pilates improves core strength and balances the muscles around the joints,
improving the way your body functions, looks and feels. It focuses on breathing,
pelvic placement, rib-cage placement, scapular movement, and head and cervi-
cal spine placement.

PED:134 GOLF II 1
This course provides students with the opportunity to learn and practice
advanced skills in driving, pitching, putting, and selected course play. Students
will develop skills which will provide them with an enhanced insight and under-
standing of golf. Additional hours required. Prerequisite: PE:133 or prior golf play-
ing experience.

PED:135 FENCING IV 1
Techniques, target area, rules and strategy of epee fencing will be introduced.
Additional hours required. Prerequisite: PE:126.

PED:136 POWER WALKING I 1
Speed walking technique and cardiovascular fitness will be the major emphasis.
Equipment selection, safety and warm up will be reviewed. Prerequisite: PE:173.

PED:138 YOGA - ADVANCED 1
Ten advanced asanas and additional breathing techniques will be presented. The
emphasis will be placed on Classical yoga. Additional hours required.
Prerequisites: PE:181 and PE:182.

PED:139 EXTREME FITNESS 1
This course is designed to teach correct execution of lower- and upper-body sym-
metric exercises; teach the correct execution of sport-specific sprinting and speed
development exercises. Additional hours required. Prerequisites: Permission by instructor. The student must provide documentation of a recent completed physical examination and sign a release waiver to be admitted into the class.

PED:201 PSYCHOLOGICAL PERSPECTIVE IN EXERCISE AND SPORT 3
Sport and exercise psychology is the scientific study of people and behavior in
sport and exercise contexts. This course focuses on two areas of study: (1) learning how psychological factors affect an individual’s physical performance and (2) understanding how participation in sport and exercise affects a person’s psychological development, health, and well-being. Prerequisite: PSY:200 and Reading Proficiency.

PHYSICAL SCIENCE

PSI:101 PHYSICAL SCIENCE LECTURE I 3
Lecture survey of the fundamental principles of physics and chemistry with
emphasis on science process skills. Designed for students in non-science and
career curricula. Content same as lecture portion of PSI:124. Credit may be earned for either PSI:124 or PSI:101, not both. Prerequisite: MTH:007 or MTH:030 with grade of “C” or better; or MTH:108 with grade of “C” or better, or one year of high school algebra with grade of “C” or better each semester and Reading Proficiency.

PSI:105 PHYSICAL SCIENCE I 3
A lecture/laboratory introduction to science with special subject adaptations for
students in non-science and career programs. Additional lab hours required. Prerequisite: Reading Proficiency.

PSI:107 PHYSICAL SCIENCE LABORATORY I 1
A laboratory course in general physical science including topics related to
PSI:101. Prerequisite: concurrent or prior enrollment in PSI:101 and Reading Proficiency.

PSI:111 INTRODUCTION TO ASTRONOMY I 3
Descriptive coverage of the topics: earth, solar system, stars, galaxies and evo-
lution of the universe for non-science majors. Prerequisite: Reading Proficiency.

PSI:112 INTRODUCTION TO ASTRONOMY II 3
Selected topics of interest in modern astronomy are covered in-depth. Prerequisite: PSI:111 or consent of instructor and Reading Proficiency.

PSI:115 OBSERVATIONAL ASTRONOMY 1
An introduction to astronomical observations, techniques and instruments, which
may accompany PSI:111 or PSI:112 (Introduction to Astronomy I or II) or may be
taken independently. No prior knowledge of astronomy is assumed. Additional
lab hours required. Prerequisite: Reading Proficiency.

PSI:121 LIGHT AND VISION 3
A descriptive coverage of light, color lighting effects, vision lasers and hologra-
phy. Prerequisite: Reading Proficiency.

PSI:123 METEOROLOGY 3
This physical science course introduces the reasons why we have weather and
the forces which create specific weather patterns and phenomena. Topics range
from global wind and radiation patterns on the macrocosmic, to thunderstorms and
tornados on the microscale. Students regularly participate in weather forecast-
ing using daily public weather information. Prerequisite: Reading Proficiency.

PSI:124 PRINCIPLES OF PHYSICAL SCIENCE 4
A survey of the fundamental principles of physics and chemistry with emphasis
on science process skills. Laboratory exercises illustrate and reinforce lecture
topics. Credit may be earned for either PSI:124 or PSI:101, not both. Additional
lab hours required. Prerequisite: MTH:007 or MTH:030 with grade of “C” or bet-
ter, MTH:108 with grade of “C” or better, or one year of high school algebra with grade of “C” or better and Reading Proficiency.

PHYSICAL THERAPIST ASSISTANT

PTA:100 INTRODUCTION TO PHYSICAL THERAPIST ASSISTANT 2
This course provides an introduction to the professional field of physical therapy
and the role of the physical therapist assistant in the health care system. Legal
and ethical questions are discussed as well as interpersonal communication
skills, learning styles, and the importance of empathy and respect for all
patients. Prerequisite: Reading Proficiency.

PTA:104 CLINICAL EXPERIENCE I 2
Students will have the opportunity to practice communication, interpersonal,
technical and administrative skills acquired in the first year of study in a clinical
facility under the supervision of a licensed clinical instructor for three weeks.
Prerequisite: PTA:105 with a grade of “C” or better and Reading Proficiency. 120
clinical hours.

PTA:105 FUNDAMENTALS OF PATIENT CARE FOR THE PTA 4
This course is an introduction to the basic patient care skills in physical therapy.
Treatment procedures include positioning, transfer techniques, massage, gait
with and without assistive devices, wheelchair management and architectural
barriers. Emphasis throughout is on safety, the preparation of the patient physi-
cally and psychologically, appropriate PTA/patient interaction, and patient/care-
giver teaching. Additional lab hours required. Prerequisite: PTA:214 with a grade
of “C” or better and Reading Proficiency.

PTA:208 HEALTH OCCUPATION SEMINAR 2
A study of the health care system and the role of PTA within it. Topics include:
health care organizations; department policies and procedures; audit; legal
and ethical issues; community resources; record keeping; and application for work. Prerequisite: PTA:100 and Reading Proficiency.

PTA:210 CLINICAL EXPERIENCE FOR ARMY TRANSITION STUDENTS 4
A six-week clinical experience for students in the army transition program to
PTA. This is a full-time (40-hour per week) experience, with opportunity to devel-
op skills under the supervision of a licensed physical therapist. Prerequisite: Program acceptance and Reading Proficiency.

PTA:211 PHYSICAL AGENTS 3
This course provides PTA students with scientific knowledge and clinical applica-
tion skills required to safely and efficiently provide treatment under the direc-
tion of a PT with the following physical agents: thermal agents, compression
therapies, traction, cryotherapy, hydrotherapy, light and sound agents, and elec-
trotherapeutic modalities. Additional lab hours required. Prerequisite: PTA:105
with a grade of “C” or better and Reading Proficiency.
PTA:212 THERAPEUTIC EXERCISE AND REHABILITATION CONCEPTS I  
This course covers data collection and intervention techniques used by the PTA under the direction and supervision of the PT in the treatment of arthritis, postural abnormalities, extremity and spinal dysfunctions, abnormal gait, cardiopulmonary conditions, and amputations. The principles and application of prosthetic and orthotic devices will also be included. Prerequisite: PTA:105 with a grade of “C” or better and Reading Proficiency.

PTA:213 THERAPEUTIC EXERCISE AND REHABILITATION CONCEPTS II  
Study of normal development neurological and long term disabilities. Required off campus observations. Additional lab hours required. Prerequisite: PTA:212 and Reading Proficiency.

PTA:214 DATA COLLECTION AND INTERVENTION TECHNIQUES FOR THE PTA  
An introductory course on data collection and intervention techniques used by the PTA which includes vital signs, sterile techniques, dressing changes, emergency procedures, goniometry, muscle testing, cardiovascular response to exercise, and gait. In addition the basic concepts of exercise and techniques to develop flexibility, strength, power, and endurance will be taught. Additional lab hours required. Prerequisite: BIO:209 with a grade of “C” or better, or concurrent enrollment in BIO:208, and Reading Proficiency.

PTA:215 MEDICAL CONDITIONS IN REHABILITATION  
This course is an overview of disease conditions commonly seen for treatment in occupational and physical therapy departments. Acceptance into the PTA or OTA program is required. Prerequisites: BIO:207 with a grade of “C” or better and Reading Proficiency.

PTA:216 CLINICAL EDUCATION IIA  
Students will have the opportunity to practice skills acquired in the first & second years of the program in a clinical facility under the supervision of a licensed Physical Therapist for 6 weeks. Prerequisite: Permission of Program Director and Reading Proficiency.

PTA:217 CLINICAL EDUCATION IIB  
Students will have the opportunity to practice skills acquired in the first & second year of the program in clinical facility under the supervision of a licensed Physical Therapist for 6 weeks. Additional hours required. Prerequisite: Permission of Program Director and Reading Proficiency.

PHYSICS

PHY:111 COLLEGE PHYSICS I  
This course is the first semester of a two-semester non-calculus physics sequence. The entire sequence covers topics in mechanics, heat, sound, electricity, magnetism, optics and modern physics. Additional lab hours required. Prerequisite: MTH:144 or MTH:160 or concurrent enrollment in MTH:160A or MTH:160B or MTH:160G and Reading Proficiency.

PHY:112 COLLEGE PHYSICS II  
This course is the second semester of a two-semester non-calculus physics sequence. The entire sequence covers topics in mechanics, heat, sound, electricity, magnetism, optics and modern physics. Additional lab hours required. Prerequisite: PHY:111 and Reading Proficiency.

PHY:122 ENGINEERING PHYSICS I  
The first semester of a three-semester calculus-level physics sequence. The entire sequence covers topics in mechanics, heat and thermodynamics, optics, electricity and magnetism, and nuclear and atomic physics, with mechanics being one of the topics covered in the first semester. Additional lab hours required. Prerequisite: prior or concurrent enrollment in MTH:220 and Reading Proficiency.

PHY:223 ENGINEERING PHYSICS II  
The second semester of a three-semester calculus-level physics sequence. The entire sequence covers topics in mechanics, heat and thermodynamics, optics, electricity and magnetism, and nuclear and atomic physics, with optics being among the topics included in the second semester. Additional lab hours required. Prerequisites: PHY:122 and MTH:230 and Reading Proficiency.

PHY:224 ENGINEERING PHYSICS III  
The third semester of a three-semester, calculus-level physics sequence. The entire sequence covers topics in mechanics, heat and thermodynamics optics electricity and magnetism, and nuclear and atomic physics, with modern (nuclear and atomic) physics being the primary topics included in the third semester. Additional lab hours required. Prerequisite: PHY:223 and prior or concurrent enrollment in MTH:240 and Reading Proficiency.

PLASTICS TECHNOLOGY

PLA:100 INTRODUCTION TO PLASTICS TECHNOLOGY  
This is an introductory course in Plastics Technology program. The course is designed to give an overview of the plastics industry, plastics materials, and various methods of plastics processing including injection and blow molding and extrusion processes. Additional lab hours required. Prerequisite: Reading Proficiency.

PLA:200 PLASTICS MACHINE OPERATIONS I  
This is the first course in the Plastics Technology Certificate program. It is the first of a two course sequence that details plastics processing techniques including injection molding, blow molding, and extrusion. The hydraulic and electric principles of machine operation are considered, and followed through with “hands on” operation for verification. Safety considerations in processing are included where applicable. Prerequisites: PLA:100 or Consent of Department, and Reading Proficiency.

PLA:250 PLASTICS MACHINE OPERATIONS II  
This is the last course in the plastics technology certification program, and the second of a two course sequence that details processing techniques. The primary emphasis is on injection molding, blow molding, and secondary operations. Process capability and process control are also considered. Additional lab hours required. Prerequisite: PLA:200 or Consent of Department, and Reading Proficiency.

PLA:290 WORKPLACE LEARNING: PLASTICS TECHNOLOGY  
This workplace-based course provides the student the opportunity to apply theory and skills learned in the classroom, learn new skills, and explore career possibilities while supervised by a professional in the field and a faculty member. Students will observe and participate in the functions of the industry to enhance their preparation for entering the field. Minimum of 50 hours per credit hour in the workplace throughout the term. Additional hours required. Prerequisite: PLA:200 or Consent of the department, and Reading Proficiency.

POLITICAL SCIENCE

PSC:101 INTRODUCTION TO AMERICAN POLITICS  
A survey of the American political scene which meets the State requirement. Basic values, current issues, government processes, and citizen rights are discussed in a modern framework. National, as well as some state and local areas, are covered. Prerequisite: Reading Proficiency.

PSC:102 AMERICAN NATIONAL POLITICS  
A basic course which introduces the student to political parties, interest groups, elections, individual freedoms and the institutions of the national government (Congress, the Courts, and the President and bureaucracy). This course and PSC:103 are recommended for the social science major. Prerequisite: Reading Proficiency.

PSC:103 STATE AND URBAN POLITICS  
This course is a study of the political patterns of the American states and their formal and informal relationships to local governments. Special emphasis is placed on urban, suburban, and metropolitan politics and problems. Prerequisite: Reading Proficiency.
PSC:104  BRITISH POLITICS AND SOCIETY  3
This course introduces students to some of the main institutions and issues of contemporary British politics and society. Through lectures, videos, text assignments, and field trips, students will explore government in 21st-century Britain. Prerequisite: Reading Proficiency.

PSC:106  BLACKS AND THE AMERICAN POLITICAL PROCESS  3
A study of the American political system and its effect on Black Americans. This includes an analysis of governmental processes, current issues, citizen's rights, and techniques for effective participation in the political process. Prerequisite: Reading Proficiency.

PSC:107  INTRODUCTION TO INTERNATIONAL STUDIES  3
This course is designed to provide an introduction to the international system. The focus is on the emergence of the Third World as a significant part of the international system, the global issues of food, energy, and population, and the politics of the conflicts in the Middle East and South Africa. Prerequisite: Reading Proficiency.

PSC:201  INTERNATIONAL RELATIONS  3
An introduction to politics and policies among nations. Topics discussed include balance of power, balance of terror, terrorism, developing countries, international economic transactions, multinational corporations, international organizations, and the foreign policies of the major powers. Prerequisite: Reading Proficiency.

PSC:204  POLITICS OF AFRICAN NATIONS  3
This course is an analysis of representative and current problems of African nations with particular attention to some specific problems of political development and modernization common to all of them. Prerequisite: Reading Proficiency.

PSC:205  CONSTITUTIONAL ISSUES  3
A study of various constitutional issues as free speech; sex, age and wealth discrimination, privacy, abortion; de facto segregation; and state and national issues. Missouri cases related to such constitutional issues will be examined. Cases are used as a basis for discussion. Prerequisite: Reading Proficiency.

PSC:207  FUTURE WORLDS: POLITICS AND SOCIETY  3
This course introduces alternative approaches to the future. The impact of technology on society will be discussed along with a consideration of environmental problems including energy, food supply, population, and natural resources. Discussions will explore political and economic power and institutions in an interdisciplinary framework. Prerequisite: Reading Proficiency.

PSC:209  THE UNITED NATIONS  3
The study of the United Nations Organization emphasizing issues, procedures, problems and prospects and its role in promoting world peace. Prerequisite: Reading Proficiency.

PSC:211  U.S. FOREIGN POLICY  3
This course traces the evolution of American foreign policy from the origins of World War II to the present. The focus is on the cold war, containment, and contemporary issues. Specific policies and objectives are analyzed and evaluated along with the experiences, thinking, and goals of decision-makers. Prerequisite: Reading Proficiency.

PSC:212  RUSSIAN POLITICS AND SOCIETY  3
Marx's original communist ideology, the political history of the Soviet state, and the government and politics of contemporary Russia will be examined. Prerequisite: Reading Proficiency.

PSY:100  PSYCHOLOGY OF GRIEF  2
This course investigates the meaning of death, the experience of dying, choices and decisions in death, death and the child, grief and bereavement. Special emphasis is placed on the role of funeral service personnel in working with the dying and with the bereaved. Prerequisite: Reading Proficiency.

PSY:125  HUMAN SEXUALITY  3
Human sexuality includes not only the biological component of male and female sexuality, but also attitudes, values and feelings about one's own gender and sex role. Consequently, in dealing with sex as a natural biological function, the expression of which is a dimension of psychosocial behavior, the sexual development and/or differentiation of men and women from conception to maturity will be stressed. (Same course as BIO:122 and SOC:125). Prerequisite: Reading Proficiency.

PSY:200  GENERAL PSYCHOLOGY  3
This course is an introduction to the scientific study of human behavior. It attempts to help students gain insights into their own and others’ behavior. A variety of topics relating to psychological development will be covered. Prerequisite: Reading Proficiency.

PSY:203  CHILD PSYCHOLOGY  3
Psychological basis of child growth and development is covered. Emotional, mental, physical and social needs of childhood and adolescence are covered. Includes an analysis of the factors in the home, school and community which influence behavior and personality. Prenatal development and the problems of pregnancy are covered. Prerequisite: PSY:200 and Reading Proficiency.

PSY:205  HUMAN GROWTH AND DEVELOPMENT  3
This course is a survey of the basis of human growth and development. Emotional, mental, physical and social needs of children, adolescents and adults are reviewed. Analysis of the multiple factors which influence and shape behavior and personality is made. Prerequisite: PSY:200 and Reading Proficiency.

PSY:206  INTRODUCTION TO SOCIAL PSYCHOLOGY  3
This course presents an overview of social behavior and cognitive processes with emphasis on such topics as first impressions, impression management, nonverbal behavior, persuasion, conformity, interpersonal relationships, altruism, prejudice and discrimination, and group behavior. Prerequisite: PSY:200 and Reading Proficiency.

PSY:207  APPLIED PSYCHOLOGY  3
This course involves the application of psychological principles to problems of personal and social adjustment in a variety of settings. Prerequisite: PSY:200 and Reading Proficiency.

PSY:208  ABNORMAL PSYCHOLOGY  3
A survey of abnormal/deviant behavior, including the causes and theories concerning neuroses, psychoses, mental retardation, drug abuse, sexual disorders, criminal behavior, and other selected topics. A discussion of the prevention and treatment of these disorders is included. Prerequisite: PSY:200 and Reading Proficiency.

PSY:210  PERSONALITY AND ADJUSTMENT  3
An examination of the contributions of the major schools of human personality and its expression in patterns of adjustment and growth as well as in dysfunctional behavioral patterns. Theories surveyed will represent dynamic, humanistic, cognitive and behavioral perspectives. Adjustment issues include: self concept, social environment and role adaptation, self-management, maladjustment, remediation and treatment. Prerequisite: PSY:200 and Reading Proficiency.

PSY:211  BEHAVIORAL STATISTICS  4
An introduction to a number of descriptive and inferential statistics and how these are applied in the analysis of behavioral research data. Topics to be covered include the following: descriptive statistics: frequency distributions measures of central tendency, measures of variability and correlation. Inferential statistics: parameter estimation, probability theory and hypothesis testing, tests, analysis of variance and nonparametric tests including proportions test and chi square. Additional lab hours required. Prerequisites: PSY:200, or SOC:101, and MTH:140 and Reading Proficiency.

PSY:213  PSYCHOLOGY OF AGING  3
An examination of normal and pathological aging changes in personality, sensory mechanisms, intelligence, creativity, and sexuality with some emphasis on methods of treatment. Prerequisite: PSY:200 and Reading Proficiency.
PSY:214 ADOLESCENT PSYCHOLOGY 3
The study of the individual from puberty to young adulthood. An examination of the physical, social, emotional, cognitive and moral development of adolescence. Additional topics of importance such as juvenile delinquency, adolescent sexuality and vocational choice are also discussed. Prerequisite: PSY:200 and Reading Proficiency.

PSY:215 BRAIN AND BEHAVIOR 3
This course examines the basic mechanisms of neuronal structure, function and communication. Behavioral functions studied include: sensations and perception, emotion and drives, learning and memory, vision, sleep and dreams, stress, addiction, language, aging effects, sex differences, and disorders. Prerequisites: PSY:200 and Reading Proficiency.

PSY:216 PSYCHOLOGY OF GENDER 3
Psychological and cultural examination of gender, gender roles, socialization, and issues related to stereotyping, gender differences and similarities, and mental health. Prerequisite: PSY:200 and Reading Proficiency.

PSY:217 CROSS-CULTURAL PSYCHOLOGY 3
Cross-Cultural Psychology will examine the influence and impact of a variety of cultures (e.g., Chinese, Indian, Latino, Japanese, Middle Eastern) on psychologi- cal issues. Among the psychological issues included are: parenting, aging, gen- der, personality, cognition, and stress. Prerequisite: PSY:200 and Reading Proficiency.

PSY:218 ADDICTION AND COMPULSIVE BEHAVIOR 3
This course explores the dynamics and scope of addiction and compulsive behav- ior in human experience. Unlike a course strictly devoted to substance abuse, this course examines the extent to which a chemical dependency model of addiction is applicable to other forms of compulsive behavior. Prerequisite: PSY:200 and Reading Proficiency.

QUALITY CONTROL

QC:100 INTRODUCTION TO QUALITY CONTROL 3
A course that teaches the basic theories and concepts of quality control. Emphasis will be placed on the current technology used in quality control. Topics covered will include organization structure, collection of quality related informa- tion, quality engineering and total quality control. Computer applications and quality control software will be utilized to develop graphical analysis and diag- nosis of symptoms. Quality planning principles will be introduced as a method of quality improvement. Prerequisite: Reading Proficiency.

QC:102 QUALITY COST ANALYSIS 3
A survey course on the elements of product costs as they relate to quality. Direct quality cost, prevention, appraisal and failure and indirect quality cost: consumer incurred, customer dissatisfaction will be discussed in detail. The collection and evaluation of cost data as related to quality will be developed on a measurement base that is sensitive to change. Prerequisite: Reading Proficiency.

QC:104 PRINCIPLES AND APPLICATION OF QUALITY 3
A course designed to teach the current technology used in quality control with emphasis on computer applications and software. Product control, job shop con- trol and quality planning will be emphasized. Quality improvement through graphical analysis and diagnosis of symptoms, causes and remedies will be stressed. Prerequisite: Reading Proficiency.

QC:105 NON-DESTRUCTIVE TESTING 4
This course presents the theory and application of the most common non- destructive test methods. Students will learn the types of equipment and proce- dures used for the testing of various materials as well as joined materials, detail parts and assemblies. Testing methods studied will include ultrasonic, eddy cur- rent, x-ray, magnetic particle and liquid penetrant. Additional lab hours required. Prerequisite: Reading Proficiency.

QC:200 QUALITY ASSURANCE 3
Advanced course on the scope and function of quality assurance. Topics covered include vendor selection, records, procurement methods and data analysis. The subject of quality standards will be covered and students will be instructed in quality audit techniques. Prerequisite: Reading Proficiency.

QC:202 INSPECTION METHODS 3
This course will introduce the subject of inspection as it relates to the product or process specification. The location of various inspection functions, type of inspection plans, the inspection standard and inspection organization will be dis- cussed. Inspection records keeping and tool calibration will be developed for a typical inspection function. Prerequisite: Reading Proficiency.

QC:204 RELIABILITY AND FAILURE ANALYSIS 3
This course will analyze the component failure to determine the validity of a product design. The subject of failure will be developed on a coordinated approach to include: failure prediction, failure testing and failure elimination in design, manufacturing and field use. Prerequisite: QC:202 and Reading Proficiency.

QC:206 STATISTICAL QUALITY CONTROL I 3
Introduction to frequency distributions and the normal curve. Concepts of varia- tion, statistical process control and process capability. Pre-control, control charts for variables and attributes, and SPC techniques for short runs will be discussed. Prerequisite: MTH:124 or QC:204 and Reading Proficiency.

QC:208 STATISTICAL QUALITY CONTROL II 3
Fundamentals of probability and probability distributions. Development and use of acceptance sampling plans and operating characteristic curves. Introduction of a wide assortment of sampling strategies and hypothesis testing. Prerequisite: QC:206 and Reading Proficiency.

QC:209 DESIGN OF EXPERIMENTS/TAGUCHI METHODS 3
Introduction to techniques for efficiently designing and analyzing experiments to optimize processes or product designs. Emphasis is on the use of Taguchi methods and utilizing techniques to minimize variation. Prerequisite: QC:208 and Reading Proficiency.

QC:210 SOFTWARE QUALITY ASSURANCE 3
Course provides theory and application of quality assurance practices at each phase of software life cycle development. Government and industry software quality assurance standards are covered. Prerequisite: Reading Proficiency.

QC:211 ASSESSMENT OF QUALITY SYSTEMS 3
This course will discuss methods for evaluating the effectiveness of a company’s quality system. Standards and criteria to be used include the current ISO 900 series, the Malcolm Baldrige National, and state quality award criteria. Self- assessment and general auditing techniques will be examined, along with how to utilize these evaluation methods to foster a company’s improvement journey. Prerequisite: Reading Proficiency.

QC:212 QUALITY TOOLS FOR ADVANCED MANUFACTURING 3
This advanced course covers tools used in a manufacturing environment. Topics covered include quality attitude, quality statistics, probability, the tools of quali- ty, process improvement, metrology, and computer generated charts and graphs. Prerequisites: MTH:124 or MTH:140 or MTH:144, and Reading Proficiency.

RADIOLOGIC TECHNOLOGY

XRT:101 RADIOGRAPHIC PROCEDURES I 6
In-depth coverage of radiographic anatomy, positioning and examination proce- dures for the chest, abdomen, IV urogram, gastrointestinal series and selected portions of the extremities. In-depth coverage of basic radiation protection, nurs- ing procedures, ethics and terminology are presented. Additional hours required. Prerequisite: current enrollment in program and Reading Proficiency.

XRT:102 RADIOGRAPHIC PROCEDURES II 3
A continuation of XRT:101, covering radiographic anatomy, positioning and exam- ination procedures for the extremities, shoulder and pelvic girdle, bony thorax and vertebral column and the skull. Prerequisite: XRT:101 and Reading Proficiency.

XRT:103 RADIOGRAPHIC PROCEDURES III 3
A continuation of XRT:102, covering intraoral, bedside, trauma and selected speci- alized procedures. Prerequisite: XRT:102 and Reading Proficiency.
XRT:104  PRINCIPLES OF RADIOGRAPHIC EXPOSURE I  2  
This course is intended to give the beginning student basic knowledge in tech-
nique and an in-depth coverage of exposure factors, quality of radiographs.  
Additional lab hours required. Prerequisite: XRT:101 and Reading Proficiency.

XRT:105  PRINCIPLES OF RADIOGRAPHIC EXPOSURE II  2  
Continuation of XRT:104 with an in-depth coverage of quality of radiographs,  
control of exposure factors, and techniques of chart construction. Additional lab  
hours required. Prerequisite: XRT:104 and Reading Proficiency.

XRT:107  RADIOLOGIC PHYSICS I  2  
Fundamental principles of radiation physics and equipment to include the study  
of x-ray tubes, rating charts, radiation control devices and automatic processing.  
Prerequisite: XRT:101, XRT:102, and XRT:104 and Reading Proficiency.

XRT:108  RADIOLOGIC PHYSICS II  2  
Production and measurement of radiation, interaction with matter, principles of  
radioactivity and electromagnetic radiation will be covered. Prerequisite:  
XRT:101, XRT:102, and XRT:107 and Reading Proficiency.

XRT:111  CLINICAL EDUCATION I  1  
Observation in all aspects of the radiology department. Prerequisite: Current  
enrollment in Radiologic Technology program and Reading Proficiency. Forty clinical  
hours per week for two weeks.

XRT:112  CLINICAL EDUCATION II  2  
Practicum in basic radiographic positioning. Prerequisite: XRT:111 and Reading  
Proficiency.

XRT:116  CLINICAL EDUCATION III  4  
Practicum in radiographic positioning and the use of contrast media. Prerequisite:  
XRT:112 and Reading Proficiency. 27 clinical hours per week (432 total hours per semester).

XRT:121  RADIOGRAPHIC FILM EVALUATION I  2  
A critical analysis of radiographs in the examination of the upper and lower  
extremities, the shoulder and pelvic girdles, bony thorax, vertebral column and  
the skull. Prerequisite: XRT:103 and Reading Proficiency.

XRT:122  RADIOGRAPHIC FILM EVALUATION II  2  
A continuation of XRT:121, completing the skull and also covering the respira-
tory system, abdomen, digestive and urinary systems. Prerequisite: XRT:121 and  
Reading Proficiency.

XRT:207  RADIOLOGIC PATHOLOGY  2  
This course is a presentation of the more commonly encountered lesions of the  
human body as seen through the medium of x-ray. Anatomy and physiology of  
pathologic processes are presented by body systems as a means of exploring the  
rational of many intricate radiologic examinations. Prerequisite: XRT:105 and  
Reading Proficiency.

XRT:208  IMAGING AND SPECIAL TECHNIQUES  3  
A presentation of various recording media with emphasis on thermography,  
xeroradiography, Polaroid, ultrasound, C.T. scanners and duplication and sub-
traction techniques. Prerequisite: XRT:105 and Reading Proficiency.

XRT:209  RADIobiology  2  
A course emphasizing effects of radiation upon tissue and tissue recovery rate.  
Prerequisite: Reading Proficiency.

XRT:211  RADIOLOGIC TECHNOLOGY REVIEW  3  
A review of all major phases of radiologic technology, to include anatomy and  
physiology, radiographic procedures, radiographic exposure, physics, and radia-
tion biology. This course will review critical material necessary for the national  
certifying examination. Prerequisite: Fourth semester R.T. student and Reading  
Proficiency.

XRT:212  RADIOLOGIC TECHNOLOGY SEMINAR  3  
Provides an introduction to quality assurance programs, computer applications  
and radiology management techniques as well as a discussion of various career  
options in radiology. Prerequisite: Reading Proficiency.

XRT:213  CLINICAL EDUCATION IV  3  
Continuation of practical education in all routine phases of radiologic technolo-
gy. Prerequisite: XRT:116 and Reading Proficiency.

XRT:214  CLINICAL EDUCATION V  4  
Practicum in the operation of specialized equipment used in highly technical pro-
cedures. Prerequisite: XRT:213 and Reading Proficiency.

XRT:215  CLINICAL EDUCATION VI  3  
A continuation of clinical education in all phases of radiologic technology.  
Prerequisite: XRT:214 and Reading Proficiency.

XRT:250  ESSENTIALS OF MAMMOGRAPHY I  2  
A study of the principles of patient education, anatomy, physiology, pathology,  
positioning and image evaluation of the breast. Eight week course. Prerequisites:  
Current enrollment in the program. Graduate of an accredited two-year Allied  
Health program in Radiologic Technology. Successfully pass the certification  
examination administered by the American Registry of Radiologic Technologists  
(ARRT). Possess a current registry card from the American Registry of Radiologic  
Technologists. Reading Proficiency.

XRT:251  ESSENTIALS OF MAMMOGRAPHY II  2  
A continuation of XRT:250 Essentials of Mammography I. Emphasis will be on the  
principles of mammographic techniques, instrumentation, quality assurance and  
film critique. Prerequisites: Successful completion of XRT:250. Reading Proficiency.

XRT:252  MAMMOGRAPHY PRACTICUM  5  
This course provides the basic principles and theory of mammographic position-
ing, technique, quality control and patient care. Sixteen week course. This course  
can be taken with verifiable documentation of mammography experience that  
is equal to the requirements of XRT:252 Mammographic Practicum and at the dis-
ccretion of the Program Coordinator. Prerequisites: Concurrent enrollment in  
XRT:250 and XRT:251. Reading Proficiency.

READING

RGD:012  BASIC READING SKILLS  2  
This is an initial reading course with emphasis on word attack skills, basic read-

RGD:013  BASIC READING SKILLS LAB  1  
This is an individualized course encompassing individual diagnostic- prescriptive  
laboratory reading instruction. Additional lab hours required. Prerequisite:  
Concurrent enrollment in RGD:012.

RGD:016  DEVELOPMENTAL READING  2  
This course is designed to help students expand the range of their reading compre-

RGD:017  DEVELOPMENTAL READING LAB  1  
This is an individualized course designed to develop reading comprehension and  

RGD:018  ENGLISH AS A SECOND LANGUAGE: READING  3  
This is a course designed for non-native English speakers who wish to develop  
their knowledge of the structure of the English language and the pronunciation  
and formation of English letters. The instruction will include assistance with the  
reading of students’ content textbooks.

RGD:020  READING IMPROVEMENT  3  
This course is designed to help students gain greater understanding of written  
material and to improve reading vocabulary. Prerequisites: RGD:016 and  
RGD:017 with grades of “C” or better, or appropriate score on placement test.

RGD:021  READING IMPROVEMENT LAB  1  
This course provides individualized practice under the supervision of a reading  
instructor. Additional lab hours required.
REAL ESTATE

REL-100 REAL ESTATE SALES PROCEDURES
This course assists those persons desiring to sit for the real estate sales license examination. It will include topics normally covered in the Uniform and Missouri portions of the exam including real estate ownership, contracts, financing, mathematics, brokerage, valuation and taxes, land description, and federal and state codes and regulations. (Course also available as continuing education option.) Prerequisite: Reading Proficiency.

REL-102 PROPERTY APPRAISAL I: RESIDENTIAL
An introduction to the field of real estate appraising including basic appraisal principles, concepts, and techniques and the economic principles which apply to real estate valuation. Prerequisite: Reading Proficiency.

REL-104 REAL ESTATE LAW
A general introduction to real estate law designed to provide the non-lawyer with a working knowledge of real estate law and related aspects. The course will include examination of the laws that govern basic rights of ownership and use of real estate and deals specifically with aspects such as the sale of property, leasing, land use, land management and financing. Prerequisite: Reading Proficiency.

REL-105 RESIDENTIAL APPRAISAL II: MARKET DATA ANALYSIS
This course is a significant expansion of the following areas presented in REL-102 (1) Proving adjustments by market abstractions (2) calculating depreciation; and (3) completing the URAR Small Residential Income Property Report. Also included are basics of understanding styles of residential housing and construction and how to utilize the Marshall and Swift Residential Cost Manual. The student must pass the examination given at the end of the course if he/she wishes to receive a certificate of satisfactory completion from N.A.I.F.A. Prerequisite: REL-102 and Reading Proficiency.

REL-202 PROPERTY APPRAISAL II: INCOME PRODUCING
This course will serve as a continuation of study for those who intend to specialize in appraisal. It will also provide a general base of knowledge in income property appraisal for those planning to work in sales or management. Prerequisite: REL-102 and Reading Proficiency.

REL-203 PROPERTY APPRAISAL III: ADVANCED INCOME
Advanced techniques of capitalization are examined with considerable emphasis placed on taxation and condemnation appraising using case studies and class work on a variety of property types. The course includes mortgage equity capitalization and other advanced techniques of property valuation including analysis of income tax consideration in appraisal. General principles of land development and utilization related to planning and zoning as well as site development and acquisition will also be included. Prerequisite: REL-202 and Reading Proficiency.

REL-204 REAL ESTATE FINANCE
A study of the economics of real estate financing, including sources of mortgage money, mortgage terms, marketing loans, and discussion of real estate appraisals for financial purposes. Prerequisite: Reading Proficiency.

REL-205 REAL ESTATE PROPERTY MANAGEMENT
A general overview of property management including merchandising, public relations, economic trends and cycles, investment planning, cost and income projections, budgeting maintenance and repair, rent collection, property administration process and the organization and operation of a management office. Prerequisite: Reading Proficiency.

REL-206 LAND DEVELOPMENT AND UTILIZATION
A general overview of land development and utilization involving types of uses, amount of land allocated to various uses, alternative use and marketability of land. This course will also include current and future uses of land with respect to environmental and economic considerations. Prerequisite: Reading Proficiency.

REL-208 REAL ESTATE BROKER PROCEDURES
Meeting the state course of study requirements for the brokers license examination, this course covers Missouri Real Estate Law and Rules; arithmetic, ownership, brokerage, valuation, taxes, economics, and finance. Prerequisite: REL-100 and Reading Proficiency.
REL:209 INCOME APPRAISAL II 3
This course is a continuation and further development of the material covered in the REL:202 course. The student will also be required to do an appraisal of a complex income producing property which will serve as a partial basis for determination of the final grade. The individual will be able to utilize the information gained in the two income appraisal courses in a hands-on approach. The appraisal will also serve as a demonstration of the student’s abilities to prospective employers. (Requires the possession and use of a financial calculator). Prerequisite: REL:102 and REL:202 and Reading Proficiency.

REL:210 REAL ESTATE INVESTMENT ANALYSIS 3
This course will analyze investing strategies and alternatives for small to medium-size investment programs. Financing, tax consequences, discounted cash flow and tax deferred exchanges will be reviewed. The investor will move through simulated acquisition, holding and disposition of investment property. Prerequisite: Reading Proficiency.

RESPIRATORY THERAPY

RTH:120 INTRODUCTION TO RESPIRATORY CARE AND RESPIRATORY PHYSICS 5
This course is an introduction to the field of Respiratory Care. Instruction includes: the historical perspective of respiratory care professional organizations, and the principles of physics, as they apply to respiratory care. The theory and laboratory applications for: cylinders, regulators, flowmeters, analyzers, blenders, oxygen administration devices, aerosol and humidity therapy and nebulizers will be presented. A programmed presentation for medical terminology, mathematics, and computer applications are also presented. Prerequisites: BIO:207 and CHM:101 and MTH:124 or higher and Reading Proficiency.

RTH:121 ORIENTATION TO THE HOSPITAL 2
Topics to be covered in this course include: hospital and departmental organization, medical ethics, patient’s rights, legal responsibilities, and hospital visitation. Theory, application and equipment for patient assessment and life vital signs. Prerequisite: Admission to the program and Reading Proficiency.

RTH:125 AIRWAY MANAGEMENT 3
Anatomy and physiology of the upper and lower airway. Theory, application and equipment for the management of the airway for the conscious and unconscious patient. Topics to include: artificial airways, resuscitation devices, chest physiotherapy, and suction removal. Additional lab hours required. Prerequisite: RTH:120 and Reading Proficiency.

RTH:126 INTRODUCTION TO MECHANICAL VENTILATION 3
This course will present information relevant to positive pressure techniques, and how they are applied in mechanical ventilatory support. Basic indications and hazards of positive pressure therapies will be presented along with the technical components of intermittent positive pressure breathing, non-invasive positive pressure support, adult and pediatric mechanical ventilators. A two-hour per week laboratory session will enable the learner to observe and practice the principles of operation of mechanical ventilators prior to their hospital experience. Practice in the patient simulator laboratory is also included. Prerequisites: RTH:120 and RTH:121 and Reading Proficiency.

RTH:127 RESPIRATORY PHARMACOLOGY 2
Basic pharmacologic principles, classification of drugs, the effects, side-effects, and hazards of the medications used in cardiopulmonary medicine. Prerequisite: Admission to program, must hold a certificate or degree from an allied health program, or waiver from program director and Reading Proficiency.

RTH:128 ARTERIAL BLOOD GASES 2
Theory and application of Henderson-Hasselbach Equation, oxygen dissociation curve, oxygen uptake, transport, and consumption, oxygen and carbon exchange, renal physiology, and arterial and venous gas tensions. Clinical application of obtaining arterial samples, and interpretation of results. Prerequisite: Admission to program, must hold a certificate or degree from an allied health program or waiver from program director and Reading Proficiency.

RTH:131 PEDIATRIC RESPIRATORY CARE 3
This course provides a presentation on pediatric and neonatal respiratory care to include: embryonic development of the cardiopulmonary system, cardiopulmonary malformations, and lung disease. The course will also cover the technical aspects of assessment, equipment, and maintenance of pediatric neonatal respiratory care devices, including mechanical ventilator systems. A two-hour per week laboratory session will enable the learner to observe and demonstrate the skills essential to pediatric and neonatal respiratory care. Additional lab hours required. Prerequisites: RTH:128 and RTH:140 and BIO:208 and Reading Proficiency.

RTH:140 RESPIRATORY CARE CLINICAL I 1
Application of respiratory care principles in the hospital setting. Additional hours required. Prerequisite: RTH:120 and RTH:121 and Reading Proficiency.

RTH:146 CLINICAL LEVEL II 3
Application of respiratory care principles in the hospital. Additional hours required. Prerequisite: RTH:126, RTH:128 and RTH:140 and Reading Proficiency.

RTH:220 PULMONARY PATHOPHYSIOLOGY 3
The etiology, pathology, symptomology, and treatment of various lung diseases, to include: C.O.P.D., asthma, restrictive lung disorders, infectious lung diseases, occupational lung diseases, pulmonary neoplasms, and pulmonary manifestations of other disease states. Prerequisite: Admission to the program; must hold certificate or degree from an allied health program or waiver from program director and Reading Proficiency.

RTH:221 CRITICAL CARE MONITORING 2
The theory and clinical aspects of invasive and noninvasive hemodynamic monitoring to include: anatomy and physiology of the heart and vascular systems, equipment, procedures, and interpretation of results, the theory, application, and interpretation of basic electrocardiography. Prerequisite: RTH:128 or waiver from program director and Reading Proficiency.

RTH:222 CARDIOPULMONARY PHYSIOLOGY 2
A detailed discussion of the normal physiologic principles utilized by the cardiopulmonary system, to include: neurogenesis of breathing, reflexes governing respiration, properties of elastance, resistance, compliance, and conductance, the physiologic properties of the pulmonary and systemic vascular systems. Prerequisite: Admission to program, must hold a certificate or degree from an allied health program or waiver by program director and Reading Proficiency.

RTH:223 MECHANICAL VENTILATION: A CLINICAL APPROACH 4
This course will cover the clinical applications of mechanical ventilation, to include: ventilator commitment, discontinuance and weaning techniques, the maintenance of a patient on a mechanical ventilator, and the hazards and side effects of positive and negative pressure mechanical ventilation, and the management of chronic ventilator-dependent patients. Recent development in mechanical ventilation such as inverse-ratio ventilation, APRV, and the interpretation of waveforms. Graphics will also be covered. Demonstrations in the patient simulator laboratory are mandatory. Additional lab hours required. Prerequisites: RTH:126 and RTH:128 and Reading Proficiency.

RTH:225 PULMONARY FUNCTION TESTING 3
The theory and application for the purpose of diagnosing respiratory pathologies through the measurement of lung gas volumes, capacities, and flows. Includes evaluation through stress (exercise) testing and pulmonary rehabilitation. Additional lab hours required. Prerequisites: RTH:220 and RTH:222 and Reading Proficiency.

RTH:228 N.B.R.C. REVIEW 2
A comprehensive review of the major components of respiratory care as they apply to the NBRC matrix for the entry-level and advanced practitioner exams. Including testing methodologies, strategies, evaluators, and simulated testing experiences; extensive simulated testing for entry-level, written and clinical simulations. Prerequisite: Admission to program and Reading Proficiency.

RTH:240 RESPIRATORY CARE CLINICAL III 2
Application of respiratory care principles in the hospital setting. Additional hours required. Prerequisite: RTH:146 and Reading Proficiency.
RTH:245  RESPIRATORY CARE CLINICAL IV  2
Application of respiratory care principles in the hospital setting. Additional hours required. Prerequisite: RTH:220, RTH:221, RTH:222, RTH:223 and RTH:240 and Reading Proficiency.

RTH:246  BASIC NEUROLOGIC ANATOMY AND PHYSIOLOGY  2
This course is designed to give the student basic knowledge of the brain as it applies to sleep and sleep disorders. Additional hours required. Prerequisite: Admission into the program and AAS degree or higher in a Health Science, or approval of program director and Reading Proficiency.

RTH:247  POLYSOMNOGRAPHY EQUIPMENT AND TESTING I  2
This course will present information relevant to the equipment required for polysomnographic testing to include: multi-channel recorders, transducers, electrodes, physiologic monitors; and calibration of the equipment. Preparing the equipment and patient for the test will also be covered. Additional hours required. Prerequisites: Admission into the program and an AAS degree or higher in a Health Science, or approval of program director and Reading Proficiency.

RTH:248  POLYSOMNOGRAPHY CLINICAL LEVEL I  1
This course is designed to give the student the basic knowledge in setting-up the equipment and patient for a polysomnographic examination. The student will go to an area sleep laboratory, and observe and participate in a pre-determined number of patient tests. Skill development includes: equipment preparation, calibration, and patient set-up. Prerequisites: Admission into the program and an AAS degree or higher in a Health Science or approval of program director and Reading Proficiency.

RTH:249  NEUROPATHOLOGY AND SLEEP MEDICINE  2
This course is designed to give the student the basic information related to the disease processes and conditions which adversely affect sleep, and how these conditions interfere with health. Neurologic neuromuscular, and upper airway problems will be discussed. Etiologies, clinical presentation, diagnosis and treatment will be covered for each condition. Additional hours required. Prerequisites: Admission into the program and an AAS degree or higher in a Health Science or approval of program director and Reading Proficiency.

RTH:250  POLYSOMNOGRAPHY EQUIPMENT AND TESTING II  2
This course is designed to build upon the concepts and skills presented in Equipment and Testing I, which include basic function and calibration of the equipment, setting-up the monitors and patient for a polysomnographic examination. This course will present information and skill development on performing the test, quality assurance, and reporting test results via paper copies or computer-generated results. This course will also present information on equipment used in the treatment of various sleep disorders, to include Oxygen Therapy, C.P.A.P., BiPAP, and Nocturnal Ventilatory Support. Additional hours required. Prerequisite: Admission into the program and an AAS degree or higher in a Health Science or program director approval and Reading Proficiency.

RTH:251  POLYSOMNOGRAPHY CLINICAL LEVEL II  1
The student will observe and participate in a pre-determined number of polysomnographic examinations. The student will prepare the patient for the exam, and will operate the equipment to assure the data collected is accurate and valid. When ordered by a physician, the student will initiate supplemental oxygen therapy, and/or positive airway pressure therapy. Prerequisites: Admission into the program and an AAS degree or higher in a Health Science or approval of program director and Reading Proficiency.

RTH:252  POLYSOMNOGRAPHIC TEST INTERPRETATION AND SCORING  2
This course is designed to give the student the knowledge required to provide a basic interpretation for any polysomnographic exam. Course content includes interpretation of: normal and abnormal values for multi-channel data, abnormal waveforms and events, and interpretation of abnormalities and artifacts, in accordance with standard nomenclature, and scoring of the exam. Additional hours required. Prerequisites: Admission into the program and an AAS Degree or higher in a Health Science or approval of program director and Reading Proficiency.

RTH:253  AMERICAN POLYSOMNOGRAPHY NATIONAL BOARD PREPARATION  1
This course is designed to give the student the information required to prepare for the National Sleep-testing Board Examination. Content includes: purpose of board exams and exam construction, examination matrix, review of major testing areas, and simulated examinations. Additional hours required. Prerequisites: Admission into the program and an AAS degree or higher in a Health Science or program director approval and Reading Proficiency.

RTH:254  POLYSOMNOGRAPHY CLINICAL LEVEL III  1
This course is designed to enable the student to become proficient in all aspects of sleep testing. The student will go to an area sleep lab and prepare the patient and equipment for a test, perform the examination, record the data, and provide a basic interpretation and score for the exam. Prerequisites: Admission into the program and an AAS degree or higher in a Health Science or program director approval and Reading Proficiency.

RUSSIAN

RUS:101  ELEMENTARY RUSSIAN I  4
This beginning course presents the basic sentence structure and vocabulary necessary to participate in elementary Russian conversation and to begin reading short Russian passages. Emphasis is on the use of Russian in everyday situations. Prerequisite: Reading Proficiency.

RUS:102  ELEMENTARY RUSSIAN II  4
This course is a continuation of RUS:101. Students complete the basic elements of Russian grammar, increase their vocabulary and gain added facility in speaking and reading Russian. Prerequisites: RUS:101 and Reading Proficiency.

SAFETY TECHNOLOGY

SAF:100  SAFETY PROGRAM ORGANIZATION AND ADMINISTRATION  3
An introduction to provide the essential knowledge and skills to organize and operate an effective safety program for any size company and type of industry. Course topics include management responsibility, accident investigation and analysis, recording and reporting occupational injuries and illnesses, making safety inspections, personal protective equipment, job safety analysis, fire prevention and control and sources of help for the safety professional and management. Prerequisite: Reading Proficiency.

SAF:101  SAFETY AND HEALTH STANDARDS, REGULATIONS AND CODES  3
A course dealing with the Williams-Steiger Occupational Safety and Health Act (OSHA). Course reviews all aspects of the OSHA regulations including how standards are developed, source of current standards and how the federal safety program is administered. OSHA standards are reviewed to provide an understanding of what the law requires. Prerequisite: Reading Proficiency.

SAF:102  PLANT AND EQUIPMENT LAYOUT  3
A study of techniques of planning a variety of operations required by a comprehensive safety program including plant construction, layout and process arrangement. Important elements of the course are good plant housekeeping, adequate illumination, color, dynamics, human factors engineering and general safety considerations. Prerequisite: Reading Proficiency.

SAF:103  OPERATION - HAZARDS AND CONTROLS  3
An examination of the hazards connected with various industrial operations and dealing with the safe control of those hazards. Areas covered are machine guarding principles, techniques and methods of grounding electrical equipment, the safe use of compressed air and gases, and the hazards associated with the use of hand and power tools. Prerequisite: Reading Proficiency.

SAF:200  MATERIALS HANDLING SAFETY  3
Injury and property damage aspects of materials handling, control or elimination of hazards in various methods of handling materials, including manual hoists, conveyors, transporters, and railways. Prerequisite: Reading Proficiency.
SOC:125  HUMAN SEXUALITY  
3
Sexuality includes not only the biological component of male and female sexuality, but also attitudes, values and feelings about one’s own gender and sex role. Consequently, in dealing with sex as a natural biological function, the expression of which is a dimension of psychological behavior, the sexual development and/or differentiation of men and women from conception to maturity will be stressed. (Same course as BIO:122 and PSY:125.) Prerequisite: Reading Proficiency.

SOC:126  STUDY OF PSYCHODYNAMIC SUBSTANCES  
3
This course will focus on the properties of drugs as chemicals and their impact on the body and mind. The history of drug use and abuse, issues surrounding addiction, factors that indicate a high risk to addiction and the interaction of drugs with each other will be examined. Prerequisite: Reading Proficiency.

SOC:201  ASPECTS OF AGING  
3
Examines the factors and forces that affect life quality in the late years. The physiological, psychological, and sociological aspects of aging will be considered, including those influences in the cultural context that enhance and impede continued growth of the person. Prerequisite: SOC:101 or PSY:200 or HMS:100 and Reading Proficiency.

SOC:202  AMERICAN SOCIAL PROBLEMS AND ISSUES  
3
A study of select social problems, including consideration of proposed lines of action in dealing with them. Problem areas include population, the affluent society, poverty, urban renewal, delinquency and crime, automation, the aged, ethnic and racial relations and the role of the United States in relationship to the underdeveloped areas of the world. Prerequisite: SOC:101 or SOC:102 and Reading Proficiency.

SOC:203  CRIMINOLOGY AND DEVIANCE  
3
The perspective of this course is that of crime and deviance as normal aspects of the functioning of a society. In addition to the traditional focus on the criminal and the deviant, the course will examine societal forces which create crime and deviance and societal responses to them. Prerequisite: SOC:101 or SOC:102 or permission of instructor and Reading Proficiency.

SOC:204  MARRIAGE AND THE FAMILY  
3
This course is a review of the historical development of the family, an analysis of the family living in modern society including preparation for marriage and the factors involved in marital success. Prerequisite: SOC:101 or SOC:102 and Reading Proficiency.

SOC:211  ALCOHOLISM AND DRUG ABUSE  
3
Course focuses on nature, causes, treatment and prevention of alcoholism and drug abuse. Strategies of education and treatment will be reviewed. Course designed to deal with problems encountered either personally or professionally. Course also looks at social and cultural factors in alcoholism and drug abuse. Prerequisite: Reading Proficiency.

SOC:212  RACE AND ETHNICITY  
3
A sociohistorical examination of race and ethnic group relations focusing on the forms and processes of assimilation, cultural diversity, causes of racial conflict and factors which promote racial harmony. Includes an assessment of the contemporary status and future prospects of major ethnic groups in American society. Prerequisite: SOC:101 or permission of instructor and Reading Proficiency.

SPANISH

SPA:101  ELEMENTARY SPANISH I  
4
A beginning course presenting the basic sentence structure and vocabulary necessary to participate in elementary Spanish conversation and to begin reading short Spanish passages. Additional lab hours required. Prerequisite: Reading Proficiency.

SPA:102  ELEMENTARY SPANISH II  
4
A continuation of SPA:101. Students complete the basic elements of Spanish grammar, increase their vocabulary and gain added facility in speaking and reading Spanish. Additional lab hours required. Prerequisite: SPA:101 or 2 years of high school Spanish and Reading Proficiency.

SPA:106  INTRODUCTION TO LATIN AMERICAN CIVILIZATION  
3
An introduction taught in English to the civilization and cultural heritage of Latin America. Some sample topics: racial problems, past and present relationships with the United States, literacy and artistic contributions. Prerequisite: Reading Proficiency.
Surgical Technology program and Reading Proficiency. Addressed. Corequisite: ST:111. Prerequisite: ST:108 and must be enrolled in the Surgical Technology program and Reading Proficiency.

**Course Descriptions**

**ST:104 PHARMACOLOGY FOR SURGICAL TECHNOLOGISTS** 2
The course is designed to provide the student with learning opportunities which will enable him to apply scientific principles of the biologic science of pharmacology. Emphasis is placed on the relationship of drugs to the surgical patient. Prerequisite: Must be enrolled in Surgical Technology program and Reading Proficiency.

**ST:105 FUNDAMENTALS OF SURGICAL TECHNOLOGY** 4
This course provides the student with skills necessary to function as a surgical technologist. Laboratory experience is focused so the student will achieve a satisfactory level of performance in gowning and gloving, surgical scrub, establishing and maintaining asepsis, draping, instrumentation, and proper care of the surgical patient. Students learn to work with and care for surgical equipment and supplies in both scrub and circulating roles. Students spend five hours per week at clinical site. Course will correlate with ST:101 so student may apply principles of theory and practicum. Prerequisite: ST:101 to be taken concurrently with ST:105. Must be enrolled in the Surgical Technology program and Reading Proficiency. 155 lab/clinical hours. 64 open lab hours.

**ST:106 INTRODUCTION TO SURGICAL TECHNOLOGY** 6
This course will introduce the student to the field of surgical technology. Topics will include principles of aseptic technique and patient care in the operating room. Responsibilities and functions of the surgical technologists in the pre-, intra-, and post operative phases will be discussed. Corequisite: ST:105. Prerequisite: Must be enrolled in the Surgical Technology program and Reading Proficiency.

**ST:108 PRINCIPLES OF OPERATING ROOM COMMUNICATION** 2
This course will address the modes of communication in the operating room, specifically focusing on medical/surgical terminology and computer technology utilization. Corequisite: ST:108. Prerequisite: Must be enrolled in Surgical Technology program and Reading Proficiency.

**ST:110 SURGICAL PROCEDURES I** 4
This course will introduce the surgical technology student to the principles of surgical intervention and patient care considerations in multiple specialty areas. Pathophysiology, diagnostics, prognosis and complications of procedures will be addressed. Corequisite: ST:111. Prerequisite: ST:108 and must be enrolled in the Surgical Technology program and Reading Proficiency.
THEATRE

THT:101 INTRODUCTION TO THEATRE 3
A course designed to enhance the enjoyment of theatre going. Students study the nature of theatre as a composite art form, including and investigation of the function of playwright, actor, director, and designer in the traditional forms of theatre. Prerequisite: Reading Proficiency.

THT:102 STAGECRAFT 3
The purpose of this course is to study the technical areas of theatre production: emphasis will be on scenery construction and rigging; paints and the painting of scenery; stage lighting; costume design; and construction. Included will be a survey of terminology and equipment for the stage. Prerequisite: Reading Proficiency.

THT:103 STAGE DESIGN AND LIGHTING 3
This course investigates the function of the technical designer in the theatre. This course will be related to actual production in the college theatre and includes instructions in set drawings, lighting plots, and lighting. Prerequisite: Reading Proficiency.

THT:104 THEATRE PRACTICUM 1
Practical application of acting (when cast) and production techniques. Assignments are made on an individual basis. Prerequisite: Reading Proficiency.

THT:105 THEATRE PRACTICUM 2
Practical application of acting (when cast) and production techniques. Assignments are made on an individual basis. Prerequisite: Reading Proficiency.

THT:106 THEATRE PRACTICUM 3
Practical application of acting (when cast) and production techniques. Assignments are made on an individual basis. Prerequisite: Permission of instructor required and Reading Proficiency.

THT:107 PLAYWRITING 3
This course explores the fundamental processes of playwriting. It will provide the beginning student with opportunities to investigate the concepts of dialogue, plot, characterization, mood, conflict and setting as they relate to writing for the theatre. Prerequisite: Reading Proficiency.

THT:108 ACTING I 3
Emphasis on application of principles of theory of creative acting. Exercises in movement and voice are integrated with improvisational technique. Prerequisite: Reading Proficiency.

THT:109 ACTING II 3
Continuation of THT:108. Performance of scenes from both classical and contemporary plays is required in class. Emphasis is on individual development in the use of principles and styles of acting. Prerequisite: Reading Proficiency.

THT:110 HISTORY OF THEATRE 3
A survey of the development of the theatre from its beginnings to the present. Emphasis on the periods of history in which most significant contributions to the theatre were made. Prerequisite: Reading Proficiency.

THT:115 ACTING FOR THE CAMERA 3
This course includes the following: (1) exploration of the aesthetics and principles of acting for the camera; (2) analysis of diverse acting styles and outstanding performances in film and television; and (3) acting exercises for the camera. Some acting exercises will be videotaped and edited for analysis. (Same course as MCM:115). Prerequisite: Reading Proficiency.

TOURISM

TUR:104 TRAVEL AND TOURISM FOUNDATIONS I 6
This course is designed to provide non-automated, foundational knowledge for those entering the travel and tourism industry. Students will learn the codes, terms, definitions, organizations, city/country locations, and resources & references that pertain to the various components of the industry. Prerequisite: Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

TUR:105 TRAVEL AND TOURISM FOUNDATIONS II 10
This course is the second component to the Travel and Tourism Foundations training. It is designed to provide automated, foundational knowledge for those entering the travel and tourism industry. Students will learn how to utilize a live GDS (Global Distribution System) and the Internet to acquire information and construct travel reservations. Prerequisite: Prior or concurrent enrollment in TUR:104 and Reading Proficiency or concurrent enrollment in RDG:030 or ENG:070.

TUR:106 DOMESTIC/INTERNATIONAL GEOGRAPHY AND LANDMARKS 3
This course is a survey of U.S. and world travel destinations, examining natural and manmade landmarks that attract tourists to popular cities, states, territories, and countries. The purpose of the course is to make students familiar with the salable aspects of an area, so they can match destinations with traveler wants and needs. Prerequisite: Reading Proficiency.

TUR:201 CONVENTION AND MEETING PLANNING 3
This course is designed for those people in an association or business who are responsible for planning meetings, conferences and conventions. The material in this course will cover negotiations with hotels and airlines, site inspection and selection, housing systems, conference and meeting facility needs, programs, speakers, banquets, receptions and breaks, displays and exhibits, entertainment and recreation, spouse programs, video-conferences, budgeting, audio-visual equipment, advertising and promotion, personal development. The course will consider the difference between planning for a business or planning for an association. Prerequisite: Reading Proficiency.

TUR:205 CASINO MANAGEMENT AND OPERATIONS 3
This course is designed to familiarize students with the operations and management of casinos. Special emphasis is placed on staffing and entertainment. Prerequisite: Reading Proficiency.

TUR:223 SELLING LEISURE CRUISES AND TOURS 3
This course will provide students with a knowledge base that is necessary to effectively sell leisure cruises and tours. Class will study the types of cruises and tours, popular cruise and tour destinations, traveler profiles, and leisure travel trends. It will cover the sales process and acquaint students with some of the brochures and websites of leading cruise and tour companies. Prerequisite: Reading Proficiency.

TUR:230 INTERNATIONAL TRAVEL AND WORLD ISSUES 3
The course will provide students with the essentials in international travel, including currencies, customs, immigration, insurance, time zones, passports and visas. Students will also learn how world issues and events influence the flow of travelers between countries. Prerequisites: TUR:104, TUR:105, TUR:106 and Reading Proficiency.

TUR:235 CERTIFIED TRAVEL ASSOCIATE (CTA) PREP COURSE AND TEST 3
The course is designed to prepare students for The Travel Institutes’ first level of certification, the CTA program, to meet the needs of travel professionals in the early stages of their careers. It focuses on eight core areas necessary for effective practice in the travel industry: Understanding Customer Needs, Customer-Focused Selling, Professionalism at Work, Customer Service, Touring the World, Selling Special Interest Travel, Interpersonal Communication, and Computer Technology. Prerequisites: Department Chair approval and Reading Proficiency.

TUR:236 PRACTICUM - TRAVEL AND TOURISM 3
The course provides students with a supervised framework to gain practical field experience in the travel and tourism industry. Students are required to complete 150 hours of work in a relevant atmosphere, while attending weekly classroom discussions covering job search and job performance topics. Prerequisites: Department Chair approval and Reading Proficiency.

WOMEN’S STUDIES

WMS:100 INTRODUCTION TO WOMEN’S STUDIES 3
This course is an introduction into the field of Women’s Studies. Women’s issues are explored from a variety of disciplines. An emphasis will be placed on personal experience and its relationship to larger social structures. The focus of this course is to develop a sense of empowerment and critical thinking in students. Prerequisite: Reading Proficiency.
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Walter Lewis, M.A., Professor
John Messmer, Ph.D., Associate Professor
Karl Dirk Voss, Ph.D., Associate Professor
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<tr>
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<tbody>
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<td>Roy Day, Ph.D., Professor</td>
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<td>Gultan Ilhan, M.A., Associate Professor</td>
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<td>Richard Kalfus, Ph.D., Professor</td>
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<td>Marco Romero, M.A., Professor</td>
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<td>Dale Skornia, M.A., Assistant Professor</td>
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<td>Donna Werner, Ph.D., Associate Professor</td>
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<td>Assistant Professor</td>
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<td>Rondel DeLong, M.A., Associate Professor</td>
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<td>Stacey Gee, M.B.A., Instructor</td>
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<td>Margaret Hvatum, M.S., Associate Professor</td>
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<td>Judy Larson, M.Ed., Associate Professor</td>
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<td>June Mercer, M.B.A., M.S., Associate Professor</td>
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<td>Robert Miller, B.S., Assistant Professor</td>
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<td>Gayla Stewart, M.D.P., Professor</td>
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<td>Instructional Resources</td>
<td>Rebecca Hellbling, M.L.S., Associate Professor</td>
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<td>Damaris Schmitt, M.A., Professor</td>
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<td>Katy Smith, M.A.L.S. Assistant Professor</td>
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<td>Mathematics</td>
<td>Kelly Ballard, M.A., Assistant Professor</td>
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<td>Nathan Wilson, M.A., Instructor</td>
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<td>Nursing</td>
<td>Deborah Chanasue, R.N., M.S.N., Professor</td>
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<td>Mary Kay Dorsey, R.N., M.S.N., Professor</td>
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<td>Lisa Kokotovich, R.N., M.S.N., Assistant Professor</td>
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<td>Cheryl Strahm, R.N., M.S.N., Assistant Professor</td>
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<td>Janet Walsh, R.N., M.S.N., Professor</td>
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<td>Emily Yale, R.N., M.S.N., Associate Professor</td>
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<td>Occupational Therapy Assistant</td>
<td>Nancy Klein, M.S., Professor</td>
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<td>Physical Education</td>
<td>Randall Albright, M.Ed., Associate Professor</td>
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<td>Kevin Kelly, M.S., Associate Professor</td>
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<td>Ronald Mirikitani, M.S., Professor</td>
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<td>Linda Tiedt, M.S., Professor</td>
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<td>Physical &amp; Engineering Sciences</td>
<td>Carl Campbell, M.A., Instructor</td>
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<td>Nancy Collier, Ph.D., Assistant Professor</td>
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<td>Joachim Dorsch, Ph.D., Assistant Professor</td>
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<td>Michael Hauser, M.S., Professor</td>
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<td>Andrew Langrehr, M.S., Assistant Professor</td>
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<td>Kwan Lee, Ph.D., Professor</td>
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<td>Craig Lincoln, Ph.D., Professor</td>
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<td>Joseph Schneider, M.S., Instructor</td>
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<td>Vidyullata Waghulde, Ph.D., Assistant Professor</td>
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<tr>
<td>Physical Therapist Assistant</td>
<td>Mary Christman, M.A., Professor</td>
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<td>Julie High, M.S., Associate Professor</td>
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</table>

**Wildwood**

**ADMINISTRATORS/PROFESSIONAL STAFF**

**President**

Pamela McIntyre, M.A, Acting President

**Student Enrollment Services and Student Activities**

Marilyn Taras, B.A., Manager

**Instructional and Career Resources**

Abby DeShane, M.L.S., Manager

**Student Enrollment and Academic Advising**

Barbara Mehranfar, B.G.S., Coordinator

**Student Enrollment and disAbility Support Services**

Jan Eudaley, M.A., Coordinator

**Student Enrollment and Financial Aid**

Helen Nauman, M.A., Coordinator

**Manager of Physical Facilities**

John Tetstill, B.A.

**Wildwood-Faculty**

Robyn Barrett, M.B.A., Assistant Professor

Terri Graville, M.A., Instructor II

Afzal Kan Lodhi, Ph.D., Professor

Timothy Roach, Ph.D., Professor

Dorothy Welty-Rodriguez, M.S., Instructor II
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Directions to Joseph P. Cosand
St. Louis Community College Center
300 S. Broadway, St. Louis, MO 63102-2800

From Interstate 70
Take the Memorial Drive/Arch exit.
Turn right on Market. Turn left on Broadway.

From Interstate 64/Highway 40
Take the 11th Street exit. Proceed on 11th Street to Walnut.
Turn right and proceed to Broadway. Turn right on Broadway.

From Interstate 44/55
Take the Memorial Drive/Arch exit.
Turn left on Market. Turn left on Broadway.
A Unique Identification Number (UIN) will be assigned as your college ID. Check here if you wish to receive your UIN via email:  

Social Security No.: ___________________________ Former Student Number (if known): ___________________________

Name: ___________________________ Previous Legal Name(s): ___________________________

Last Name        First Name        Middle Name

Permanent Address: ___________________________

(No P.O. Box) Number        Apt. No.        Street

City        State        Zip Code

County of Residence: ___________________________

Mailing Address: ___________________________

(If different from above) Number        Apt. No.        Street

City        State        Zip Code

Telephone Numbers: Home: (   )___________________ Cell: (   )___________________ Business: (   )___________________

Preferred Email Address: ___________________________

Emergency Contact: ___________________________

Person’s Name        Telephone        Relationship to Applicant

Sex:  

❑ Male

❑ Female

Date of Birth:   /   /   

Month        Day        Year

ETHNIC ORIGIN

❑ American Indian / Alaskan Native

❑ Asian / Pacific Islander

❑ Black Non-Hispanic

❑ Hispanic

❑ White Non-Hispanic

❑ Other

❑ Do not want to specify

Are you a United States citizen?  

❑ Yes

❑ No

If not, what is your visa type: ___________________________

Please include a copy of your I-151, I-551 (Alien Registration Receipt Card) or I-94 (Arrival/Departure Record).

Is English your first language?  

❑ Yes

❑ No

If not, what is your first language: ___________________________

Country of Birth: ___________________________

Country of Citizenship: ___________________________

EDUCATIONAL HISTORY

Check one:

❑ High School Graduate        Date of Graduation: ______ / _______

❑ GED Graduate        Date of Test Results: ______ / _______

❑ Still in High School        Expected Graduation Date: ______ / _______

❑ Did Not Graduate        Date Last Attended: ______ / _______

Have you taken the ACT and/or SAT?  

❑ Yes

❑ No

Date of Test: Month ______ Year ______

Did you enroll (or are you currently enrolled) in a college credit course or program while in high school?  

❑ Yes

❑ No

If yes, check all that apply:  

❑ Tech Prep

❑ Project Lead the Way

❑ Advanced Placement

❑ Dual Credit/Enrollment

❑ Other

High School Information

High School Attended:        Name: ___________________________

City: ___________________________ State: ___________________________

MOSIS* ID Number (if known) ___________________________

*Missouri Student Information System

Previous College(s)

Most Recently Attended: Name of College ___________________________

City ___________________________ State ___________________________ Dates Attended ___________________________

Other College Attended: Name of College ___________________________

City ___________________________ State ___________________________ Dates Attended ___________________________

Highest Degree Completed:

❑ High School/GED

❑ Certificate

❑ Associate’s

❑ Bachelor’s

❑ Master’s

❑ Doctorate

❑ First Professional

❑ None of the previous
Have you previously attended St. Louis Community College?  ❑ Yes ❑ No If so, when: ________________________________

Application submitted for:
❑ Fall Year _________
❑ Spring Year _________
❑ Summer Year _________

Please indicate which campus you plan to attend:
❑ Florissant Valley
❑ Forest Park
❑ Meramec
❑ Wildwood

A. My primary reason for attending St. Louis Community College:
(Select only one)
❑ to improve existing job skills
❑ to prepare for a new job
❑ to transfer courses to another college/university
❑ for self-improvement (not job related)

B. I will accomplish this by:
(Select only one)
❑ taking selected courses
❑ earning a Certificate
❑ earning an Associate's degree

What do you plan to study at St. Louis Community College? __________________________________________________

Program of Study

Entry status: (Select only one)
❑ New College Student (never attended any college)
❑ Transfer Student (most recently attended another college)
❑ Re-Entry Student (most recently attended St. Louis Community College)
❑ Dual-Enrolled Student (still attending high school)

I agree to adhere to all college policies and procedures which includes the statement of student rights and responsibilities.
Any violation of those policies will be reason for disciplinary action and could result in dismissal from the college.

Student’s Signature ________________________________ Date: _____/_____/______
(REQUIRED)                                      Month     Day          Year

Do you plan to: Yes  No
❑ Receive a degree or certificate
❑ Apply for a selective admissions program
❑ Apply for financial aid or veterans' benefits
❑ Participate in intercollegiate athletics
❑ Enroll on a student visa

If you answered yes to any of these questions, you must submit high school and all official college transcripts to the Admissions/Registration office. College transcripts must be mailed directly to the Admissions/Registration office. Hand-carried or faxed college transcripts are not accepted.

SEND APPLICATION AND TRANSCRIPTS TO: Admissions/Registration office at campus of choice:

St. Louis, MO 63135-1408  314-513-4244
Florissant Valley
3400 Pershall Road
5600 Oakland Avenue

St. Louis, MO 63110-1393  314-644-9127
Forest Park
5600 Oakland Avenue

St. Louis, MO 63122-5720  314-984-7601
Meramec
11333 Big Bend Road

Wildwood, MO 63040-1168  636-422-2000
Wildwood
2645 Generations Drive

Campus Safety: In accordance with federal law, the college publishes a security report annually covering crime reported within the St. Louis Community College district over a three-year period. Copies are available upon request.

St. Louis Community College is an equal opportunity/affirmative action institution. Accommodations are available for persons with disabilities. Persons with speech or hearing disabilities may call the college through Relay Missouri at 711.