KIRKWOOD COMMUNITY COLLEGE
2024 – 25 CATALOG

Kirkwood
COMMUNITY COLLEGE

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GENERAL INFORMATION

General Information

Kirkwood Community College is the region's only partner for empowering students to achieve success for less … helping students find their future and save a fortune.

Our Mission

Kirkwood Community College ensures access to quality education, training, and lifelong learning with clear educational pathways that provide opportunities and support for all students to succeed.

Our Vision

To be the community college leader in regional, national, and global education.

Our Values

- Respect
- Excellence
- Responsibility
- Diversity Equity Inclusion

Equal Employment Opportunity

Education and Employment Nondiscrimination Statement

It is the policy of Kirkwood Community College not to discriminate in its programs, activities, or employment on the basis of race, color, national origin, sex, disability, age, sexual orientation, gender identity, creed, religion, and actual or potential family, parental or marital status. If you have questions or complaints related to compliance with this policy, please contact the Vice President, Human Resources and Institutional Effectiveness, 6301 Kirkwood Blvd. SW, Cedar Rapids, IA 52404, 319-398-5572, equity@kirkwood.edu, or the Director of the Office for Civil Rights U.S. Department of Education, John C. Kluczynski Federal Building, 230 S. Dearborn Street, 37th Floor, Chicago, IL 60604-7204, Telephone: (312) 730-1560 Facsimile: (312) 730-1576, TDD 800-877-8339 Email: OCR.Chicago@ed.gov.

KIRKWOOD LOCATIONS

Cedar Rapids Main Campus

6301 Kirkwood Boulevard SW
Cedar Rapids, IA 52404
319-398-5411
www.kirkwood.edu (https://www.kirkwood.edu/)

Kirkwood Community College's main campus is located in Cedar Rapids, Iowa, a metropolitan area of approximately 150,000 residents. The main campus location features 1.85 million square feet of learning space, a working 400-acre farm, and one of the only full-service teaching hotels in the country.

Each year Kirkwood's Cedar Rapids location provides close to 16,000 students with academic and career-focused advising, tutoring and writing help, mentoring and counseling services, an on-campus bookstore and library, more than 40 clubs, organizations, and groups.

Center Locations

In addition to the main campus in Cedar Rapids, Kirkwood has additional locations in Benton, Iowa, Johnson, Jones, Linn, and Washington counties. Kirkwood centers offer college credit courses, continuing education classes, and high school completion programs to students of all ages. Students can complete all the required courses to earn an associate of arts degree through local Kirkwood centers. Classes at each center are delivered through traditional face-to-face classroom instruction, interactive video classrooms, and are also available online.

Local Kirkwood centers offer the same services available to students at the main campus in Cedar Rapids, including placement testing, academic advising, tutoring, wireless computer access, and more.

Benton County Center

111 West Third Street
Vinton, IA 52349
319-472-2318
www.kirkwood.edu/bentoncounty (https://www.kirkwood.edu/bentoncounty/)

Iowa County Center

200 West Street
Williamsburg, IA 52361
319-668-2461
www.kirkwood.edu/iowacounty (https://www.kirkwood.edu/iowacounty/)

Jones County Regional Center

220 Welter Drive
Monticello, IA 52310
319-465-2302
www.kirkwood.edu/jonesregional (https://www.kirkwood.edu/explore/locations/jones-regional/)

Kirkwood Regional Center at the University of Iowa

2301 Oakdale Blvd
Coralville, IA 52241
319-358-3100
www.kirkwood.edu/kirkwoodui (https://www.kirkwood.edu/kirkwoodui/)

Additional services for students at the Kirkwood Regional Center at U of I include academic advising, accommodation services, admissions, career services, counseling services, financial aid, enrollment services, global learning, student assistance, student life events, and a testing center.

Linn County Regional Center

1770 Boyson Road
Hiawatha, Iowa 52233
319-398-1052
www.kirkwood.edu/linnregional (https://www.kirkwood.edu/linnregional/)

Washington County Regional Center

2192 Lexington Blvd
Washington, IA 52353
319-653-4655
www.kirkwood.edu/washingtonregional (https://www.kirkwood.edu/washingtonregional/)

Kirkwood Main Campus Map

You can view an up-to-date online map at: http://www.kirkwood.edu/maincampus (https://www.kirkwood.edu/maincampus/)

Routes to Kirkwood

You can find up-to-date driving routes online at: http://www.kirkwood.edu/maincampus (http://www.kirkwood.edu/maincampus/)

PROGRAMS OF STUDY

For the most up-to-date list of programs offered at Kirkwood, go to: www.kirkwood.edu/programs (https://www.kirkwood.edu/programs/)

Program Areas

Animals, Food, and Land

Arts and Design

Business

Culture, Communication and Human Behavior

Health and Wellness

Manufacturing, Trades and Transportation

Social Services, Safety and Education

STEM and IT

F

H

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W

Online Degrees

Career Programs

Liberal Arts Degrees

If you plan to continue your education after Kirkwood, our Liberal Arts Program will provide the foundation and transferable courses you need to prepare for that next step.

The Liberal Arts Program offers the following transfer interest areas. Depending upon your transfer institution and your transfer interest area, you may earn an Associate of Arts or an Associate of Science degree in Liberal Arts, or you may take only the credits you need to transfer to the institution of your choice. If you have questions about the transfer of specific courses, consult www.transferiniowa.org (http://www.transferiniowa.org).

Liberal Arts - Associate of Arts (A.A.) Degree

We can help you transfer your A.A. degree and follow a degree pathway, including:

- Anthropology/Cultural Studies
- Art
- Business Administration
- Communication Studies
- Criminal Justice
- Digital Media
- Early Childhood Education
- Economics
- Education
- English
- History
- Humanities
- Human Services
- Journalism
- Music
- Philosophy
- Political Science
- Psychology
- Religious Studies
- Sociology

- Theatre
- World Languages-French, Spanish

Liberal Arts - Associate of Science (A.S.) Degree

We can help you transfer your A.S. degree and find a pathway, including:

- Biology
- Chemistry
- Computer Science
- Engineering
- Environmental Science
- Math
- Physics

Transfer Majors

These programs have a structured set of courses designed to provide students with a common foundation of knowledge and credits that seamlessly transfer into aligned programs at Iowa regent and private institutions.

Reverse Credit Transfer Option

Reverse Credit Transfer is an option for students who do not finish their associate degree before they transfer to an Iowa public university. When a student applies to the university, they may indicate their interest in applying future credits earned at the university toward the completion of their associate degree. By doing so, the student agrees to have their university contact information and transcript sent back to Kirkwood. Kirkwood then evaluates this coursework to determine if degree requirements are met. More information is available at www.transferiniowa.org/reverse_credit_transfer.php (http://www.transferiniowa.org/reverse_credit_transfer.php).

Certificates and Diplomas

Certificate and Diploma programs are designed for entry-level employment and may provide specialization in specific areas. Courses

are usually taken from degree programs and may be completed within 6 to 48 semester hours.

Certificates

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- Advanced Chassis Certificate (p. 83)
- Advanced Drivetrain Certificate (p. 83)
- Advanced Powertrain Certificate (p. 83)
- Agribusiness Entrepreneurship Certificate (p. 71)
- Agribusiness Farm Management Certificate (p. 71)
- Agribusiness Industry Management Certificate (p. 72)
- Architectural Technology Certificate (p. 78)
- Beef Science Certificate (p. 75)
- Clinical Laboratory Assistant Certificate (p. 152)
- Computer Aided Design (CAD) Certificate (p. 100)
- Computer Aided Manufacturing Certificate (p. 103)
- Construction Estimator Certificate (p. 112)
- Construction Fundamentals Certificate (p. 112)
- Crop Production Certificate (p. 75)
- Custom Applicator Certificate (p. 76)
- Design Introductions Certificate (p. 148)
- Early Childhood Administration Certificate (p. 126)
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- Emergency Medical Technician (EMT) Certificate (p. 164)
- Entrepreneurship Certificate (p. 94)
- Entry-Level Firefighter Certificate (p. 135)
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- Fire Science Certificate (p. 135)
- Fundamentals of Automotive Technology Certificate (p. 82)
- Human Resources Certificate (p. 94)
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- Introduction to Automotive Technology Certificate (p. 84)
- IT Fundamentals Certificate (p. 110)
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Online Degrees

Earn any of these degrees online. The degree you earn online is equivalent to a traditional classroom degree.

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- Business Administration: Accounting, A.A.S. (p. 88)
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- Paralegal Studies, A.A.S. (p. 162)
- Water Environmental Technology, A.A.S. (p. 180)

DEGREE AND CORE REQUIREMENTS

Associate of Arts (A.A.) (p. 10)
Associate of Science (A.S.)

A.A. and A.S. degrees are generally considered "transfer level" degrees. Most students earning these degrees transfer to a four-year college or university and continue their studies. Requirements will differ between colleges, so students should work closely with their transfer institutions and Kirkwood advisors to choose classes that meet their needs.

Associate of Applied Science (A.A.S.) (p. 10)
Associate of Applied Arts (A.A.A.) (p. 10)

Students who earn A.A.A and A.A.S. degrees typically enter the workforce; however, some of these programs also have transfer agreements with four-year institutions. Students should work with an advisor to determine which degree program best suits their goals.

Diploma (p. 11)
Certificate (p. 11)

Diploma and certificate programs normally take nine to 12 months to complete and provide entry-level skills to begin a chosen career. Those in the workforce who already have two- or four-year degrees may also seek certificates to advance their careers. Diploma and certificate programs generally do not transfer, but it is best to check with an advisor.

A.A. and A.S. Degree Requirements

The Degree Requirements Table (p. 11) provides degree requirements for students pursuing a two-year transfer program at Kirkwood. Additional requirements of the programs include:

- Earn a minimum of 62 semester hours of credit.
- Complete 16 semester hours in residence at Kirkwood.
- Maintain a minimum cumulative grade point average of 2.0.
- Students seeking an A.A. degree must complete one approved diversity course.

Electives

Electives are transferable courses required for completing degrees. They go beyond core and general education requirements in providing an opportunity to pursue subjects of special interest.

Electives can be chosen from:

- All courses with "Arts & Sciences Elective Code: A" in the course description (transfer courses).
- Up to 16 credit hours of courses with "Arts & Sciences Elective Code: B" in the course description (technical courses).

A.A.A. Degree Requirements

To receive an Associate of Applied Arts degree, the following requirements must be completed:

- Earn 62-86 semester hours of credit in the courses required for the specific program.

- Earn 16 semester hours in residence at Kirkwood in the program for which the degree is sought.
- Maintain a minimum cumulative grade point average of 2.0.
- Complete a minimum of 23 semester credit hours of coursework in the following basic learning core:

Core Requirement	Number of Courses
Communication - Writing	2 courses
Communication - Speech	1 course
History/Cultures	1 course
Humanities	2 courses
Mathematics/Science	1 course
Social Science	1 course

A.A.S. Degree Requirements

To receive an Associate of Applied Science degree, the following requirements must be completed:

- Earn 62-86 semester hours of credit in the courses required for the specific program.
- Earn 16 semester hours in residence at Kirkwood in the program for which the degree is sought.
- Maintain a minimum cumulative grade point average of 2.0.
- Complete a minimum of 15 semester credit hours of coursework in the following basic learning core:

Core Requirement	Number of Courses
Communication	2 courses
Humanities	1 course
Social Science	1 course
Mathematics/Science	1 course

Degree Requirements Table

Requirement	Associate of Arts (A.A.)	Associate of Science (A.S.)	Associate of Applied Science (A.A.S.)	Associate of Applied Arts (A.A.A.)
	credit hours	credit hours	credit hours	credit hours
Communication - Writing	5	5		5
Communication - Speech	3	3		3
Communication			6	
Humanities	9			6
Humanities and/or History-Cultures		9	3	
History-Cultures	6			3
Social Science	9	6	3	3
Mathematics	3			
Science	6			
Mathematics/Science		20	3	3
Program specific courses			47-71	39-63
Electives	21	19		
Degree Total	**62**	**62**	**62-86**	**62-86**

Diploma Requirements

- Earn 30-48 semester hours of credit in the courses required for the specific program.
- Earn eight semester hours in residence at Kirkwood in the program for which the diploma is sought.
- Maintain a minimum cumulative grade point average of 2.0.

Certificate Requirements

- Earn 6-29 semester hours of credit in courses required for the specific program.
- Earn six semester hours in residence at Kirkwood in the program for which the certificate is sought.
- Maintain a minimum cumulative grade point average of 2.0.

ADMISSIONS, TUITION AND FINANCIAL AID

- Admissions Services (p. 12)
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Admissions Services

319-398-7600 or 800-363-2220

admissions@kirkwood.edu

Kirkwood is proud to maintain an open admission policy, which means enrollment is open to all people with or without a high school diploma.

Applying for Admission

How to Apply

Complete an admission application and submit it online at www.kirkwood.edu/apply (http://www.kirkwood.edu/apply/).

There is no application fee. Select one program area to receive more information about completing the admission process.

Some programs require a program conference. At the program conference, students meet with the program instructors to learn more about the expectations of the program. This is an important step because some programs fill quickly. Program advisors contact students with more information once applications are received.

Placement Assessment

All degree-seeking students in programs with coursework that requires placement in math and/or writing must complete the necessary steps to place the students in appropriate courses to address their learning needs. In addition, non-degree seeking students wishing to register for coursework that requires placement in math and/or writing must also complete the necessary placement steps. Appropriate placement in math and writing courses is determined by a variety of measures, including placement tests, previous academic experience, and advising. Information about placement is offered to prospective students prior to registration and can be provided by an academic advisor.

Financial Aid

Submit the Free Application for Federal Student Aid (FAFSA) as soon as possible after it is available. Start early – the financial aid process can take some time to complete. Go to http://www.fafsa.gov.

Scholarships

Kirkwood awards over $3 million in scholarships to students each year. Applications for first-round scholarships open October 1, and close March 15. Applications received after the deadline will be eligible for a limited amount of second-round funding opportunities and new scholarships developed after the March 15 deadline. Applications for second-round

opportunities are due July 15. Apply at www.kirkwood.edu/scholarships (http://www.kirkwood.edu/scholarships/).

Housing

Contact the Housing office at 319-398-7647 or www.kirkwood.edu/housing (http://www.kirkwood.edu/housing/). Most area apartments are open Monday-Friday 8 a.m.-5 p.m.

Transcripts

Students who are transferring to Kirkwood, or returning students who attended another college after leaving Kirkwood, must provide Kirkwood with an official transcript from each college or university they attended in order to receive credit for those courses.

Admission to the College Does Not Guarantee Acceptance into All Programs

Generally, admission to programs is granted on a continuous basis as applicants complete the required admission procedures. Applicants can apply a year in advance of the term they plan to enter. They should apply as soon as they've determined their specific major/program or general Program Area as choosing one is required on the application. Applying early is recommended in order to get as much pre-enrollment assistance as needed. Applicants should be mindful of their specific program's required entry term as they do vary depending on program. Program entry terms can be found on the individual program pages of this catalog.

College Credit While in High School

High school students have the opportunity to earn both high school and college credit through an agreement between the local high school district and Kirkwood Community College. With approval from the high school, students may enroll in individual classes or a sequence of classes called a Career Academy program at no cost to the student or family. Courses are available within the high school setting, at a Kirkwood location or online. Additional information can be found at www.kirkwood.edu/earncredit (http://www.kirkwood.edu/earncredit/) and high school students can apply at www.kirkwood.edu/hscreditapply (http://www.kirkwood.edu/hscreditapply/).

Global Learning

Cedar Rapids Main Campus
2008 Iowa Hall
319-398-5579

Coralville Location
Kirkwood Regional Center at the University of Iowa
319-882-3658

Kirkwood's Global Learning department fosters global learning, ensuring that every Kirkwood student, faculty and staff engage in global learning experiences as part of their Kirkwood journey. Through global learning experiences, students learn to encounter difference, and appreciate the rich complexity of our globalized world. Students develop mutual respect and an understanding of interconnectedness through a variety of intentional programming such as study abroad, virtual exchange, on-campus activities, and more. International students, immigrant students and English Language Learners (ELLs) will also find intentional programming and services in Global Learning. The following services and resources are available:

- English Language Acquisition (ELA) course sequence
- Community organizations referral
- International student advising
- International recruiting and prospective student services
- SEVIS advising and compliance
- Faculty exchanges and global professional development
- International grants/special projects
- International Education Week each November
- Cultural activities and celebrations
- Study Abroad programs and scholarships
- Virtual exchange opportunities for students and training for faculty

English Language Proficiency

Cedar Rapids Location
2008 Iowa Hall
319-398-4998

Coralville Location
Kirkwood Regional Center at the University of Iowa
319-887-3658

To assure that students whose first language is not English are prepared to complete college-level coursework, proficiency in English must be demonstrated. Students, including graduates of American high schools, international students, permanent residents, refugees and U.S. citizens, can demonstrate English language proficiency by earning one of the following:

- ACT composite scores of 18 or higher with English sub scores of 18 or higher.
- SAT writing scores of 430 or higher.
- Standard TOEFL paper-based scores of 500 or higher or Internet-based equivalent scores of 63 or higher.
- IELTS scores of 6.0 or higher.
- Kirkwood English Language Acquisition (ELA) placement scores of Level Six.

Note: All test scores must be earned within the two years prior to applying to the college.

Students may not register for non-ELA credit classes until they complete, or are completing, Level Five of the ELA course of study. Exceptions may be made for students who plan to study Industrial Technology majors. ELA coursework is intended to provide developmental preparation for other college credit classes.

Nine elective credits are awarded for Elements of Writing, Effective Reading Strategies, and Fundamentals of English Grammar.

Students who do not plan to take credit classes, but want to obtain the basic English language skills and knowledge necessary for employment and self-sufficiency, should contact 319-784-1510 (Cedar Rapids), 319-887-3967 (Coralville), or 319-653-4655 (Washington).

International Students

Cedar Rapids Location
2008 Iowa Hall
319-398-5579

Coralville Location
Kirkwood Regional Center at the University of Iowa
319-887-3658

Kirkwood welcomes international students from countries all around the world. An international student is defined as a person who enters the United States with an F-1 or J-1 student visa to attend college. Kirkwood encourages international students to apply for admission to Kirkwood following the international admission steps atwww.kirkwood.edu/intlapply (http://www.kirkwood.edu/intlapply/). International student advisors are available in the Global Learning department and are professionally trained as SEVIS designated school officials to advise international students on matters related to their student visa status, intercultural adjustment, and the U.S. academic culture.

Residence Qualifications

319-398-7600

Students enrolling at Kirkwood are classified as residents or nonresidents of Iowa, or as international students, for admission and tuition purposes by the college Registrar's Office. The Iowa Department of Education establishes requirements for proof of Iowa residency for community colleges.

To determine resident or non-resident residency, the primary determination is the reason a person is in the state of Iowa. The second determination will be the length of time a person has resided in Iowa (a minimum of 90 days prior to the start of the semester). If a person is in the state primarily for educational purposes, that person will be considered a non-resident. If a person holds an F-1 or J-1 student visa status, the residency classification is international.

Please note that a student cannot be a resident of two states at the same time. If your home is in another state and you are living in Iowa for the purpose of attending school, you are a resident of your home state and not a resident of Iowa.

Residency status changes are not automatic. They must be requested by the student. The Request to Change Residency Status form must be submitted to the Registrar's Office no later than the first week of classes for the request to be considered for the current semester. Requests submitted later than this will be reviewed and considered for the following semester. In no case will a residency status be changed retroactively for prior terms.

Tuition Rates

The Kirkwood Board of Trustees established current tuition charges in May 2024.

Additional fees may be applied for technology, and other incidentals as described in the Fee Policy. Tuition and fees are due two weeks before the term starts.

Iowa Residents

- $217 per credit hour, per semester.
- Tuition for an average, full-time schedule (15 credit hours) is $3,255 per semester.

Nonresidents

- $290 per credit hour, per semester.
- Tuition for an average, full-time schedule (15 credit hours) is $4,350 per semester.

International Students

- $400 per credit hour, per semester.
- Tuition for an average, full-time schedule (12 credit hours) is $4,800 per semester.
- Mandatory international student health insurance for one year is estimated to be $1,500.

Installment Payments

319-398-5631

The Kirkwood Payment Plan is designed to help students meet educational expenses without debt. There is no cost to enter the interest-free monthly payment plan. Students may pay tuition and fees with an automatic bank payment (ACH) or credit card.

Refund of Tuition

See policy in Academic and Enrollment Procedures (p. 58) section.

Financial Aid

Cedar Rapids Main Campus
3rd Floor Iowa Hall
319-398-7600
financialaid@kirkwood.edu

Financial aid consists of grants, loans, scholarships and work-study.

The Kirkwood Financial Aid office helps qualified students receive financial assistance, enabling them to pursue their academic goals.

To receive the maximum consideration for financial aid, students should submit the Free Application for Federal Student Aid (FAFSA) as soon as possible after October 1. Results will be sent to Kirkwood and the Financial Aid Office will email the student with next steps. Students must apply each year.

Federal and State Financial Aid Programs

Kirkwood participates in state and federal financial aid programs. Kirkwood uses the FAFSA information to determine eligibility. For more information on these programs, go to www.kirkwood.edu/financialaid (https://www.kirkwood.edu/explore/services/one-stop/).

ACADEMIC RESOURCES

Accommodation Services

Cedar Rapids Main Campus
3034 Iowa Hall
319-398-5540
www.kirkwood.edu/accommodations (https://www.kirkwood.edu/explore/services/learning-services/disability-accomodation/)
SAS@kirkwood.edu

Accommodation Services provides support and advocacy for students with disabilities to ensure students have equal access to educational opportunities. Accommodation Services assists students through an interactive process to identify reasonable accommodations. We support students enrolled in credit, continuing education courses, high school students taking college classes, etc. We serve students with (but not limited to) Learning Disabilities, ADHD, Autism, Chronic Health conditions, Mental Health conditions (such as Anxiety, Depression), Temporary Injuries and more. If interested in academic accommodations, contract our office or visit our website for further information.

The Academic Advising Center

Cedar Rapids Location
2nd Floor of Kirkwood Hall
319-398-5540
advising@kirkwood.edu
www.kirkwood.edu/advising (http://www.kirkwood.edu/advising/)

Kirkwood Regional Center at the University of Iowa
319-398-2600
ICAdvising@kirkwood.edu
www.kirkwood.edu/iowacity (http://www.kirkwood.edu/iowacity/)

The Academic Advising Center helps currently enrolled students with their academic futures, from developing an academic plan to choosing the best courses to smoothly transfer to a four-year school. We can also help clarify course requirements or refer you to support services if needed.

Schedule an appointment whenever you face an important academic decision, need information about your academic options, or just want to talk through something that is important to you. Your advisor is "your person" at Kirkwood and forming a supportive relationship with you is core to helping you succeed.

Autism Support @ Kirkwood (ASK) Program

Cedar Rapids Main Campus
3034 Cedar Hall
319-398-5540
www.kirkwood.edu/ask (https://www.kirkwood.edu/explore/services/learning-services/ask-program/)
SAS@kirkwood.edu

The ASK Program supports Kirkwood students on the spectrum or who identify as Autistic. We use a holistic approach to assisting student in developing academic, social and personal skills to create academic and individual success. Autism Advocates provide coaching and guidance for students through regular meetings and social event opportunities to support students self-directed work toward their individual goals. For more information, please contact our office or visit our website.

Career Services

3rd Floor Iowa Hall
319-398-5540
www.kirkwood.edu/careerservices (http://www.kirkwood.edu/careerservices/)

Career Services assists students, alumni and community members with the career development process. This can include:

- Complete online assessments FOCUS 2 and YouScience to learn more about your interests, values, skills and aptitudes.
- Encourage and connect you to opportunities such as career conversations or job shadow experiences for networking, and to develop/strengthen your "power" skills.
- Assist you with making the transition to the workforce successfully with helping you build your cover letter, resume and helping prep you for the job interview.

Counseling Services

www.kirkwood.edu/counseling (http://www.kirkwood.edu/counseling/)
3034 Iowa Hall
Student Services
319-398-5540

Kirkwood Regional Center at The University of Iowa
2301 Oakland Blvd, Coralville

Counseling is available to all students, free of charge. Students may contact Student Services at 319-398-5540, to schedule an appointment

with one of our counselors. Telemental Health sessions are available as well as in-person sessions.

Counseling Services provides personal counseling on a variety of topics, including:

- Coping strategies for test anxiety, time management, stress reduction, and social anxiety
- Assertiveness skills and anger management
- Problem-solving and decision making skills
- Transitioning to independent living, homesickness and loneliness
- Mental health counseling
- Relationship issues
- Student advocacy
- Information and referral to campus and community resources

Distance Learning

- Distance Learning (p. 16)
- WebLive Classrooms (p. 16)

Distance Learning

Online
www.kirkwood.edu/aisd (https://www.kirkwood.edu/about-us/faculty-leadership/academic-departments/academic-innovation-strategy-design/index/)
319-398-4958

Online classes offer students the flexibility to learn outside the traditional classroom. Most courses start on specific dates in August, September, January, February or May and meet for 16 weeks or 12 weeks. A qualified teacher is available to answer questions, respond to assignments, grade exams, and designs each course. All courses meet the goals and objectives of the same courses offered in the traditional classroom and transfer to other institutions in the same way.

Online courses provide an enriching and engaging environment for learning. Kirkwood online student can take advantage of the same learning supports the college makes available to all student. You can find more information about these in your course syllabus.

Kirkwood Community College has been approved by Iowa to participate in State Authorization Reciprocity Agreements (SARA). SARA is a voluntary, regional approach to state oversight of postsecondary distance education.

WebLive Classrooms

Cedar Rapids Main Campus
319-398-4958

Kirkwood students can take courses and programs over an interactive instructional video system that links instructors to students at many different locations. Internet access is needed for your class from home, work, or one of Kirkwood's county centers using zoom. The delivery system saves students time and travel, while providing an interactive learning environment with the instructor and other students. For more information go to www.kirkwood.edu/aisd (https://www.kirkwood.edu/about-us/faculty-leadership/academic-departments/academic-innovation-strategy-design/index/).

FlexFORWARD

2196 Linn Hall
319-784-1566
flexforward@kirkwood.edu
www.kirkwood.edu/flexforward (http://www.kirkwood.edu/flexforward/)

The FlexFORWARD program allows students to move through their coursework at a pace that fits within their busy schedules. These courses are set up using Competency Based Education (CBE). FlexFORWARD's delivery format operates with the college's existing semester/term structure. Courses are delivered in 6-week (fall/spring) and six week (summer) blocks that fall within Kirkwood's current semester length.

FlexFORWARD students may only register for courses in the FlexFORWARD program; they may not simultaneously take courses from Kirkwood's other delivery formats. Additionally, FlexFORWARD students can be active in up to two FlexFORWARD courses at a time. Each of the courses within the specific FlexFORWARD program will have a recommended weekly schedule to assist students in their pacing to assure completion within the block. Students must meet or exceed proficiency in all competencies to earn credit for each course.

Honors Program

The Kirkwood Community College Honors Program offers outstanding students the opportunity to push their academic boundaries, work closely with faculty in their career fields and make themselves more attractive to selective four-year schools.

Qualified students work with a faculty member to develop a one-credit-hour honors project. The nature of a student's honors project is left open to inspire creativity in both the student and the faculty member, as well as to allow for adaptation to a variety of disciplines. Program details can be found at: www.kirkwood.edu/honorsprogram (http://www.kirkwood.edu/honorsprogram/).

Honors Program Credits

The Kirkwood Foundation pays for honors program credits. Eligible students may receive up to four free honors credits.

Phi Theta Kappa

Phi Theta Kappa is the only internationally-recognized honor society for students attending two-year colleges. Kirkwood's local chapters are Alpha Eta Rho, for main campus students, and Beta Lambda Tau, for students at the Kirkwood Regional Center at the University of Iowa.

Both chapters give achievement-minded Kirkwood students the opportunity to network with and energize one another, participate in service projects within the community and be part of a highly-esteemed group on campus.

Members of Alpha Eta Rho or Beta Lambda Tau must complete 12 credit hours at Kirkwood and have a 3.5 or greater cumulative GPA.

Iowa Vocational Rehabilitation Services

Cedar Rapids Main Campus
2027 Cedar Hall

319-398-4925
www.ivrs.iowa.gov (http://www.ivrs.iowa.gov)

The Iowa Vocational Rehabilitation Services office works with Iowans with disabilities to:

- Gain accessibility to school or work, and increase independence.
- Assist students to determine a viable vocational direction.
- Find financial support through counseling and guidance.
- Assist in exploring employment opportunities as well as expand job search skills.

KPACE

Kirkwood's Pathways for Academic Career Education and Employment
2026 Iowa Hall
319-398-5899 ext 5069

KPACE provides academic, personal and financial supports to individuals who are currently earning a wage lower than a livable wage for their family. Kirkwood offers short-term and long-term training to prepare individuals to work in a middle-skill industry that is experiencing a shortage in the current Iowa workforce.

KPACE allows individuals the opportunity to seek training based on their developmental needs, career goals, and personal situations. KPACE assistance has been successful in alleviating student and life stressors that can cause barriers to student success.

Unique to this Kirkwood award, students will be connected with a Pathway Navigator who offers guidance and support from the beginning to the end of their educational and career pathway. KPACE financial assistance is available for a maximum of six consecutive semesters.

Referrals are accepted on an ongoing basis from community agencies, and Kirkwood counselors, instructors and staff. Students must apply and be accepted into the program.

Learning Commons

Cedar Rapids Main Campus
2071 Cedar Hall
319-398-5425
www.kirkwood.edu/tutoring (http://www.kirkwood.edu/tutoring/)

Kirkwood Regional Center at the University of Iowa
Room 052, Lower Level
319-887-3658

The Learning Commons supports students in meeting their learning goals through services such as individual meetings with a dedicated learning assistant, walk-in hours in math and science, and peer study groups. Study support for any class is available by request for any student enrolled in a credit course at Kirkwood. There is no charge to the learner, and study support is available every term, day and evening.

Additional support is also available 24/7 online from www.brainfuse.com (http://www.brainfuse.com). Links are available on the learning commons website and within TALON.

Many learning assistants are Kirkwood students who are paid by the college for their services. Students interested in being learning assistants may apply through the Learning Commons office.

Library Services

Cedar Rapids Main Campus
First Floor Benton Hall
319-398-5697
Toll free: 1-866-452-8504
www.kirkwood.edu/library (http://www.kirkwood.edu/library/)

Kirkwood's library is open to all students, staff, faculty and area residents. The librarians are experts in college-level research, including finding material, evaluating sources, organizing research, and communicating findings clearly and ethically. The library has books, DVDs, magazines, and scholarly journals, plus online access to ebooks, scholarly peer-reviewed journals, newspapers, videos, music, and more. Ask a librarian if you can't find something you need. We can help you in your search and can borrow materials from another library for you to use.

Many resources and services are available online 24/7 through the Kirkwood website. Librarians are available to answer questions during library hours, including nights and weekends. Find current hours on our website. All Kirkwood students, including online learners, students at county centers, and concurrent enrollment, students have full access to all library services and materials. Ask questions in person, by phone, chat, text, and e-mail. Use the library website to access our online resources, research help guides, and video tutorials, including guides on creating APA and MLA citations. The website also has other services like:

- print from your own device to a Kirkwood printer
- reserve a group study room
- reserve time for a research consultation, either in person or online
- request delivery of library materials to a Kirkwood Center

Information Resources and Technology

The library provides quality information resources like books, journals, and videos, most of which are available through our website.

We also provide computers, printers, and copiers for student use. Students may check out a laptop for use within the library or bring a laptop or mobile device to connect with WiFi. All library computers have Microsoft Office as well as selected course-specific software.

Facilities

The Kirkwood Library is located on the Cedar Rapids Main Campus on the first floor of Benton Hall. There are many places to study on the first and second floors, comfortable seating, study carrels and natural lighting. The second floor is designated as a quiet study area and has several group study rooms.

Some library services will be available in the Learning Commons at the Kirkwood Regional Center at the University of Iowa, in room 052 on the lower level.

MyHub

MyHub is your go to place to access your Kirkwood profile containing your new student checklist, class schedule, program plan, billing and payments, and other academic records. Also find available support resources such as advising, tutoring and counseling. Explore the campus

using the MyHub interactive campus maps and learn about the upcoming student life events on the events widget.

Download the Kirkwood MyHub app from either the Apple or Google Play app store or access it through your browser by going to hub.kirkwood.edu (http://hub.kirkwood.edu/). Sign in using your k-number and established password.

Project START

2026 Iowa Hall
project.start@kirkwood.edu

Project START (Supported Training and Retraining) helps students overcome barriers they may encounter while reaching their academic and career goals. Staff help students by providing financial assistance, helping with study skills and test taking, monitoring class progress, arranging special assistance, and serving as an advocate with instructors and other college personnel.

Students will be connected with a Pathway Navigator who offers guidance and support from the beginning to the end of their educational and career pathway. START assistance is available for a maximum of four consecutive semesters.

Referrals are accepted on an ongoing basis from community agencies and Kirkwood counselors, instructors and staff. Students must apply and be accepted into the program.

Project START began as a cooperative effort between Kirkwood and the Hall-Perrine Foundation, and receives continued funding from the Kirkwood Foundation.

Secondary Programs

Kirkwood Center for Lifelong Learning
6301 Kirkwood Blvd SW
Cedar Rapids, IA 52404
319-784-1510

Adult English Language Instruction

Adult Literacy and English as a Second Language (ESL) classes are offered to non-native English speakers through Kirkwood's Secondary Programs. Students in these classes gain the knowledge and linguistic skills necessary for self-sufficiency and gainful employment. Through these classes, students are connected to pathways that provide opportunities in job training programs, high school equivalency classes, or higher education. Classes are taught in Cedar Rapids, Coralville, and online at levels designed to meet the needs of all learners.

English Language students may be eligible to participate in job training and additional English language instructional programs through Kirkwood's IET/IELCE programming. These programs include classes and on the job training customized to meet the needs of local employers looking to expand their workforce.

High School Completion and Adult Literacy Programs

The Adult Education and Literacy program assists adult learners to become literate and obtain the knowledge and skills necessary for employment and self-sufficiency. The program also assists adults in the completion of a secondary education.

Students 17 years of age or older who have not completed their high school education may be eligible to earn a diploma through Kirkwood's High School completion program. More than 50 independent study, online and structured course are offered at Kirkwood learning centers located in the seven-county service area.

Computers are available to provide students with coursework, enrichment activities and vocational experience. Students are also encouraged to take interest and career assessment inventories, tour program facilities on the main campus, and explore other career and academic resources as part of their high school experience.

Students may choose to earn credits to meet the state requirement for a state high school equivalency diploma. Kirkwood also offers a high school equivalent diploma through HiSET. A company designated by the state that offers testing to gain a high school equivalent diploma. A student must pass the 5 required tests (English, Reading, Math, Science, and Social Studies) to earn their high school equivalent diploma. Kirkwood offers classes, independent study, instructional software, to learn and prepare for these tests.

High School Distance Learning (HSDL) Program

Students unable to attend a Kirkwood learning center can earn high school credits or transfer credits through the High School Distance Learning program. Often, students who are currently enrolled in high school complete courses through this program to meet the requirements of their local high school. Courses are available in packet and online formats.

Corrections Education

Through a contract with the Iowa Department of Corrections, Kirkwood manages the educational programs offered to offenders at the Anamosa State Penitentiary and the Iowa Medical and Classification Center in Oakdale. Literacy, HSED preparation and testing, and life skills are the instructional priorities.

Student Assistance

Cedar Rapids Main Campus
3034 Iowa Hall
319-398-5540

www.kirkwood.edu/studentassistance (http://www.kirkwood.edu/studentassistance/)
studentassistance@kirkwood.edu

Student Assistance is available to help students navigate life at Kirkwood and in the community. When students are unsure where to go for help or when the unexpected occurs in life, the staff in Student Assistance is available to provide support and information to college and community

resources. Student Assistance staff assist students with overcoming challenges while also providing academic and personal assistance.

Faculty, staff, students and community members are encouraged to visit www.kirkwood.edu/studentassistance (http://www.kirkwood.edu/studentassistance/) to submit a student concern form, schedule an appointment, or get connected to resources.

Study Abroad

Cedar Rapids Main Campus
2008 Iowa Hall
319-398-5579

Students earn college credits while embarking on once-in-a-lifetime adventures through Kirkwood's Study Abroad programs. They greatly expand their horizons by stepping outside the conventional college environment, meeting and traveling with other college students, and fully experiencing world cultures.

Financial aid can be applied to Study Abroad programs and scholarships are also available. For more information about Kirkwood's Study Abroad programs visit www.kirkwood.edu/studyabroad (http://www.kirkwood.edu/studyabroad/).

Test Centers

Cedar Rapids Main Campus
2055 Cedar Hall
319-398-5456
testcenter@kirkwood.edu
www.kirkwood.edu/testcenter (http://www.kirkwood.edu/testcenter/)

Kirkwood Regional Center at the University of Iowa
2301 Oakdale Blvd, Coralville, Room 126
319-887-3642

All regional and county Kirkwood campuses have test centers that will proctor placement and academic examinations. Please contact the preferred test center for its schedule and procedures.

A wide variety of testing services are provided to prospective students, current students, graduates and the community at large. Prospective students participate in placement testing to help determine their readiness for college-level classes. Once prospective students complete placement testing, advisors help them determine results. Current students use the center for department make-up and Distance Learning exams. Provides testing accommodations for disabilities. Alumni and members of the community use the center for continuing education and professional certification testing. In addition, English Language Acquisition (ELA) tests are given to incoming students whose native language is not English.

A photo ID is required for all tests.

TRIO Student Support Services-Traditional and TRIO Student Support Services-ESL

Cedar Rapids Main Campus
2010 Cedar Hall
319-398-5455

trio@kirkwood.edu
www.kirkwood.edu/trio (http://www.kirkwood.edu/trio/)

TRIO Student Support Services is a program specifically designed to assist students in the transition to higher education and the college environment. Participants receive individualized academic advising and guidance, financial aid, scholarship and financial literacy assistance, math and writing support, transfer advice, career development assistance, and cultural and civic engagement opportunities.

To be eligible for the TRIO program a student must meet one of the following eligibility criteria and be a citizen or national of the United States:

1. First generation student (neither parent has graduated with a bachelor's degree).
2. Low income.
3. Physical or mental disability.
4. For TRIO SSS ESL - support is provided for non-native English speakers, ELA students, or students who speak a language other than English at home.

TRIO programs are federally funded under the Higher Education Act of 1965. TRIO programs help students overcome class, social and cultural barriers in higher education.

Veterans Services

Cedar Rapids Main Campus
2026 Iowa Hall
319-398-4962
www.kirkwood.edu/va (http://www.kirkwood.edu/va/)

Kirkwood is committed to serving those in the community who have served or are serving in the military. Almost all programs are approved by the Department of Education for payment of Department of Veterans Affairs educational benefits. The Veterans Services Coordinator/School Certifying Official is a full-time staff person who is available to assist veterans in the application process to ensure the students' programs meet federal guidelines.

As another service to student-veterans, Kirkwood offers a Veterans Lounge, available to all veterans and their dependents. The lounge is open during regular college hours. Located in 2004 Iowa Hall, the Veterans Lounge provides a spot to check emails, quietly study or just enjoy camaraderie with fellow veterans.

Veterans Benefits

Veterans and members of the Selected Reserve may be eligible to receive educational benefits while enrolled in and pursuing an approved program of education and training.

Spouses of veterans who are rated by the VA and found to be totally and permanently disabled from a service-related disability or have died due to a service-related disability, have 10-20 years from their initial date of eligibility. Children of these veterans have until age 26.

Members of the Selected Reserve, who have not served active duty other than training, are required to remain actively drilling in order to maintain eligibility. Reservists who were ordered to active duty after September 11, 2001, in response to war or national emergency, have no delimiting date as long as they remain in their reserve component.

To be eligible for veterans educational benefits, students must:

1. Be eligible under one of the benefit programs of the Department of Veterans Affairs;
2. Be pursuing courses at least as half-time students to receive monthly benefits;
3. Maintain a 2.0 grade point average for graduation or show satisfactory progress each term while on academic probation;
4. Pursue one program at a time;
5. Take only courses applicable to the stated, current program.

Veterans Education Outreach Program (VEOP)

Recognizing students who receive veterans educational benefits periodically need special services, the college has established the VEOP. The Veterans Services Coordinator/School Certifying Official :

- Coordinates veterans' services with other campus services such as admissions, financial aid, counseling or placement.
- Maintains communication with military Reserve and National Guard units, as well as local members of the active military, to identify and serve people eligible for benefits and entitlements.
- Serves as the principal contact person and advocate for eligible students attending or seeking to attend Kirkwood. This may include facilitating admission, evaluating military credits, developing and monitoring degree programs, or serving as an information-referral source.

Further questions should be directed to the Veterans Services Coordinator/School Certifying Official.

VITAL

Cedar Rapids Main Campus
2042/2044 Cedar Hall
319-398-5574
www.kirkwood.edu/VITAL (https://www.kirkwood.edu/explore/services/learning-services/vital/)

VITAL provides vocational, training and support services to students who were enrolled in special education programs in high school and are now enrolled at Kirkwood. The Vocational Individualized Training and Learning (VITAL) program is jointly administered by Kirkwood, Grant Wood Area Education Agency and local high schools.

Writing Centers

Cedar Rapids Main Campus
2080 Cedar Hall

Kirkwood Regional Center at the University of Iowa
Room 052, Lower Level
WritingCenter@kirkwood.edu
www.kirkwood.edu/writingcenter (http://www.kirkwood.edu/writingcenter/)

The Writing Center helps students of any level of ability to improve all aspects of their writing, and at any stage of a writing project, from brainstorming ideas, organizing thoughts, developing arguments, explaining concepts and processes, to editing and proofreading.

While the Writing Center is not a proofreading service, instructors assist students in becoming better readers of their own work and developing their writing skills. The Writing Center is available to help students with writing tasks in any class, with personal writing, and for applying for jobs and scholarships. We offer assistance in-person and online.

STUDENT LIFE AND SERVICES

Bookstores

Cedar Rapids Main Campus
319-398-5469

In addition to providing course materials for all Kirkwood courses, the bookstore carries supplies, logo apparel and gifts. At the end of each semester, students have an opportunity to sell back previously purchased course materials.

EagleTech is Kirkwood's technology destination to purchase cutting-edge devices including Apple and Windows products. The highly trained technology gurus and ninja-skilled Apple technicians are available to fix your computer problems.

Bus Service

Many students ride the Cedar Rapids Transit to and from campus. Current students with a valid EagleCard can ride any Cedar Rapids Transit route for free. For more information on bus stop locations and bus routes, visit www.cedar-rapids.org/residents/city_buses/ (https://www.cedar-rapids.org/residents/city_buses/).

EagleCard

131 Nielsen Hall
319-398-5680
www.kirkwood.edu/eaglecard (http://www.kirkwood.edu/eaglecard/)

The EagleCard is the official Kirkwood Community College identification card. It is required for the following:

- Buying books at the Kirkwood bookstores.
- Selling books back at book buy-back time.
- Checking out books from the Kirkwood library.
- Admittance to the Michael J. Gould Recreation Center, computer labs, and athletic and entertainment events.

A student has the option of depositing money on their EagleCard account and using the funds as Eagle cash on campus. The EagleCard Eagle cash is accepted at the EagleTech Store, the Mini Cafe in Linn Hall, the Iowa Hall Cafe, and the Iowa Hall coffee shop, as well as the main campus bookstore.

Students can obtain their EagleCard, on main campus, at the EagleCard office (131 Nielsen Hall), Iowa Hall Information Desk or the Recreation Center.

Food Pantry

Cedar Rapids Main Campus
3038 Iowa Hall

Kirkwood Regional Center at The University of Iowa
Room 024

Kirkwood Student Food Pantry offers free perishable and non-perishable grocery items to enrolled Kirkwood students. Other items available are nursing mother supplies, personal care items, and limited school supply needs. If you have any questions, please email studentfoodpantry@kirkwood.edu.

Housing

Cedar Rapids Main Campus
3rd Floor Iowa Hall
319-398-7647
www.kirkwood.edu/housing (http://www.kirkwood.edu/housing/)

Kirkwood does not provide on-campus housing, but nearly 2,500 students live in privately-owned apartments near the Cedar Rapids campus. The Housing office provides information and serves as a liaison between apartment managers and student tenants.

Public Safety

319-398-7777
www.kirkwood.edu/public-safety (http://www.kirkwood.edu/explore/public-safety/index/)

Public Safety officers patrol campus property, respond to emergency and non-emergency calls for service, conduct parking enforcement, staff special events, conduct inspections of life safety devices, and facilitate a variety of safety and security presentations.

Public Safety officers may ask persons for identification to determine whether they have legitimate business at the college. Public Safety officers have the authority to investigate offenses involving rule violations and to make a referral to the appropriate area of the college.

Public Safety officers do not possess arrest powers and do not carry firearms. Criminal incidents are referred to local law enforcement who have jurisdiction on campus. Public Safety maintains a highly professional working relationship with law enforcement. Anyone who is the victim of, or witness to a crime is strongly encouraged to report the crime immediately to Public Safety and local law enforcement.

Services (offered 24 hours a day, 365 days a year at the Cedar Rapids Main Campus):

- Enforcement of college, as well as local, state, and federal laws and regulations.
- Investigations.
- Escorts on main campus.
- Unlocking and jump starting of vehicles on main campus.
- Monitoring and enforcing of traffic regulations.
- Emergency response.
- Member of Threat Assessment Team.
- Blue-light emergency phones located throughout campus.
- Safety and security presentations.

Campus Security (Clery) Act

Because safety is a community issue, Public Safety, working in partnership with students, faculty and staff, can make this community a safer place to live, work and learn. Public Safety prepares the Annual Security Report annually for students, parents, faculty and staff at Kirkwood. The report, includes campus crime statistics for the last three years as well as safety-related policies and procedures. Information is prepared in accordance with the Crime Awareness and Campus Security Act enacted by Congress in 1990. The act was amended a number of times, and renamed the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act and recently amended as part of the Violence Against Women Reauthorization Act. The Clery Act, as it is commonly called, requires all institutions of higher education give timely warnings of crimes that represent a threat to the safety of students or employees, and to make public their campus security policies. It also requires that crime data is collected, reported and disseminated to the campus community, and submitted to the U.S. Department of Education. The act is intended to provide accurate, complete and timely information about safety on campus so students may make informed decisions.

To obtain a printed copy of the report, contact:

Campus Security
6301 Kirkwood Blvd. SW
Cedar Rapids, Iowa 52404
319-398-7777

This report is also available at www.kirkwood.edu/explore/public-safety/clery-act (http://www.kirkwood.edu/explore/public-safety/clery-act/)

Student Life

Cedar Rapids Main Campus
2nd Floor Iowa Hall
319-398-5578
www.kirkwood.edu/studentlife (http://www.kirkwood.edu/studentlife/)

Kirkwood offers opportunities to get involved in both extracurricular and co-curricular activities and groups to help make the most of your college experience. With more than 400 annual events and activities and nearly 50 clubs and organizations, there are many opportunities to meet new friends, build your resume, and have fun. The college provides these opportunities to students in two primary ways.

Clubs and Organizations

Kirkwood offers both general interest clubs and academic based organizations to help students grow outside of the classroom. Students can join a wide variety of groups or talk with the Student Life office on how to create a new group on campus. Clubs and organizations are a fun way to engage with others with common interests or goals. www.kirkwood.edu/clubs (http://www.kirkwood.edu/clubs/)

Events and Activities

The college offers more than 400 annual events and activities for students that range from athletics or performing arts to intramural sports and educational events. Starting with Welcome Week in August, there are plenty of ways for students to build connections with other students and various Kirkwood resources to provide each student with a great college experience. Cheer on the nationally ranked Eagles, see our music & theatre students star on stage, join us for a comedian or game of bingo, play an intramural sport, join us for a community-based event, find out more about Study Abroad, or find your fit through one of the many other events offered to students. While students may not be interested in every event, we are confident that we provide events for every student. Best of all, every event offered to students is free of charge. www.kirkwood.edu/events (http://www.kirkwood.edu/events/).

Traffic and Parking

Thousands use the Kirkwood campuses each day. For everyone's safety, Public Safety will enforce traffic and parking regulations. Students, Staff, Faculty, and Visitors may park in any non-reserved parking space.

Kirkwood's traffic and parking regulations are based on the Traffic Code of the State of Iowa, local laws, and ordinances. Students, Faculty, Staff and Guests are expected to comply with these regulations. Traffic and parking violations such as speeding, failure to stop at a stop sign, failure to yield to pedestrians, reckless driving and parking illegally are strictly prohibited.

Additional information regarding traffic and parking regulations is available at www.kirkwood.edu/explore/public-safety/traffic-parking (https://www.kirkwood.edu/explore/public-safety/traffic-parking/)

KIRKWOOD HISTORY AND ACCREDITATION

Kirkwood is a publicly-supported college that serves Benton, Cedar, Iowa, Johnson, Jones, Linn and Washington counties in eastern Iowa. Kirkwood operates under the regulations of the Iowa Department of Education and is governed by a publicly-elected, nine-member board of trustees.

In January 1965, a steering committee conducted a study to establish a vocational school to serve parts of eastern Iowa, then known as Area X. Soon after this local study, the Iowa General Assembly approved legislation that created a system of community colleges throughout the state.

On July 1, 1966, Kirkwood was officially established, originally called "Area X Community College." The college immediately assumed responsibility for the federally-funded vocational/technical programs the Cedar Rapids Community School District had provided since 1964. The college added the Arts and Sciences, Student Services and Community Education divisions a year later. In 1969, the college board of trustees decided on a new name—"Kirkwood Community College," to honor Samuel J. Kirkwood, Iowa's governor during the Civil War years.

In 1982, Kirkwood became a board member of the League for Innovation in the Community College, a consortium of 20 of the nation's finest two-year colleges.

Kirkwood awards Associate of Arts and Associate of Science degrees that transfer to four-year colleges and universities. Graduates in Applied Science and Technology programs are prepared to enter specialized technical careers.

Kirkwood Community College is accredited by the Iowa Department of Education and by The Higher Learning Commission.

The Higher Learning Commission
Suite 7-500
230 South LaSalle Street
Chicago, IL 60604-1411

The Higher Learning Commission can be reached at 800-621-7440 or www.hlcommission.org (http://www.hlcommission.org). Appropriate professional associations within their respective fields accredit individual college programs. For more information go to www.kirkwood.edu/accreditation (http://www.kirkwood.edu/accreditation/).

Legal Basis of the College

Kirkwood was established and continues to operate as prescribed by Iowa Code section 260C.48 and Iowa Administrative Code 281-IAC 24.

Area community colleges offer, to the greatest extent possible, educational opportunities and services in each of the following areas:

1. The first two years of college work including pre-professional education.
2. Vocational and technical career training.
3. Programs for in-service training and retraining of workers.
4. Programs for high school completion for students of post-high school age.
5. Programs for all students of high school age who may best serve themselves by enrolling for vocational and technical training while also enrolled in a local high school, public or private.
6. Student personnel services.
7. Community services.
8. Vocational education for persons who have academic, socioeconomic or other disabilities that prevent them from succeeding in regular vocational education programs.
9. Training, retraining and all necessary preparation for productive employment of all citizens.
10. Vocational and technical training for persons who are not enrolled in high school and who have not completed high school.

ACADEMIC AND STUDENT PROCEDURES

Special Notice to Students

Each student is responsible for being familiar with the information appearing at www.kirkwood.edu/studenthandbook (p. 24). Failure to read the regulations will not be considered an excuse for noncompliance. The college reserves the right to change policies or revise curricula as needed due to unanticipated circumstances. Rules and regulations have been adopted by the faculty and administration of the college. If a student finds that extenuating circumstances might justify the waiver of a particular college regulation, that student may file an appeal of procedure with the Vice President of Student Services, according to established procedures.

Grades

Final Grade Appeal Procedure

Final Grade appeals are addressed to the Grade Appeal Committee.

Appeal Process

You may appeal a final course grade provided that:

- Conferences have been held first with the instructor assigning the grade and then the appropriate department administrator.
- Appeal of a final grade can be submitted using this Final Grade Appeal Form (https://cm.maxient.com/reportingform.php?KirkwoodCC&layout_id=20)
- The grade appeal form must be submitted within 100 calendar days from the date of which the grade was assigned. In order to ensure a timely hearing of the appeal, students are encouraged to submit their appeal request as soon as possible after the grade is assigned.
- The appeal should contain a brief, clear and concise description of what occurred and state specifically why the student is appealing the final grade. Students should also provide additional information why

the Committee should grant the appeal. Supporting documentation is allowed and may be included with the appeal.

Final Course Grade Hearing Procedure

An Ad Hoc Appeal Committee will convene to consider the appeal within ten (10) business days of the receipt of the grade appeal. The chairperson will contact all parties involved in the appeal and provide an opportunity to appear in person for the appeal hearing. The Ad Hoc Appeal Committee may render a decision based entirely on the written appeal material. It is the intention of the Committee to reach a decision concerning appeals within two (2) business days following the conclusion of the appeal hearing. The chairperson of the Committee will notify all parties involved of the Committee's decision using a letter to the student's Kirkwood email address within ten (10) business following the appeal hearing. The decision of the Committee is final and cannot be appealed within the College.

Staff Rights

Any faculty/staff member directly involved with any student appeal will be notified of the appeal upon receipt of such by the Committee chairperson. The chairperson will also notify the staff person of the date, time and place of the appeal hearing and request that the staff member provide written information responsive to the appeal. The involved faculty/staff person or designee has the right to appear before the Committee, personally present information and answer questions pertinent to the appeal.

Student Rights

The student will be notified by the chairperson of the date, time and place of the appeal hearing. The student has the right to appear before the Committee, and personally present information and answer questions pertinent to the appeal. The student has the right, during the hearing, to be assisted by an advisor they chose, at their own expense. The student is responsible for presenting their own information, and therefore, advisors are not permitted to speak or to participate directly in any part of the hearing. Students should select an advisor that can be present during the scheduled date and time, delays will not be permitted due to scheduling conflicts.

Other Appeals

The Committee may also hear other academic policy and procedure appeals as designated by the vice president of Academic Affairs or a committee recommendation.

Disposition of Appeals

Within 10 business days of the hearing, all persons directly involved in the appeal will receive written notification through their Kirkwood email address by the committee chairperson of the Committee's decision about the appeal. The Committee's decision is final and cannot be appealed within the College. The plurality of the vote or the nature of the votes cast by individual committee members will not be disclosed.

Auditing Courses

Audit enrollment in courses provides students the opportunity to attend a class as a noncredit participant, usually as a listener-observer. This kind of enrollment may have value for students who want an introduction to subjects outside their major fields, a review or refresher, or other

purposes where credit and grades are not needed or would pose an unnecessary academic risk.

With the permission of the faculty member and department Dean, students can enroll in any course on an audit basis. Students and faculty members must agree on what portion(s) of courses the student plans to audit and the requirements the instructor has for attendance and participation. If the student fulfills the agreement for the audit, the grade of "N" will be entered on the student's academic transcripts. If the student does not fulfill the audit agreement, the registrar, upon request from the faculty member, will withdraw the student from the courses and assign a grade of "W."

Audit enrollments carry no credit or grade point value. No inference is made regarding the quality of a student's mastery of the course subject matter. Students enrolled in FlexForward programs are excluded from audit enrollments.

Standard tuition and fees apply to all audit enrollments regardless of the length and scope of the audit. The last day to change from graded credit to audit is the 5th business day of the semester. Once your enrollment changed to audit, the enrollment cannot be changed back to graded credit.

Computing Grade Point Average

Grade point average is computed by multiplying the number of semester credits for each Kirkwood and transfer course by the numerical value, or "grade points," of the grade given for that course. These values are then added together for the total grade points, which are then divided by the total semester credits for the GPA. The grade point average is not weighted.

Example:

Course	Grade	Grade Points	Semester Credits	Total Grade Points
X	A	= 4.0	x 3	= 12
Y	B	= 3.0	x 3	= 9
Z	F	= 0.0	x 4	= 0

Total grade points (21) divided by total semester credits (10) = 2.10 GPA.

Credit Assignment in Emergency Situations

After completing at least two-thirds of the class duration, a student may petition to receive a grade and credit for courses in the academic term at the time of such emergency situations as:

- Induction, but not enlistment, into the United States armed services.
- Serious personal or family illness requiring the student to withdraw from all classes.
- Death in the immediate family.
- Other similar emergency circumstances that prevent the student from completing the academic term.

Students who believe they are entitled to consideration under this procedure must file petitions with Student Services, third floor Iowa Hall. Appropriate documentation of emergencies must accompany petitions. A committee will review the petitions to ensure conformity with the procedure. Those found to be in conformity will be forwarded

for response to instructors involved. Instructor response may include assigning grades then in progress, assigning reduced grades in consideration of unmet course requirements or declining to assign grades. In any case, students retain the right to withdraw from courses.

Students who experience an emergency situation such as those above should work with their academic advisor to determine the best course of action for their circumstance, which could include an incomplete grade or a special appeal of procedure.

Dean's List

Students with outstanding academic records are named to the Dean's List. To qualify, a student must have completed 12 credit hours of graded coursework and achieved a grade point average of 3.3 or higher. A minimum of six graded credit hours must be earned in the term of the award. The Dean's List information will be pulled three weeks after the end of the term.

Forgiveness for Failing Grades

Grades of "F" (or any other failing grades) can be changed to "O" (no credit) if the student has either not been enrolled in any program of higher education for a period of at least three consecutive years or has honorably served in the U.S. armed services for at least two years, between the final day of the term last attended and the first day of the term they returned.

The student must also have returned to Kirkwood, and in their first semester or within their first three consecutive semesters, they:

1. completed six credit hours and earned a minimum 2.0 GPA in the semester(s), and
2. have no unpaid balance for the semester(s)

Courses with grades changed in accordance with this procedure will not satisfy graduation requirements.

Changing of grades under this procedure may only be done once and will not impact a student's satisfactory academic progress status for financial aid.

For more information, contact:

Student Services
Third Floor Iowa Hall
319-398-7600

Grading System

Kirkwood uses a 4.0 grading system. Kirkwood grades and their grade points or meanings are provided below:

Grade	Grade Points
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00

Grade	Description
P	Passing Credit
Q	No Credit
I	Incomplete
E	Excused Without Credit
T	Credit by Examination
L	Credit for Prior Education or Experience
N	Audit
W	Withdrew from Course
X	Course Repeated
O	Original Grade Removed

The grades A, B, C, D and F are included in the computation of grade point average. Credit toward graduation is granted for A, B, C, D, P, L and T.

Incomplete Grades

A student who is in good standing but unable to complete a segment of the assigned coursework due to extenuating circumstances may be assigned the grade "I" (Incomplete) by the faculty member. In such cases, the instructor and the student must complete an Incomplete Grade Agreement form documenting the course requirements remaining and the date by which they must be completed.

The Incomplete grade is not intended for use with a student who misses a majority of the course, even when the reasons are valid. In these instances, the student should apply for an appeal of policy and retake the entire course at another time.

The maximum time a student is permitted to carry an incomplete grade is one year. After this time, in the absence of any alternative grade being assigned by the instructor, the "I" grade will be changed to "F."

Repeating Courses for a Better Grade

Students may repeat a course. No course may be repeated more than twice without the approval of the Vice President for Academic Affairs. When a course is repeated, the lower grade will be changed to an X, which carries no credit and has no effect on the grade point average. Only the best grade will be used in the GPA calculation. Because of federal financial aid regulations, a third attempt may not contribute to a student's half-time/full-time status for financial aid eligibility.

Financial Aid Satisfactory Academic Progress (SAP)

Federal regulations, HEA Sec. 484(c), §668.16, 668.34, require all schools participating in Title IV Federal Financial Aid programs to have a Satisfactory Academic Progress (SAP) policy that conforms to the requirements detailed below. These requirements apply to each student regardless of program of study or enrollment level as one determinant of eligibility for financial aid.

Progress is measured by the student's cumulative grade point average (GPA), percentage of credit hours earned in relation to those attempted (Pace), and the length of the academic program. In order to assure that each student is making progress toward earning a degree both in terms of number of hours completed and cumulative GPA, Kirkwood Community College requires a student maintain the following standards: a cumulative 2.0 GPA and cumulative pace of 67%. Kirkwood applies standard rounding to Pace and rounds GPA to the third decimal.

Cumulative records of each regular student is reviewed after each payment period to evaluate progress. All periods of registration, including summer term, will be evaluated regardless of whether or not financial aid was disbursed during the term. This includes remedial credits, ESL credits, credits taken while in high school, repeated credits, and transfer credits from other institutions. Attempted credit hours will be determined at the end of the drop period each term.

Withdrawals are considered when determining Pace but are not factored into the GPA calculation. Incomplete grades are also considered when determining Pace but are not factored into the GPA calculation. If a student completes a course after their SAP status has been determined, Pace and GPA will be updated at the next SAP evaluation.

The student is placed on a Warning status the first term the student's academic transcript does not meet the standards of SAP with one exception. A student without transfer credits who fail to complete any courses within the first term of enrollment (combination of Fs and Ws) will be placed on Suspension for the following term.

If progress during the Warning term is adequate to bring the cumulative record up to the standard, the Warning status is removed. If progress in the Warning term is not enough to bring the cumulative record up to standard, the student will receive a Suspension status and be ineligible for financial aid. This suspension includes all scholarships, work-study, loans and grants.

In a situation where the student is only taking pass/fail classes in a semester and does not complete any credit during that semester, the student will go on either Warning or Suspension as appropriate.

A student who fails to meet the SAP standards is sent an email explaining the status and the steps to take to regain eligibility. A student can also view the status on the Financial Aid Checklist. The student has the right to appeal the SAP policy if the student believes extenuating circumstances prevented the student from meeting the standards of the policy. Examples of extenuating circumstances would include prolonged illness for which medical attention was received, or extreme personally uncontrollable circumstances. Appeals must be in writing and include documentation of the circumstances that led to the student's academic

performance along with an academic plan. The academic plan must be comprehensive enough that it shows how a student may reach a Satisfactory SAP status or successfully graduate. Appeals should also address changes made to ensure future academic success. Appeals must be submitted by the semester deadline. Appeals received after the deadline will be considered for the following semester. The number of appeals a student has submitted will be taken into consideration by the Appeals Committee. If a student pays for classes out of pocket and completes them, that will be taken into consideration by the Appeals Committee, which determines whether the appeal is approved. The decision of the committee is final and cannot be appealed further. Additionally, Kirkwood reserves the right to re-review SAP based on a grade change.

If an appeal is approved, the student is placed on an Academic Plan status. A student with an Academic Plan status must follow the academic plan until the cumulative record meets the standard or the student graduates. Students on an academic plan must maintain a term completion rate of 75% or higher and a term GPA of 2.0. If the student fails to do so, the student is placed on Suspension.

Federal regulations stipulate that each student must complete the educational program in a reasonable length of time, which is defined as no more than 150% of the credit hours required for graduation in that program, regardless of major changes. For example, if a student is working towards a Liberal Arts-AA, which is 62 credit hours; the student can receive aid up to 150% of the credits for that program, which is 93 credit hours. Once a student has exceeded 93 earned credits, the student will be placed on suspension. All transfer credits are included in the earned credits including those earned as part of another degree or diploma. ESL credits are not counted as attempted credits when determining whether a student has completed 150% of the credits for graduation in the program. The student has the right to appeal the suspension as noted above. To continue to receive financial aid, the student must follow the academic plan. The academic plan may only contain courses that are required for the student's program. A student will be warned of this status at 125% of the credits required for graduation in the program. The student can contact the Financial Aid Office with questions regarding SAP.

Financial Aid Procedures

Financial Aid Eligibility Requirements

To receive the maximum consideration for financial aid, students should apply as soon as the Federal Application for Federal Student Aid (FAFSA) is available. An application for financial aid must be made each year. All students seeking financial aid must:

• Be enrolled as a regular student in an eligible program;
• Not be enrolled simultaneously in elementary or secondary school;
• Be a citizen of the United States or an eligible noncitizen;
• Have earned a high school diploma or its recognized equivalent;
• Sign a Statement of Educational Purpose, which certifies they will use federal student financial aid only to pay educations costs;
• Be making satisfactory academic progress (SAP) according to Kirkwood's published procedure;
• Attend classes in which they are enrolled;

• Not be in default on a Title IV loan or, if in default, have made satisfactory repayment arrangements with the loan holder;
• Have not obtained loan amounts that exceed annual or aggregate loan limits made under any Title IV loan program;
• Not be liable for an overpayment of a Title IV grant or Federal Perkins Loan, or if liable, have made satisfactory repayment arrangements with the holder of the debt;
• Not have property which is subject to a judgement lien for a debt owed to the U.S., or if subject to a judgement lien, have made satisfactory repayment arrangements with the debt holder;
• Have completed repayment of funds to either ED or the holder of a loan, as applicable, if the student has been convicted of, or pled nolo contendere or guilty to, a crime involving fraud in obtaining Title IV aid

Work-Study Hiring and Compensation

Students

A. Work-study assignments are designed to provide students with an opportunity to gain experience in their career field or to develop general work skills that are transferable.

B. Work-study students who mark "yes" on their FAFSA form and are eligible for work-study dollars, will receive an eligibility e-mail from Kirkwood Community College confirming their eligibility.
   1. Eligibility e-mails will direct students to the work-study job listing site.
   2. To be considered for a position, work-study students must contact the department by phone or e-mail for application instructions.
   3. Work-study students must be enrolled in at least one Title IV class.

Hiring Department

A. Qualified work-study students who apply for a work-study position will be interviewed either by phone or in-person.
   1. All qualified work-study candidates must be interviewed, unless the pool of work-study candidates exceeds five students. In that case only the top five work-study candidates need to be interviewed.

B. The hiring department must verify the student's work-study eligibility with the Financial Aid Office.

C. The hiring department will complete the New Hire Work-study Form indicating, the award amount they are requesting for the work-study student.

D. Work-study students will need to complete the new hire packet that includes: HR cover letter, ACA Disclosure, W4, I-9, and direct deposit.
   1. Work-study students will not have to redo their new hire paperwork if they have worked in the last six months.
   2. Work-study students will not have to complete the background check forms/process as long as they are enrolled as a student.
      a. The exception is if the work-study student will be in regular contact with children under the age of 18 years of age or if required by one of our partner non-profit organizations.
      b. HR will cover the cost for the background checks for all eligible work-study students that require one.

c. Work-study students who are no longer students, or transition to a regular part-time or full-time position will be required to complete a background check.

E. To ensure that work-study students are properly compensated for the work that they perform for the College, their job responsibilities/classification will be placed into one of three pay bands.

1. Work-study students may be paid up to 10% above the minimum of their pay classification so long as it does not exceed the pay of regular part-time employees. To request a salary adjustment above the minimum, the employer/department must submit their reasons in writing to the Human Resources Department.

2. Returning work-study students who return for a second fiscal year and who have been in the position for six months or longer prior to the new fiscal year, may receive an increase equal to that of the part-time staff at Kirkwood.

3. Work-study students may not work more than 20 hours a week during the school year. Work-study students may work up to 28 hours per week during break periods and during the summer.

F. Termination of Employment

1. Hiring departments will need to notify the Financial Aid Office and the Human Resources Department when the work-study student concludes their assignment.

Financial Aid Office

A. The Financial Aid Office will manage the work-study program, providing departments with the resources needed so they can monitor their department budget.

B. When individual work-study funding levels fall near the $500 mark, the Financial Aid Office will verify with the department whether or not they plan to continue to employ the student. If employment will continue, Financial Aid Office will:

1. Attempt to increase the work-study award amount for the student by examining student's need as well as the department's budge or

2. Notify the department that the Human Resources department will switch the student to a regular part-time employment status.

C. Each year, the Financial Aid Office will request completed "Work-study Budget Request" forms from the departments. These are due March 1.

D. Every March/April, the Financial Aid Office will verify with existing work-study employers/departments their need for work-study students for the upcoming fiscal year.

1. Employer/Departments should inform the Financial Aid Office by June 1 of any returning work-study students. Departments should encourage students to file the FAFSA as soon as possible.

2. The Financial Aid Office will confirm with the employer/department the amount of the work-study funding available for their area for the upcoming fiscal year.

3. An employer/department that is not actively looking to fill their work-study position/s and has not filled the position by November 1st will have their funding re-allocated to other departments for that fiscal year.

4. The Financial Aid Office will continually review employer/department work-study accounts to ensure they are actively being utilized. If accounts are not being fully utilized, the Financial Aid Office will review the accounts in partnership with the employer/department and reallocate the funds based on usage.

5. If the employer/department has not used a work-study in the previous two fiscal years, they will be removed from the list along with their funding and will have to reapply if they wish to hire a work-study student.

a. Employers/Departments that reapply will need to provide a job description if a current one is not on file.

b. Employers/Departments will need to complete the "Work-study Budget Request" form.

c. Employers/Departments will need to provide the part-time G/L for their respective departments when completing the work-study form. This G/L code will only be used in cases where the work-study will be retained by the department on a regular part-time basis and work-study funding is no longer available.

General Procedures and Student Rights

Accommodation Services for Students with Disabilities

Kirkwood Community College does not discriminate against qualified individuals with disabilities. The College provides reasonable accommodation(s), as required by law, to otherwise qualified applicants and students with disabilities in all education programs, activities, services and practices, including application procedures, admissions, course selection, the awarding of degrees, discipline and dismissal. Educational opportunities will not be denied to an otherwise qualified applicant or student because of the need to make reasonable accommodation(s) or modification(s) for the physical and mental impairment(s) of any such individual.

Definitions

A student "with a disability" is: an individual with a physical or mental impairment that substantially limits one or more of the major life

activities, a person with a record of such impairment, or a person who is regarded as having such impairment.

- Individuals with disabilities may include persons who have: mobility, sensory or speech impairments; cosmetic disfigurements; mental illness; mental retardation; learning disabilities; cognitive disabilities. Individuals with disabilities may also include persons who have neurological, psychological, or physical disabilities.
- "Major life activities" include caring for oneself, performing manual tasks, walking, sitting, standing, lifting, reaching, seeing, hearing, speaking, breathing, learning, and working.

A "qualified individual with a disability" means:

- with respect to educational opportunities: a person with a disability who meets the academic and technical standards required for admission or participation in an education program or activity;
- with respect to public adult educational services: a person with a disability qualified to the same extent as non-disabled individuals who are provided such services, or of any age during which it is mandatory under state law to provide such services;
- with respect to other services: a person with a disability who meets the essential eligibility requirements for the receipt of such services.

"Otherwise qualified" means: an applicant or student with a disability is "otherwise qualified" if they are qualified for receipt of educational opportunities, public adult educational services or other services, in that they satisfy all of the fundamental academic and technical standards, essential eligibility requirements and other applicable education-related selection criteria.

Reasonable Accommodation

When requested by an otherwise qualified applicant or student with a disability to do so, Kirkwood Community College is prepared to modify or adjust the admissions process or the educational environment to make "reasonable accommodations" to an applicant or student to enable the applicant or student to be considered for admission to the program, course, activity or service they desire; to meet and perform academic and technical standards required for performance of an education program or activity; to meet the essential eligibility requirements for the receipt of other services; or to enjoy equal benefits and privileges of education as are enjoyed by other similarly situated applicants or students without disabilities.

In determining the College's ability to offer reasonable accommodation to an otherwise qualified applicant or student with a disability, each request for an accommodation will be evaluated on a case-by-case basis. Factors to be examined include, among others: the academic and technical standards required for admission or participation in an education program or service; the purpose and nature of the program, course, and/or service; the precise education-related abilities and functional limitations of the applicant or student and how those limitations could be overcome with reasonable accommodation; the nature and cost of the accommodation required in relation to the College's financial resources.

An otherwise qualified applicant or student who requires attendant care services must make arrangements to provide for their own attendant care service. The College does not assume coordination or financial responsibilities for attendant care services.

The College will engage in an interactive process to determine if an accommodation can be made to admit or continue to enroll an individual with a disability to any particular program, course, service, and/or activity

or to provide educational opportunities and other services. The College would not provide an accommodation to admit or continue to enroll if or when:

- an accommodation would substantially alter the educational standards or mission of Kirkwood Community College;
- an accommodation would fundamentally alter the nature of the program, course, service and/or activity;
- an accommodation would not enable a student or applicant to meet the essential functions or technical standards of a program, course, service and/or activity
- an accommodation would not overcome the effects of the individual's disability and meet essential functions or standards of the program, course or service;
- an accommodation would cause an undue financial or administrative hardship on the College;
- an accommodation, that even made, would still result in direct threat to the health or safety of the individual or others.

The implementation of reasonable accommodation does not eliminate or negate requirements for successful completion of a program, course, service and/or activity; the necessity for adherence to generally acceptable standards of behavior and the College's code of conduct; and the requirement to adhere to administrative and faculty directions and instructions. If the academic, technical, or other standards required for admission or participation in an education program, course, service and/or activity are expanded, revised, or modified with an accommodation, the conditions and procedures stated in this procedure shall apply to any evaluation of the student's ability to perform the expanded, revised, or modified requirements and the College's determination whether reasonable accommodation will be provided.

Request Process for Reasonable Accommodation

To request reasonable accommodation under this procedure, an applicant or student must submit an Application for Accommodations to Accommodation Services requesting accommodation(s) and describing the nature of the requested accommodation. An applicant or student should also indicate the nature of the claimed disability and identify their abilities and functional limitations with respect to the claimed disability. The applicant or student will be asked to provide supporting documentation of a disability along with the request. Supporting documentation includes medical, psychological, and educational records which outlines the need for accommodations.

In the request process, the applicant or student with a disability shall also assist the College in determining if and what reasonable accommodations might be provided by identifying in writing or otherwise:

- any special methods, skills, or procedures that would enable them to perform the tasks, functions, or requirements that they otherwise might not be able to perform because of their disability;
- the accommodations the College might make that would enable them to perform and meet the academic and technical standards required for admission to or participation in an educational program, course, service, and/or activity; and
- any equipment, aids, or services that the applicant or student is willing to provide and utilize that the College is not required to provide.

If the applicant or student requires secretarial or other assistance in preparing such written statement or request due to their disability, such assistance will be provided upon request.

Response to Applicants and Students Who Request Reasonable Accommodation

The College, through Accommodation Services, will review the application and documentation and determine eligibility of a student within two (2) weeks (14 calendar days) upon receipt of all documentation and evaluations requested. Once the College determines the student is eligible for services and the student is registered for classes, the College will communicate that decision to the student by electronic communication or other appropriate form. The student is responsible for contacting their assigned Advocate upon receipt of the communication to schedule an initial meeting. Advocates will attempt to meet with the student and determine reasonable accommodation(s) within three (3) weeks.

The determination of whether and/or what reasonable accommodation will be made for an applicant or student shall be made by the Accommodation Access Advocates (or designee), individually or in consultation with appropriate administrators, instructors, and medical or other personnel related to the College. When determining reasonable accommodations Accommodation Services will engage in an interactive process with the student. The following will be considered:

- the academic and technical standards required for admission or participation in an education program or activity by the applicant or student, and
- potential reasonable accommodations to overcome any limitations, and the effectiveness of various accommodations in enabling the applicant or student to perform the academic, technical, or other requirements of the course, program, activity, or service in question.
- the essential eligibility requirements necessary for receipt of other services will be made based on the individual's precise academic and technical abilities and functional limitations and whether and/or how a reasonable accommodation would enable the applicant or student to overcome those limitations to perform and meet all of the required academic, technical, and other standards.

Once reasonable accommodations have been determined, an applicant or student in consultation with their Advocate will develop an accommodation letter with their Advocate. Accommodation letters will be shared with the appropriate faculty through electronic communication. The applicant or student is responsible for making arrangements and communicating with appropriate faculty regarding the determined accommodations. Accommodation Services will maintain a confidential file to document the applicant or student's disability and determined reasonable accommodations.

Accommodations that would substantially modify the educational standards, operation, and/or mission of the College will not be offered and are, by definition, not "reasonable" accommodations. An accommodation that would be unduly costly, extensive, substantial, or disruptive or that would fundamentally alter the nature of the course, program, service, or activity offered by the College would constitute such a substantial modification.

Accommodations are provided on a course-by-course basis and are required to be established (renewed) each semester an applicant or student is enrolled. A student or applicant can request accommodations at any time however it is recommended to start the accommodations request process early in the semester to allow as much time as possible to develop and implement an accommodation plan which will be useful to the student. Accommodations are not retroactive. No student is assured of any particular accommodation or of the student's preferred accommodation.

The College may make inquiries of applicants concerning the presence of a disability but recognizes that such inquiries will be for the purpose of planning support services and such inquiries will not form the basis for any decision regarding acceptance or enrollment in educational programs.

Student Appeal Procedure

Applicants or Students Who Reject Reasonable Accommodation

An applicant or student with a disability has the right to reject an offered reasonable accommodation and submit an appeal. However, in that event, admission to or current enrollment in the program, course, activity or academic support may be denied, withdrawn, or modified as deemed appropriate by the College.

Appeal Process

Accommodation Appeals are addressed to the Accommodation Services Equity Committee.

An applicant or student can submit an appeal of the offered reasonable accommodation to the Accommodation Services Equity Committee if the matter cannot be resolved after:

1. Discussing the rejection with their Accommodations Access Advocate

2. Discussing the rejection with the Dean of Students or other designee with supervisory responsibility

3. In cases where a resolution is not reached, then an applicant or student can submit a written appeal to the Educational Equity Steering Committee which will make final determination on the appeal.

Submitting an Appeal

Appeals must be submitted to the Accommodation Services Equity Committee, Attn: Dean of Students, 3034 Iowa Hall, Kirkwood Community College, Cedar Rapids, IA 52404, or via email to deanofstudents@kirkwood.edu.

Appeals must be submitted no later than fifteen (15) working days following the decision of the appropriate dean, as stated in paragraphs above. Appeals should be clearly printed, or preferably typed, on standard 8 ½ x 11 inch paper and include the student's name, address, and date. It should be brief, clear and concise and state specifically:

- What decision is being appealed
- What relief the student is seeking
- Any alternative accommodations that should be considered
- Why the Committee should grant the appeal.

Supporting documentation, if any, should be submitted by the student and attached to the letter of appeal.

Within ten (10) working days of the receipt of the student appeal, the Accommodation Services Equity Committee will convene to consider the appeal. The Chairperson will contact all parties involved in the appeal and determine whether they wish to appear in person for the appeal hearing or have the Accommodation Services Equity Committee render a

decision based entirely on the written appeal material. It is the intention of the Accommodation Services Equity Committee to reach a decision concerning appeals within five (5) working days following the conclusion of the appeal hearing. The Chairperson of the Accommodation Services Equity Committee will notify all parties involved of the Committee's decision.

The decision of the committee is final and cannot be appealed within the College.

Kirkwood Community College shall not engage in nor allow unlawful discrimination against individuals involved in its educational programs and activities on the basis of race, creed, color, sex, sexual orientation, gender identity, national origin, religion, age, disability, or actual or potential parental, family, or marital status. If you have questions or complaints related to compliance with the policy, please contact the Vice President of Human Resources at Kirkwood Community College, 313 Kirkwood Hall, 6301 Kirkwood Blvd. SW, Cedar Rapids, IA 52404, Telephone: 319-398-5572, Email: equity@kirkwood,edu (equity@kirkwood.edu), or the Director of the Office for Civil Rights U.S. Department of Education, John C. Kluczynski Federal Building, 230 S. Dearborn Street, 37th Floor, Chicago, IL 60604-7204, Telephone: 312-730-1560, Fax: 312-730-1576, Email: OCR.Chicago@ed.gov.

Alcohol and Drug Procedure

Alcohol Procedure

The on-campus use of alcoholic beverages is allowed at Kirkwood only where prior written approval for the serving of alcohol has been obtained from the president (or designee). All Iowa state laws and local statutes regarding the use, purchase, possession, distribution, or dispensation of alcohol must be observed. Food and nonalcoholic beverages must also be made available at events in which alcoholic beverages are served. Alcohol is prohibited at any event in which the majority of participants are under the age of 21; where alcoholic beverages are the focal point of the event, or which contributes to alcohol overindulgence or abuse.

Drug Procedure

The unlawful use, possession, distribution, or dispensation of any narcotic (including prescription medications), dangerous drug or controlled substance is strictly prohibited on campus or at any college-sponsored activity.

Sanctions

There are substantial penalties for drug and alcohol violations. Individuals are subject to federal, state and local laws, as well as college procedures. Both state and federal laws prohibit distribution or manufacture of controlled substances or counterfeit controlled substances. Penalties can result in imprisonment and fines depending on the severity of the crime.

State and local ordinances regulate alcohol. Underage possession of alcohol, driving while intoxicated, public intoxication, public consumption, serving underage intoxicated individuals, open containers and large private parties are all affected by these laws. Check with the local police department for more information. The college may also impose sanctions against students and employees who violate this procedure. The procedures for administering sanctions are described below under, "Procedures."

Procedures

Students who violate this procedure may be referred for an educational/treatment program and may be subject to disciplinary action in accordance with the policies and procedures outlined in the Student Conduct Code. The Dean of Students or designee will determine if the student is responsible for violating this procedure and will impose appropriate sanctions. Sanctions may include warning, probation, suspension, expulsion, and other discretionary sanctions, including educational or treatment programs.

Hazards of Drug Use and Available Services

Illicit drug use may result in:

- physical or psychological dependency;
- a craving or inability to stop using drugs;
- adverse effects on body systems;
- injury due to motor vehicle crashes, assaults or other unintended acts;
- disruption of personal relationships and work habits;
- ineligibility for some types of employment.

Kirkwood Alcohol/Drug Abuse Program

For Students: Dean of Students Office, 319-398-5540 (Support groups, substance abuse counselor, student assistance team)

For employees: Employee Assistance Program, Cedar Rapids, 319-398-6694 or 800-383-6694

Additional Agencies

- Area Substance Abuse Council
  Cedar Rapids, 319-390-4611 or Vinton, 319-472-2443
- Sedlacek Treatment Center
  Cedar Rapids, 319-398-6226
- Alcoholics Anonymous
  Cedar Rapids, 319-365-5955
- Hillcrest Family Services
  Cedar Rapids, 319-362-3149
- Mental Health Institute
  Cedar Rapids, 319-398-3562 or Independence, 319-334-2853
- Mid-Eastern Council on Chemical Abuse
  Iowa City, 319-351-4357
- Unity Point (St. Luke's) Chemical Dependency Services
  Cedar Rapids, 319-363-4429

Animals on College Property

Purpose

This procedure outlines safety and security standards relative to animals allowed on college property; to permit services that animals provide to students, faculty, staff, the institution and the community; and to identify the distinction between those animals permitted on and those excluded from college property.

Definitions

Service Animals – Service animals are dogs, or other animals defined by federal or state law, trained to do work or perform specific tasks directly related to an individual's disability.

Emotional Support Animals – Emotional support animals are animals that provide therapeutic benefit to individuals with a disability, and are prescribed by a physician or licensed mental health professional.

Working Animals – Working animals are animals used: a) in academic courses or for education and research purposes; b) for law enforcement and rescue purposes; or c) under the direction of licensed mental health professionals or other employees or individuals approved by the college for therapeutic purposes.

Companion Animals or Pets - Companion animals (commonly known as pets) are animals living with individuals for purposes of pleasure, leisure time activity and companionship.

The Procedure

Service Animals

1. Faculty, staff, or students wishing to utilize a service animal on college property must receive the approval of Student Accommodation Services (for students) or the Department of Human Resources (for employees), permitting the individual to have a service animal on campus.
2. Approved service animals, including service-animals-in-training, may accompany an individual with a disability or an individual training the animal in public facilities and accommodations or places to which the general public is invited (e.g. academic buildings, administrative offices, faculty or staff offices, etc.), as long as the animal is under control.
3. When not readily apparent that an animal is a service animal, college personnel may ask only two questions to determine if the animal is permitted: (1) Is the animal a service animal required because of a disability, and (2) what work or task has the animal been trained to perform?

Working Animals

1. Working animals are permitted on campus by authorized individuals. The applicable cabinet officer will determine if and when working animals are permitted on campus, in consultation with Student Accommodation Services (in relation to students) or Human Resources (in relation to employees) unless otherwise stated in this procedure.
2. The review and approval of college-owned or maintained animals for education or research purposes are under the jurisdiction of the Vice President of Academic Affairs, which follows college policies and procedures and other guidelines adopted by local, state, and federal regulatory agencies.
3. Animals used for special events or non-academic purposes will be reviewed and approved by the Vice President of Facilities and Public Safety.

Emotional Support Animals and Companion Animals

1. Emotional support animals and companion animals are not permitted inside college facilities, except for the College President's residence, and other approved college activities involving animals.
2. Emotional support animals and companion animals are generally permitted on Kirkwood grounds but must be attended to, physically restrained, and under the control of the owner/person responsible for the animal at all times.

Responsibilities of Individuals with Animals on Campus

Owners and keepers of animals on campus are responsible for their animals at all times. This responsibility includes complying with all state laws and local animal ordinances as well as the following requirements:

1. Providing appropriate restraint, control and supervision of animals at all times.
2. Providing animals with appropriate care, including food, water, shelter, health care and humane treatment.
3. Cleaning up and disposing of all animal waste (both indoors and outdoors) in a timely and effective fashion.
4. Not allowing odor, noise, damage, or other behavior of animals that disturbs others or damages college grounds, facilities or property.
5. Ensuring animals are properly licensed and vaccinated under the laws of Iowa and evidence indicating such license and vaccination must be presentable.
6. The owner and/or the handler are responsible for any damage to persons or property caused by the animal. The college may seek restitution from the responsible parties for any animal related damage or costs.

Violations of This Procedure

1. An animal may be prohibited from or required to leave a facility on campus if the animal's behavior or presence poses a direct threat to the health or safety of others. For example, an animal that displays aggressive/vicious behaviors toward people or other animals may be excluded.
2. Animals may be restricted from areas when and where their presence presents a health, safety, or sanitation concern.
3. An animal may be prohibited if the owner/keeper does not adhere to the Responsibilities of Individuals with Animals on Campus (above), or if the animal substantially interferes with the reasonable use of public accommodation by others.
4. Animals that have been abandoned or found within college facilities that are not a part of a college-sponsored program may be impounded and/or placed with a third party, at the expense of the owner or individual who claims the animal.

Complaints Under This Procedure

1. Animals that are out of control, presenting a disruption, or posing a threat to the campus community should be reported to Public Safety, 319-398-7777.
2. Non-emergencies involving students or employees and their animals in academic buildings, administrative offices, or other areas of campus, can be directed to the Dean of Students office (319) 398-5540 (for student concerns) or to Human Resources 319-398-7797 (for employee concerns).
3. Concerns of alleged policy violations will be managed according to the procedures outlined in existing student and employee conduct processes.

Cancellation and Delay Procedure

Weather, infrastructure failures, or area emergencies may necessitate delayed opening or closure of one or more College sites. The following procedure is a framework for the College regarding closure and delay decisions.

Procedure:

The following approach is considered during inclement weather or other emergency situations.

- A decision **to close** for the entire day will be communicated by 6:00am or as emerging conditions warrant.
- A decision **to delay** opening of campus until 10:00am or 5:00pm will be communicated by 6:00am or as conditions warrant.   o Buildings will be unlocked one half-hour before the announced start time o Classes and activities that are scheduled to start before a delay will not meet.
- A decision **to close** during the day or evening will be communicated in a timely manner.
- Students enrolled in county and regional center programming should follow local high school procedures as well as Kirkwood's closures and delays.
- All College employees designated as essential personnel are required to report to work, or remain at work until released by their supervisor.

• Exceptions to college closure and delays:facilities serving clients or external customers (i.e., Athletics, Corporate Training, The Hotel at Kirkwood, KCETC, etc.) will remain open based on client activities.

Considerations to Close or Delay

The decision to close or delay college operations will be made by senior administrators, based on the following considerations:

- Discussions with College personnel on site regarding current conditions
- Impact to campus operations (e.g. amount of snowfall received/ forecasted)
- Road conditions and ability to travel safely
- Environmental conditions (i.e., temperature, wind speeds/chill)
- Considerations of local school districts and other educational institutions

Communications Plan

In order to ensure the campus community is made aware of closure and/or delays, the College will utilize an established communications plan. In many cases, the College will provide continuous updates on weather systems and emerging conditions to allow students and employees to make informed decisions. Additional information regarding the College's emergency notification procedure can be found in 304.20 Timely Warning and Emergency Notifications (https:// www.kirkwood.edu/_files/pdf/about-us/trustees/304.20_procedure_- _timely_warning_and_emergency_notifications_access.pdf).

- Announcements of College closings and delays will be communicated through the following outlets:
  - Kirkwood Alert (most accurate and timely communication)
  - Campus e-mail notifications
- Talon Announcements
- Website & My Hub pop-up notification
- Social media pages
- Local news and radio programming

Copyright Procedure

Kirkwood Community College respects the legal right of ownership of intellectual property in all media. It is the procedure of Kirkwood Community College that all members of the College adhere to the provisions of the United States Copyright Law (Title 17, United States Code, Sect. 101, et seq.).

Faculty and staff are reminded that it is unlawful to copy, distribute or display copyrighted material without written permission from the copyright holder, unless fair use or educational exceptions apply. Both the individual requesting such services and the individual performing the services may be liable for copyright infringement. Please consult a Kirkwood librarian with questions concerning copyright exceptions.

Discrimination and Harassment

Kirkwood Community College shall not engage in nor allow unlawful discrimination against individuals involved in its educational programs and activities on the basis of race, creed, color, sex, sexual orientation, gender identity, national origin, religion, age, disability, or actual or potential parental, family, or marital status. If you have questions or complaints related to compliance with the procedure, please contact:

Vice President of Human Resources
Kirkwood Community College
313 Kirkwood Hall
6301 Kirkwood Blvd. SW
Cedar Rapids, IA 52404
Telephone: 319-398-5572
Email: equity@kirkwood.edu

or

Director of the Office for Civil Rights
U.S. Department of Education
John C. Kluczynski Federal Building
230 S. Dearborn Street, 37th Floor
Chicago, IL 60604-7204
Telephone: 312-730-1560
Fax: 312-730-1576
Email: OCR.Chicago@edu.gov

Domestic Travel Procedure and Practice

Off-campus travel by students must be approved in advance by the appropriate dean if the travel:

1. Includes an overnight stay;
2. involves a Kirkwood vehicle or rental vehicle, or
3. occurs outside of the College's seven county service area.

The department or student organization must designate a faculty or staff member to serve as the trip sponsor who is responsible for providing trip information to the appropriate individuals as outlined in this procedure. The trip sponsor must accompany the students on the trip unless special

permission is granted by the trip sponsor's Cabinet member, allowing the student(s) to travel alone.

Other off-campus travel by students that does not meet one of the conditions set forth requires prior approval/notification to an immediate supervisor or designee by the faculty or staff member sponsoring an activity involving in-district travel.

Modes of Transportation

Whenever possible, each student will travel to and from their destinations in transportation provided by the College. Exceptions may be made with approval of both the trip sponsor and the appropriate dean. When a personal mode of transportation is approved, the student(s) are responsible for making travel arrangements and all associated travel expenses, and the student(s) assume all liability in the event of an accident or mishap. The College cannot be held liable for accidents or injuries sustained in private vehicles. In the event students are authorized to travel separate from the college provide transportation, a waiver must be approved and on file a minimum of five working days prior to travel. Employees traveling must also be aware of and abide by both the "Vehicle and Equipment Use" and "Travel and Business Expenses" procedures.

Student Conduct

The Student Conduct Code applies to students who are participating in travel activities. Alleged student conduct violations occurring during travel will be adjudicated according to the procedures described in the Student Conduct Code. In such cases the trip sponsor will notify the appropriate dean or the Dean of Students of the alleged misconduct. The accused student may be sent home as determined by the trip sponsor, the supervising dean, and the dean of students. Such decisions will be made on a case by case basis. Additional travel expense may be assessed to the student.

Students must participate in all scheduled activities as directed by the trip sponsor. Students, who wish to participate in activities outside of those directed by the trip sponsor, must receive approval from the trip sponsor prior to beginning the activity. In such cases, the students are responsible for any expenses incurred relating to the outside activity.

Notification and Approval Process

The trip sponsor will ensure all necessary arrangements have been made prior to embarking on domestic travel. The procedures for domestic travel are as follows:

1. Complete the Student Domestic Travel Notification form. The notification will include the purpose of the trip, date(s), and destination. Also to be included are specific details regarding the mode of transportation; name, address and phone number of all overnight accommodations; names, k-numbers and contact information of participants; and emergency contact information for all participants including employees. The notification form will be submitted online at least five working days prior to the departure date. Travel will be approved by the trip sponsor's supervisor after all necessary information and forms have been submitted.
2. A travel contract must be completed online prior to departure by each student.

Note: Student travel occurring outside of the United States is handled according to the procedures described in the International Student Travel Procedure.

Freedom of Expression

The primary function of an institution of higher education is the discovery, improvement, transmission, and dissemination of knowledge by means of research, teaching, discussion, and debate. To fulfill this function, the institution must strive to ensure the fullest degree of intellectual freedom and free expression allowed under the First Amendment to the Constitution of the United States. This policy is made and published by the College to prohibit intellectual restrictions and penalties based on protected speech, including political speech, to the fullest extent of the First Amendment of the United States Constitution.

It is not the proper role of an institution of higher education to shield individuals from speech protected by the First Amendment to the Constitution of the United States, which may include ideas and opinions the individual finds unwelcome, disagreeable, or even offensive.

It is the proper role of an institution of higher education to encourage diversity of thoughts, ideas, and opinions and to encourage, within the bounds of the First Amendment to the Constitution of the United States, the peaceful, respectful, and safe exercise of First Amendment rights.

Students and faculty have the freedom to discuss any problem that presents itself, assemble, and engage in spontaneous expressive activity on campus, within the bounds of established principles of the First Amendment to the Constitution of the United States, and subject to reasonable time, place, and manner restrictions that are consistent with established First Amendment principles.

The outdoor areas of campus of an institution of higher education are public forums, open on the same terms to any invited speaker subject to reasonable time, place, and manner restrictions that are consistent with established principles of the First Amendment to the Constitution of the United States.

The outdoor areas of campus, which for this policy means the generally accessible outside areas of campus where the campus community are commonly allowed, such as grassy areas, walkways, or other similar common areas. Outdoor areas of campus do not include areas outside health care facilities, veterinary medicine facilities, areas where livestock or animals are kept, facilities or outdoor areas used by Kirkwood Community College athletic programs or teams, areas where there are business operations such as a hotel, or other outdoor areas where access is restricted to a majority of the campus community.

Annual training shall be provided to the College's students, faculty, and staff on free speech and First Amendment protections.

Protected Activities

A member of the campus community, which for this policy shall include students, administrators, faculty, staff, and/or guests invited by students, administrators, faculty or staff, shall be freely permitted to engage in noncommercial expressive activity in outdoor areas of campus, subject to reasonable time, place, and manner restrictions, and as long as the member's conduct is not unlawful, does not impede others' access to a facility or use of walkways, and does not disrupt the functioning of Kirkwood Community College. Kirkwood may designate other areas of campus available for use by the campus community. All access to designated areas will be granted on a viewpoint-neutral basis.

Noncommercial expressive protected activities include but are not limited to any lawful oral or written means by which members of the campus community may communicate ideas, including but limited to all forms

of peaceful assembly, protests, speeches including invited speakers, distribution of literature, circulating petitions, and publishing, including publishing or streaming on an internet site, audio or video recorded in outdoor areas of campus.

Protected activities shall also include the right of student expression in a counter demonstration held in an outdoor area of campus as long as the conduct at the counter demonstration is not unlawful, does not materially and substantially prohibit the free expression of others, or impede other's access to a facility or use of walkways.

If any faculty member of Kirkwood is found to have knowingly restricted the protected speech of a student, or otherwise penalizes a student for protected speech or activities, under the Student Conduct Code or other applicable policies or procedures for student conduct, the faculty member is subject to discipline, up to and including termination under the applicable faculty policies, procedures, and Iowa law based on the totality of the facts.

In all instances, faculty and staff (including extracurricular coaches) may support a student's First Amendment rights without fear of discipline by the College.

Non Protected Activities

Nothing shall prevent Kirkwood Community College from prohibiting, limiting, or restricting expression and/or expressive activity that is not otherwise protected by the Constitution of the United States. Non protected activities include, but are not limited to the following:

- A threat of serious harm and expression directed or likely directed to provoke imminent unlawful actions; and
- Harassment, including but not limited to expression which is so severe or pervasive and subjectively and objectively offensive that the expression unreasonably interferes with an individual's access to educational opportunities or benefits provided by this Community College;
- Violence;
- Defamation, including libel and slander;
- Obscenity; or
- Inciting others to commit crimes or engage in unlawful conduct.
- Disruption to the normal operations of the college

Student Organizations

Kirkwood Community College will not deny benefits or privileges available to student organizations based on the viewpoint or expression of the viewpoint of a student organization or its members protected by the First Amendment to the Constitution of the United States. For purposes of this policy, benefits means recognition, registration, use of facilities for meetings or speaking purposes, use of channels of communication, and access to funding sources otherwise available to other student groups.

In addition, Kirkwood Community College shall not deny any benefits or privileges to a student organization based on the organization's requirement that its leaders agree to and support the organization's beliefs as interpreted and applied by the organization, and to further the organization's mission. For purposes of this policy, student organization means a group officially recognized or registered by Kirkwood Community College or a group seeking official recognition or registration comprised of students who are admitted and in attendance at Kirkwood who receive or are seeking to receive benefits or privileges.

Public Forums on Campus-Freedom of Association

The outdoor areas of campus are deemed public forums. Kirkwood may maintain and enforce clear, published, reasonable viewpoint-neutral time, place, and manner restrictions that are narrowly tailored in furtherance of a significant institutional interest, but shall allow members of the campus to engage in spontaneous expressive activity and to distribute literature. If Kirkwood places restrictions, it shall provide ample alternative means of expression.

Except as provided in this policy, and subject to the reasonable time, place, and manner restrictions, Kirkwood shall not designate any area of campus a free speech zone or otherwise create policies restricting expressive activities to a particular outdoor area of campus.

Nothing in this policy shall be construed to grant individuals the right to engage in conduct that intentionally, materially, and substantially disrupts the expressive activity of a person or student organization if Kirkwood has reserved space in an outdoor area of campus for the activity in accordance with this policy.

Complaint Procedure

If a member of the campus community believes he or she has been aggrieved by a violation of this policy, the member shall follow the grievance procedures as outlined for this policy.

In the event the matter is not resolved through the appropriate grievance process, or otherwise as provided under Iowa law, the aggrieved member of the campus community may file a complaint with the governing body (Kirkwood Community College Board of Trustees) not later than one year after the day of the alleged policy violation.

Retaliation against any member of the campus community who files such a complaint is prohibited, and any founded instance of founded retaliation is subject to discipline or other sanctions.

Minor Children on Campus

Student Guidelines

Children may visit certain college offices and facilities for limited periods of time when their parent or guardian is conducting routine business at the college. However, regular repeated visits by children are not permitted. Under no circumstances are children permitted in:

- Labs, shops, construction/repair sites, other areas where potential hazards exist or recreation facilities, unless those facilities are being used for activities intended to include children (e.g. family hours, sports camps, etc.)
- Testing centers
- Computer classrooms
- Classrooms: except when the child's presence is necessary for classroom activities
- A child should never be left unattended while the parent or guardian is attending class, conducting other business or attending a public event on campus
- Line of sight supervision by the parent or guardian is required at all times; should a child become disruptive, the student and child may be asked to leave

Visitor Guidelines

The following guidelines apply to bringing children to the campus by visitors:

- Line of sight supervision by the parent or guardian is required at all times
- Parent or guardian must assure that children are not disruptive
- Parent or guardian must not leave children unattended while on campus, including athletic or other Kirkwood activities

Kirkwood assumes no responsibility or liability for children, or for any accidents or injuries to children.

Preferred Name
Procedures

Prospective students and employees may provide a preferred first name on the admissions application or employment application provided the applicant provides a social security number or other unique identifier.

Current students and employees may declare a preferred first name on MyHub.

Alumni who are not current students or employees may declare a preferred first name in the Kirkwood Foundation Office.

Preferred Name Display

Kirkwood will attempt to use the preferred name wherever possible. This list provides examples of places where preferred and legal names will be used. These lists are not exhaustive and are subject to change.

Preferred Name

- MyHub
- Talon
- Class Rosters
- Kirkwood email
- EagleCard
- Degree Audit Report
- Advisee Lists
- Library
- Diplomas
- Employee training, years of service, and excellence awards

Legal Name will be used (where required by law or with partner institutions)

- Financial aid documents and forms
- Student accounts and billing notices
- Clinical Placements
- 1098-T, 1099, and W-2 tax forms
- Applications for employment and civil service testing materials
- Employment, payroll records and benefits documents
- Responses to enrollment and degree verification requests
- Student health records
- Requisitions, direct payment vouchers, and travel documents
- Background check

Legal Name and Preferred Name will be used

- Transcripts
- Discipline records

Questions about this procedure may be referred to the Registrar.

Professional Licensure Disclosure
The Procedure

For the purpose of professional licensure disclosure compliance, Kirkwood determines:

- A student's location as the state listed in the permanent address. In instances where a student's location is not a U.S. state or territory, their location will be considered the state of Iowa. A student is enrolled when they have an activated program of study AND are registered for classes in the current or following term.

Student addresses are collected from the application for admission. Students can update their address at any time through the MyHub student portal. Students are asked to confirm their address through the reapplication for admission/major change request.

Direct Student Disclosures

Enrollment Services runs a weekly report identifying students in a professional licensure program whose location is a U.S. state other than Iowa or a U.S. territory. Identified students are sent a disclosure to their Kirkwood student email through Colleague. Documentation of these direct disclosures is stored in Colleague.

Every spring, Institutional Effectiveness notifies academic deans to review professional licensure programs and state determinations. If a change in state determination is identified, Institutional Effectiveness notifies IT to update the report used by Enrollment Services to send direct disclosures through Colleague to students in the professional licensure program whose location is the state or territory that had a change in determination within 14 calendar days of the determination change. Documentation of these direct disclosures is stored in Colleague.

Web Disclosures

Institutional Effectiveness notifies Marketing if there are changes in professional licensure programs and state determinations. Marketing will update Kirkwood's Professional Licensure Disclosure and individual program websites accordingly.

Definitions

Term	Definition
Activated Program	Program on file that has an active status.
Enrolled Student	A student who has an activated program and is registered for classes in the current or following semester.
Permanent Address	The address students would use on their tax return and where their diploma can be mailed when they graduate. For students living away from home, this is where their parents live.
Profession Licensure Program	A program that leads to professional licensure or certification that is required for employment in an occupation, or is advertised as meeting such requirements.

| State Determination | The designation given to each U.S. state or territory identifying if the program's curriculum meets, does not meet, or has not been determined to meet state or territory licensure or certification requirements. |
| Student Location | The U.S. state or territory listed in the student's permanent address. If the student's permanent address is not a U.S. state or territory, their location will be determined as Iowa. *Student location determination is not the same as residency status. For questions on residency status, view the Residency Policies on https://www.kirkwood.edu/get-started/enrollment/policies (https://www.kirkwood.edu/get-started/enrollment/policies/). |

Religious Accommodations

Kirkwood Community College is committed to strengthening equity and inclusion practices, pedagogy and policies that foster belonging and a supportive community for all students, staff and faculty. The College does not discriminate against individuals involved in its educational programs and activities on the basis of religion, require or prohibit any religious association as a condition of employment or participation in our educational programs or activities, or permit religious harassment. The College provides reasonable accommodations, as required by law, to individuals whose sincerely held religious beliefs, practices, and observances conflict with work or class requirements, unless the accommodation could create an undue hardship.

Definitions

Religious Beliefs

Religious Beliefs include theistic beliefs (i.e. those that include a belief in any god) as well as non-theistic moral or ethical beliefs about right and wrong that are sincerely held by an individual, regardless of whether they are part of an organized religion.

Religious Accommodation

A Religious Accommodation is any adjustment to an environment, practice, or process that allows an individual to practice their religion. The need for religious accommodation may arise where an individual's religious beliefs, observances, or practices conflict with a specific task or requirement of a class, schedule, workplace responsibility, assignment, or position.

Undue Hardship

An accommodation that causes an Undue Hardship includes but is not limited to an accommodation that: compromises essential requirements of a course, program, job or activity; is requested retroactively or in an untimely manner; causes an undue administrative or financial hardship for the College; jeopardizes the safety of an individual who requires the accommodations or others; infringes on the rights of other employees, including those rights set forth in a collective bargaining agreement or other policy or law; or imposes an unreasonable burden on other employees or students.

Process for Requesting Religious Accommodation

Employees and prospective employees requesting religious accommodation should make the request in writing to their direct supervisor or Human Resources.

Students requesting religious accommodation should complete a Request for Religious Accommodation Form (https://www.kirkwood.edu/site/?p=43022) and submit it to the Dean of Students Office at deanofstudents@kirkwood.edu or 3034 Iowa Hall.

The request for accommodation may trigger an interactive process, particularly if more information is needed in order to develop a reasonable accommodation that does not cause undue hardship.

Examples of religious accommodations may include: an exception to dress and grooming requirements; a schedule modification, including flexible arrival or departure times; a work reassignment or position change; alternative menu options/modifications for dietary requirements; excused absence from work or classes; allocation of private space for the purposes of observance or practice of religious beliefs; modification of workplace or class practices, policies and procedures.

Appeal Procedure

An employee who believes they have a qualifying condition that is not being reasonably accommodated by the College should contact the Office of Human Resources at Kirkwood Community College, 313 Kirkwood Hall, 6301 Kirkwood Blvd SW, Cedar Rapids, IA 52404; 319-398-5572; equity@kirkwood.edu.

An applicant or student can submit an appeal of the offered reasonable accommodation to the Accommodation Services Equity Committee if the matter cannot be resolved after:

1. Discussing the rejection with their Accommodations Access Advocate.

2. Discussing the rejection with the Dean of Students or other designee with supervisory responsibility

3. In cases where a resolution is not reached, then an applicant or student can submit a written appeal to the Accommodation Services Equity Committee, which will make final determination on the appeal.

Student appeals must be submitted to the Accommodation Services Equity Committee, Attn: Dean of Students, 3034 Iowa Hall, 6301 Kirkwood Blvd SW, Cedar Rapids, IA 52404, or via email to deanofstudents@kirkwood.edu

If you have questions or complaints related to compliance with the policy, please contact the Vice President of Human Resources at Kirkwood Community College, 313 Kirkwood Hall, 6301 Kirkwood Blvd. SW, Cedar Rapids, IA 52404, Telephone: **319-398-5572**, Email: **equity@kirkwood.edu**, or the Director of the Office for Civil Rights U.S. Department of Education, John C. Kluczynski Federal Building, 230 S. Dearborn Street, 37th Floor, Chicago, IL 60604-7204, Telephone: **312-730-1560**, Fax: 312-730-1576, Email: **OCR.Chicago@ed.gov**.

Sexual Harassment Procedure

I. **The Preamble**

In accordance with Title IX of the Education Amendments Act of 1972, Kirkwood Community College prohibits sex discrimination, including sexual harassment, as defined in Section II. The College will utilize these procedures to respond to claims of sexual harassment and will not proceed under any other College policy or procedure if doing so would interfere with any right or privilege provided to a party under Title IX. If the College determines that a report or complaint does not constitute a violation of Title IX, it may still proceed to investigate or respond to that report or complaint under any other applicable College policy or procedure.

II. **Definitions**

A. **Sexual harassment** means unwelcome behavior (verbal, written, physical) that is directed at someone because of that person's sex or gender, and that meets any of the following definitions:

1. **"Quid Pro Quo" Harassment.** A College employee, agent, or other individual under the College's control or authority explicitly or implicitly conditions an educational decision or benefit on submission to sexual conduct (e.g., sexual favors for a better grade, more playing time; threatening (explicitly or implicitly) negative consequences if the student or employee rejects sexual advances).

2. **Hostile Educational/Work Environment.** Unwelcome conduct that creates a hostile, intimidating or demeaning environment that is sufficiently severe, pervasive, and objectively offensive that it effectively denies a person equal access to participation in the College's educational program or activity. Examples can include persistent and unwelcome efforts to develop a sexual relationship; bullying/cyber-bullying of a sexual nature or for a sexual purpose; sexual exploitation (defined below); unwelcome commentary about an individual's body or sexual activities; unwanted sexual attention; repeated and unwelcome sexually-oriented teasing, joking or flirting; verbal abuse of a sexual nature. Behavior could be verbal, non-verbal (e.g., gestures, touching), written or electronic.

3. **Sexual Assault.** An offense that meets the definition any one of the following offenses:
   - Rape: the penetration, no matter how slight, of the vagina or anus, with any body part or object, or oral penetration by a sex organ of another person without consent of the victim;
   - Fondling: the touching of the private body parts of another person for the purpose of sexual gratification without consent of the victim;
   - Incest: sexual intercourse between persons who are related to each other within the degrees wherein marriage is prohibited by law; or
   - Statutory rape: sexual intercourse with a person who is under the statutory age of consent.

4. **Stalking.** Purposefully engaging in a course of conduct directed at a specific person ("target") that would cause a reasonable person to fear bodily injury to, or the death of, the target or a member of the target's immediate family when:
   - when the person ("stalker") knows or should know that the target will be placed in reasonable fear of bodily injury to, or the death of, the target or a member of the target's immediate family by the course of conduct; and
   - the stalker's course of conduct induces fear in the target of bodily injury to, or the death of, the target or a member of the target's immediate family.

5. **Dating Violence.** Violence committed by a person who is or has been in a social relationship of a romantic or intimate nature with the victim. The existence of such a relationship shall be determined based on a consideration of:
   - The length of the relationship.
   - The type of relationship.
   - The frequency of interaction between the persons involved in the relationship.

6. **Domestic Violence.** Any action that may constitute a felony or misdemeanor crime of violence committed:

- By a current or former spouse or intimate partner of the victim;
- By a person with whom the victim shares a child in common;
- By a person who is cohabiting with, or has cohabited with, the victim as a spouse or intimate partner;
- By a person similarly situated to a spouse of the victim under the domestic or family violence laws of the State of Iowa; or
- By any other person against an adult or youth victim who is protected from that person's acts under the domestic or family violence laws of the State of Iowa.

Determination as to whether the alleged conduct constitutes sexual harassment should take into consideration all of the circumstances, including the context in which the alleged incidents occurred.

B. **Consent and Incapacitation.** Sexual assault, as defined above, occurs when physical sexual activity is engaged in without the consent of the other person or when the other person is unable to consent to the activity due to incapacitation.

Consent means words or clear, unambiguous actions that show a knowing and voluntary agreement to engage in mutually agreed-upon sexual activity.

- Consent is voluntary. It must be given without coercion, force, threats, or intimidation.
- Consent is affirmative. Consent means positive cooperation in the act or expression of intent to engage in the act pursuant to an exercise of free will. Silence or the absence of resistance does not equate to consent.
- Consent is clear. If confusion or uncertainty on the issue of consent arises anytime during the sexual interaction, the sexual activity should cease.
- Consent is revocable. Consent to some form of sexual activity does not imply consent to other forms of sexual activity. Consent to sexual activity on one occasion is not consent to engage in sexual activity on another occasion. A current or previous dating or sexual relationship, by itself, is not sufficient to constitute consent. Even in the context of a relationship, there must be mutual consent to engage in sexual activity—every time. Consent must be ongoing throughout a sexual encounter and can be revoked at any time. Once consent is withdrawn, the sexual activity must stop immediately.
- Consent cannot be given when a person is incapacitated.
- Being intoxicated by drugs or alcohol oneself does not diminish the responsibility to obtain consent from the other party.

Incapacitation means the inability (temporarily or permanently) to give consent because the individual is mentally and/or physically helpless, asleep, unconscious, or unaware that sexual activity is occurring.

- The factors to be considered when determining whether consent was given include whether the accused knew, or whether a reasonable person should have known, that the complainant was incapacitated.

C. **Sexual exploitation** involves taking sexual advantage of another person, even though the behavior might not constitute sexual assault, where the conduct creates a hostile educational or employment environment for the target of the conduct or otherwise falls within the

definition of "sexual harassment" above. Examples can include, but are not limited to:

- Distribution or publication of sexual or intimate information about another person without consent.
- Electronic recording, photographing, or transmitting sexual or intimate utterances, sounds, or images without knowledge and consent of all parties.
- Engaging in indecent exposure.
- Sexual intimidation, which is an implied or actual threat to commit a sex act against another person, or behavior used to coerce participation in a sex act, when no sex act actually occurs.
- Voyeurism, which involves both secretive observation of another's sexual activity or secretive observation of another for personal sexual pleasure.

D. **Employees** include all full and part time employees working for the College in any capacity.

E. **Student** includes all persons taking courses at Kirkwood Community College, either full-time or part-time, pursuing degree or non-degree programs including continuing education and distance courses. Persons who withdraw after allegedly violating the Student Code, who are not officially enrolled for a particular term but who have a continuing relationship with the College, or who have been notified of their acceptance for admission are also considered "students," although not enrolled in this institution.

F. **Complainant** means any person who alleges that they have been subjected to sexual harassment as defined by these procedures. At the time of filing a formal complaint, a complainant must be participating in or attempting to participate in the College's programs or activities.

G. **Respondent** means any person who has been reported to be the perpetrator of conduct that could constitute sexual harassment under these procedures, and over whom the College is able to exercise substantial control.

H. **Investigators** mean the individuals designated by the College to conduct investigations of alleged sexual misconduct. Under no circumstances will an Investigator serve as a member of the Sexual Misconduct Board or Appeal Decision-Maker for the same case.

I. **Sexual Misconduct Board** means the group of faculty, staff, and administrators appointed by the College to hear complaints of sexual misconduct and act as the initial decision-makers, and who are trained to do so. No member of the Sexual Misconduct Board shall be the Title IX Coordinator, Title IX Investigator, or Appeal Decision-Maker.

III. **Scope**

This procedure applies to all persons participating in the programs or activities of Kirkwood Community College, including students and employees of the College, as defined in Section II, and in particular students or employees who:

- Are victims of any form of sexual harassment (as defined in Section II), by any other person (student, employee, or others outside the College community).
- Are accused of engaging in behavior prohibited by these procedures.

The College has jurisdiction over locations, events or circumstances over which it substantially controls the Respondent and the context in which the harassment occurs, including any building owned or controlled by a student organization that is officially recognized by the College. The College's jurisdiction is limited to conduct against a person that occurs in the United States.

Any person may file a complaint alleging sexual misconduct against a student or employee of the College. However, with respect to any complaint that is 1) by a person who is not a member of the College community, and 2) relating to conduct occurring outside the College's program or activity, the College reserves the right to determine, in its sole discretion, whether the conduct described in the complaint bears a sufficient nexus to the educational program or employment relationship of a Kirkwood student or employee or constitutes a sufficient risk to the College community to proceed under these procedures.

IV. **Confidentiality**

Kirkwood is committed to creating an environment that encourages individuals to come forward if they have experienced any form of sexual misconduct. The College will work to safeguard the identities and privacy of individuals who seek help or who report sexual misconduct. However, it is important that individuals understand the limits on confidentiality of individuals whom they may contact for such assistance. Different people, depending on their positions, have different obligations with regard to confidentiality.

The College will keep confidential the identity of any individual who has made a report or complaint of sex discrimination or sexual harassment, or has been identified as the perpetrator or respondent to any such report or complaint, or is a witness to any complaint or investigation, **except** as required to carry out the purposes of these procedures (including the conduct of any investigation, hearing, or judicial proceeding), applicable law, or as permitted by the Family Educational Rights and Privacy Act ("FERPA"), 20 U.S.C. § 1232g.

Under Iowa law, communications with some individuals are confidential. Anyone who wants to maintain confidentiality should always confirm whether confidentiality applies to the communication before they make the communication. Generally, confidentiality applies when an individual seeks services from the following persons:

- Trained and statutorily certified victim's advocate (this includes advocates working from the Riverview Center or Waypoint Services). See Section VII.A. Confidential Advocacy and Support.
- Licensed Psychological counselor (including counselors from Kirkwood Counseling Services)
- Licensed Healthcare provider
- Personal attorney representing the complainant, respondent, and/or other participants
- Religious/spiritual counselor

Any other College employee cannot guarantee complete confidentiality. However, information is disclosed only to select officials who have an essential need to know in order to carry out their job responsibilities. As is the case with any educational institution, the College must balance the needs of the individual with its obligation to protect the safety and well-being of the community at large. Therefore, depending on the seriousness of the alleged incident, further action may be necessary, including a Timely Warning Notice, where required by the Clery Act. The notice would not contain any information identifying the individual who brought the complaint.

V. **Reporting Sexual Misconduct**

Contacting Police or Kirkwood Public Safety does not mean a Complainant must pursue charges. Kirkwood Public Safety and local

law enforcement can advise individuals of their options and can also preserve evidence while the person considers her/his options.

A. Reporting to Law Enforcement

Because sexual misconduct may constitute both a violation of college policy and criminal activity, the college strongly encourages, but does not require, students to report concerns of sexual misconduct to law enforcement as soon as possible after the incident. A Complainant may proceed under these procedures whether or not they elect to report to law enforcement as well.

For emergencies, contact 9-1-1.

To contact law enforcement in non-emergency situations, call the non-emergency number for your local police department.

B. Reporting to Kirkwood

To seek assistance and support, or to report misconduct in non-emergency situations, contact the Dean of Students Office, 3rd Floor Iowa Hall, 319-398-5540 or Public Safety 319-398-7777. Other reporting options include:

- Submitting a Silent Witness Report: https://www.kirkwood.edu/explore/public-safety/threat-assessment (https://www.kirkwood.edu/explore/public-safety/threat-assessment/)
- Contacting Title IX Coordinator, Melissa Payne, Vice President for Student Services, at: melissa.payne@kirkwood.edu
  319-398-5584
  3036 Iowa Hall
- Contacting a Deputy Title IX Coordinator:
  - Bobbi Miller, Dean of Students, 319-398-7798, bobbi.miller@kirkwood.edu
  - David Heffer, Director of Public Safety and Emergency Management, david.heffer@kirkwood.edu
  - Wes Fowler, Vice President of Human Resources, 319-398-7797, wes.fowler@kirkwood.edu

C. Amnesty for Complainants and Participants in Investigations

The College will not pursue disciplinary action for improper use of alcohol or other drugs against a student who reports in good faith an incident of sexual misconduct, or who participates in good faith in an investigation into an incident of sexual misconduct.

D. Retaliation Prohibited

Retaliation against a person who reports sexual misconduct, assists someone with a report of sexual misconduct, or participates in any manner in an investigation or resolution of a sexual misconduct report is strictly prohibited. Retaliation includes threats, coercion, discrimination, intimidation, reprisals, and/or adverse actions related to employment or education.

These procedures' anti-retaliation protections do not apply to any individual who makes a materially false statement in bad faith in the course of any complaint, investigation, hearing, or other proceeding under these procedures. However, a determination that an individual made a materially false statement in bad faith must be supported by some evidence other than the determination of whether the Respondent violated these procedures alone.

E. Time Frames for Reporting and Response

The College strongly encourages prompt reporting of complaints and information. While there is no time limit in invoking these procedures in responding to complaints of alleged sexual misconduct, a complaint should be submitted as soon as possible after the event takes place.

Individuals are encouraged to report sexual misconduct immediately in order to maximize the College's ability to respond promptly and equitably. The College will not be able to investigate a formal complaint against an individual who is no longer affiliated with the College. Under those circumstances, the College will still consider whether it can offer supportive measures to the Complainant or proceed under another applicable College policy, procedure, handbook provision, or rule.

In all cases, the College will conduct a prompt and equitable investigation of allegations of sexual misconduct. Generally, the College will attempt to complete the process within 60 days. However, the time frames set forth in these procedures are meant to provide guidance, and the College may, as appropriate, alter or extend time frames for good cause, with notice to the parties. The time it takes to complete the resolution of a sexual misconduct complaint may vary based on the complexity of the investigation and the severity and extent of the alleged conduct, as well as on whether there is a parallel criminal investigation, or if school breaks occur during the process.

VI. Process for Responding to Reports of Sexual Misconduct

A. Initial Steps

1. Initial Meeting with the Complainant
   Upon receipt of any report of sexual harassment occurring in the College's program or activity, as defined in Section II above, the Title IX Coordinator or designee will first schedule a meeting with the Complainant to provide the Complainant with information about these procedures to discuss supportive measures available to the Complainant with or without the filing of a formal complaint, and to explain the process for filing a formal complaint.

   If the Complainant would like assistance throughout any College investigation or adjudication process, the Dean of Students Office will make a student services staff member available to a complainant who is a student. Employees who would like assistance during a Title IX investigation should contact Kirkwood Human Resources This staff member is not an "advocate" as that term is used below (see Article VII, A, Confidential Advocacy and Support), nor is that staff person a representative who will speak on behalf of the Complainant in any investigatory or adjudication process. Rather, the staff member serves as a point of contact to answer questions and explain processes, to make sure the Complainant's expressed needs are being addressed, and to join the Complainant in meetings if requested. The College also will offer the same resource to Respondents.

   At the initial intake meeting with the Complainant, the Title IX Coordinator or designee will seek to determine how the Complainant wishes to proceed. The Complainant may opt for:

2. Formal Complaint
   If the Complainant wishes to proceed with either formal or informal resolution, a written document must be filed by the Complainant or signed by the Title IX coordinator alleging harassment against a respondent. Where the Title IX Coordinator signs a formal complaint,

the Title IX Coordinator is not the complainant or otherwise a party to a complaint proceeding under these procedures.

B. **Formal Resolution**

A Complainant may elect to pursue a formal resolution, which involves a hearing before the Sexual Misconduct Board,which is described more specifically in this section.

1. **Equitable Treatment**

As set forth in more detail below, the College will treat Compainants and Respondents equitably throughout the formal resolution process.

2. **Consolidation of Complaints**

The College may consolidate formal complaints of sexual harassment against more than one respondent, or by more than one complainant against one or more respondents, or by one party against another party, where the allegations arise out of the same facts or circumstances.

3. **Required Notices**

Notice of Investigation. If a Complainant elects to pursue a formal complaint, the Title IX Coordinator or designee will provide a written Notice of Investigation simultaneously to both parties notifying the parties of:

- the identities of the parties involved in the incident;
- the conduct alleged;
- the date and location of the incident;
- Respondent's entitlement to a presumption of innocence;
- The parties' rights to have an advisor of their choice at the party's expense, who may be an attorney; and
- The parties' rights to review and comment on investigative evidence.

The written notice of investigation shall notify the parties that making false statements or knowingly submitting false information during the grievance process is prohibited by the College and may constitute an independent basis for disciplinary sanctions against any student or employee, up to and including suspension or expulsion of a student or termination of an employee's employment.

The notice shall be provided prior to the initial interview of any party.

If, during the course of investigation, the College determines that additional allegations will be investigated as part of the pending complaint, the Title IX Coordinator or designee will provide written notice of the additional allegations to any identified Complainant(s) or Respondent(s).

Notice of Interviews, Hearings, or Other Meetings. Parties will be provided written notice of the date, time, location, participants, and purpose of any interview, hearing, or meeting with sufficient time for the party to prepare.

4. **Dismissal**

The College shall dismiss any formal complaint made under these procedures if at any time it determines that it lacks jurisdiction under Title IX because the conduct alleged in the formal complaint:

- Would not constitute sexual harassment as defined in Section II of these procedures even if proved;
- Did not occur in the College's education program or activity; or
- Did not occur against a person in the United States.

The College, in its sole discretion, may dismiss any formal complaint under these procedures if at any time:

- The Complainant notifies the Title IX Coordinator in writing that the Complainant would like to withdraw the formal complaint or any allegations;
- The Respondent is no longer enrolled or employed by the College; or
- Specific circumstances exist that prevent the College from gathering evidence sufficient to reach a determination as to the formal complaint or allegations. Examples include, but are not limited to, a significant passage of time from the date of the allegation(s) in the complaint to the date the complaint is filed that makes investigation impracticable or where the Complainant has stopped participating in the process.

Dismissal of a complaint from proceeding under these procedures does not preclude the College from offering supportive measures to any party or from proceeding under any other applicable code of conduct, policy, or procedures applicable to students and/or employees of the College.

Upon dismissal of any formal complaint under this section, written notice of this dismissal and the reason(s) therefore will be provided simultaneously to Complainant and Respondent.

5. **Investigation**

The College shall provide an investigator who is impartial and unbiased and does not have a conflict of interest in the present case to serve as the Investigator of a formal complaint filed under these procedures. The investigator(s) may be a College administrator or someone retained by the College, such as an attorney, mental health professional, or another person trained to conduct investigations of sexual misconduct. The investigators serve as neutral fact-finders, who during the course of the investigation, typically conduct interviews with the Complainant, the Respondent, and each third-party witness; gather evidence relevant to the complaint, including site visits or photographs at each relevant site where appropriate; and where applicable, coordinate with law enforcement agencies to collect and preserve relevant evidence.

The burden of proof and the burden of gathering sufficient evidence to reach a determination of responsibility rests with the College and not with the parties. Both parties will have an equal opportunity to present witnesses, including fact and expert witnesses, and other evidence (both inculpatory and exculpatory) to the Investigator. Neither party will be restricted in their ability to discuss the allegations or to gather and present relevant evidence; provided, however, that such communications shall not constitute harassment of or retaliation against any party.

The Investigator will evaluate all relevant evidence, both inculpatory and exculpatory, and will not make credibility determinations based solely on a person's status as complainant, respondent or witness.

The Investigator will only access, consider, disclose, or otherwise use a party's treatment records made or maintained by a health care provider, or other records protected under a legally recognized privilege, if the party provides the Investigator with voluntary, written consent to do so.

Prior to completion of the Investigative Report, the Investigator will provide each party and the party's advisor, if any, copies of any evidence obtained by the Investigator that is directly related to the allegations in the complaint. Both parties will have ten (10) calendar days to submit a written response to the evidence to the Investigator. The College may require both parties and their advisors to enter into a written agreement prohibiting the use or dissemination of evidence for any purpose other

than those directly related to the parties' participation in the Title IX grievance process.

6. **Investigative Report**

After conducting the investigation, the investigator(s) will complete an investigative report that includes:

- Summaries of interviews with the Complainant, the Respondent, and each third-party witness; photographs of relevant sites and related logs; electronic and forensic evidence; and a detailed written analysis of the events in question;
- A statement of all undisputed material facts; and
- A statement of all disputed material facts, including a summary of the evidence supporting each position.

The investigative report will be distributed, concurrently, to both of the parties and the Title IX Coordinator at least ten (10) calendar days prior to a hearing to determine responsibility under these procedures.

7. **Complainant Changes Election to Informal Resolution or Respondent Elects to Accept Responsibility.**

After reviewing the investigative report but prior to any determination of responsibility, the Complainant may decide to elect Informal Resolution instead of formal resolution, by making such a request to the Title IX Coordinator or designee prior to the hearing date. Informal Resolution will be conducted in accordance with Section C, below.

At any point prior to the hearing, the Respondent may elect to admit responsibility for the alleged sexual misconduct. In such cases where the Respondent voluntarily admits responsibility prior, the Title IX Coordinator or designee will propose a resolution to the complaint and a sanction. If both the Complainant and the Respondent agree to the proposed resolution and sanction, the complaint is resolved without a hearing and without any further rights of appeal by either party. If either the Complainant or the Respondent objects to the proposed sanction, a hearing before the Sexual Misconduct Board will be convened for the sole purpose of determining an appropriate sanction based on the conduct to which Respondent admitted, and in these cases, the decision of the Board may be appealed pursuant to paragraph 15, "Appeals," below. For purposes of this sanction hearing, all of the other provisions of these procedures relating to the imposition of a sanction for Sexual Misconduct will apply.

8. **Advisors**

The Complainant and the Respondent may have an advisor present to assist them during the pre-hearing, hearing, and appeal stages of the complaint process. The advisor may be an attorney chosen at the party's expense. However, advisors are not permitted to speak or to participate directly in the process, with the exception of conducting cross-examination during any hearing before the Sexual Misconduct Board. Parties should select as an advisor a person whose schedule allows attendance at the scheduled date and time for the hearing because delays will not normally be allowed due to the scheduling conflicts of an advisor.

9. **Notice of Hearing and Pre-Hearing Meetings.**

If a hearing is scheduled, the Title IX Coordinator or designee will provide written notice to both parties of the time, date, location, anticipated participants, and purpose of the hearing with sufficient time for the parties to prepare for the hearing. In addition, the Title IX Coordinator or

designee will schedule separate meetings with the Complainant and the Respondent to review the hearing procedures.

10. **Conduct of the Hearing**

Formal rules of process, procedure, and/or technical rules of evidence, such as are applied in criminal or civil court, are not used in these proceedings.

Hearings will be conducted in private.

The Sexual Misconduct Board chairperson and three members of the Sexual Misconduct Board will be appointed by the Dean of Students to serve on the Sexual Misconduct Board.

The Sexual Misconduct Board chairperson may be a college employee or someone retained by the College, such as an attorney, mental health professional, or another person trained to conduct sexual misconduct hearings.

The complainant, respondent, and their advisors, if any, will be allowed to attend the entire portion of the hearing at which information is received (excluding deliberations). Admission of any other person to the hearing will be at the discretion of the chairperson of the Board.

The complainant and respondent have the right to challenge any member of the Sexual Misconduct Board on grounds of prejudice. This challenge, with the reasons for the challenge, must be submitted in writing to the Dean of Students at least two (2) business days prior to the hearing. The Dean of Students or designee will determine if the member will sit on the case. If the challenge is upheld, the Dean of Students or designee will select another Sexual Misconduct Committee member for the Sexual Misconduct Board.

The complainant, the respondent, and the Sexual Misconduct Board may arrange for witnesses to present pertinent information to the Board. The college will try to arrange the attendance of possible witnesses who are members of the college community, if reasonably possible, and who are identified by the complainant and/or the respondent at least two (2) business days prior to the hearing. Witnesses will provide information to and answer questions from the Board and will be subject to cross-examination.

The Sexual Misconduct Board will not require, allow, rely upon, or otherwise use questions or evidence that constitutes or seek disclosure of, information protected under a legally recognized privilege, unless the person holding such privilege has waived the privilege.

Each party may be represented during the live hearing by an advisor of their choice at their own expense, who may be an attorney. If a party does not have an advisor, an advisor of the College's choice will be provided to conduct cross-examination.

Each party's advisor shall be permitted to conduct cross-examination of the other party and any witnesses, including all relevant questions and follow-up questions, including those challenging the credibility of the party or witness. Cross-examination will be conducted directly, orally, and in real time during the hearing. Under no circumstances will any party be allowed to conduct cross-examination personally.

The Chair will determine the relevance of any cross-examination question before it is answered. Questions or evidence about a Complainant's sexual predisposition or prior sexual behavior are not relevant and shall be excluded, other than to establish that someone other than the Respondent committed the conduct alleged by Complainant, or if

the questions concern specific incidents between Complainant and Respondent and are offered to provide consent.

If any party or witness does not submit to cross-examination during the hearing, the Sexual Misconduct Board will not rely on any statement of that party or witness in reaching a determination of responsibility. The Sexual Misconduct Board will not draw an inference about responsibility based solely on a party's or witness's absence from the hearing or refusal to answer cross-examination or other questions.

All procedural questions, including the decision to accept evidence and/or statements, will be made by the Sexual Misconduct Board Chair, in their sole discretion.

A recording (audio or video) or written transcript will be made of the hearing and will be available to the parties for inspection and review.

At the request of either party, the hearing will be conducted with parties in separate rooms with technology enabling the decision-makers and parties to simultaneously see and hear the witness answering questions.

After the portion of the hearing concludes in which all pertinent information has been received, the Sexual Misconduct Board, excluding the Board Chairperson, will determine by majority vote whether the Respondent has violated each section of these procedures for which the person is charged with violating.

11. **Standard of Proof**

The determination of whether or not a violation of these procedures occurred will be made on the basis of whether it is more likely than not that the Respondent violated these procedures. This standard is more formally referred to as the "preponderance of evidence" standard. In making its determination, the Board will carefully consider all of the evidence presented and follow the procedures stated in these procedures and any other applicable College policies, procedures, rules, or handbook provisions in order to ensure as fair a hearing as possible for all parties.

12. **Sanction**

Sanctions and remedies will be determined on a case-by-case basis by the Sexual Misconduct Board. Sanctions may range from a written warning to suspension or expulsion of a student or termination of an employee's employment with the College. The Sexual Misconduct Board is required to consider the suspension or expulsion of any student or the recommendation to terminate any employee's employment, if that individual is found responsible for sexual assault; however, the Sexual Misconduct Board may impose or recommend, where applicable, any sanction that it finds to be fair and proportionate to the violation. Students will be sanctioned in accordance with Article IV, B, of the Student Conduct Code. Student sanctions may include, but are not limited to: Warning, probation, deferred suspension, suspension, withdrawal of an offer of admission, revocation or withholding of a degree, loss of privileges, delayed registration, and other discretionary sanctions, such as work assignments, service, mental health or substance abuse evaluation and/or treatment.

Employee discipline following a determination by the Sexual Misconduct Board of a violation under this procedure will be determined in compliance with applicable law and Kirkwood policies and procedures, up to and including termination of employment.

13. **Written Decision**

Within ten (10) business days of completion of the hearing, the Dean of Students will notify the Complainant and accused student of the decision and any sanctions imposed.

Following the conclusion of the hearing, Board Chair will notify the Title IX Coordinator or designee of the decision and any sanctions imposed or recommended in writing within five (5) business days of completion of the hearing. Within ten (10) business days of completing the hearing, the Sexual Misconduct Board Chair will issue a written determination regarding responsibility, which shall be determined by a preponderance of the evidence. The written determination will include:

- Identification of the allegations;
- A description of the procedural steps taken from the receipt of the formal complaint through the determination, including notifications to the parties, interviews, site visits, methods used to gather other evidence, and hearings held;
- Findings of fact;
- Conclusions regarding the application of the College's code of conduct to the facts;
- A statement of and rationale for the decision-maker(s) determination regarding responsibility for each allegation;
- A statement of and rationale for any disciplinary sanctions that will be imposed on Respondent, if applicable;
- A statement of and rationale for any remedies the College will provide to restore or preserve Complainant's access to the College's program or activity, if applicable; and
- A statement of the College's appeal procedures.

The Title IX Coordinator or designee will provide the written determination to the parties simultaneously. The decision shall be final five (5) business days after delivery of the written determination, if no appeal is filed.

14. **Appeals**

Within five (5) business days of delivery of the written decision to them, either party may appeal the dismissal of a formal complaint, or the Board's decision and/or the sanction imposed to the President of the College or designee. Such appeals will be in writing and will be delivered to the Title IX Coordinator or designee. Appeals must allege one of the following:

- A procedural irregularity that affected the outcome of the matter;
- New evidence that was not reasonably available at the time of the determination regarding dismissal or responsibility was made, that could affect the outcome of the matter; or
- The Title IX Coordinator, Investigator(s), or Hearing Panel had a conflict of interest or bias for or against complainants or respondents generally or the individual complainant or respondent that affected the outcome of the matter.

The Title IX Coordinator or designee will notify both parties in writing if an appeal is received alleging one of the bases for appeal above. Both parties will be given an opportunity to submit a written statement in support of, or challenging, the written determination. Written statements must be submitted to the President or designee within five (5) business days of receiving notification that an appeal was filed.

The President or designee will determine if the decision and/or sanctions imposed will be stayed pending the outcome of the appellate decision.

Except as required to explain the basis of new information, an appeal will be limited to a review of the verbatim record of the hearing and supporting documents.

The President or designee may affirm, reverse, or modify the decision regarding the violation and/or sanctions imposed. A written decision will be issued simultaneously to the parties describing the result of the appeal and the rationale therefor. The written appeal decision of the President or designee is the final decision of the College, and no further appeals are permitted under these procedures.

All parties will be informed of the results of the appeal decision as promptly as possible.

C. Informal Resolution

Upon filing of a formal complaint, a Complainant may request a less formal proceeding known as "Informal Resolution." Although less formal than formal resolution, Informal Resolution is not mediation. Informal resolution is available to the parties any time prior to a determination of responsibility made by the Sexual Misconduct Board.

1. Election of Informal Resolution

The Title IX Coordinator will assess the severity of the alleged harassment and the potential risk of a hostile environment for others in the community to determine whether informal resolution may be appropriate. Informal Resolution will not be available to resolve allegations involving an employee sexually harassing a student.

The College will not require the parties to participate in the Informal Resolution process as a condition of enrollment, continuing enrollment, or employment or continuing employment, or of any other right conferred by the College.

The Title IX Coordinator will provide the parties with a written notice setting for the allegations, the requirements of the informal resolution process set forth in these procedures, the right of any party to withdraw from the informal process and proceed with the formal grievance process in Section B, above, at any time prior to agreeing to a resolution; and any consequences resulting from the participation in the informal process, including the records that will be maintained or could be shared by the College. Both parties must voluntarily consent in writing to participation in the informal resolution process.

2. Information Gathering and Resolution Process

Upon receipt of voluntary written consent from both parties, the Title IX Coordinator will assign the informal resolution to an Investigator. The Investigator will consult separately with the Complainant and Respondent and gather additional relevant information as necessary from the parties and others, as indicated.

The Title IX Coordinator also may put in place any appropriate supportive measures to protect the educational and/or work environment of the parties. Supportive measures must be individualized and designed to protect the safety of all parties and deter sexual harassment. Supportive measures are non-disciplinary and no inference of responsibility under these procedures should be drawn from the implementation of any supportive measures by the Title IX Coordinator.

The Title IX Coordinator or the Investigator will attempt to aid the parties in finding a mutually acceptable resolution to the complaint. This resolution will be reduced to writing and must be signed by the Complainant and the Respondent. Once both parties have voluntarily

signed the written resolution, the written resolution becomes final and neither party can initiate the formal grievance process to resolve the allegations in the formal complaint. The written resolution is not subject to appeal.

3. Advisors

The Complainant and the Respondent each may be assisted by an advisor throughout the Informal Resolution process. Advisors are assigned and subject to the same restrictions set forth for advisors in Formal Resolution (outlined above).

4. Election of Formal Resolution

Either party may, at any time prior to signing an informal resolution agreement, elect to end the informal resolution process and initiate formal resolution instead. In such cases, statements or disclosures made by the parties in the course of the informal resolution will not be considered in the subsequent formal resolution unless the party who made the statement or disclosure gives written consent to its use during the formal resolution process. In the event that either party elects to move forward with formal resolution, a new investigator will be designated who was not involved in the informal resolution process.

5. Privacy of Informal Resolution

In order to promote honest, direct, communication, information disclosed during informal resolution must remain private while the informal resolution is pending, except where disclosure may be required by law or authorized in connection with duties on behalf of the College.

D. Complainant Does Not Wish to Pursue Resolution or Requests Confidentiality

If the Complainant does not wish to pursue formal or informal resolution and/or requests that his or her report remain confidential, the Title IX Coordinator or designee will inform the Complainant that the College's ability to respond may be limited. The Title IX Coordinator or designee may conduct a preliminary investigation into the alleged sexual misconduct and may weigh the Complainant's request against the following factors:

- The seriousness of the alleged sexual misconduct,
- Whether there have been other complainants of sexual misconduct against the same Respondent, and
- The Respondent's right to receive information about the allegations, including the name of the complainant.

The Title IX Coordinator will only initiate a formal complaint against the wishes of the Complainant where doing so is not clearly unreasonable based on known circumstances, based on the potential impact to the College community if the allegations were true.

The Title IX Coordinator or designee will inform the Complainant if the College cannot ensure confidentiality. Even if the College cannot take disciplinary action against the Respondent because the Complainant insists on confidentiality or that the complaint not be resolved, the College reserves the authority to undertake an appropriate inquiry, issue a mutual "no contact" order to both parties, and/or take other reasonably necessary supportive measures, including the Supportive Measures described in Section E, below, to promote a safe learning environment for the Complainant and/or the entire College community.

E. Supportive Measures

The Title IX Coordinator may institute supportive measures to protect the safety of the college community, to enable parties and witnesses to continue their studies or work, and to ensure the integrity of an investigation. Supportive measures will be individualized, provided without fee or charge to the student(s) or employee(s), and are non-disciplinary in nature. Complainant's preferences will be considered when instituting supportive measures.

The College may make a non-disciplinary interim suspension of a student Respondent on an emergency basis. Prior to suspending a student, the College will conduct an individualized safety and risk analysis and determine whether there is an immediate threat to the physical health or safety of any individual. Any student so suspended will be provided with notice and an opportunity to challenge this action immediately following the removal.

The College may, in its discretion, place an employee Respondent on administrative leave pending the outcome of a grievance process.

The Dean of Students Office, Office of Human Resources, and/or Campus Security may also take additional interim supportive actions, as appropriate, including but not limited to:

- Offering counseling to any party;
- Extension of deadlines or other course-related adjustments;
- Modifying class or work schedules;
- Changing work or housing locations;
- Addressing other academic concerns (e.g., absences, assignments, grades, leaves of absence, withdrawal);
- Mutual restriction on contact between the parties;
- Safety planning, including campus escort services and increased security or monitoring of certain areas of campus;
- Leaves of absence; or
- Education/training.

VII. **Available Resources and Services**

There are campus and community services available to individuals who are subjected to sexual misconduct, regardless of whether an individual chooses to report a violation of these procedures to the College or local law enforcement. The College strongly encourages individuals subjected to sexual misconduct to seek assistance to care for themselves emotionally and physically through confidential crisis intervention, health care, and counseling. Individuals should keep in mind that medical examinations are time-sensitive and are critical in preserving evidence of sexual assault.

A. **Confidential Advocacy and Support**

Riverview Center (Cedar Rapids)

Riverview Center provides trained advocates to assist victims of sexual assault. Advocates can assist individuals with medical and legal advocacy, counseling, and case management. Advocates can speak with individuals confidentially as they consider their options. Any communication with a Riverview Center advocate is legally protected under Iowa Code Section 915.20, which allows for confidential communications that cannot be disclosed without the individual's permission.

50 2nd Ave Bridge
Cedar Rapids, IA 52401
319-540-0080

Website: www.riverviewcenter.org (http://www.riverviewcenter.org)

Sexual Assault Hotline (24 hours a day) 888-557-0310

Waypoint Services (Cedar Rapids)

Waypoint provides shelter and support for women and families in crisis due to domestic violence or sexual assault.

318 5th Street SE
Cedar Rapids, IA 52401
319-365-1458
24-Hour Crisis & Support Line 800-208-0388 or 319-363-2093

Domestic Violence Intervention Program (DVIP)

DVIP provides comprehensive support and advocacy services to victims/survivors in the following areas:

- Cedar County
- Iowa County
- Johnson County
- Washington County
  1105 S Gilbert Court
  Iowa City, IA 52240
  800-373-1043
  Website: www.dvipiowa.org (https://dvipiowa.org/)

Amani

This program serves survivors and victims of sexual assault and domestic violence in the African American communities in Cedar Rapids, Davenport, and Waterloo.
Crisis Line: 888-983-2533
www.amani-cs.org (https://www.amani-cs.org/)

Latinas Unidas Por Un Nuevo Amanecer (LUNA)

This program serves survivors and victims of sexual assault and domestic violence in the Latino/Latinx communities throughout Iowa.
24-hour hotline: 866-256-7668
www.lunaiowa.org (https://www.lunaiowa.org/)

Indigenous Survivors & Empowerment (RISE)

This program serves survivors and victims of sexual assault and domestic violence in the Native and Meskwaki communities in Iowa.
24-hour hotline: 855-840-7362
www.meskwaki.org/rise (https://www.meskwaki.org/family-services/#RISE)

Monsoon Asians & Pacific Islanders in Solidarity

This program serves survivors and victims of sexual assault and domestic violence in Asian and Pacific Islander (API) communities throughout Iowa.
24-hour hotline: 866-881-4641
monsooniowa.org (https://monsooniowa.org/)

Nisaa African Family Services

This program serves survivors and victims of sexual assault and domestic violence in African Immigrant and Refugee communities throughout Iowa.
Iowa City office: 319-338-7617

nisaa-afs.org (https://nisaa-afs.org/)

Thrive Together

This program serves survivors and victims of sexual assault and domestic violence in the Deaf and Hard of Hearing communities throughout Iowa.
24/7 text only line: 515-661-4015
Email: help@thrivetoghethertoday.org
www.thrivetogether.org (https://www.afternic.com/forsale/thrivetogether.org)

Kirkwood Counseling Services

Students can meet with a counselor during normal business hours. Services are free and confidential.
Contact information: www.kirkwood.edu/counseling (http://www.kirkwood.edu/counseling/)

In an emergency after hours, students and employees may call the 24-hour Foundation 2 hotline at 319-362-2174 or 800-332-4224.

Employee Assistance Program (Employees Only)

Employees can make use of the Employee Assistance Program for confidential counseling services.
Mercy Employee Assistance Program: 1-319-398-6694, or
1-800-383-6694

Student Health Services

Students can meet confidentially with a health care provider.
Contact information: www.kirkwood.edu/explore/services/student-health-services (https://www.kirkwood.edu/explore/services/student-health-services/)

B. **Additional Resources**

1. **College Title IX Coordinator**

The College has designated Melissa Payne, Vice President for Student Services as the Title IX Coordinator to ensure Title IX compliance for the entire campus. The Title IX Coordinator is responsible for ensuring a non-discriminatory campus environment that is free from harassment. Individuals may obtain information from the Title IX Coordinator about the College's grievance process and may file a formal complaint with the Title IX Coordinator. Questions or concerns may be directed to (319) 398-5584 or 3036 Iowa Hall, Kirkwood Community College.

Deputy Title IX Coordinators are:

- Bobbi Miller, Dean of Students, 319-398-7798
- David Heffer, Director of Public Safety and Emergency Management
- Wes Fowler, Vice President of Human Resources, 319-398-7797

2. **Public Safety**: (319) 398-7777, www.kirkwood.edu/security (http://www.kirkwood.edu/security/)

Public Safety provides services 24 hours a day and can respond to reports of emergencies. Public Safety works closely with law enforcement and can assist individuals in understanding their options for reporting incidents and assisting individuals in contacting local law enforcement to report an incident of sexual misconduct. Contacting Public Safety or law enforcement does not mean a student must pursue

criminal charges. Public Safety can also assist individuals in safety planning and provides escort services.

3. **Human Resources Office:** 313 Kirkwood Hall, (319) 398-5572

Staff can assist an employee in filing a report or, if the employee is not ready to file a report, the staff can work with the person to address concerns over work assignments or schedules, leaves of absence, or other employment concerns. Staff can also assist the employee in notifying Campus Security or local law enforcement, if requested by the employee and provide referrals to employees to resources such as counseling or a confidential advocate.

4. **Dean of Students Office:** 3rd Floor Iowa Hall, (319) 398-5540

Staff can assist a student in filing a report or, if the student is not ready to file a report, the staff can work with the person to address concerns over housing, class assignments or schedules, leaves of absence, withdrawal or other academic concerns. Staff can also assist the student in notifying Campus Security or local law enforcement, if requested by the student and provide referrals to students to resources such as counseling or a confidential advocate.

C. **External Resources**

A Complainant may choose to file a complaint with the state and federal agencies listed below.

Office for Civil Rights (OCR) – Chicago Office
U.S. Department of Education
Citigroup Center
500 W. Madison Street, Suite 1475
Chicago, IL 60661
Phone: (312) 730-1560
Fax: (312) 730-1576 TDD: (877) 521-2172
Email: OCR.Chicago@ed.gov
Web: www.ed.gov/ocr (http://www.ed.gov/ocr/)

Equal Employment Opportunity Commission (EEOC)
Reuss Federal Plaza
310 W. Wisconsin Avenue, Suite 800
Milwaukee, WI 53203-2292
Phone: (800) 669-4000
Fax: (414) 297-4133
TTY: (800) 669-6820
Web: www.eeoc.gov/ (http://www.eeoc.gov/)

Iowa Civil Rights Commission (ICRC)
Grimes State Office Building
400 E. 14th Street
Des Moines, IA 50319
Toll free: (800) 457-4416
Phone: (515) 281-4121
Fax: (515) 242-5840
TDD: (877) 521-2172
Web: https://icrc.iowa.gov/   (https://icrc.iowa.gov/)

VIII. **Reporting Requirements**

The College can respond to sexual misconduct only if the College is made aware of the behavior. Therefore, if a College employee becomes aware of a complaint or other violation of these procedures, the employee must immediately bring the information to the Title IX Coordinator or a Deputy Title IX Coordinator so that concerns can be addressed, and services can be offered to the affected individuals. Employees are expected to

reasonably comply and cooperate with the College's process for receiving and responding to complaints under these procedures.

IX. **Prevention, Training, and Policy Communication**

The College is committed to education, communication and training in order to prevent sexual misconduct and to assure an appropriate response when incidents occur. The College will provide information on the following to students, faculty and staff:

- Preventing sexual misconduct
- Procedures for responding to incidents of sexual misconduct
- Resources available to individuals in cases of sexual misconduct

The College will provide training on the above information to all College personnel involved in providing any part of the college's response to reports of alleged sexual misconduct.

The College will also ensure that individuals who serve as Title IX Coordinators, Title IX Investigators, Sexual Misconduct Board Members, Appeal Decision-Makers, and facilitators of the informal resolution process have adequate training on the definition of sexual harassment, the scope of the College's education program or activity, how to conduct the College's investigation and grievance process, as applicable, and how to serve impartially, including by avoiding prejudgment of the facts, conflicts of interest, and bias. The Sexual Misconduct Board will also receive annual training on any technology to be used at a live hearing and on relevance of questions and evidence, including exclusion of questions or evidence protected under applicable "rape shield" laws, rules, or regulations. Investigators must also receive training on issues of relevance to create an investigative report that fairly summarizes relevant evidence. Training materials will not rely on sex stereotypes and will promote impartial investigations and adjudications of formal complaints under these procedures. This training may include expertise drawn from campus and community resources, professional organizations, and other experts on the topic of sexual misconduct.

The College will maintain materials used to train its employees on a website and will provide information about these procedures to all new students and employees through orientation and annually thereafter. These procedures are also available for distribution in printed form from the Dean of Students Office, Campus Security, and Human Resources and other College personnel involved in prevention and/or response activities.

X. **Recordkeeping**

- The College will maintain the following records for seven years from the date of closure of the complaint:
- Each sexual harassment investigation, including determinations, audio or video recordings, disciplinary sanctions, and any remedies provided to the Complainant;
- Any appeal and the result therefrom;
- Any informal resolution; and
- All materials used by the College to train Title IX Coordinators, investigators, decision-makers, and those who facilitate informal resolution under these procedures.

Additionally, the College will create and maintain for seven years from the date of closure of any complaint:

- Any actions, including supportive measures, taken in response to a report or formal complaint of sexual harassment;

- Documentation of the basis for the College's conclusion that its response to any such report or complaint was not deliberately indifferent;
- Documentation that the College has taken measures designed to restore or preserve access to the College's educational program or activity;
- Where no supportive measures are provided to Complainant, documentation of why it was not clearly unreasonable to do so.

[1] *"Course of conduct" means repeatedly maintaining a visual or physical proximity to a person without legitimate purpose or repeatedly conveying oral or written threats, threats implied by conduct, or a combination thereof, directed at or toward a person*

[2] *If authority is vested with some other individual or decision-making body under federal, state, or local law, rule, or policy to render a particular sanction (e.g., termination of a College employee with a continuing teaching contract) the Sexual Misconduct Board shall issue a determination of responsibility for the underlying conduct and may make a recommendation regarding sanction. The matter shall be referred by the Title IX Coordinator or designee to the individual/decision-making body with authority to issue the sanction for further handling.*

Student Complaint Procedure

The vast majority of complaints can and should be handled by the department closest to the issue where the complaint originates. The process for handling student complaints is as follows:

> 1. Discuss the complaint directly with the staff member or faculty involved. (In cases where this is not possible, such as alleged harassment or discrimination, a student may move to the second step.)

> 2. Discuss complaint with the Director or Dean with supervisory responsibility over the area where the issue occurred.

> 3. In cases where a resolution is not reached at the department level, a student may submit a complaint in writing to the appropriate vice president; Vice President, Academic Affairs (academic issues), Vice President, Student Services (student service and miscellaneous issues), or Vice President, Continuing Education and Training (continuing education issues) by completing the Kirkwood Student Complaint Form (https://cm.maxient.com/reportingform.php?KirkwoodCC&layout_id=60).

This process does not circumvent other existing review committees such as Special Appeals Committee, Academic Policies and Procedures Committee, or the Student Conduct Hearing board.

In the event that the complaint cannot be satisfied through one of these avenues:

- The Bureau of Iowa College Aid, Iowa Department of Education is authorized to receive and review complaints from students. You may also contact the Bureau of Iowa College Aid (https://educate.iowa.gov/higher-ed/student-complaints/) to register your complaint.

Student Conduct Code

Preamble

Kirkwood Community College is an academic community built on the principles of mutual respect, integrity, and honesty. The college strives to provide a community wherein individuals have the right to express their opinions and ideas, to assemble peacefully, and to associate freely in a manner that does not interfere with the rights of others and is in the confines of intellectual honesty. In order to thrive as an educational institution, the college has adopted this Student Conduct Code ("Student Code") to promote and preserve its educational mission for the benefit of all who are invited to be a part of the community.

Purpose

It is in the best interest of the college and all those who are students or who may desire to become students at the college that the disciplinary procedure be defined. This document prescribes procedures to be followed in disciplinary cases in order that cases may be handled in a timely manner while serving the interests of the college community and safeguarding the rights of all students. Administrative responsibility for the establishment and enforcement of policies governing non-academic student conduct and disciplinary action has been delegated by the Kirkwood Community College President to the Vice President for Student Services. The Vice President has, in turn, delegated considerable authority for the establishment of rules and handling of violations to the Dean of Students and other bodies as designated in this policy.

Definitions

1. The term "Accused Student" means any student accused of violating this Student Code.

2. The term "Board of Trustees" means the group of elected officials charged with oversight of the College.

3. The term "Business Days" means all days except Saturdays, Sundays, and College holidays. When counting days, the day a complaint is received at any point in the procedure shall be considered "day one."

4. The term "College" means Kirkwood Community College.

5. The term "College premises" includes all land, buildings, facilities, and other property in the possession of or owned, used, or controlled by the College (including adjacent streets and sidewalks).

6. The term "College official" includes any person employed by the College or any person performing assigned administrative or professional responsibilities on behalf of the College.

7. The term "Complainant" means any person who submits a charge alleging that a student violated this Student Code. When a student believes that s/he has been a victim of another student's misconduct, the student who believes s/he has been a victim will have the same rights under this Student Code as are provided to the Complainant, even if another member of the College community submitted the charge itself.

8. The term "faculty member" means any person hired by the College to conduct classroom or teaching activities or who is otherwise considered by the College to be a member of its faculty.

9. The term "member of the College community" includes any person who is a student, faculty member, College official or any other person employed by the College. A person's status in a particular situation will be determined by the Dean of Students or designee.

10. The term "staff member" means any person employed by the College who is not a faculty member or student employee.

11. The term "student organization" means any number of persons who have complied with the formal requirements for College recognition as a club or organization.

12. The term "policy" means the written regulations of the College as found in, but not limited to, the student conduct code, student handbook, college catalog, and college website.

13. The term "student" includes all persons taking courses at Kirkwood Community College, either full-time or part-time, pursuing degree or non-degree programs including continuing education and distance courses. Persons who withdraw after allegedly violating the Student Code, who are not officially enrolled for a particular term but who have a continuing relationship with the College or who have been notified of their acceptance for admission are considered "students," although not enrolled in this institution.

14. The term "Student Conduct Administrator" means a College official authorized by the Dean of Students to determine whether a student has violated the student conduct code and to impose sanctions.

15. The term "Student Conduct Board" means any person or persons selected by the Dean of Students, including but not limited to members of the Student Conduct Committee, to determine whether a student has violated the Student Conduct Code and to recommend sanctions that may be imposed when a rules violation has been committed.

16. The term "Student Conduct Board Chairperson" means an individual selected by the Dean of Students or designee to facilitate a Student Conduct Board.

17. The term "Student Conduct Committee" means the College committee appointed by the Vice President for Student Services to serve as participants on the Student Conduct Committee.

Student Code Authority

1. The Dean of Students will determine the composition of Student Conduct Boards and will determine which Student Conduct Board or Student Conduct Administrator will be authorized to hear each matter.

2. The Dean of Students will develop policies for the administration of the student conduct system and procedural rules for the administration of Student Conduct Board Hearings that are not inconsistent with provisions of the Student Code.

3. Decisions made by a Student Conduct Board and/or Student Conduct Administrator are final, pending the normal appeal process.

Prohibited Conduct

A. **Jurisdiction of the Student Conduct Code**
   The Student Conduct Code will apply to conduct that occurs on College premises, at College-sponsored activities, and to off-campus conduct, including, but not limited to, activities on College partners' premises, that adversely affects the College community and/or the pursuit of its objectives. Each student will be responsible for his/her conduct from the time of application for admission through the actual awarding of a degree, even though conduct may occur before classes begin or after classes end, as well as during the academic year and during periods between terms of actual enrollment (and even if their conduct is not discovered until after a degree is awarded). The Student Conduct Code applies to a student's conduct even if the student withdraws from school while a disciplinary matter is pending.

B. **Conduct—Rules and Regulations**
   Any student found to have committed or to have attempted to commit the following offenses is subject to the full range of

disciplinary sanctions outlined in Article IV including warning, probation, suspension, or expulsion:

1. Acts of dishonesty, including but not limited to the following:
   a. Furnishing false information to any College official, faculty member, or office.
   b. Forgery, alteration, or misuse of any College document, record, or instrument of identification.
2. Disruption or obstruction of teaching, research, administration, disciplinary proceedings, other College activities, including its public service functions on or off campus, or of other authorized non-College activities when the conduct occurs on college premises.
3. Physical abuse, verbal abuse, threats, intimidation, harassment, coercion, and/or other conduct which threatens or endangers the health or safety of any person.
4. Violation of the Sexual Harassment Procedures, which prohibits sexual misconduct in any form and which includes any unwelcome behavior of a sexual nature that is committed without consent, by force, intimidation, coercion, or manipulation.
5. Attempted or actual theft of and/or damage to property of the College or property of a member of the College community or other personal or public property, on or off campus.
6. Hazing, defined as an act which, intentionally or recklessly, endangers the physical health or safety of a student, for the purpose of initiation, admission into, affiliation with, or as a condition for continued membership in, any organization operating in connection to the college.
7. Unauthorized possession, duplication or use of keys to any College premises or unauthorized entry to or use of College premises.
8. Violation of any College policy, rule, or regulation published in hard copy or available electronically on the College website.
9. Violation of any federal, state or local law.
10. Manufacturing, selling, distribution, use, or possession of marijuana, heroin, narcotics, or other controlled substances except as expressly permitted by law or possession of a device (drug paraphernalia) used to ingest or inhale an illegal drug or narcotic.
11. Manufacturing, selling, distribution, use, or possession of alcoholic beverages (except as expressly permitted by College regulations), or public intoxication. Alcoholic beverages may not, in any circumstance, be used by, possessed by, or distributed to any person under twenty-one (21) years of age.
12. Participating in an on-campus or off-campus demonstration, riot or activity that disrupts the normal operations of the College and/or infringes on the rights of other members of the College community; leading or inciting others to disrupt scheduled and/or normal activities within any campus building or area.
13. Obstruction of the free flow of pedestrian or vehicular traffic on College premises or at College sponsored or supervised functions.
14. Conduct that is disorderly, lewd, or indecent; breach of peace; or aiding, abetting, or procuring another person to breach the peace on College premises or at functions sponsored by, or participated in by, the College or members of the College community.
15. Any unauthorized use of electronic or other devices to make an audio or video record of any person while on College premises without his/her prior knowledge, or without his/her effective consent when such a recording is likely to cause injury or distress. This includes, but is not limited to, surreptitiously taking pictures of another person in a gym, locker room, or restroom.
16. Theft or other abuse of computer facilities and resources, including but not limited to:
    a. Unauthorized entry into a file, to use, read, or change the contents, or for any other purpose.
    b. Unauthorized transfer of a file.
    c. Use of another individual's identification and/or password.
    d. Use of computing facilities and resources to interfere with the work of another student, faculty member or College official.
    e. Use of computing facilities and resources to send obscene or abusive messages.
    f. Use of computing facilities and resources to interfere with normal operation of the College computing system.
    g. Use of computing facilities and resources in violation of copyright laws.
    h. Any violation of College policies pertaining to use of information technology, including computer use policies.
17. Abuse of the Student Conduct Code, including but not limited to:
    a. Failure to obey the notice from a Student Conduct Board or College official to appear for a meeting or hearing as part of the Student Conduct System.
    b. Falsification, distortion, or misrepresentation of information before a Student Conduct Board.
    c. Disruption or interference with the orderly conduct of a Student Conduct Board proceeding.
    d. Institution of a Student Conduct Code proceeding in bad faith (e.g. filing a false complaint).
    e. Attempting to discourage an individual's proper participating in, or use of, the student conduct system.
    f. Attempting to influence the impartiality of a member of a Student Conduct Board prior to, and/or during the course of, the Student Conduct Board proceeding.
    g. Harassment (verbal or physical) and/or intimidation of a victim or other person who files a student conduct complaint or any participant(s) of a conduct proceeding, including but not limited to, their family members, friends, or acquaintances, witnesses, panel members, or advisors, prior to, during, and/or after a student conduct proceeding.
    h. Retaliation against a victim or other person who files a student conduct complaint or any participant(s) of a conduct proceeding, including but not limited to, their family members, friends, or acquaintances, witnesses, Board members, or advisors, prior to, during, and/or after a student conduct proceeding. This includes any form of intimidation, threats, harassment (verbal or physical) or knowingly filing a false complaint.
    i. Failure to comply with the sanction(s) imposed under the Student Conduct Code.
    j. Influencing or attempting to influence another person to commit an abuse of the student conduct code system.
18. Intentionally sounding a false alarm or tampering with fire safety equipment.
19. Use or possession on the campus or at or during any College-authorized function or event of firearms, ammunition, or other dangerous weapons, substances, or materials, except as expressly authorized by the College, or of bombs, explosives, or

explosive or incendiary devices prohibited by law or any other violation of the college weapons policy.

20. Undue or willful neglect to meet financial obligations to the College when properly notified by the College.

21. Failure to comply with directions of College officials or law enforcement officers acting in performance of their duties and/or failure to identify oneself to these persons when requested to do so.

22. Misuse of college identification – Transferring, lending, borrowing, or altering a college identification.

23. Violation of the Student Conduct Code while on disciplinary probation, or violation of the terms of one's probation.

C. **Violation of Law and College Discipline**

1. College conduct proceedings are separate from criminal or civil litigation. Formal rules of process, procedure, and/or technical rules of evidence, such as are applied in criminal or civil court, are not used in student conduct code proceedings.

2. College disciplinary proceedings may be instituted against a student charged with conduct that potentially violates both the criminal law and this Student Code (that is, if both possible violations result from the same factual situation) without regard to the pendency of civil or criminal litigation in court or criminal arrest and prosecution. Proceedings under this Student Code may be carried out prior to, simultaneously with, or following civil or criminal proceedings off campus at the discretion of the Dean of Students or designee. Determinations made or sanctions imposed under this Student Code will not be subject to change because criminal charges arising out of the same facts giving rise to violation of college rules were dismissed, reduced, or resolved in favor of or against the criminal law defendant.

3. When a student is charged by federal, state, or local authorities with a violation of law, the College will not request or agree to special consideration for that individual because of his or her status as a student. If the alleged offense is also being processed under the Student Code, the College may advise off-campus authorities of the existence of the Student Code and of how such matters are typically handled within the college community. The College will attempt to cooperate with law enforcement and other agencies in the enforcement of criminal law on campus and in the conditions imposed by criminal courts for the rehabilitation of student violators (provided that the conditions do not conflict with campus rules or sanctions). Individual students and other members of the college community, acting in their personal capacities, remain free to interact with governmental representatives as they deem appropriate.

Article IV: Student Conduct Code Procedures

A. **Charges and Student Conduct Hearings**

1. Any person may file charges against a student for violations of the Student Conduct Code. A charge should be prepared in writing and directed to the Dean of Students or designee. Any charge should be submitted as soon as possible after the event takes place, preferably within one calendar year. With respect to any complaint that is 1) by a person who is not a member of the college community, and 2) relating to non-college conduct, the College reserves the right to determine, in its sole discretion, whether the conduct described in the complaint constitutes a sufficient risk to the college community to warrant processing the complaint.

2. The Dean of Students or designee may conduct an investigation to determine if the charges have merit. If the accused student elects to acknowledge his or her actions and take responsibility for the alleged misconduct, the Dean of Students will propose a resolution to the complaint and a sanction. If the accused student agrees to the proposed sanction, the complaint is resolved without a hearing and without any further rights of appeal. If the accused student objects to the proposed sanction, a hearing will be convened for the sole purpose of determining a sanction, and in these cases, the decision is subject to appeal pursuant to Article IV, D.

   If the charges are not admitted to and/or cannot be disposed of by mutual consent, the Dean of Students or designee will determine if the matter will be resolved through an administrative hearing or by a Student Conduct Board. Complaints that may result in a sanction of suspension or expulsion will be disposed of through a Student Conduct Board. All other cases will be disposed of through an administrative hearing conducted by the Dean of Students or Student Conduct Administrator.

3. Complaints alleging conduct that includes sexual harassment and other forms of sexual misconduct will be handled according to the rules and procedures described in the Sexual Harassment Procedures and the applicable sections of this policy.

4. All charges will be presented to the accused student in written form. A time will be set for an administrative hearing or Student Conduct Board hearing that ensures a prompt and equitable resolution, not less than five (5) nor more than thirty (30) business days after the accused student has been notified. Maximum time limits for scheduling of an administrative hearing or Student Conduct Board hearing may be extended at the discretion of the Dean of Students. Written notification to the Accused Student will include:

   a. the alleged conduct violation;

   b. a summary of the specific allegations;

   c. the time, date, and place of the hearing;

   d. the name(s) of the Student Conduct Administrator or Student Conduct Board members, who will hear the case;

   e. the potential disciplinary sanctions; and

   f. the related procedures outlined in Article IV.
   Like notice will also be provided concurrently to the Complainant.

5. Formal rules of process, procedure, and/or technical rules of evidence, such as are applied in criminal or civil court, are not used in Student Code proceedings.

6. The determination of whether or not a violation of the Student Conduct Code occurred will be made on the basis of whether it is more likely than not that the Accused Student violated the Student Conduct Code. This is more formally referred to as the, "Preponderance of the Evidence Standard."

7. The Dean of Students or designee will notify the Accused Student and the Complainant of the outcome of the hearing in writing within ten (10) business days of completion of the hearing.

8. If an Accused Student, with notice, does not appear for the hearing, the information in support of the charges will be presented and considered even if the accused student is not present.

9. A conduct violation that may not result in the sanction of suspension or expulsion will be resolved through an administrative hearing with the Dean of Students or Student Conduct Administrator. During the administrative hearing the

accused student will have an opportunity to respond to the charges and to present evidence or witnesses contesting the charges. The Dean of Students or Student Conduct Administrator will determine if a violation occurred and will issue appropriate sanctions.

10. An alleged violation of the Student Conduct Code in which the accused student contests responsibility and that may result in the sanction of suspension or expulsion will be resolved through a Student Conduct Board Hearing according to the following guidelines:

   a. Hearings will be conducted in private.

   b. The Student Conduct Committee chairperson and two members of the Student Conduct Committee will be appointed by the Dean of Students to serve on the Student Conduct Board.

   c. The Complainant, Accused Student and their advisors, if any, will be allowed to attend the entire portion of the Student Conduct Board Hearing at which information is received (excluding deliberations). Admission of any other person to the Student Conduct Board Hearing will be at the discretion of the chairperson of the Student Conduct Board.

   d. In hearings involving more than one Accused Student, the Dean of Students, in his or her discretion, may permit the Student Conduct Board Hearing(s) concerning each student to be conducted either separately or jointly.

   e. The Complainant and the Accused Student have the right to challenge any member of the Student Conduct Board on grounds of prejudice. This challenge, with the reasons for the challenge, must be submitted in writing to the Dean of Students at least two (2) business days prior to the hearing. The Dean of Students or designee will determine if the member will sit on that case. If the challenge is upheld, the Dean of Students or designee will select another Student Conduct Committee member for the Student Conduct Board.

   f. The Complainant and the Accused Student have the right to be assisted by an advisor they choose, at their own expense. The Complainant and/or the Accused Student is responsible for presenting his or her own information, and therefore, advisors are not permitted to speak or to participate directly in any Student Conduct Board Hearing before a Student Conduct Board. The participants should select as an advisor a person whose schedule allows attendance at the scheduled date and time for the Student Conduct Board Hearing because delays will not normally be allowed due to the scheduling conflicts of an advisor.

   g. The Complainant, the Accused Student, Student Conduct Administrator, and the Student Conduct Board may arrange for witnesses to present pertinent information to the Student Conduct Board. The College will try to arrange the attendance of possible witnesses who are members of the college community, if reasonably possible, and who are identified by the Complainant and/or Accused Student at least two (2) weekdays prior to the Student Conduct Board Hearing. Witnesses will provide information to and answer questions from the Student Conduct Board.

   h. Questions may be suggested by the Accused Student and/or Complainant to be answered by each other or by other witnesses. This will be conducted by the Student Conduct Board with such questions directed to the chairperson, rather than to the witness directly. This method is used to preserve the educational tone of the hearing and to avoid creation of an adversarial environment. Questions of whether potential information will be received will be resolved in the discretion of the chairperson of the Student Conduct Board.

   i. Pertinent records, exhibits, and written statements (including Student Impact Statements) may be accepted as information for consideration by a Student Conduct Board at the discretion of the chairperson.

   j. All procedural questions are subject to the final decision of the chairperson of the Student Conduct Board.

   k. After the portion of the Student Conduct Board Hearing concludes in which all pertinent information has been received, the Student Conduct Board will determine by majority vote whether the Accused Student has violated each section of the Student Code which the student is charged with violating.

   l. There will be a single verbatim record, such as a tape recording, of all Student Conduct Hearings before a Student Conduct Board (not including deliberations). Deliberations will not be recorded. The record will be the property of the college.

   m. The Student Conduct Board may accommodate concerns for the personal safety, well-being, and/or fears of confrontation of the Complainant, Accused Student, and/or other witness during the hearing by providing separate facilities, by using a visual screen, and/or by permitting participation by telephone, videophone, closed circuit television, video conferencing, videotape, audio tape, written statement, or other means, where and as determined in the sole judgment of the Dean of Students or designee to be appropriate.

B. **Sanctions**

   1. The following sanctions may be imposed upon any student found to have violated the Student Conduct Code:

      a. Warning—a notice in writing to the student that the student is violating or has violated institutional regulations.

      b. Probation—a written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe disciplinary sanctions if the student is found to violate any institutional regulation(s) during the probationary period.

      c. Loss of Privileges—denial of specified privileges for a designated period of time.

      d. Fines—previously established and published fines may be imposed.

      e. Restitution—compensation for loss, damage, or injury. This may take the form of appropriate service and/or monetary or material replacement.

      f. Discretionary Sanctions—work assignments, essays, service to the college, or other related discretionary assignments.

      g. Deferred Suspension – A serious and final notification that any violation of College policy may result in the immediate suspension of the student from the College for a specified period of time after which the student would be eligible to return. Conditions for readmission may be specified prior to the student being eligible to return.

      h. Suspension—separation of the student from the College for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.

      i. Expulsion—permanent separation of the student from the College.

j. Revocation of Admission and/or Degree—admission to or a degree awarded from the College may be revoked for fraud, misrepresentation, or other violation of College standards in obtaining the degree, or for other serious violations committed by a student prior to graduation.

k. Withholding Degree—The College may withhold awarding a degree otherwise earned until the completion of the process set forth in this Student Conduct Code, including the completion of all sanctions imposed, if any.

l. Delayed Registration-- A student may be required to delay his/her course registration until a complainant or any other student(s) involved in a conduct matter has completed course registration. Delayed registration is for a specified number of semesters or may be required until the complainant or other involved student(s) graduate.

2. More than one of the sanctions listed above may be imposed for any single violation.

3.

a. Other than college expulsion or revocation or withholding of a degree, disciplinary sanctions will not be made part of the student's permanent academic record but will become part of the student's disciplinary record.

b. In situations involving both an Accused Student(s) (or group or organization) and a student(s) claiming to be the victim of another student's conduct, the records of the process and of the sanctions imposed, if any, will be considered to be the education records of both the Accused Student(s) and the student(s) claiming to be the victim because the educational career and chances of success in the academic community of each may be impacted.

4. The following sanctions may be imposed upon groups or organizations:

a. Those sanctions listed above in article IV(B)(1)(a)–(k).

b. Loss of selected rights and privileges for a specified period of time.

c. Deactivation-loss of all privileges, including college recognition, for a specified period of time.

5. In each case in which a Student Conduct Board or Student Conduct Administrator determines that a student and/or group or organization has violated the Student Conduct Code, the sanction(s) will be determined and imposed by the Dean of Students or Student Conduct Administrator with the exception of cases involving sexual misconduct, in which case the Sexual Misconduct Board will determine the sanctions.

C. **Interim Suspension**

In certain circumstances, the Dean of Students or designee may impose an interim suspension-- prior to the disposition of a student conduct hearing.

1. Interim suspension may be imposed only:

a. to ensure the safety and well-being of members of the college community or preservation of College property;

b. to ensure the student's own physical or emotional safety and well-being; or

c. if the student poses an ongoing threat of disruption of, or interference with, the normal operations of the College.

2. During the interim suspension, a student will be denied access to the campus (including classes) and/or all other College activities or privileges for which the student might otherwise be eligible, as the Dean of Students or designee may determine to be appropriate.

3. The interim suspension does not replace the regular process, which will proceed on the normal schedule, up to and through an Administrative or Student Conduct Board proceeding, if required. However, the student should be notified in writing of this action and the reasons for the suspension. The notice should include the time, date, and place of a subsequent hearing at which the student may show cause why his or her continued presence on the campus does not constitute a threat and at which they may contest whether a campus rule was violated.

D. **Appeals**

1. The decision of a Student Conduct Administrator or Student Conduct Board including sanctions imposed may be appealed by the Accused Student(s), the Complainant(s) or both to the Vice President for Student Services or designee within five (5) business days of the decision. Such appeals will be in writing and will be delivered to the Dean of Students or his or her designee. The Vice President or designee will determine if the decision and/or sanctions imposed will be stayed pending the outcome of the appellate decision.

2. Except as required to explain the basis of new information, an appeal will be limited to a review of the verbatim record of the student conduct hearing and supporting documents for one or more of the following purposes:

a. To determine whether the Student Conduct Board Hearing was conducted fairly in light of the charges and information presented, and in conformity with prescribed procedures. Deviations from designated procedures will not be a basis for sustaining an appeal unless significant prejudice results.

b. To determine whether the sanction(s) imposed were appropriate for the violation of the Student Conduct Code which the student was found to have committed.

c. To consider new information, sufficient to alter a decision or other relevant facts not brought out in the original hearing, because such information and/or facts were not known to the person appealing at the time of the original hearing.

3. The vice president for Student Services may affirm, reverse, or modify the decision regarding the violation and/or sanctions imposed. The appeal decision of the vice president is the final decision of the college, and no further appeals are permitted under this policy.

4. All parties will be informed of whether the grounds for an appeal are accepted and the results of the appeal decision.

Article V: Composition of Student Conduct Committee

The Student Conduct Committee is appointed by the vice president for Student Services and is composed of two (2) staff members nominated by the Dean of Students, two (2) faculty members nominated by the vice president for Academic Affairs, and one (1) faculty/staff chairperson appointed by the Vice President for Student Services. The Dean of Students or designee will preside over all meetings of the Student Conduct Committee.

Article VI: Training

The Dean of Students or designee will conduct annual training with persons involved in the administration of the student conduct system. This includes, but is not limited to, the Student Conduct Committee members and other Student Conduct Administrators. Training will be

conducted in a manner that is consistent with provisions of the student conduct code.

Article VI: Interpretation and Revision

A. Any question of interpretation or application of the Student Conduct Code will be referred to the Dean of Students or designee for final determination.

B. The Student Conduct Code will be reviewed every three years under the direction of the Dean of Students.

Student International Travel

All Study Abroad students will be compliant with the rules and regulations of Study Abroad at Kirkwood as set forth in the Study Abroad Student Contract and other Study Abroad procedures in place in Global Learning. For semester abroad programs, refer to the Global Learning office policy and procedures.

Student groups must follow the following procedures:

1. Complete the Study Abroad online application to be considered for participation in the program.

2. Once accepted, the Kirkwood Community College Study Abroad Student Contract must be completed and signed acknowledging the risks and obligations of the student. The Study Abroad Student Contract must be signed by the student and clearly outlines all student expectations in detail.

3. Participants in an approved study abroad program must be enrolled in academic credit. Participants traveling in a non-study abroad experience will receive an itinerary and program expectations outlined by the faculty/staff leader in conjunction with Global Learning.

4. All students are responsible for full payment of tuition and program fees related to the travel program. For Study Abroad, program fees are inclusive of international airfare, some program-related expenses, and international health and travel insurance. Some personal travel expenses, activities and meals will be at the student's additional expense during travel.

5. Students must participate in all scheduled activities as directed by the faculty leader and program itinerary. Students are to remain within a 30-mile radius of the faculty leader for the duration of the program and are not to partake in unscheduled activities that cross international borders or that would place them outside of this 30-mile radius for program management purposes.

6. Students are required to attend all appropriate pre-departure orientations and post-program debriefings.

Student Conduct

Students agree to abide by the Kirkwood Community College Student Conduct Code at all times. Failure to comply may result in dismissal from the program.

The Student Conduct Code applies to students who are participating in travel activities. Alleged student conduct violations occurring during travel will be adjudicated according to the procedures described in the Student Study Abroad Contract and may ultimately result in the student being sent home at their own expense. In such cases, the faculty leader will notify the appropriate administrator at Kirkwood of the alleged misconduct. Disciplinary proceedings will be determined by the faculty leader, Global Learning, the Study Abroad Emergency Team and the Dean of Students. Such decisions will be made on a case-by-case basis.

Student Records

Definitions

- **Attendance** at the College includes, but is not limited to, attendance in person or by correspondence, videoconference, satellite, Internet, or other electronic information and telecommunications technologies, and the period during which a person is working under a work-study program

- **Directory Information** is information concerning a student that may be released publicly. The College designates the following items as directory information.
  - Student's name
  - Date of birth
  - Degrees, diplomas, certificates earned and awards (e.g., Dean's list)
  - Dates of attendance (e.g., Fall 2010, Fall 2010-Spring 2012)
  - Enrollment status (full-time, part-time, not enrolled)
  - Participation in officially recognized activities (e.g., SIFE, DECA)
  - Participation in officially recognized sports
  - Height and weight of members of athletic teams
  - Major (for commencement program only)
  - Hometown (for commencement program only)

The College may disclose any of these items of directory information on any student, currently enrolled or not. Students have the right to request that no directory information be made public by completing a Directory Information Block Request or Removal form and filing it with the Student Services office.

- **Disclosure** means permitting access, release, transfer or other communication of personally identifiable information contained in education records by any means to any party.

- **Education Records** include any information or data recorded in any medium, including but not limited to electronic, print, handwriting, film, microfiche and e-mail, which is directly related to a student and maintained by the College or by a person acting for the College. The term "education records" does not include the following:
  - Records that are kept in the sole possession of the maker of the records, are used only as a personal memory aid, and are not accessible or revealed to any other person except a temporary substitute for the maker of the record.
  - Records created and maintained solely for law enforcement purposes by Campus Security.
  - Employment records made and maintained in the normal course of business and related exclusively to the individual in that individual's capacity as an employee and are not available for use for any other purpose. This exception does not include records relating to a student in attendance at the College who is employed as a result of his/her status as a student (e.g., work study); such records are protected as "education records".
  - Records created or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his/her professional capacity and used only in the treatment of the student and not available to individuals other than those providing the treatment.
  - Alumni records created or received by the College after an individual is no longer a student in attendance and that are not directly related to the individual's attendance as a student

(e.g., information collected by the College pertaining to alumni accomplishments).

- Grades on peer-graded papers before they are collected and recorded by a teacher.
- Admission records for an individual who does not enroll at the College.
- **FERPA -** The Family Educational Rights and Privacy Act of 1974 is a U.S. Federal Law that governs the access to educational information and student records.
- **Legitimate Educational Interests** are the demonstrated "need to know" by those school officials who act in the student's educational interest. A school official has a legitimate educational interest if the official needs to review an educational record in order to fulfill his/her professional responsibility.
- **Parent** means a parent of a student and includes a natural parent (custodial and/or non-custodial), a guardian, or an individual acting as a parent in the absence of a parent or a guardian. This definition includes adoptive and custodial stepparents. At the postsecondary level, FERPA rights have transferred to the student and parents have no rights under FERPA to inspect their student's education records, which will not be released to parents except in certain circumstances in which the law allows a student's education records to be disclosed to a parent without the prior consent of the student.
- **School Officials** demonstrating a legitimate educational interest within the limitations of their "need to know" may have access to student education records protected by FERPA. A school official is a person employed by the College as a faculty, administrative, clerical, medical, legal or professional employee or other person who manages student education records including the campus nurse, student employee or volunteer; a member of the Board of Trustees; a person, company or organization with whom the College has contracted or otherwise arranged to provide services that the College itself would otherwise have to provide, such as an attorney, auditor, collection agent, security service or other service provider.
- **Student** means any individual who is officially registered and in attendance, or who has been officially registered and in attendance, at the College, and about whom the College maintains education records. A person who has applied for admission to but has never been in attendance at the College is not a student. The right to inspect education records resides solely with the student. Parents have no rights under FERPA to their student's education records.

Maintenance of Student Records

All College personnel, including student employees, involved in the handling and maintenance of education records protected by FERPA shall be instructed concerning the confidential nature of such information and their responsibilities regarding it, pursuant to this policy and the provisions of FERPA. This instruction will be a part of each employee's orientation procedure, including student employees, and will be finalized by their signing the Code of Responsibility form.

Annual Notice to Students of FERPA Rights

The Student Services office gives public notice of student rights under FERPA annually by email and via the College Web site.

Disclosure of Student Records
Directory Information

The College may disclose directory information on any student, currently enrolled or not, without prior written consent. Students have the right to request directory information not be made public by completing a Directory Information Block Request or Removal form and filing it with the Student Services office.

Education Records With Consent of the Student

The College will obtain a signed and dated written consent from a student before it discloses personally identifiable information, other than directory information, from a student's education records, except as authorized by law, to any individual, agency or organization. This consent will specify the records to be disclosed, the purpose of the disclosure, and the parties to whom the disclosure may be made.

Education Records Without Prior Consent of the Student As Authorized by Law

All education records are maintained in confidence. However, under certain circumstances in accordance with the Act, they may be disclosed without the prior consent of the student. The agencies, institutions, entities and individuals who may receive or inspect these records are listed below.

Parties to whom personally identifiable information is released, as a general rule, are not permitted to disclose the information to others without the written consent of the student, nor misuse personally identifiable information, and must destroy these documents and/or electronic records when no longer needed.

The College will maintain a record of the requests for and disclosure of personally identifiable information from a student's education records for the situations outlined below except for paragraphs 1, 9 and 12 below, those made by students for their own education records, requests involving written consent from the student, disclosures to school officials under the conditions of their legitimate educational interest, a party seeking directory information, or a federal grand jury or law enforcement subpoena, or court order, that prohibits disclosure.

The record will include the name of the individual or agency requesting information, the reason for the request including the legitimate educational interest the party had in obtaining the information, the date of the request, and the disposition of the request and will be made part of the student's permanent record.

Kirkwood Community College school officials or their agents who have a legitimate educational interest in student records and data, and who require personally identifiable information to complete their assigned duties, may review such material.

Officials of another institution where the student seeks to enroll or is enrolled, or where the student receives services from the other institution in connection with the student's participation in internships, affiliations or other programs related to the student's courses or program at the College.

Authorized representatives of institutions from which the student has received financial aid or with which a student has applied for financial aid are entitled to access if needed to determine eligibility for, the amount of, or the conditions for aid, or to enforce terms or the conditions of such aid. "Financial aid" as used in this paragraph means a payment of funds

provided to a student that is conditioned on his/her attendance at the College.

Authorized representatives of the federal, state and local educational authorities may review personally identifiable information from student records in connection with an audit or evaluation of federal or state supported education programs, or for the enforcement of or compliance with federal legal requirements related to those programs.

Federal, state, local and independent organizations engaged in studies for, or on behalf of, the college to develop, validate, or administer student aid programs, administer predictive tests, or improve education. Information is disclosed, however, only when these institutions confirm that the study will be conducted in a manner that does not permit personal identification of students by individuals other than representatives of the organization and the information will be destroyed when no longer needed for the purposes for which the study was conducted.

Accrediting organizations in order to conduct accrediting functions.

Information will be provided pursuant to a lawful subpoena or court order. Before complying with a subpoena, the College will attempt to notify the student involved that a subpoena has been issued, unless the subpoena prohibits such notification. The notification will be sent to the student's last known address and to counsel for the student, if known.

In the case of an emergency, the College may disclose personally identifiable information to the appropriate parties if knowledge of the information is deemed by the College to be necessary to protect the health or safety of the student or other individuals based on the following considerations:

1. the nature of the emergency,
2. the need for information,
3. the relative assistance the parties can offer,
4. and the amount of time available.

The Dean of Students will be the responsible officer in emergency cases, and if unavailable, another appropriate administrator.

To an alleged victim of a crime of violence or non-forcible sex offense of the final result of any institutional disciplinary proceeding against the alleged perpetrator of that crime with respect to that crime, regardless of the outcome of the proceeding. The final results of any disciplinary proceeding shall include only the name of the student, the violation committed, and any sanction imposed against the student.

To a court of law those education records that are necessary to defend the College against a student who initiates legal action against it, or those education records that are relevant to the College's case as a plaintiff in a legal action against a student.

Information regarding disciplinary action taken against a student for conduct that posed a significant risk to the safety or well-being of that student, other students, or other members of the College community may be released to school officials or to school officials at other institutions who have been determined to have a legitimate educational interest in the behavior of the student.

To the parent of a student who is under the age of 21 information about a violation of any federal, state or local law, or any rule or policy of the College, governing the use or possession of alcohol or a controlled substance if the College determines that the student has committed a disciplinary violation with respect to such use or possession.

Although students have the right to opt out of the release of directory information, they may not choose to be anonymous within the classroom setting, whether in a traditional or distance learning class, by opting out. Disclosure of name and email address, as required by the instructor and classroom setting, for purposes of conducting the class and class discussion or activities is permissible under FERPA.

The College may disclose to third-parties any student information that it has designated as directory information, provided that the student has not restricted such information from disclosure.

Under the Solomon Amendment, student military recruiting information (name, address, telephone number, age or year of birth, level of education [e.g., freshman, sophomore] and major of currently enrolled students) will be released to military recruiters unless students have previously requested that no directory information be disclosed to third parties under FERPA.

Access to Education Records by Students

The College will provide current and former students access to the student's own education records, with the exception of those listed below, within 45 days of receipt of the student's written request.

- They are not entitled to the financial aid records of the student's parents or guardian.
- They must not be permitted to view their education records if they contain information about another student; in such cases, they will be permitted to access only that part of the record which pertains to the inquiring student.

The substantive judgment of a faculty member about a student's work, expressed in grades and/or evaluations, is not within the purview of this right to challenge. The right to challenge grades does not apply under The Act unless the grade assigned was inaccurately recorded, in which case the record will be corrected.

Students have the right to challenge the content of their education records if they consider the information within to be inaccurate, misleading, or inappropriate. This process includes an opportunity for amendment of the records or insertion of written explanations by the student into such records.

Students challenging information in their records must submit, in writing, a request for a hearing to the College Registrar, listing the specific information in question and the reasons for the challenge. A hearing will be conducted by a College official who has no direct interest in the outcome of the hearing. The student shall be afforded a full and fair opportunity to present evidence relevant to the reasons for the challenge. The hearing officer will render a decision, in writing, noting the reason and summarizing all evidence presented within a reasonable timeframe after the challenge is filed.

Should the hearing be in favor of the student, the record shall be amended accordingly.

Should the request be denied, an appeal may be made, in writing, and submitted to the Registrar within 10 days of the student's notification of the decision of the hearing officer. The appeal shall be heard by an appeals board of three disinterested senior College officials and a decision rendered, in writing, within a reasonable period of time.

Should the appeal be in favor of the student, the record will be amended accordingly.

Should the appeal be denied, the student may choose to place a statement with the record commenting on the accuracy of the information in the record and/or setting forth any basis for inaccuracy. When disclosed to an authorized party, the record will always include the student's statement and notice of the board's decision, as long as the student's record is maintained by the College.

The student has 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 20202-5901

Contact Information

Questions related to this procedure should be directed to the Registrar at (319) 398-5476

Please visit talon.kirkwood.edu (http://talon.kirkwood.edu) for College-wide FERPA training.

Additional FERPA information can be found at the Family Policy Compliance Office Website: https://studentprivacy.ed.gov/?src=rn.

Tobacco Free - Smoke Free

Kirkwood Community College is committed to providing its students, employees, partners, and visitors safe and healthy environments. Tobacco/Nicotine products are a proven health and safety hazard, to the tobacco user and non-smokers who are exposed to secondhand smoke. In addition to causing direct health hazards, smoking contributes to institutional costs in other ways including fire damage, cleaning and maintenance costs and costs associated with employee absenteeism, health care and medical insurance.

Kirkwood Community College is committed to:

- Supporting tobacco/nicotine free campuses at all locations and partnering sites.
- Serving as a role model in the community by promoting a tobacco/nicotine-free environment.
- Assisting both students and employees who wish to quit using tobacco/nicotine products.

Tobacco/Nicotine use including electronic smoking devices, cigarettes, cigars, pipes and smokeless tobacco/nicotine is prohibited. This is products up to and including the use of look-a-likes where the original would include tobacco or nicotine. Smoking is defined as the burning or inhaling of tobacco/nicotine or other matter that can be smoked or inhaled, or the inhaling of smoke or vapor from an electronic smoking device.

The use of tobacco/nicotine products, which includes smokeless and smoking tobaccos/nicotines, is prohibited:

- In all areas within Kirkwood Community College buildings.
- On all property owned, leased or occupied by Kirkwood Community College.
- In all vehicles owned, leased or rented by the school.

This procedure applies to all employees, students, partners, and visitors. All individuals in noncompliance of the Smoke Free Air Act will be considered in violation and subject to disciplinary action.

- No tobacco/nicotine products shall be sold or distributed on Kirkwood Community College property.
- Campus organizations are prohibited from accepting money or gifts from tobacco/nicotine companies that promote use of their products.
- Tobacco/nicotine advertisements are prohibited in College-run publications and at any athletic or campus event.
- Signs stating that the entire campus is tobacco/nicotine free are prominently posted at all campus and building entrances and other conspicuous places.
- All Kirkwood Community College employees are authorized and encouraged to communicate and reinforce this procedure with courtesy and diplomacy to any person whom they see in violation. Individuals who refuse to comply should be reported to Public Safety.

Traffic and Parking

Kirkwood's traffic and parking regulations are based on the Code of the State of Iowa, local laws and ordinances also apply. Students, faculty, staff and guests are expected to comply with these regulations.

Traffic and parking violations such as speeding, failure to stop at a stop sign, reckless driving and parking illegally are not permitted.

The majority of parking spaces on campus are to be used on a first come, first serve basis. Students, faculty, staff and guests may park in any of the non-designated parking areas.

Reserved Parking:

The following areas are reserved and are clearly marked:

- Disability (handicap) spaces are reserved for those vehicles that display valid State of Iowa Disability Identification. For additional information on the State of Iowa Persons with Disabilities Parking Law, click here (https://iowadot.gov/mvd/vehicleregistration/persons-with-disabilities/).
- Visitor spaces designated for campus guests. These spaces are not to be used at any time by faculty, staff or students.
- Kirkwood issued permit parking spaces. All vehicles parked in these spots must correctly display a valid Kirkwood issued parking permit they have been issued.
- Expectant Mother Signage – reserved for expectant students and others who bring small children to campus.
- Park & Ride – Located on the northwest end of Linn Hall parking lot, reserved for Park & Ride commuters.
- Overnight Parking - Vehicles are not to be left on campus overnight. Exceptions may be made by contacting Public Safety.
- Other specially designated parking spaces. Examples of these reserved spaces are Service Vehicles and Maintenance.

Kirkwood Issued Permit Parking:

Public Safety has special permit parking spaces available. The designated spaces are available on a temporary basis only. A Kirkwood issued permit must be displayed to park in these locations.

Examples of circumstances which may qualify for special parking are:

- Temporary disability which limits mobility
- Pregnancy
- Medical conditions

Campus Security maintains records of vehicles authorized to park in reserved spots including the name of the requestor, vehicle and permit information. Vehicles parked in reserved spots without authorization, outside the timeframe, or with an expired permit are subject to a citation.

The responsibility of finding a reserved space lies with the permit holder. Possessing a permit for a reserved parking space or requesting a reserved spot, does not guarantee the availability of a preferential parking space. In the event a reserved space is not available, a reserved permit does not allow preferential parking. Reserved permit holders may park in open, non-designated parking spaces at any time.

Reserved parking permits are the property of Kirkwood and may only be used by the permit holder. It is the responsibility of the permit holder to notify Public Safety of any relevant changes to their information on file, including but not limited to change of license plate, change of vehicle or temporary use of an alternate vehicle. In the event a permit is lost, a replacement permit will be issued at the cost noted on the Administrative Fees Chart.

Warnings & Violation Notices:

Warning notices will be issued by Public Safety whenever possible. Violation notices or citations will be issued when the warning notice has been ignored or the violation is significant. Continual disregard of warnings and citations may result in your vehicle being towed.

The city where the campus is located may also issue parking and/or moving violation tickets.

Payment of Fines:

- Payments by cash or check may be made at Dispatch in the Facilities & Public Safety Building during normal business hours
- Credit card payments can be made through My Hub
- A late payment fee may be added to any violation if payment is not made within **10 business days** from the date of issuance of the citation

Citation Appeals:

Parking citation appeals shall be received by Public Safety via the online appeals portal or in person at the public safety office within **5 business days** of citation issuance. Once an appeal has been received by the public safety office, an administrative review of the appeal shall be conducted based on the facts presented and information available, by the appeals committee, and a decision shall be made within 10 business days.

Towing:

Vehicles may be towed, at the owners' expense, for the following reasons:

- Vehicle parked on Kirkwood property for more than 72 hours and contact with the owner of the vehicle is unsuccessful may be considered as abandoned

- Vehicle parked in a no-parking zone and prevents operations from occurring (e.g. deliveries, maintenance access, emergency access)
- Vehicle parked in a manner that obstructs snow removal
- All costs associated with the towing shall be the responsibility of the vehicle owner/operator
- The college assumes no liability in damages to towed vehicles

Weapons Procedure

The presence of weapons on campus poses a risk to the health and safety of the community. Firearms, weapons or explosives of any kind shall not be allowed on any Kirkwood Community College campus or at any Kirkwood sponsored event.

Weapons of any kind, whether carried open or concealed, shall not be allowed on Kirkwood Community College property or at any Kirkwood sponsored event. This is regardless of the individual having a federal or state weapons permit.

Mace or pepper spray is allowable under the procedure, but may not be used or possessed in such a way that violates this or other College policies.

Any member of the campus community who observes an individual possessing, transferring, selling or using a weapon and who reasonably believes that the individual has not been specifically authorized by Kirkwood should report the suspected violation immediately to Kirkwood Public Safety.

Exemptions:

- Law Enforcement - This procedure does not apply to law enforcement personnel or peace officers who are carrying the weapon in performance of their duties.
- Non-projectile Weapons - Consistent with Iowa Code 724.8A, non-projectile weapons, such as stun guns, that direct an electric current, impulse, wave, or beam that produces a high-voltage pulse designed to immobilize a person are permitted. However, projectile high-voltage pulse weapons, such as tasers, are prohibited, despite the above exception.   In addition, non-projectile high-voltage pulse weapons are subject to off-campus restrictions, including age limitations, per Iowa Code 724.4.
- Props – Due to the risk of being identified as a real weapon, any item which looks like a weapon in appearance and is utilized for any purpose on any Kirkwood campus, must be reported and approved by Associate Vice President, Public Safety or designee prior to being used for any activity.

Individuals seeking an exception must submit a written request in advance to the Associate Vice President, Public Safety. The Associate Vice President will review the request in consultation with other appropriate staff members and will respond to the request in writing.

Violations:

Because weapons may pose a clear risk to persons and property on the campus, violation of the regulations may result in disciplinary action from the College and/or prosecution under the appropriate state or federal laws.

Students in violation of the procedure may be subject to disciplinary action up to and including expulsion. Faculty and staff violating this procedure may be subject to disciplinary action, up to and including

termination of employment. Guests, visitors and contractors found in violation of this procedure may be permanently prohibited from returning to campus for any reason.

Individuals found in possession of weapons in violation of this procedure may be reported to local law enforcement for further criminal action in accordance with the appropriate local, state and federal laws.

Kirkwood will also pursue disciplinary, or criminal action as appropriate against anyone who violates this procedure by engaging in violence, threats of violence or intimidation.

Term	Definition
Firearm	Any device that shoots a bullet, pellet, flare, tranquilizer, spear, dart, or other projectile, whether loaded or unloaded. This includes but is not limited to; guns, air guns, dart guns, pistols, revolvers, rifles, shotguns, cannons, and any ammunition for such devices
Weapon	Any device that is designed to, or traditionally used to inflict harm. This includes, but is not limited to: (1) firearms, slingshots, switchblades, daggers, bows and arrows, hand grenades, hunting knives, explosives; (2) any object that could reasonably construed as a weapon or that is intended to be used to inflict bodily injury; or (3) any object legally controlled as a weapon or treated as a weapon by law.
Explosives	Any combustible capable of causing serious injury including but not limited to firecrackers, black powder, dynamite, plastic explosives or blasting caps.

Administrative Fees & Violations Chart

Violation	Fee
Warning	$0.00
Parking Violation	$20.00
Moving Violation	$40.00
Parking in Disability Space w/o placard displayed*	$200.00
Late Payment	$5.00

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*State Minimum
All fines are per occurrence.
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Transfer Credit Procedures

Vocational-Technical Credit

Kirkwood accepts vocational-technical credits earned in courses that are part of Associate of Applied Science degree programs at Kirkwood or other Iowa community colleges. Such credits are herein referred to as technical credits.

A maximum of 16 hours of technical credits are acceptable toward Associate of Arts or Associate of Science degrees. The credits may not be used to satisfy core or general education requirements.

Official transcripts from other community colleges will be reviewed by the registrar and transfer credit will be awarded as appropriate.

Procedure on Awarding A.A., A.S., A.A.A., A.A.S. Degree when Student has B.A., B.S. Degree or Higher

When a student has a previously earned B.A., B.S., or higher degree and subsequently earns enough credits for an Associate degree from Kirkwood, the college will not award a degree if it is in the same program or area as the higher-level degree. The college will award the A.A., A.S., A.A.A., or A.A.S. degree if the major or field of study is not related to the B.A., B.S., or higher degree

Transfer of Credit from Other Institutions

When examining transcripts from other colleges, Kirkwood may accept the credit given to a student who has done successful work at another college provided our evaluation determines that the work was from an institution that is accredited by an institutional accreditor recognized by the United States Department of Education.

Grades of "F" (or any other failing grades) for transfer students will be ignored in the computation of cumulative and transfer grade point averages.

Grades corresponding to "D-" or better will be accepted for transfer into Arts and Sciences programs and will be accepted toward fulfilling general education requirements for Applied Science programs. Higher grades may be required for some program courses.

Transfer of Military Credit

Kirkwood awards transfer credit for military training as follows:

Direct course equivalency credit is granted for Military Occupation Specialty (MOS) based courses in certain fields.

Technical elective credit is granted for basic training and non-MOS courses completed while in the military provided the course is listed in the ACE (American Council on Education) Guide. No more than 16.0 hours of technical elective credit will be awarded. This is in accordance with the Liaison Advisory Committee on Transfer Students (LACTS) agreement between Iowa community colleges and public universities.

To receive credit, students must provide documentation by submitting official military transcripts to the VA certifying official.

Academic and Enrollment Procedures

Adds, Drops and Withdrawal of Registration

Students may add a course at any time before it starts, subject to the course load limit and student load limits. After a course starts, it may only be added with the instructor and dean signatures.

Students may drop individual courses prior to the last day to drop shown on the course syllabus. After the last day to drop a course, students must remain in the scheduled course. They will receive "F" grades if they stop attending classes without officially dropping them. Classes that have ended cannot be dropped.

Students who have not attended a course will be administratively withdrawn and will not be charged for the course.

Academic Integrity Procedure

Kirkwood students are responsible for authenticating all work in a course. This includes but is not limited to quizzes, exams, presentations, papers, journals, and projects. If asked, the student must be able to produce proof establishing that the work they submit is original and created by the student. For this reason, it is recommended that students engage in a verifiable working process on assignments and conduct themselves during class in a manner that does not lead to the suspicion of academic dishonesty.

Students should keep copies of all drafts of original work, make photocopies of research materials, write summaries of research materials, retain Writing Center receipts, keep logs or journals of work on assignments and papers, and save drafts or versions of assignments under individual file names on personal computer or cloud storage devices.

All writing that is taken from secondary sources (including those on the Internet) must have proper attribution and citation as outlined in course requirements and syllabus.

If the instructor suspects academic dishonesty and asks the student to authenticate their work, the inability to authenticate the work is grounds for opening an investigation of academic dishonesty. In the event that an instructor or administrator communicates to the student a suspicion of academic dishonesty, the burden of proof rests on the student to establish that they were responsible for the creation of his or her own work.

In addition to requiring that students authenticate their work, Kirkwood faculty or their designees may employ various other means of ascertaining authenticity – such as engaging in Internet searches, creating quizzes based on student work, or requiring students to explain their work or process orally.

This procedure applies to all credit and noncredit coursework taken at Kirkwood Community College.

Academic dishonesty may include but is not limited to:

1. Plagiarism and Fabrication
   a. Copying information verbatim from a source without providing proper credit or source attribution.
   b. Paraphrasing a significant portion of another individual's work without fundamentally changing the main idea and failing to provide proper credit.
   c. Presenting as your own work something that you had no part in creating (this would include obtaining papers or other academic materials by purchasing, borrowing or downloading them from a third party or website).
   d. Creating false data or modifying existing data as part of an assignment or project without the express knowledge and consent of the instructor. This includes false graphs, charts and bibliographic citations.
2. Misrepresentation
   a. Allowing another individual to represent their self as the student to complete a quiz, test or other assessment.
   b. Allowing one's own name to be part of a project or group assignment for which the individual played no role or had no significant contribution.
   c. Submitting as original work an assignment from a previous course or class unless such prior submission is noted and the original work has been substantially modified or enhanced. Without these changes, the student is guilty of self-plagiarism.
3. Cheating and Facilitation
   a. Copying from another student's work during a class on a graded or assessed activity.
   b. Knowingly allowing other students to view or access one's work during a test or quiz. During in-class assessment, students should ensure that their work is not visible to others and should avoid the appearance of viewing another student's quiz, exam or other unique work.
   c. Using unauthorized notes (written or electronic) during a quiz or exam. This includes but is not limited to unauthorized notes or formulae on calculators or other devices that are allowed.
   d. Accessing the Internet or other electronic sources during an in-class assessment without the express knowledge and consent of the instructor.
   e. Communicating with another student (either by sending or receiving information) in a way that shares information and answers on graded activities without the express knowledge and consent of the instructor.

f. Copying, photographing or in any way duplicating part or all of a quiz or test without the permission of the instructor.
4. Impeding Fair and Equal Access to the Education and Research Process
   a. Hiding, removing or in any way restricting access to information and materials that other students may be required to access in the course of completing an assignment or project. This includes creating passwords or other electronic barriers to access on public or shared websites.

Sanctions

The sanctions for confirmed violation of the Academic Integrity Procedure are as follows:

First Offense

The instructor will communicate with the student about the suspected violation of the Academic Integrity Procedure. The instructor will have the authority to issue a failing grade on the paper, exam or assignment for which cheating or plagiarism was established. A first offense of academic dishonesty will be treated as a warning and an opportunity for educating students about Kirkwood's Academic Integrity Procedure. The student's name will be entered into the database of Student Academic Integrity Violations for a first offense of student academic misconduct and the student will be required to complete online Academic Integrity Education.

Second Offense

The instructor will communicate with the student about the suspected violation of the Academic Integrity Procedure. The instructor will have the authority to issue a failing grade on the paper, exam or assignment for which cheating or plagiarism was established. In addition, the instructor will have the authority to issue a failing grade for the course. The student's name will be entered into the database of Student Academic Integrity Violations for a second offense of student academic misconduct and the student will be required to complete online Academic Integrity Education and meet with the appropriate department administrator.

Third Offense and Subsequent Offenses

The instructor will communicate with the student about the suspected violation of the Academic Integrity Procedure. The instructor will have the authority to issue a failing grade on the paper, exam or assignment for which cheating or plagiarism was established. In addition, the instructor will have the authority to issue a failing grade for the course. The student's name will be entered into the database of Student Academic Integrity Violations for a third or subsequent offense of student academic misconduct. The student will be suspended for one semester from Kirkwood Community College. The student must meet with the Associate Vice President of Academic Affairs prior to being readmitted to the college.

Appeal

Students may appeal the finding of violation of the Academic Integrity Procedure using the Academic Integrity Appeals Procedure.

Academic Integrity Appeal Procedure

- Appeal of a determination/finding of academic dishonesty can be submitted using this Academic Integrity Appeal Form (https://cm.maxient.com/reportingform.php?KirkwoodCC&layout_id=6).
- Students have five working days from being notified of an instance of academic dishonesty to submit an appeal.

- The appeal should contain a brief, clear and concise description of what occurred and state specifically why the activities or behavior of the student should not be determined academic dishonesty. Students may also provide additional information why the Committee should grant the appeal. Supporting documentation is allowed and may be included with the appeal.

Academic Integrity Hearing Procedure

An Ad Hoc Appeal Committee will convene to consider the appeal within ten (10) business days of the receipt of the student appeal. The chairperson will contact all parties involved in the appeal and provide an opportunity to attend the appeal hearing. The Ad Hoc Appeal Committee may render a decision based entirely on the written appeal material. It is the intention of the committee to reach a decision concerning appeals within two (2) business days following the conclusion of the appeal hearing. The chairperson of the committee will notify all parties involved of the committee's decision using a letter to the student's Kirkwood email address within ten (10) business days following the appeal hearing. The decision of the committee is final and cannot be appealed within the College.

Faculty Rights

Any faculty member directly involved with any student appeal will be notified of the appeal upon receipt of such by the committee chairperson. The chairperson will also notify the faculty of the date, time and place of the appeal hearing and request that the faculty member attend the hearing or provide written information responsive to the appeal. The involved faculty person or designee has the right to appear before the Committee, personally present information and answer questions pertinent to the appeal.

Student Rights

The student will be notified by the chairperson of the date, time and place of the appeal hearing and request that the student attend the hearing. The student has the right to appear before the committee, and personally present information and answer questions pertinent to the appeal. The student has the right, during the hearing, to be assisted by an advisor they chose, at their own expense. The student is responsible for presenting their own information, and therefore, advisors are not permitted to speak or to participate directly in any part of the hearing. The participants should select as an advisor whose schedule allows attendance at the scheduled date and time for the hearing because delays will not normally be allowed due to the scheduling conflicts of an advisor.

Alternative Credit

Alternative credit is defined as course credit earned outside of Kirkwood credit course completion, transfer course completion and credit by examination.

Students who believe they know the content of a course will work with an alternative credit advisor from the department that owns the course. The alternative credit advisor will guide the student through the process based on the student's source of learning the course content.

If the learning is not by completion of coursework through Kirkwood Continuing Education, there is an administrative charge of $25 per application, and if the application is approved, a tuition charge is assessed equal to one half the current tuition for the credit course. If the

learning took place in Kirkwood Continuing Education coursework, there are no charges.

Alternative credit is not granted if:

- the course was previously passed or failed
- the student has earned (or would earn upon approval of an alternative credit request) 18 or more credit hours through exam or alternative credit

This procedure does not exempt students from complying with all other Kirkwood graduation procedures including residency and graduation procedures.

Alternative credit is denoted on the student's transcript as exam credit with a L grade. The credit does not apply to the grade point average calculation. If the student transfers to another institution, credits earned through this policy are subject to the receiving institution's policies and procedures. It is not guaranteed that all post-secondary institutions will recognize these credits.

If the application is denied, the student is notified in writing by the academic department. The application and a copy of the denial letter are submitted to Enrollment Services for inclusion in the student's academic record. The student may appeal the decision to the Vice President of Academic Affairs. The appeal must be made in writing and submitted within 10 business days of the date of the denial letter.

Assignments and Examinations

Students are expected to complete all class assignments and examinations on time. It is the student's responsibility to make up any work missed during an absence from class.

Students must be present for final examinations as scheduled. In cases of illness or emergency during final exams, a student may be excused and the exam rescheduled by the instructor. In cases where such illness or emergency may extend more than a few days, the procedure for incomplete course work should be followed.

Student Class Attendance

Students are expected to attend all sessions of classes for which they are enrolled. Absences shall in no way lessen student responsibility for meeting the requirements of any class. Students are expected to know the attendance requirements for each of their courses. Failure to abide by a faculty member's attendance requirements may adversely impact their grade.

Class Attendance Expectations

Learning is central to our work at Kirkwood Community College. Faculty members use educational experiences to facilitate learning, and students learn by engaging in those experiences. Attendance and engagement in all scheduled classes are regarded as integral to learning and are expected of all students. Kirkwood faculty members identify expectations for learning and attendance in their course syllabi. Students are accountable for the learning outcomes for each session, including those sessions that have been missed. Assessments of learning that occur during an absence may or may not be made up, depending on the instructor's expectations and the nature of the absence. Absences that result from participation in college-sponsored activities, jury duty, or short term military service will be accommodated, subject to the guidelines listed below. For all other absences, authorization of an "excuse" is the province of the individual faculty member and subject to the standard appeal process.

Class Attendance Policy Related to College-Sponsored Activities

College-sponsored activities (excluding practices) include athletic competitions, student academic competitions and conferences, musical and drama performances, and class field trips. Questions on whether an activity is a college-sponsored event for purposes of this procedure should be directed to the Vice President of Academic Affairs. If anticipated absences for a semester appear to be extraordinarily numerous or difficult to accommodate, a faculty member may appeal the need for the full accommodation to the Vice President of Academic Affairs.

Students involved in activities where they are required to represent the college, i.e. college-sponsored activities, must give written notice to the faculty member at least one week in advance of the absence unless last-minute schedule changes make this notice impossible. If regular season athletic schedules have been developed, student participants must present written notice of anticipated absences within the first week of the semester. Failure to provide timely written notice may result in a loss of this opportunity.

The faculty shall accord students the opportunity to independently make up coursework or work of equal value, for the day(s) the event was scheduled and to take a scheduled exam at an alternate time. The faculty member shall determine alternate exam times and due dates for missed course work. These assigned dates may be prior to the date of the absence.

Organizers (coaches, faculty and staff) of college-sponsored activities shall:

1. assist students in planning class schedules to minimize the number of absences;
2. inform students of their responsibilities as described above; and
3. provide written communications to the faculty member announcing and verifying the need for student class absences. Written notices must be provided at the beginning of the semester if the schedule is known, or as soon as possible after the need for a student absence is determined.

Class Absence for Jury Duty

Students who are called to jury duty may have alternative assignments provided assuming the time spent is within normal semester boundaries. Proof of both the call to serve and actual service must be shared with the faculty member, and it is the student's responsibility to notify the faculty member prior to service and to make arrangements to complete alternative work post the jury assignment.

Class Attendance Policy Related to Required Military Duty or Veteran Status

Questions on whether an activity is a required military service activity for purposes of this procedure should be directed to the Vice President of Academic Affairs. If anticipated absences for a semester appear to be extraordinarily numerous or difficult to accommodate, a faculty member may appeal the need for the full accommodation to the Vice President of Academic Affairs.

Absences due to military duty or veteran status must be excused. This includes, but is not limited to, the following:

- Mandatory monthly drill instruction, such as duty completed by national guard members and military reservists (typically this involves a one-day absence in order to extend weekend training).
- Service-related medical appointments where failure to appear might result in a loss of benefits.

Students must give written notice to the faculty member at least one week in advance of the absence unless last-minute schedule changes make this notice impossible. Students are strongly encouraged to inform each faculty member of their known and anticipated absences as far in advance as possible, preferably at the start of the term.

The faculty shall accord students the opportunity to independently make up course work or work of equal value, for the day(s) the event was scheduled and to take a scheduled exam at an alternate time. The faculty member shall determine alternate exam times and due dates for missed course work. These assigned dates may be prior to the date of the absence.

Students are still responsible for demonstrating achievement of course learning goals, even when absences due to military duty are necessary and reasonable. In situations with many absences or extended periods of military duty (e.g. being called to active duty), it may be most appropriate for the student to withdraw and retake the course in a future semester.

Course Load

Those pursuing 12 semester hours or more during any semester (12 hours or more in a summer term) are considered full-time students. To earn an associate degree in four semesters, students should plan to enroll for an average of 16 hours per semester.

There is no limit on the number of credit hours a student may carry in any semester. However, any student wishing to enroll in more than 18 hours in a semester or more than 13 hours in a summer semester will need the department dean's signature unless they are enrolled in a FlexForward program.

Students may not take a course for more or less credit than that assigned in the college catalog or in MyHub.

Part-time coursework may be undertaken in many programs and students with an interest in attending part-time are advised to contact the appropriate program department for details.

Credit by Examination

Students may earn credit hours through the College Level Examination Program (CLEP), DANTES, Advanced Placement tests, the Alternative Credit policy or through a variety of department-approved subject matter examinations. These examinations enable students to earn college credit for their knowledge in various subject areas by allowing them to test out of individual courses.

Credits awarded through the examination process will appear on the transcript as exam credit and count toward the number of credit hours needed for the program degree, diploma or certificate. The dean of the respective department will have final approval of credits awarded by examination.

A maximum of 18 credits may be awarded for alternative coursework and exam credit of any kind.

Credit by examination will not be granted:

1. If it duplicates courses previously passed or failed.
2. If it puts the student over 18 credits of exam credit.

Credit Hour Definition

Kirkwood defines a unit of credit as a semester hour. No registration or orientation hours may be included when determining credit hours. The College's minimum requirements are listed here (p. 63).

The College's Minimum Requirements

Instructional Delivery	Delivery Definition	Minimum Minutes	Contact Hours
Classroom Work	Lecture and formalized classroom instruction under the supervision of a faculty member	800	16
Laboratory Work	Experimentation and practice by students under the supervision of a faculty member	1600	32
Clinical Practice	Applied learning experience in a health agency or office under the supervision of a faculty member	2400	48
Work Experience	Employment-related experience planned and coordinated by an institutional representative and employer, with control and supervision of the student on the job	3200	64
Distance Education	Courses taught over the Internet, or other electronic means (i.e. in-class hybrids, Weblive)	Same as above with equivalent work required	Same as above with equivalent work required
FlexFORWARD Courses	Courses or programs of study that allow students to complete course competencies at a faster pace than if offered by conventional methods	Equivalent outcome achievement and verifiable evidence	Equivalent outcome achievement and verifiable evidence

Legal Reference: Chapter 21 of the Iowa Administrative Code ("One credit hour equals 50 minutes") and Federal Credit Hour Definition ("A credit hour is the amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than: (1) one hour of classroom work and a minimum of two hours of out-of-class student work each week for approximately 15 weeks for one semester.")

Curricular Graduation Requirements

Students are required to complete the curricular requirements in place during the academic year in which they were accepted into the program of study as long as there were no breaks in enrollment equal in length or longer than concurrent fall/spring semesters or concurrent spring/fall semesters.

If a student is pursuing a program of study that becomes closed to admissions, the academic department responsible for the program will determine a future date by which current students must either finish or change to an open program. Students in this situation should work closely with their advisors.

Students with a break in enrollment equal in length or longer than concurrent fall/spring semesters or concurrent spring/fall semesters will be allowed to finish their program of study as long as it is still open to admissions, but under the curricular requirements in place during the academic year in which they re-enroll.

Students who apply for certificates, diplomas or degrees that are not their program of study are required to complete the curricular requirements in place when the application is submitted.

Earning Multiple Awards

Kirkwood confers certificates, diplomas and degrees. These awards are earned in progression based on the number of credit hours needed to complete the required program of study. A student may earn, and the college will confer, multiple awards per term, as long as the student is enrolled in the term.

Fees

Fees represent the college's core charges for instructional offerings. Course related fees are based on a formula applied to the consumable costs associated with a course that are not part of tuition. Others may be a fixed rate and tied to professional organizations or testing.

Lab Fees: These fees recover some or all of the costs for supplies normally used in an individual course to support student learning and development. Depending on the average costs, lab fees are derived through a formula that considers the actual cost per student, on average, with a defined fee maximum ceiling which considers both course and total program cost. Fees are reviewed regularly to insure that the fee range is accurate and consistent with course instructional requirements.

Technology Fees: This is a per student fee intended to provide support for technology infrastructure costs. This fee is applied to all students attending Kirkwood Community College.

Incidental Fees: Some courses or programs of study may impose fees for a variety of purposes. Some programs/courses, for example, may require testing fees or professional credentialing or contributions to support events relevant to the organization or course program of study. Courses or programs may require students to purchase individual supplies or materials necessary for projects, learning activities, or external assessments.

Non-Credit Fees: Fees are established for various non-credit courses and programs based on the delivery cost of the course or program. These fees may be separate or included as the cost for enrolling in the course or program of study.

Refunds: Some fees are not refundable but most are refundable before the course starts and through the end of its 100% tuition refund period.

Fraudulent Academic Credentials

Anyone seeking to become a student at Kirkwood Community College who submits fraudulent or altered academic credentials to the college, or who is found to have fraudulently altered Kirkwood academic credentials or records, may be subject to sanctions, in accordance with the procedures established in the Student Conduct Code. Sanctions may include suspension, expulsion, revocation of admission to the college and/or program of study, or other discretionary sanctions.

Independent Study

Students requesting independent study must have previous coursework in the discipline and a positive performance record. Independent study should not be used to meet college requirements that can be satisfied through regular course offerings.

Students need to discuss the independent study course contract with the discipline faculty member and have the appropriate approvals before registering.

Military Tuition Assistance Withdrawal

Military tuition assistance (TA) is awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws (officially or unofficially) on or before 60% of the course(s) meeting period has been completed, Kirkwood Community College will comply with the Department of Defense policy to return unearned TA funds on a proportional basis through the 60% portion of the period for which the TA funds were provided. After a student completes 60% of the term, all TA funds are considered fully earned.

Student Financial Services will notify affected students within 30 days of the determination of withdrawal as to the portion of funds being returned and if the return of unearned funds will result in a balance on the student's financial account. If a service member stops attending due to a military service obligation (deployed or temporary duty), Kirkwood will work with the affected service member to identify solutions that will avoid student debt for the returned portion of TA funds.

The return of unearned military TA funds will follow the same guidelines as the Department of Education Title IV funding, outlined in Kirkwood's Withdrawal Policy for Return of Title IV Funds policy. The calculation is completed for each course individually. Once the completion (earned) percentage is calculated, Kirkwood will multiply the percentage by the amount of TA funds awarded to determine the amount of TA funds earned. The unearned TA funds will be returned to the military service, not to the service member, within 45 days of the determination of withdrawal.

National Guard or Reserve Forces of the United States Duty Policy

This procedure offers the following options to a student who is a member, or the spouse of a member, if the member has a dependent child, of the National Guard or reserve forces of the United States and who is ordered to start National Guard, military service or federal service or duty:

- Withdraw from the student's entire registration and receive a full refund of tuition and mandatory fees.
- Make arrangements with the student's instructors for course grades, or for incompletes that shall be completed by the student at a later date. If such arrangements are made, the student's registration shall remain intact and tuition and mandatory fees shall be assessed for the courses in full.
- Make arrangements with only some of the student's instructors for course grades, or for incompletes that shall be completed by the student at a later date. If such arrangements are made, the registration for those courses shall remain intact and tuition and mandatory fees shall be assessed for those courses. Any course for which arrangements cannot be made for grades or incompletes shall be considered dropped and the tuition and mandatory fees for the course refunded.

Online Registration Restriction

Students with a grade point average of less than 1.8 for all online classes within the previous three years will have a registration restriction placed on their record. The restriction prevents registration in online classes until the average for online courses reaches 1.8 or better, or a three year period has passed. The average for online courses can be improved by retaking failed or low-scored courses in another format (face-to-face, WebLive or hybrid). Students will receive a warning when their online GPA is lower than 2.0. In cases where extenuating circumstances can be documented, a petition for policy waiver may be submitted to www.kirkwood.edu/lowgpa (https://www.kirkwood.edu/lowgpa/) for review.

Note: This registration restriction does not prevent students from enrolling in face-to face, WebLive or hybrid format classes, only online classes.

Program/Area of Study Changes

A student who changes their program/area of study is accountable in terms of graduation only for requirements of the new program/area of study. The course work and grade point average earned in earlier programs/areas of study continue to affect cumulative GPA and appear on the student's transcript. A student contemplating a change of program/area of study is encouraged to discuss their plans with their academic advisor.

Readmission

Students who have withdrawn from the college in good standing and who desire to be readmitted should submit their request at www.kirkwood.edu/majorchange (http://www.kirkwood.edu/majorchange/). Students who are readmitted after absence from the college and who desire a degree, diploma or certificate will be required to fulfill current graduation requirements.

Refund of Tuition

Tuition refunds are computed as of the date the class is dropped via MyHub or is withdrawn at the Student Services office or at a Kirkwood center.

- For a class that is one to eight days long, a student receives no refund beginning the first day of class.
- For a class that is nine to 33 days long, a student may drop up to the end of the first day of the class and receive a full refund.

- For a class that is 34 to 81 days long, a student may drop up to the end of the fourth calendar day and receive a full refund.
- For classes that are 82 days or longer, a student may drop up to the end of the second week and receive a full refund.
- For a study abroad course, a student may only drop by submitting a formal withdraw request to the Global Learning office. Refunds for tuition and program fees are determined by the payment terms and vary by program.

According to the Higher Education Act (HEA) of 1965 as amended, schools are required to follow the Return of Title IV procedure. Students earn their Title IV federal financial aid by attending class. If they withdraw from all classes and therefore are not enrolled long enough to earn all of their aid, the 'unearned' portion must be returned to the appropriate Title IV program. The Title IV programs include Pell Grant, Supplemental Educational Opportunity Grant (SEOG) and Stafford Loans. Federal Work-Study earnings are not affected by Title IV regulations concerning the return of unearned federal financial aid. The Financial Aid office will make this calculation and this may result in a balance due for the student. Any student who is considering dropping all classes should speak with a financial aid representative to determine how this will affect the financial aid award.

Regular and Substantive Interaction

The U.S. Department of Education regulations for distance education (https://www.govinfo.gov/content/pkg/FR-2020-09-02/pdf/2020-18636.pdf) require regular and substantive interaction (RSI) between instructors and their students. The Department of Education defines substantive interaction (https://www.ecfr.gov/current/title-34/subtitle-B/chapter-VI/part-600/subpart-A/section-600.2/) as engaging students in teaching, learning, and assessment, consistent with the content under discussion, and also includes at least two of the following:

1. Providing direct instruction;
2. Assessing or providing feedback on a student's coursework;
3. Providing information or responding to questions about the content of a course or competency;
4. Facilitating a group discussion regarding the content of a course or competency; or
5. Other instructional activities approved by HLC or the program's accrediting agency.

An institution ensures regular interaction (https://www.ecfr.gov/current/title-34/subtitle-B/chapter-VI/part-600/subpart-A/section-600.2/) between a student and an instructor or instructors by, prior to the student's completion of a course or competency:

1. Providing the opportunity for substantive interactions with the student on a predictable and scheduled basis commensurate with the length of time and the amount of content in the course or competency; and
2. Monitoring the student's academic engagement and success and ensuring that an instructor is responsible for promptly and proactively engaging in substantive interaction with the student when needed on the basis of such monitoring, or upon request by the student.

What is Kirkwood Community College Doing to Ensure RSI?

Kirkwood Community College recognizes regular and substantive interaction is more than a compliance requirement, it is essential to effective teaching and learning. At Kirkwood all instructors will regularly assess or provide feedback on a student's coursework and provide information or respond to questions about course content or course competency. Additionally, faculty may facilitate group discussions regarding content of a course or competency.

RSI principles are embedded in the learning management system Instructor Training module and in training materials for new instructors teaching online, Web-live, FlexForward, and hybrid modalities. Instructional designers support faculty integration of RSI principles as they develop online courses. Kirkwood includes a RSI statement in all course syllabi. Additionally syllabus training encourages faculty to provide clear expectations for student-faculty interaction, publish weekly student help hours, and communicate their plan to respond to questions and provide feedback on submitted work.

Resident Credit Requirement

Students completing associate of arts and associate of science degrees must earn a minimum of 16 credit hours from Kirkwood.

Students completing associate of applied science and associate of applied arts degrees must earn a minimum of 16 credit hours from Kirkwood in their program of study.

Students completing diplomas must earn a minimum of 8 credit hours from Kirkwood in their program of study.

Students completing certificates must earn a minimum of 6 credit hours from Kirkwood in their program of study.

Exceptions approved by the Vice President of Academic Affairs.

Student Testing and Course Placement

All degree-seeking students in programs with coursework that requires placement in math and/or writing must complete the necessary steps to place the students in appropriate courses to address their learning needs. In addition, non-degree seeking students wishing to register for coursework that requires placement in math and/or writing must also complete the necessary placement steps. Appropriate placement in math and writing courses is determined by a variety of measures, including placement tests, previous academic experience, and advising. Information about placement is offered to prospective students prior to registration and can be provided by an academic advisor.

Financial Aid Eligibility for Remedial Courses

A course will be deemed remedial for Title IV award purposes if it meets any of the following criteria.

- Any classes designated remedial by Kirkwood's authorizing authority. These classes will be identified by the zero prefix in the course number.
- All English Language Acquisition (ELA) classes.
- Certain classes that are considered remedial for a specific student because it is determined the student needs a course in order to succeed in the entry-level course required for their program.

The following criteria is used to determine whether a course is 'remedial for the student'.

1. Placement test scores recognized by the appropriate academic department that demonstrate a student is not proficient enough to start in the entry-level course within their designated program.
2. Academic Advisor determines that a student is not proficient enough to start in the entry-level course within their designated program based on one of the following criteria.
   a. A two-year time lapse since the subject matter was last studied by the student as documented by a high school or college transcript or a signed statement by the student.
   b. Lack of proficiency in the subject matter as demonstrated by a high school or college transcript.
   c. No proficiency in the subject matter as indicated in a signed statement by the student.

CAREER PROGRAMS

Get a great start here with certificate, diploma or degree programs designed to provide the training and expertise you need to begin your new career in as little as one year.

Advanced Welding Technologies

Department website. (http://www.kirkwood.edu/industrialtech/)

Advanced Welding Technologies, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

The Advanced Welding Technologies Associate degree program includes Shielded Metal Arc Welding, Gas Metal Arc Welding and Gas Tungsten Arc Welding. Prepares students for a SENSE 1 and SENSE 2 level credential from the American Welding Society. Graduates of this program can transfer to the University of Northern Iowa to pursue a Technology Management Bachelor of Arts degree and the University of Iowa to pursue an Applied Studies Bachelor of Arts degree.

Welder certifications to American Welding Society codes is available in several welding processes.

This program requires completion of 6G pipe carbon steel certifications and 3G vertical up with backing and open-root certifications.

Career Opportunities

Trade unions such as:

- ironworkers, plumbers and pipefitters, and boilermakers
- production welder
- welding fabrication
- weld shop owner
- maintenance welder
- welding inspection
- welding instructor
- welding equipment sales

Degree Requirements

Term 1		
Fall		**Credit Hours**
MAT-765	Welding Mathematics	3
WEL-228	Welding Safety/Health: SENSE1	1
WEL-244	GMAW Sh Cir Transfer: SENSE1	2
WEL-245	GMAW Spray Transfer: SENSE1	2
WEL-251	Gas Tungsten Arc Welding for Carbon Steel: SENSE1	2
WEL-269	Thermal Cutting Processes	3
WEL-274	SMAW I: SENSE1	3
Communications Elective		3
	Term Totals:	**19**
Term 2		
Spring		
IND-156	Micros for the Trades	2
WEL-233	Print Reading and Welding Symbol Interpretation: SENSE1	3
WEL-254	Inspection/Test Princ: SENSE1	1
WEL-268	FCAW	3
WEL-273	GTAW Stainless and Aluminum	3
WEL-275	Shielded Metal Arc Welding II: SENSE1	3
	Term Totals:	**15**
Term 3		
Summer		
WEL-271	Welding Docs and Inspection	3
Communications Elective		3
	Term Totals:	**6**
Term 4		
Fall		
MFG-103	Applied Metallurgy	3
WEL-272	Advanced GTAW Pipe	6
WEL-287	Layout and Fitup	3
WEL-291	Advanced Gas Metal Arc Welding Pipe Principles and Practices	3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
	Term Totals:	**18**
Term 5		
Spring		
ATR-105	Industrial Robotics	3
WEL-286	Advanced Shielded Metal Arc Welding Principles and Practices	6
WEL-290	Advanced Flux Cored Arc Welding Principles and Practices	3
WEL-932 or WEL-800	Internship or Welding Capstone	3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	**18**
	Program Totals:	**76**

Optional Courses

Code	Title	Credit Hours
WEL-924	Honors Project	1
WEL-928	Independent Study	1-3

WEL-268	FCAW	3
WEL-233	Print Reading and Welding Symbol Interpretation: SENSE1	3
	Term Totals:	**15**
	Program Totals:	**34**

Advanced Welding Technologies Tool Requirements

Students in the Advanced Welding Technologies program are required to have a tool set for lab activities in the first semester of the program. Instructors will provide students with a list of minimum requirements. Students can purchase tool set through the Industrial Technologies Department or on their own. Payment plans can be arranged with the financial aid office.

Entry-Level Welder Diploma

Entry Time

Fall

Award

Diploma
2 terms

The Entry-Level Welder diploma program includes Shielded Metal Arc Welding, Gas Metal Arc Welding and Gas Tungsten Arc Welding. Prepares students for a SENSE 1 level credential from the American Welding Society.

Welder certifications to American Welding Society codes are available in several welding processes.

This program requires completion of 3G vertical up with backing and open-root certifications.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		Credit Hours
WEL-228	Welding Safety/Health: SENSE1	1
WEL-244	GMAW Sh Cir Transfer: SENSE1	2
WEL-274	SMAW I: SENSE1	3
MAT-765	Welding Mathematics	3
WEL-269	Thermal Cutting Processes	3
WEL-251	Gas Tungsten Arc Welding for Carbon Steel: SENSE1	2
WEL-245	GMAW Spray Transfer: SENSE1	2
Communications Course		3
	Term Totals:	**19**
Term 2		
WEL-275	Shielded Metal Arc Welding II: SENSE1	3
WEL-254	Inspection/Test Princ: SENSE1	1
IND-156	Micros for the Trades	2
WEL-273	GTAW Stainless and Aluminum	3

Agricultural Business

Department website. (http://www.kirkwood.edu/agrisciences/)

- Agricultural Business, A.A.S. (p. 70)
- Agricultural Business Diploma (p. 71)
- Agribusiness Entrepreneurship Certificate (p. 71)
- Agribusiness Farm Management Certificate (p. 71)
- Agribusiness Industry Management Certificate (p. 72)

Agricultural Business, A.A.S.

Entry Time

Fall or Spring

Award

Associate of Applied Science degree
2 years (4 terms)

Agricultural Business students study sales, finance, safety, commodity markets, economics, entrepreneurship, farm and industry management, agronomy, animal science and precision farming to prepare for careers in the agricultural industry.

Career Opportunities

- ag banks and credit unions
- crop scouting
- cooperatives
- fertilizer applications
- data collection from research/analysis

Degree Requirements

Term 1		Credit Hours
AGC-116	Professionalism in Ag	1
COM-723 or ENG-105	Workplace Communications or Composition I	3
AGA-114	Principles of Agronomy	3
AGS-113	Survey of the Animal Industry	3
AGB-133	Introduction to Ag Business	3
AGC-103 or CSC-116	Ag Computers or Information Computing	3
AGC-123	Applied Ag Concepts	1
	Term Totals:	17
Term 2		
Select one of the following:		3
AGC-130	Mathematics I - Agriculture	
MAT-156	Statistics	
MAT-707	Algebra Mastery 1	
AGB-470 or ACC-152	Farm Records, Accounts, Analys or Financial Accounting	3

AGC-210	Employment Seminar	1
Approved industry internship required for graduation as outlined by internship supervisor		
AGB-323	Ag Procedures and Safety	1
AGB-336	Agricultural Selling	3
MGT-145	Human Relations in Management	3
	Term Totals:	14
Term 3		
Humanities or History/Culture Course (p. 206)		3
AGB-330	Farm Business Management	3
AGB-466	Agricultural Finance	3
AGC-420	Issues in Agriculture	3
BIO-208	Ag Bio and Chem	3
SPC-101 or ENG-106	Fundamentals of Oral Comm or Composition II	3
	Term Totals:	18
Term 4		
AGB-235	Intro to Agriculture Markets	3
AGP-333	Precision Farming Systems	3
AGB-331	Entrepreneurship in Agriculture	3
AGB-101 or ECN-130	Agricultural Economics or Principles of Microeconomics	3
AGB-252	Ag Industry Business Mgmt	3
Approved Agriculture Elective		1
	Term Totals:	16
	Program Totals:	65

Agriculture Electives

Code	Title	Credit Hours
AGS-350	Artificial Insemination of Cattle	1
AGA-154	Fundamentals of Soil Science	3
AGA-170	Fertilizer Management	3
AGA-216	Row Crop and Forage Production	4
AGA-221	Field Crop Harvesting/Drying	4
AGA-376	Integrated Pest Management	3
AGS-214	Domestic Animal Physiology	3
AGS-319	Animal Nutrition	3
AGS-356	Livestock Behavior and Welfare	3
AGS-425	Swine Systems Management	3
AGS-441	Livestock Housing & Equipment	3
AGS-531	Swine Reproduction and Management	3
AGS-512	Beef Breeding/Nutrition	3
AGS-516	Beef Science Management	2
AGS-502	Cow Calf Production	2
AGS-500	Beef Industry Management	3
AGA-283	Pesticide Appl Certification	2

AGP-435	Advanced Precision Farming: Software Software	3
AGP-439	Ag Hardware, Maint and Tech	3

Agricultural Business Diploma

Entry Time

Fall

Award

Diploma
1 year (3 terms)

The Agricultural Business diploma is designed to provide Agribusiness fundamental skills and knowledge for individuals who already have another degree or who have been working in an Agribusiness and desire to develop a more thorough understanding of the industry to help them succeed in their career path. Students in the Agricultural Business program may also elect to receive a Diploma after completing the courses listed under the Diploma option.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		Credit Hours
AGC-130	Mathematics I - Agriculture	3
AGC-103	Ag Computers	3
AGB-133	Introduction to Ag Business	3
AGB-470 or ACC-152	Farm Records, Accounts, Analys or Financial Accounting	3
AGB-466	Agricultural Finance	3
AGC-116	Professionalism in Ag	1
AGC-123	Applied Ag Concepts	1
	Term Totals:	17
Term 2		
AGB-323	Ag Procedures and Safety	1
AGC-210	Employment Seminar	1
AGB-101 or ECN-130	Agricultural Economics or Principles of Microeconomics	3
AGB-330	Farm Business Management	3
AGB-235	Intro to Agriculture Markets	3
Select two of the following:		6
AGB-336	Agricultural Selling	
AGB-252	Ag Industry Business Mgmt	
AGB-331	Entrepreneurship in Agriculture	
	Term Totals:	17

Term 3	
Approved industry internship required for graduation as outlined by internship supervisor	
Term Totals:	0
Program Totals:	34

Agribusiness Entrepreneurship Certificate

Entry Time

Fall or Spring

Award

Certificate
1 term

The Agribusiness Entrepreneurship Certificate is designed to develop skills to recognize business opportunities, make financial considerations, and pursue the marketing of value added agricultural products.

Certificate Requirements

Term 1		Credit Hours
AGB-470 or ACC-152	Farm Records, Accounts, Analys or Financial Accounting	3
AGB-466	Agricultural Finance	3
AGB-336	Agricultural Selling	3
AGB-331	Entrepreneurship in Agriculture	3
AGC-420	Issues in Agriculture	3
	Term Totals:	15
	Program Totals:	15

Agribusiness Farm Management Certificate

Entry Time

Fall or Spring

Award

Certificate
1 term

The Agribusiness Farm Management Certificate is designed to prepare individuals interested in managing or operating a farm production business, by developing the skills and understanding of modern farm management techniques and strategies needed to succeed in today's agricultural environment.

Certificate Requirements

Term 1		Credit Hours

AGB-470
    or ACC-152
	Farm Records, Accounts, Analys
	    or Financial Accounting
		3

AGB-466	Agricultural Finance	3
AGB-235	Intro to Agriculture Markets	3
AGB-330	Farm Business Management	3
Select one of the following:		3
AGB-331	Entrepreneurship in Agriculture	
AGB-336	Agricultural Selling	

AGB-101
    or ECN-130
	Agricultural Economics
	    or Principles of Microeconomics	

	Term Totals:	15
	Program Totals:	15

Agribusiness Industry Management Certificate

Entry Time

Fall

Award

Certificate
2 terms

The Agribusiness Industry Management Certificate is designed to teach basic skills and understanding of management for those interested in moving into a management position or being more successful as a manager in the Agribusiness Industry.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
AGC-420	Issues in Agriculture	3

AGB-470
    or ACC-152
	Farm Records, Accounts, Analys
	    or Financial Accounting
		3

AGB-466	Agricultural Finance	3
	Term Totals:	9
Term 2		
AGB-252	Ag Industry Business Mgmt	3
AGB-336	Agricultural Selling	3

AGB-101
    or ECN-130
	Agricultural Economics
	    or Principles of Microeconomics
		3

	Term Totals:	9
	Program Totals:	18

Agricultural Science

Department website. (http://www.kirkwood.edu/agrisciences/)

- Agricultural Science, A.A.S. (p. 73)
- Agricultural Science Diploma (p. 74)
- Crop Production Certificate (p. 75)
- Beef Science Certificate (p. 75)
- Swine Science Certificate (p. 75)
- Precision Agriculture Certificate (p. 76)
- Custom Applicator Certificate (p. 76)

Agricultural Science, A.A.S.

Entry Time

Fall, Spring

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Agricultural Science AAS prepares students for employment in the food production chain. Students can pursue specialized studies (options) in general ag production, or beef, swine or crop production and precision agriculture. Students who want to take courses from more than one of these areas can customize their studies with the assistance of a faculty member. This program includes an internship. Specialization certificates can be earned as part of the AAS degree or earned separately.

Students in the Agricultural Science AAS program may elect to receive the diploma after completing the required courses. Please consult with the Agriculture Sciences Department for more information regarding this option.

Career Opportunities

- farm management
- swine production facilities
- feedlots
- cattle ranches
- herdsman positions
- crop production
- agronomy positions

Degree Requirements

Term 1		Credit Hours
AGC-116	Professionalism in Ag	1
AGC-103 or CSC-116	Ag Computers or Information Computing	3
ENG-105	Composition I	3
MAT-607 or MAT-102	Survey of Data or Intermediate Algebra	3
AGC-123	Applied Ag Concepts	1
AGS-113 or AGA-114	Survey of the Animal Industry or Principles of Agronomy	3
Agricultural Technical Courses		5
	Term Totals:	19
Term 2		
AGS-319 or AGA-154	Animal Nutrition or Fundamentals of Soil Science	3
Humanities or History/Culture Course (p. 206)		3
AGC-210	Employment Seminar	1
Agricultural Technical Course		3
SPC-101 or SPC-112 or ENG-106	Fundamentals of Oral Comm or Public Speaking or Composition II	3
Select one of the following:		3
BIO-208	Ag Bio and Chem	
BIO-104	Introductory Biology w/Lab	
CHM-110	Introduction to Chemistry	
	Term Totals:	16
Term 3		
Summer		
Approved industry internship required for graduation as outlined by internship supervisor		
	Term Totals:	0
Term 4		
AGS-214 or AGP-333	Domestic Animal Physiology or Precision Farming Systems	3
Agricultural Technical Courses		10
Agricultural Business Courses		3
	Term Totals:	16
Term 5		
Agricultural Business Courses		6
Agricultural Technical Courses		9
Select one of the following:		3
ECN-130	Principles of Microeconomics	
MGT-145	Human Relations in Management	
PSY-111	Intro to Psychology	
SOC-115	Social Problems	
	Term Totals:	18
	Program Totals:	69

Agricultural Technical Courses

Code	Title	Credit Hours
AGA-114	Principles of Agronomy	3
AGA-154	Fundamentals of Soil Science	3
AGA-170	Fertilizer Management	3
AGA-216	Row Crop and Forage Production	4

AGA-221	Field Crop Harvesting/Drying	4
AGA-283	Pesticide Appl Certification	2
AGA-376	Integrated Pest Management	3
AGC-420	Issues in Agriculture	3
AGP-333	Precision Farming Systems	3
AGP-435	Advanced Precision Farming: Software Software	3
AGP-439	Ag Hardware, Maint and Tech	3
AGS-113	Survey of the Animal Industry	3
AGS-214	Domestic Animal Physiology	3
AGS-319	Animal Nutrition	3
AGS-350	Artificial Insemination of Cattle	1
AGS-356	Livestock Behavior and Welfare	3
AGS-425	Swine Systems Management	3
AGS-441	Livestock Housing & Equipment	3
AGS-500	Beef Industry Management	3
AGS-501	Cattle Processing Lab	2
AGS-357	Livestock Behavior and Welfare Lab	2
AGS-502	Cow Calf Production	2
AGS-503	Cow Calf Lab	1
AGS-512	Beef Breeding/Nutrition	3
AGS-513	Reproduction/Nutrition Lab	2
AGS-516	Beef Science Management	2
AGS-517	Livestock Merchandising Lab	1
AGS-531	Swine Reproduction and Management	3
AGS-532	Swine Reproduction and Management Lab	2
FLS-141	Elementary Spanish I	4

Agricultural Business Courses

Code	Title	Credit Hours
AGB-331	Entrepreneurship in Agriculture	3
AGB-336	Agricultural Selling	3
AGB-470	Farm Records, Accounts, Analys	3
AGB-330	Farm Business Management	3
AGB-466	Agricultural Finance	3
AGB-235	Intro to Agriculture Markets	3
AGB-101	Agricultural Economics	3
AGB-252	Ag Industry Business Mgmt	3
ACC-152	Financial Accounting	4

Agricultural Science Diploma
Entry Time
Fall

Award
Diploma
1 year (3 terms including summer)

Students in the Agricultural Science AAS program may elect to receive the diploma after completing the required courses. Please consult with

the Agriculture Sciences Department for more information regarding this option.

The Agricultural Science Diploma is designed to teach students the fundamental skills, knowledge and applied academic and technical experiences required for the person who wishes to enter the agriculture industry.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		Credit Hours
AGA-114 or AGS-113	Principles of Agronomy or Survey of the Animal Industry	3
Agricultural Technical Courses		9
AGC-116	Professionalism in Ag	1
AGC-123	Applied Ag Concepts	1
	Term Totals:	14
Term 2		
AGS-319 or AGA-154	Animal Nutrition or Fundamentals of Soil Science	3
AGS-214 or AGP-333	Domestic Animal Physiology or Precision Farming Systems	3
AGC-210	Employment Seminar	1
Agricultural Technical Courses		10
	Term Totals:	17
Term 3		
Approved industry internship required for graduation as outlined by internship supervisor		
Agricultural Technical Course		3
ENG-105	Composition I	3
MAT-607 or MAT-102	Survey of Data or Intermediate Algebra	3
	Term Totals:	9
	Program Totals:	40

Agricultural Technical Courses

Code	Title	Credit Hours
AGA-114	Principles of Agronomy	3
AGA-154	Fundamentals of Soil Science	3
AGA-170	Fertilizer Management	3
AGA-216	Row Crop and Forage Production	4
AGA-221	Field Crop Harvesting/Drying	4
AGA-283	Pesticide Appl Certification	2
AGA-376	Integrated Pest Management	3
AGC-420	Issues in Agriculture	3
AGP-333	Precision Farming Systems	3
AGP-435	Advanced Precision Farming: Software Software	3

AGP-439	Ag Hardware, Maint and Tech	3
AGS-113	Survey of the Animal Industry	3
AGS-214	Domestic Animal Physiology	3
AGS-319	Animal Nutrition	3
AGS-350	Artificial Insemination of Cattle	1
AGS-356	Livestock Behavior and Welfare	3
AGS-357	Livestock Behavior and Welfare Lab	2
AGS-425	Swine Systems Management	3
AGS-441	Livestock Housing & Equipment	3
AGS-500	Beef Industry Management	3
AGS-501	Cattle Processing Lab	2
AGS-502	Cow Calf Production	2
AGS-503	Cow Calf Lab	1
AGS-512	Beef Breeding/Nutrition	3
AGS-513	Reproduction/Nutrition Lab	2
AGS-516	Beef Science Management	2
AGS-517	Livestock Merchandising Lab	1
AGS-531	Swine Reproduction and Management	3
AGS-532	Swine Reproduction and Management Lab	2
FLS-141	Elementary Spanish I	4

Crop Production Certificate
Entry Time
Fall

Award
Certificate
1 year (2 terms)

The Crop Production Certificate introduces basic agronomy concepts to students. Topics include crop and soil science, crop production, fertilizer management and crop harvest and storage methods.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
AGA-114	Principles of Agronomy	3
AGA-221	Field Crop Harvesting/Drying	4
AGA-170	Fertilizer Management	3
	Term Totals:	10
Term 2		
AGA-216	Row Crop and Forage Production	4
AGA-154	Fundamentals of Soil Science	3
AGP-333	Precision Farming Systems	3
	Term Totals:	10
	Program Totals:	20

Beef Science Certificate
Entry Time
Fall

Award
Certificate
1 year (2 terms)

The Beef Science Certificate introduces students to livestock handling and husbandry. Topics include anatomy and physiology, reproduction, nutrition and feedlot management.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
AGS-500	Beef Industry Management	3
AGS-501	Cattle Processing Lab	2
AGS-319	Animal Nutrition	3
AGS-512	Beef Breeding/Nutrition	3
AGS-513	Reproduction/Nutrition Lab	2
	Term Totals:	13
Term 2		
AGS-502	Cow Calf Production	2
AGS-503	Cow Calf Lab	1
AGS-214	Domestic Animal Physiology	3
AGS-516	Beef Science Management	2
AGS-517	Livestock Merchandising Lab	1
AGS-350	Artificial Insemination of Cattle	1
	Term Totals:	10
	Program Totals:	23

Swine Science Certificate
Entry Time
Fall

Award
Certificate
1 year (2 terms)

The Swine Science Certificate introduces students to livestock handling and husbandry. Topics include animal behavior and well-being, swine reproduction, record keeping and swine unit management.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
AGS-531	Swine Reproduction and Management	3
AGS-532	Swine Reproduction and Management Lab	2
AGS-356	Livestock Behavior and Welfare	3
AGS-357	Livestock Behavior and Welfare Lab	2
AGS-319	Animal Nutrition	3
	Term Totals:	13
Term 2		
AGS-425	Swine Systems Management	3
AGS-441	Livestock Housing & Equipment	3
AGS-214	Domestic Animal Physiology	3
	Term Totals:	9
	Program Totals:	22

Precision Agriculture Certificate

Entry Time

Fall, Spring

Award

Certificate
1 year (2 terms)

The Precision Agriculture Certificate teaches students the tools and process of precision farming. This includes using Global Positioning Systems (GPS), Geographical Information Systems (GIS) and Intelligent Devices and Implements (IDIs). Students will collect information, analyze data and implement best management practices into farming practices.

Certificate Requirements

Term 1		Credit Hours
AGP-333	Precision Farming Systems	3
AGA-114	Principles of Agronomy	3
AGP-435	Advanced Precision Farming: Software Software	3
	Term Totals:	9
Term 2		
AGA-154	Fundamentals of Soil Science	3
AGP-439	Ag Hardware, Maint and Tech	3
Any course with the following subject codes: AGA-, AGB-, AGC-, or AGP-		3
	Term Totals:	9
	Program Totals:	18

Custom Applicator Certificate

Entry Time

Fall, Spring

Award

Certificate
1 year (2 terms)

The Custom Applicator Certificate prepares students to obtain their custom applicators licensure. The licensing is a state-administered process, but the curriculum exceeds the minimum state requirements, preparing students to be successful in either obtaining employment with a crop protection service or starting their own application business.

Certificate Requirements

Term 1		Credit Hours
AGA-114	Principles of Agronomy	3
AGP-333	Precision Farming Systems	3
	Term Totals:	6
Term 2		
AGA-376	Integrated Pest Management	3
AGB-470 or ACC-152	Farm Records, Accounts, Analys or Financial Accounting	3
AGA-283	Pesticide Appl Certification	2
	Term Totals:	8
	Program Totals:	14

Apparel Merchandising and Design

Department website. (https://www.kirkwood.edu/programs/degrees/arts-design/index/)

- Apparel Merchandising and Design, A.A.S. (p. 77)

Apparel Merchandising and Design, A.A.S.

Entry Time

Fall (recommended)

Award

Associate of Applied Science degree
2 years (4 terms)

The Apparel Merchandising and Design program is designed to provide students with knowledge and hands-on experiences in the apparel and textiles industry. Students will develop skills applicable for retail establishments, visual merchandising, and entrepreneurship. The coursework includes the organization and production of the annual fashion show. Additional learning opportunities outside the classroom environment consist of a supervised internship, fashion week, and digital magazine development. Credits earned for the Apparel Merchandising and Design program can transfer to four-year universities.

Career Opportunities

- fashion sales/buyer
- specialty and department store management
- visual merchandiser
- fashion stylist
- alterations specialist

Degree Requirements

Term 1		Credit Hours
APP-130	Principles of Fashion Merchandising	3
APP-140	Fashion History	3
APP-120	Apparel Visual Merchandising	3
ENG-105	Composition I	3
MAT-115	Mathematics and Society	3
or Approved Math Course		
	Term Totals:	15
Term 2		
APP-160	Sewn Product Analysis	3
APP-170	Fashion Trends and Consumer Analysis	3
APP-240	Fashion Design	3
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3

CSC-116	Information Computing	3
MKT-180	Customer Service Strategies	1
	Term Totals:	16
Term 3		
APP-210	Apparel Textiles	3
PSY-111	Intro to Psychology	3
APP-270	Fashion Buying	3
APP-275	Fashion Styling Process	3
Any course with subject code: ACC, BUS, FIN, MGT, MKT or an approved math/science course		3
	Term Totals:	15
Term 4		
APP-215	Sustainability in Apparel	3
APP-220	Fashion Show Procedures	3
MGT-300	Intro to Entrepreneurship	3
ECN-130	Principles of Microeconomics	3
Humanities or History/Culture Course (p. 206)		3
WBL-305	Intern: Bus/Finance/Mktg/Mgt	1
	Term Totals:	16
	Program Totals:	62

Optional Courses

Code	Title	Credit Hours
APP-924	Honors Project	1
APP-928	Independent Study	1-3

Architectural Technology

Department website. (http://www.kirkwood.edu/industrialtech/)

- Architectural Technology, A.A.S. (p. 78)
- Architectural Technology Certificate (p. 78)

Architectural Technology, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Architectural Technology prepares graduates to become architectural CAD technicians. The program includes manual drafting as well as in depth instruction in CAD, computer applications (word processing, desktop publishing, multimedia), essential group skills (teamwork, project development and problem solving) and liberal arts studies. Practical experience is enhanced through a paid architectural/construction related internship or an unpaid architectural mentoring program.

Career Opportunities

- CAD technicians for architectural, civil, mechanical, electrical and/or structural services; estimators; designers
- drafters for building material suppliers
- remodelers
- kitchen designers
- residential designers

Degree Requirements

Term 1		
Fall		**Credit Hours**
WBL-148	WBL Industrial Technology	2
WBL-110	Employability Skills	1
CON-101	Architectural Plans and Specs	3
CON-331	Construction Materials Science	3
CON-410	Architectural Modeling	3
Math Course [1]		3
	Term Totals:	15
Term 2		
Spring		
CON-313	Structures and Mechanical/Electrical/Plumbing Systems	3
CAD-201	Intro to BIM	3
CON-190	Construction Lab	3
CON-322	Estimating for Construction and Architecture	3
Communications Course [1]		3
	Term Totals:	15
Term 3		
Summer		
CON-932	Internship	2
Communications Course [1]		3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	8
Term 4		
Fall		
CON-328	Construction Documentation	3
CON-316	Sustainable Construct Science	3
ARC-205	Design Studio-Residential	6
Social Science Course		3
	Term Totals:	15
Term 5		
Spring		
CON-257	Pre-Construction Services	3
CON-400	Const Svcs, CloseOut, Comm	3
ARC-207	Design Studio-Commercial	6
	Term Totals:	12
	Program Totals:	65

[1] Students planning to transfer to a four-year college or university should consider substituting some or all of the following courses:
Advanced Math class **for** MAT-716 Industrial Math II
ENG-105 Composition I **and**
ENG-108 Composition II: Technical Writing **or**
ENG-106 Composition II **for**
Communications Electives

Optional Courses

Code	Title	Credit Hours
ARC-924	Honors Project	1
ARC-928	Independent Study	1-3

Architectural Technology Tool Requirements

Students in the Architectural Technology program are required to have safety equipment for lab activities. Instructors will provide students with a list of minimum requirements. Students must purchase the safety equipment on their own.

Architectural Technology Certificate

Entry Time

Spring

Award

Certificate
3 terms

Applies advanced techniques through a simulated architectural design office to develop everything from preliminary, schematic design concepts through full sets of construction documents. Design work includes hand sketches through state-of-the-art, 3D CAD and rendering software. Graduates of this certificate program will be well equipped for positions in various architectural and engineering firms.

Certificate Requirements

Term 1		Credit Hours
CAD-201	Intro to BIM	3
	Term Totals:	**3**
Term 2		
ARC-205	Design Studio-Residential	6
	Term Totals:	**6**
Term 3		
ARC-207	Design Studio-Commercial	6
	Term Totals:	**6**
	Program Totals:	**15**

Automotive Collision Repair & Restoration

Department website. (http://www.kirkwood.edu/industrialtech/)

Automotive Collision Repair & Restoration Diploma

Entry Time

Fall

Award

Diploma
1 year (3 terms including summer)

Automotive Collision Repair and Restoration teaches students the theory and practices of metal forming and shaping; body fillers, frame straightening and repair, uni-body straightening and repairs; refinishing procedures; paints and paint chemistry; glass installation; upholstery removal and replacement; and equipment use and care. Cost estimating and customer relations skills are also emphasized. A majority of class time is devoted to practical laboratory experience in the college's Auto Collision Repair Center. A tool set is required for this program.

This diploma is eligible for state and federal financial aid.

Career Opportunities

- body shop technician
- auto garage or repair service technician
- auto/truck dealership technician
- tool sales company representative
- equipment/material sales representative
- insurance claims adjuster

Diploma Requirements

Term 1		
Fall		**Credit Hours**
CRR-121	Introduction to Metalworking & Refinishing I	3
CRR-122	Introduction to Metalworking & Refinishing II	3
CRR-820	Metalworking and Refinishing Practices	3
CRR-830	Metalworking and Refinishing I	3
WEL-333	Auto Collision Welding	2
MAT-715	Industrial Math I	3
	Term Totals:	**17**
Term 2		
Spring		
CRR-342	Metalworking II	4
CRR-344	Metalworking III	4
CRR-833	Refinishing II	3
CRR-837	Refinishing III	3
AUT-603	Basic Automotive Electricity	3
	Term Totals:	**17**
Term 3		
Summer		
CRR-545	Body Straightening/Painting and Restoration	7
Communications Course		3
	Term Totals:	**10**
	Program Totals:	**44**

Automotive Collision Repair & Restoration Tool Requirements

Students in the Automotive Collision Repair & Restoration program are required to have a tool set for lab activities. Instructors will provide students with a list of minimum requirements. Students can purchase tool set through the Industrial Technologies Department or on their own. An additional equipment list will be provided for students to purchase on their own. Payment plans can be arranged with the financial aid office.

Automotive Technology

Department website. (http://www.kirkwood.edu/industrialtech/)

Automotive Technology, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including 1 summer)

The Automotive Technology program provides entry-level skills and knowledge for students who want to work in the automotive technology field. The curriculum emphasizes automotive electronics and features courses in body electrical, engine electrical and computerized fuel delivery systems. This program is MasterTM-certified by the National Automotive Technicians Education Foundation (NATEF), and the National Institute of Automotive Services Excellence certifies our instructors as Master Technicians. Kirkwood is an authorized SnapOn Certified Training Center.

After you complete the SnapOn Diagnostic products training and pass the rigorous test, you are considered a power user of SnapOn diagnostic tools, with an efficiency of 90-100 percent. Achieve master status (top 10 percent nationwide) and be one of the most sought after technicians in the field.

This program provides the opportunity to take eight ASE certification tests. Graduation from this program requires Automotive Arc Flash and 300 hours of faculty-approved industry work.

A tool set is required for this program.

Career Opportunities

- auto dealerships
- franchised auto centers
- independent repair facilities
- specialty service shops
- auto sales and support
- fleet maintenance

Degree Requirements

Term 1		
Fall		**Credit Hours**
AUT-502	Automotive Brake Systems	2
AUT-614	Automotive Electrical I	3

AUT-888
    or AUT-100
	Technical Lab I
	    or Maintenance & Light Repair
		4

MAT-715	Industrial Math I	3
Communications Elective [1]		3
Graduation from the AAS degree requires 300 hours of faculty approved industry work		
	Term Totals:	**15**
Term 2		
Spring		
AUT-308	Manual Drive Train & Axles I	2
AUT-310	Computer Engine Controls I	2
AUT-402	Auto Suspension and Steering	2
AUT-658	Automotive Electrical II	3
AUT-702	Auto Heat & Air Conditioning	2
AUT-889	Technical Lab II	4
	Term Totals:	**15**
Term 3		
Summer		
AUT-309	Manual Drive Train & Axles II	2
AUT-708	Adv Auto Heat & Air Condition	2
Social Science Elective		3
Communications Elective [1]		3
	Term Totals:	**10**
Term 4		
Fall		
AUT-164	Automotive Engine Repair	4
AUT-311	Computer Engine Controls II	3
AUT-406	Adv Auto Suspension & Steering	2
AUT-536	Advanced Auto Brake Systems	2
AUT-680	Automotive Electrical III	3
	Term Totals:	**14**
Term 5		
Spring		
AUT-204	Automatic Transmissions/Axles	4
AUT-221	Hybrid Electric Vehicle Fund	4
AUT-312	Computerized Engine Controls III	4
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	**15**
	Program Totals:	**69**

[1] Students planning to transfer to a four-year college or university should consider substituting some or all of the following courses into the curriculum:

ENG-105 Composition I **and**
ENG-108 Comp II: Technical Writing **or**
ENG-106 Composition II
for Communications Electives

Optional Courses

Code	Title	Credit Hours
AUT-924	Honors Project	1
AUT-928	Independent Study	1-3

Automotive Technology Tool Requirements

Students in the Automotive Technology program are required to have a tool set for lab activities after the first year. Instructors will provide students with a list of minimum requirements. Students can purchase tool set through the Industrial Technologies Department or on their own. Payment plans can be arranged with the financial aid office.

Entry Level Automotive Technology Diploma

Entry Time

Fall

Award

Diploma
1 year (2 terms)

The Entry Level Automotive Technology diploma provides fundamental level skills and knowledge for students who want to work in introductory level positions in the automotive technology field. Students complete the first courses in two-course sequences covering the major areas of automotive service technology, and can opt to complete the second courses in these sequences by moving on to the degree. The curriculum emphasizes automotive electronics and features courses in body electrical, engine electrical and computerized fuel delivery systems. This program is overall Master-certified by the National Automotive Technicians Education Foundation (NATEF) and the National Institute of Automotive Services Excellence certifies our instructors as Master Technicians.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		
Fall		**Credit Hours**
AUT-502	Automotive Brake Systems	2
AUT-614	Automotive Electrical I	3

AUT-888
    or AUT-100
	Technical Lab I
	    or Maintenance & Light Repair
		4

MAT-715	Industrial Math I	3
Communications Elective [1]		3
	Term Totals:	**15**

Term 2		
Spring		
AUT-308	Manual Drive Train & Axles I	2
AUT-310	Computer Engine Controls I	2
AUT-402	Auto Suspension and Steering	2
AUT-658	Automotive Electrical II	3
AUT-702	Auto Heat & Air Conditioning	2
AUT-889	Technical Lab II	4
	Term Totals:	**15**
	Program Totals:	**30**

[1] Students planning to transfer to a four-year college or university should consider substituting some or all of the following courses into the curriculum:
ENG-105 Composition I **and**
ENG-108 Comp II: Technical Writing **or**
ENG-106 Composition II
for Communications Electives

Fundamentals of Automotive Technology Certificate

Entry Time

Fall

Award

Certificate
1 term

The Fundamentals of Automotive Technology certificate provides basic level skills and knowledge for students who want to work in positions such as tire technician or lube technician in the automotive technology field. This program is overall Master-certified by the National Automotive Technicians Education Foundation (NATEF) and the National Institute of Automotive Services Excellence certifies our instructors as Master Technicians.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
AUT-614	Automotive Electrical I	3

AUT-888
    or AUT-100
	Technical Lab I
	    or Maintenance & Light Repair
		4

MAT-715	Industrial Math I	3
	Term Totals:	**10**
	Program Totals:	**10**

Advanced Chassis Certificate

Entry Time

Fall

Award

Certificate
4 terms

The Advanced Chassis certificate provides beginning through advanced level skills and knowledge in the areas of suspension, steering, heating, air conditioning, and brakes. Students can use this certificate to help obtain a position as an automotive technician specializing in these areas. This program is overall Master-certified by the National Automotive Technicians Education Foundation (NATEF) and the National Institute of Automotive Services Excellence certifies our instructors as Master Technicians.

A tool set is required for this program.

Certificate Requirements

Term 1		Credit Hours
AUT-502	Automotive Brake Systems	2
	Term Totals:	2
Term 2		
AUT-402	Auto Suspension and Steering	2
AUT-702	Auto Heat & Air Conditioning	2
	Term Totals:	4
Term 3		
AUT-708	Adv Auto Heat & Air Condition	2
	Term Totals:	2
Term 4		
AUT-406	Advanced Automotive Suspension and Steering	2
AUT-536	Advanced Automotive Brake Systems	2
	Term Totals:	4
	Program Totals:	12

Advanced Drivetrain Certificate

Entry Time

Fall

Award

Certificate
4 terms

The Advanced Drivetrain certificate provides beginning through advanced level skills and knowledge in the areas of manual transmissions and transaxles and automatic transmissions and transaxles. Students can use this certificate to help obtain a position as an automotive technician specializing in these areas. This program is overall Master-certified by

the National Automotive Technicians Education Foundation (NATEF) and the National Institute of Automotive Services Excellence certifies our instructors as Master Technicians.

A tool set is required for this program.

Certificate Requirements

Term 1		Credit Hours
AUT-308	Manual Drive Train & Axles I	2
AUT-658	Automotive Electrical II	3
	Term Totals:	5
Term 2		
AUT-309	Manual Drive Train & Axles II	2
	Term Totals:	2
Term 3		
AUT-680	Automotive Electrical III	3
	Term Totals:	3
Term 4		
AUT-204	Automotive Automatic Transmissions and Transaxles	4
	Term Totals:	4
	Program Totals:	14

Advanced Powertrain Certificate

Entry Time

Fall

Award

Certificate
2 terms

The Advanced Powertrain certificate provides beginning through advanced level skills and knowledge in the areas of advanced computerized engine controls, engine repair, and hybrid vehicle maintenance and repair. Students can use this certificate to help obtain a position as an automotive technician specializing in these areas. This program is overall Master-certified by the National Automotive Technicians Education Foundation (NATEF) and the National Institute of Automotive Services Excellence certifies our instructors as Master Technicians.

A tool set is required for this program.

Certificate Requirements

Term 1		Credit Hours
AUT-164	Automotive Engine Repair	4
	Term Totals:	4
Term 2		
AUT-312	Computerized Engine Controls III	4

AUT-221	Hybrid Electric Vehicle Fund	4
	Term Totals:	**8**
	Program Totals:	**12**

Introduction to Automotive Technology Certificate

Entry Time

Fall

Award

Certificate
2 terms

The Introduction to Automotive Technology Certificate introduces students to the automotive service industry. Students learn a broad range of introductory service skills, with an emphasis on brakes, suspension and steering, and heating and air conditioning systems. This certificate is designed for students enrolled in the concurrent enrollment automotive technology academies. Our instructors are Master Certified by Automotive Service Excellence.

A tool set is required for this program.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
AUT-402	Auto Suspension and Steering	2
MAT-715	Industrial Math I	3
	Term Totals:	**5**
Term 2		
Spring		
AUT-502	Automotive Brake Systems	2
AUT-888 or AUT-100	Technical Lab I or Maintenance & Light Repair	4
AUT-702	Auto Heat & Air Conditioning	2
	Term Totals:	**8**
	Program Totals:	**13**

Aviation Maintenance Technology

Department website. (http://www.kirkwood.edu/industrialtech/)

- Aviation Maintenance Technology, A.A.S. (p. 85)
- Airframe Diploma (p. 85)
- Powerplant Certificate (p. 86)

Aviation Maintenance Technology, A.A.S.

Entry Time
Fall

Award
Associate of Applied Science degree
2 years (5 terms including 1 summer)

Kirkwood Community College's Aviation Maintenance Technology program prepares students for Airframe and Powerplant certifications required by the FAA.

Career Opportunities
- aviation maintenance technician
- aircraft structures technician
- helicopter technician
- sheet metal mechanic
- aircraft line assembler
- aircraft quality assurance inspector
- aircraft inspector

Degree Requirements

Term 1		
Fall		**Credit Hours**
AVM-102	Fund Electricity & Electronics	5
AVM-106	Materials and Processes	3.5
AVM-108	Physics for Aviation	1.5
AVM-116	Aircraft Drawings	1
AVM-118	Aircraft Handling	2.5
AVM-128	Federal Aviation Regulations	1.5
MAT-772	Applied Math	3
	Term Totals:	**18**
Term 2		
Spring		
AVM-114	Aircraft Electrical Systems	4
AVM-136	Metallic Structures	5
AVM-138	Non-Metallic Structures	4
AVM-146	Aircraft Instrument Systems	2
AVM-158	Aircraft Fire Protectn Systems	2
	Term Totals:	**17**
Term 3		
Summer		
AVM-144	Landing Gear and Systems	2.5
AVM-150	Aircraft Fuel Systems	2.5
AVM-152	Comm and Navigation Systems	1.5
AVM-156	Controls & Airframe Inspection	2.5
AVM-162	Environmental Systems	2.5
	Term Totals:	**11.5**
Term 4		
Fall		
AVM-163	Reciprocating Engines	5
AVM-164	Propellers	2
AVM-166	Ignition and Starting Systems	2
AVM-167	Turbine Engines	4
AVM-169	Air, Exhaust & Lubricating Sys	2.5
AVM-171	Engine Inspection	1.5
	Term Totals:	**17**
Term 5		
Spring		
COM-723	Workplace Communications	3
ENG-101	Elements of Writing	3
HIS-152	U.S. History Since 1877	3
SOC-115	Social Problems	3
	Term Totals:	**12**
	Program Totals:	**75.5**

Aviation Maintenance Technology Tool Requirements
Students in the Aviation Maintenance Technology program are required to have a tool set for lab activities. Instructors will provide students with a list of minimum requirements. Students can purchase tool set through the Industrial Technologies Department or on their own. An additional equipment list will be provided for students to purchase on their own. Payment plans can be arranged with the financial aid office.

Airframe Diploma

Entry Time
Fall

Award
Diploma
1 year (3 terms including summer)

Students enrolled in the Aviation Maintenance Technology AAS program will earn a diploma in Airframe maintenance as they complete their AAS degree.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		
Fall		**Credit Hours**
AVM-102	Fund Electricity & Electronics	5
AVM-106	Materials and Processes	3.5
AVM-108	Physics for Aviation	1.5
AVM-116	Aircraft Drawings	1
AVM-118	Aircraft Handling	2.5
AVM-128	Federal Aviation Regulations	1.5
MAT-772	Applied Math	3
	Term Totals:	**18**
Term 2		
Spring		
AVM-114	Aircraft Electrical Systems	4
AVM-136	Metallic Structures	5
AVM-138	Non-Metallic Structures	4
AVM-146	Aircraft Instrument Systems	2
AVM-158	Aircraft Fire Protectn Systems	2
	Term Totals:	**17**
Term 3		
Summer		
AVM-144	Landing Gear and Systems	2.5
AVM-150	Aircraft Fuel Systems	2.5
AVM-152	Comm and Navigation Systems	1.5
AVM-156	Controls & Airframe Inspection	2.5
AVM-162	Environmental Systems	2.5
	Term Totals:	**11.5**
	Program Totals:	**46.5**

Powerplant Certificate

Entry Time

Fall

Award

Certificate
1 term

Students enrolled in the Aviation Maintenance Technology AAS program will earn a certificate in Powerplant maintenance as they complete their AAS degree.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
AVM-163	Reciprocating Engines	5
AVM-164	Propellers	2
AVM-166	Ignition and Starting Systems	2
AVM-167	Turbine Engines	4
AVM-169	Air, Exhaust & Lubricating Sys	2.5
AVM-171	Engine Inspection	1.5
	Term Totals:	**17**
	Program Totals:	**17**

Business Administration

Department website. (http://www.kirkwood.edu/businessdept/)

- Business Administration, A.A.S. (p. 87)

Business Administration, A.A.S.

Transfer Track

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science degree
2 years (4 terms)

The Business Administration program prepares students for careers in diverse areas of business and is based on a strong foundation of business and general education courses. Upon completion of the program, students may choose to transfer to the Henry B. Tippie College of Business at the University of Iowa, the Mount Mercy University College of Business, the Stead Department of Business Administration and Economics at Coe College, or go directly into the workforce with a marketable credential.

Career Opportunities

- office manager
- front-line management
- advancement into supervisory capacity

Degree Requirements

Term 1		Credit Hours
BUS-101	Business Professionalism	1
BUS-102	Introduction to Business	3
CSC-116	Information Computing	3
ENG-105	Composition I	3
Approved Social Science Course [1]		3
MAT-165 or MAT-163	Business Calculus or Quant Reasoning for Business	3
	Term Totals:	16
Term 2		
MGT-101	Principles of Management	3
ENG-108 or ENG-106	Comp II: Technical Writing or Composition II	3
PHI-105 or PHI-135	Introduction to Ethics or Multicultural Ethics	3
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3
MAT-162	Business Statistics	4
	Term Totals:	16

Term 3		
ECN-130	Principles of Microeconomics	3
ACC-152	Financial Accounting	4
BUS-185	Business Law I	3
Approved Humanities Course [1]		3
Approved Science Course [1]		3
	Term Totals:	16
Term 4		
ACC-156	Managerial Accounting	4
ECN-120	Principles of Macroeconomics	3
Approved Literature Course [1]		3
Any Business Course with the following subject codes: ACC, BUS, FIN, MGT, MKT		3
POL-121 or CLS-151	International Relations or Understanding Cultures: Latin America	3
BUS-294	Business Admin Capstone [2]	1
	Term Totals:	17
	Program Totals:	65

[1] Select a course from the approved list for your transfer institution. See your advisor for additional guidance.

[2] Must be taken in final term-permission required

Business Administration: Accounting

Department website. (http://www.kirkwood.edu/businessdept/)

- Business Administration: Accounting, A.A.S. (p. 88)
- Tax Preparer Certificate (p. 88)
- Technical Accounting Certificate (p. 89)

Business Administration: Accounting, A.A.S.

Entry Time

Fall (recommended), Spring, Summer

Award

Associate of Applied Science degree
2 years (5 terms)

Kirkwood Community College offers several options for students interested in accounting careers. The Business Administration: Accounting AAS degree provides students with the background they need for entry-level positions in general accounting, cost accounting, tax accounting or other specialized areas of financial accounting and financial reporting.

Career Opportunities

- accounting clerk
- accounts receivable/payable manager
- bookkeeper
- payroll manager
- tax preparer

Degree Requirements

Term 1		Credit Hours
ACC-152	Financial Accounting [3]	4
BUS-101	Business Professionalism	1
BUS-102 or MGT-101	Introduction to Business or Principles of Management	3
ENG-105	Composition I	3
BCA-213 or CSC-116	Intermediate Computer Bus Apps or Information Computing	3
	Term Totals:	14
Term 2		
ACC-156	Managerial Accounting [3]	4
ACC-313	Accounting Applications [2,3]	4
ENG-108 or ENG-106	Comp II: Technical Writing or Composition II	3
ACC-161	Payroll Accounting [2,3]	3
	Term Totals:	14

Term 3		
ECN-130 or ECN-120	Principles of Microeconomics or Principles of Macroeconomics	3
MAT-156	Statistics	3
	Term Totals:	6
Term 4		
ACC-222	Cost Accounting [1,3]	4
ACC-231	Intermediate Accounting I [1,3]	4
ACC-265	Income Tax Accounting [1,3]	4
PHI-105	Introduction to Ethics	3
	Term Totals:	15
Term 5		
ACC-232	Intermediate Accounting II [2,3]	4
ACC-362	Accounting Spreadsheets [2,3]	4
ACC-491	Accounting Capstone [2,3]	3
Accounting Elective		3
	Term Totals:	14
	Program Totals:	63

[1] Courses are offered only in the fall semester.
[2] Courses are offered only in the spring semester.
[3] Minimum grade requirement of C- for graduation.

Accounting Electives

Code	Title	Credit Hours
BUS-185	Business Law I	3
ECN-120	Principles of Macroeconomics	3
ECN-130	Principles of Microeconomics	3
GLS-120	Education Experience Abroad	3
MGT-101	Principles of Management	3
MGT-130	Principles of Supervision	3
MGT-121	Project Management Basics	3
SPC-101	Fundamentals of Oral Comm	3
SPC-112	Public Speaking	3
PSY-111	Intro to Psychology	3
WBL-305	Intern: Bus/Finance/Mktg/Mgt	3

Tax Preparer Certificate

Entry Time

Fall

Award

Certificate
1 year (2 terms)

The Tax Preparer Certificate program is designed to enable the student to become a tax preparer. This certificate will provide the student with

the basic understanding of income tax law and income tax procedures. Students will use a computerized accounting system and will prepare payroll and income tax returns.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
Select one of the following:		3
ACC-111	Introduction to Accounting	
ACC-152	Financial Accounting [1]	
ACC-265	Income Tax Accounting [1]	4
PHI-105	Introduction to Ethics	3
	Term Totals:	**10**
Term 2		
Spring		
ACC-313	Accounting Applications [1]	4
ACC-161	Payroll Accounting [1]	3
	Term Totals:	**7**
	Program Totals:	**17**

[1] Minimum grade requirement of C- for graduation

Technical Accounting Certificate

Entry Time

Fall (recommended), Spring, Summer

Award

Certificate
1 year (2 terms)

The Technical Accounting certificate provides students with the skills needed for employment in entry-level accounting clerk positions. The certificate is a great way to get back into the workforce, change career direction or enhance existing skills.

This certificate is eligible for state and federal financial aid.

Career Opportunities

- accounts payable clerk
- accounts receivable clerk
- payroll clerk
- tax preparer

Certificate Requirements

Term 1		
		Credit Hours
CSC-116 or BCA-213	Information Computing or Intermediate Computer Bus Apps	3
Select one of the following:		3
ACC-111	Introduction to Accounting	
ACC-152	Financial Accounting [1]	
MAT-772	Applied Math (or higher)	3
	Term Totals:	**9**
Term 2		
ACC-313	Accounting Applications [1]	4
ACC-161	Payroll Accounting [1]	3
	Term Totals:	**7**
	Program Totals:	**16**

[1] Minimum grade requirement of C- for graduation

Business Administration: Administrative Management

Department website. (http://www.kirkwood.edu/businessdept/)

- Business Administration: Administrative Management, A.A.S. (p. 90)
- Project Management Certificate (p. 90)

Business Administration: Administrative Management, A.A.S.

Entry Time

Fall (recommended)

Award

Associate of Applied Science degree
2 years (5 terms)

This program prepares graduates to become members of an executive team in today's fast-paced business environment. It includes in-depth instruction in computer applications (word processing, desktop publishing, multimedia) and essential workplace "soft skills" (teamwork, project development, problem solving).

Career Opportunities

- executive assistant
- administrative assistant
- office manager
- office administrator
- administrative manager
- project coordinator
- associate project manager
- project manager
- project management specialist
- communications facilitator
- purchasing, supply, and logistics coordinator

Degree Requirements

Term 1		Credit Hours
BUS-101	Business Professionalism	1
BUS-102	Introduction to Business	3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
ENG-105	Composition I	3
MAT-772	Applied Math	3
	Term Totals:	**13**
Term 2		
ADM-163	Office Concepts & Procedures [1]	3
BCA-136	Advanced Word Processing	3
MGT-121 or WBL-145	Project Management Basics or Project: Bus, Fin, Mkt & Mgt	3
CSC-116	Information Computing	3
ACC-111 or ACC-152	Introduction to Accounting or Financial Accounting	3
	Term Totals:	**15**
Term 3		
Humanities or History/Culture Course (p. 206)		3
ENG-108	Comp II: Technical Writing	3
	Term Totals:	**6**
Term 4		
ADM-164	Administrative Office Apps	3
BCA-179	Emerging Technology Trends	3
BCA-213	Intermediate Computer Bus Apps	3
MGT-170	Human Resource Management	3
Select one of the following:		3
BUS-280	Fundamentals of Lean Process Improvement	
MGT-161	Agile Project Mgmt With Scrum	
WBL-146	Project: Info Solutions	
	Term Totals:	**15**
Term 5		
ADM-187	Admin Management Capstone	1
MGT-124	Project Management Tools	3
MGT-155	Integrated Project Management	3
MGT-130	Principles of Supervision	3
WBL-305	Intern: Bus/Finance/Mktg/Mgt	2
WBL-110	Employability Skills	1
	Term Totals:	**13**
	Program Totals:	**62**

[1] Requires typing speed of 30 wpm (words per minute) or concurrent enrollment in Advanced Word Processing.

Project Management Certificate

Entry Time

Fall

Award

Certificate
2 terms

Students in the Administrative Management and Management Associate of Applied Science degree may elect to receive a certificate in Project Management after completing the required courses. Please consult

with the Business and Information Technology Department for more information regarding this option.

Certificate Requirements

Term 1		Credit Hours

MGT-121
    or WBL-145
	Project Management Basics
	    or Project: Bus, Fin, Mkt & Mgt
		3

Select one of the following:		3
MGT-161	Agile Project Mgmt With Scrum	
BUS-280	Fundamentals of Lean Process Improvement	
WBL-146	Project: Info Solutions	
	Term Totals:	**6**
Term 2		
MGT-124	Project Management Tools	3
MGT-155	Integrated Project Management [1]	3
	Term Totals:	**6**
	Program Totals:	**12**

[1] Requires typing speed of 30 wpm (words per minute) or concurrent enrollment in Advanced Word Processing.

Business Administration: Financial Services

Department website. (http://www.kirkwood.edu/businessdept/)

- Business Administration: Financial Services, A.A.S. (p. 92)

Business Administration: Financial Services, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science degree
2 years (5 terms)

The Financial Services program is designed for students seeking careers with financial institutions and for those already at financial institutions wishing to attain advanced positions. This program provides an internship opportunity to give students real-world experience.

Career Opportunities

- personal banker
- financial advisor
- loan officer
- real estate agent
- credit analyst
- financial analyst
- management trainee
- insurance representative
- trust representative
- customer service representative

Degree Requirements

Term 1		Credit Hours
BUS-101	Business Professionalism	1
BUS-102	Introduction to Business	3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
ENG-105	Composition I	3
Approved Math Course		3
	Term Totals:	13
Term 2		
CSC-116	Information Computing	3
MKT-140	Principles of Selling	3
BUS-185	Business Law I	3
FIN-121	Personal Finance	3
	Term Totals:	12

Term 3		
ECN-120	Principles of Macroeconomics	3
Humanities or History/Culture Course (p. 206)		3
ENG-108 or ENG-106	Comp II: Technical Writing or Composition II	3
	Term Totals:	9
Term 4		
ACC-152	Financial Accounting	4
FIN-110	Money and Banking [1]	3
ECN-130	Principles of Microeconomics	3
MGT-101	Principles of Management	3
Program Electives		3
	Term Totals:	16
Term 5		
ACC-156	Managerial Accounting	4
FIN-130	Principles of Finance [2]	3
FIN-300	Topics in Financial Services [2]	3
MKT-180	Customer Service Strategies	1
WBL-305	Intern: Bus/Finance/Mktg/Mgt	3
	Term Totals:	14
	Program Totals:	64

[1] Courses are offered only in the fall semester.
[2] Courses are offered only in the spring semester.

Program Electives

Code	Title	Credit Hours
MGT-130	Principles of Supervision	3
MGT-112	Business Innovation	3
ACC-313	Accounting Applications	4
ACC-362	Accounting Spreadsheets	4
MGT-206	Global Business Skills	3
MGT-300	Intro to Entrepreneurship	3
MKT-110	Principles of Marketing	3
BCA-213	Intermediate Computer Bus Apps	3

Business Administration: Management

Department website. (http://www.kirkwood.edu/businessdept/)

- Business Administration: Management, A.A.S. (p. 93)
- Human Resources Certificate (p. 94)
- Entrepreneurship Certificate (p. 94)

Business Administration: Management, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science degree
2 years (5 terms)

The Management program provides an extensive selection of management courses. It is designed for someone who would like to develop management skills for career advancement.

This program offers many management and general electives from which to choose to provide students the opportunity to take courses that fit their specific needs. Certificate options are available for students who want to specialize in human resources, project management, and entrepreneurship.

Courses in the program are available face-to-face and online. Students should work with their advisor to develop a solid plan that best meets their education goals.

Career Opportunities

- assistant store manager
- human resources assistant
- project coordinator
- sales supervisor
- financial services assistant manager
- supply chain analyst
- customer service manager
- operations assistant manager
- training and development coordinator
- entrepreneur/startup founder

Degree Requirements

Term 1		Credit Hours
BUS-101	Business Professionalism	1
BUS-102	Introduction to Business	3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
ENG-105	Composition I	3

Approved Math Course		3
	Term Totals:	**13**
Term 2		
MGT-101	Principles of Management	3
CSC-116	Information Computing	3
Select one of the following:		3
SPC-101	Fundamentals of Oral Comm	
SPC-112	Public Speaking	
MKT-140	Principles of Selling	
MGT-170	Human Resource Management	3
BUS-192	Prof: Business Comp	1
	Term Totals:	**13**
Term 3		
Humanities or History/Culture Course (p. 206)		3
ECN-120 or ECN-130	Principles of Macroeconomics or Principles of Microeconomics	3
ENG-108 or ENG-106	Comp II: Technical Writing or Composition II	3
	Term Totals:	**9**
Term 4		
MGT-300	Intro to Entrepreneurship	3
MGT-121 or WBL-145	Project Management Basics or Project: Bus, Fin, Mkt & Mgt	3
MGT-130	Principles of Supervision	3
MKT-110	Principles of Marketing	3
Management Electives		3
	Term Totals:	**15**
Term 5		
ACC-111 or ACC-152	Introduction to Accounting or Financial Accounting	3
MGT-206	Global Business Skills	3
MGT-301	Management Capstone	3
Management Electives		3
	Term Totals:	**12**
	Program Totals:	**62**

Management Electives

Management elective credit may be used to earn a certificate. See your advisor for online availability.

Code	Title	Credit Hours
ACC-156	Managerial Accounting [1]	4
APP-120	Apparel Visual Merchandising [1]	3
BCA-213	Intermediate Computer Bus Apps [1]	3
BCA-290	Web Design Principles	3

BUS-185	Business Law I	3
BUS-280	Fundamentals of Lean Process Improvement	3
CIS-290	Web Content & E-Commerce Sys [1]	3
ECN-120	Principles of Macroeconomics	3
ECN-130	Principles of Microeconomics	3
FIN-121	Personal Finance	3
MGT-124	Project Management Tools [1]	3
MGT-137	Developing Leadership Skills	1
MGT-139	Effective Team Building for Managers	1
MGT-140	Time Management in the Workplace	1
MGT-155	Integrated Project Management [1]	3
MGT-161	Agile Project Mgmt With Scrum	3
MGT-171	HR Strat-Talent Mgt/Empl Rel [1]	3
MGT-179	HR Strat-Ttl Reward/Safe/Labr [1]	3
MGT-305	Business Plans for Entrepreneurs [1]	3
MKT-130	Social Media in Business [1]	3
MKT-135	Content Marketing [1]	3
MKT-140	Principles of Selling	3
MKT-150	Principles of Advertising	3
MKT-160	Principles of Retailing	3
MKT-180	Customer Service Strategies	1
WBL-200	Practicum/Field Experience	1-4
WBL-305	Intern: Bus/Finance/Mktg/Mgt	1-5

[1] Prerequisite required. See MyHub or your advisor.

Optional Courses

Code	Title	Credit Hours
BUS-928	Independent Study	1-3
BUS-924	Honors Project	1
MGT-924	Honors Project	1
MGT-928	Independent Study	1-4
MGT-112	Business Innovation	3

Human Resources Certificate

Entry Time

Fall, Spring, Summer

Award

Certificate
1 year (2 terms)

Students in the Management Associate of Applied Science degree may elect to receive a certificate in Human Resources after completing the required courses. Please consult with the Business and Information Technology Department for more information regarding this option.

Certificate Requirements

Term 1		Credit Hours
CSC-116	Information Computing	3
MGT-101	Principles of Management	3
MGT-170	Human Resource Management	3
	Term Totals:	9
Term 2		
MGT-171	HR Strat-Talent Mgt/Empl Rel [1,2]	3
MGT-179	HR Strat-Ttl Reward/Safe/Labr [1,2]	3
	Term Totals:	6
	Program Totals:	15

[1] Prerequisite required. See MyHub or your advisor.
[2] Minimum grade requirement is C- to earn certificate

Entrepreneurship Certificate

Entry Time

Fall, Spring, Summer

Award

Certificate
1 year (2 terms)

Students in the Management Associate of Applied Science degree may elect to receive a certificate in Entrepreneurship after completing the required courses. Please consult with the Business and Information Technology Department for more information regarding this option.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
MGT-300	Intro to Entrepreneurship	3
Select one of the following:		3
MGT-130	Principles of Supervision	
BCA-290	Web Design Principles [1]	
MKT-110	Principles of Marketing	3
	Term Totals:	9
Term 2		
MKT-130	Social Media in Business [2]	3
MGT-305	Business Plans for Entrepreneurs [2]	3
Select one of the following:		3
MGT-170	Human Resource Management	
CIS-290	Web Content & E-Commerce Sys [1]	

MKT-135	Content Marketing	
	Term Totals:	**9**
	Program Totals:	**18**

[1] Students should choose this course if intending to have a web-based business or non-employee based sole proprietor

[2] Prerequisite required. See MyHub or your advisor.

Business Administration: Marketing Management

Department website. (http://www.kirkwood.edu/businessdept/)

- Business Administration: Marketing Management, A.A.S. (p. 96)
- Retail Marketing Certificate (p. 97)
- Sales Certificate (p. 97)
- Social Media Marketing Certificate (p. 97)

Business Administration: Marketing Management, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science degree
2 years (5 terms)

Marketing and Management are two of the most popular majors in colleges today, due to the vast employment opportunities available. Marketing Management is a hybrid program offering both marketing and management in one degree. Marketing promotes profitable exchanges in goods and services across all sectors-from solo entrepreneurs to small businesses, from global corporations to non-profits. Effective marketing allows every kind of organization to grow and prosper allowing vast employment opportunities. It is the marketing professional's job to create, manage, and enhance brands. To some this is a scary time to be in marketing, as the very foundation of how we communicate with customers is being disrupted by the Internet and social media. Today they're just a few clicks away on your Facebook page, Twitter profile, Snapchat or Instagram feed. Marketing can even lead to better communities, locally and across the globe. These fields need professionals with a strong initiative and spirit of competition. Successful students also exhibit strong entrepreneurial, problem solving and interpersonal skills.

Through this program, students have the opportunity to earn certificates in Retail Marketing, Sales, and Social Media Marketing. Please consult with the Business and Information Technology Department for more information.

Career Opportunities

- digital marketing specialist
- brand strategist
- content marketing manager
- marketing analytics specialist
- e-commerce manager
- social media strategist
- sales representative
- advertising executive
- public relations specialist
- media planner
- sales strategist
- marketing specialist
- marketing research analyst
- marketing coordinator

Degree Requirements

Term 1		Credit Hours
BUS-101	Business Professionalism	1
BUS-102	Introduction to Business	3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
ENG-105	Composition I	3
Approved Math Course		3
	Term Totals:	13
Term 2		
CSC-116	Information Computing	3
ENG-108 or ENG-106	Comp II: Technical Writing or Composition II	3
MKT-110	Principles of Marketing	3
Select one of the following:		3
MKT-140	Principles of Selling	
SPC-101	Fundamentals of Oral Comm	
SPC-112	Public Speaking	
	Term Totals:	12
Term 3		
Humanities or History/Culture Course (p. 206)		3
ECN-120 or ECN-130	Principles of Macroeconomics or Principles of Microeconomics	3
WBL-305	Intern: Bus/Finance/Mktg/Mgt	3
	Term Totals:	9
Term 4		
MKT-150	Principles of Advertising	3
MGT-101	Principles of Management	3
MKT-180	Customer Service Strategies	1
ACC-111 or ACC-152	Introduction to Accounting or Financial Accounting	3
Marketing Elective		3
	Term Totals:	13
Term 5		
MKT-130	Social Media in Business	3
MKT-135	Content Marketing	3
MKT-160	Principles of Retailing [1]	3
MKT-195	Marketing Management [1]	3
WBL-110	Employability Skills	1

		Credit Hours
Marketing Elective		3
	Term Totals:	16
	Program Totals:	63

[1] Only offered in the spring term

Marketing Electives

Code	Title	Credit Hours
APP-120	Apparel Visual Merchandising	3
BCA-213	Intermediate Computer Bus Apps	3
BCA-290	Web Design Principles	3
CIS-290	Web Content & E-Commerce Sys	3
FIN-121	Personal Finance	3
GLS-120	Education Experience Abroad	1
MGT-112	Business Innovation	3
MGT-121	Project Management Basics	3
MGT-130	Principles of Supervision	3
MGT-170	Human Resource Management	3
MGT-171	HR Strat-Talent Mgt/Empl Rel	3
MGT-179	HR Strat-Ttl Reward/Safe/Labr	3
MGT-300	Intro to Entrepreneurship	3
MGT-305	Business Plans for Entrepreneurs	3
MKT-140	Principles of Selling	3
WBL-305	Intern: Bus/Finance/Mktg/Mgt	3

Optional Courses

Code	Title	Credit Hours
MKT-924	Honors Project	1
MKT-928	Independent Study	1-3

Retail Marketing Certificate

Entry Time

Fall, Spring, Summer

Award

Certificate
1 term

Students in Marketing Associate of Applied Science degree may elect to receive a certificate in Retail Marketing after completing the required courses. Please consult with the Business and Information Technology Department for more information regarding this option.

Certificate Requirements

Term 1		Credit Hours
APP-120	Apparel Visual Merchandising	3
MKT-110	Principles of Marketing	3
MKT-130	Social Media in Business	3

MKT-140	Principles of Selling	3
MKT-150	Principles of Advertising	3
MKT-160	Principles of Retailing [1]	3
MKT-180	Customer Service Strategies	1
	Term Totals:	19
	Program Totals:	19

[1] Only offered in the Spring term

Sales Certificate

Entry Time

Fall, Spring, Summer

Award

Certificate
2 terms

Students in Marketing Associate of Applied Science degree may elect to receive a certificate in Sales after completing the required courses. Please consult with the Business and Information Technology Department for more information regarding this option.

Certificate Requirements

Term 1		Credit Hours
MKT-110	Principles of Marketing	3
MKT-140	Principles of Selling	3
MKT-180	Customer Service Strategies	1
MGT-140	Time Management in the Workplace	1
CSC-116	Information Computing	3
	Term Totals:	11
Term 2		
MKT-130	Social Media in Business	3
BCA-213	Intermediate Computer Bus Apps	3
	Term Totals:	6
	Program Totals:	17

Social Media Marketing Certificate

Entry Time

Fall, Spring, Summer

Award

Certificate
2 terms

Students in Marketing Associate of Applied Science degree may elect to receive a certificate: Social Media Marketing after completing the

required courses. Please consult with the Business and Information Technology Department for more information regarding this option.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
MKT-110	Principles of Marketing	3
CSC-116	Information Computing	3
CIS-290	Web Content & E-Commerce Sys	3
	Term Totals:	**9**
Term 2		
MKT-130	Social Media in Business	3
MKT-135	Content Marketing	3
BCA-290	Web Design Principles	3
	Term Totals:	**9**
	Program Totals:	**18**

CAD/Mechanical Engineering Technology

Department website. (http://www.kirkwood.edu/industrialtech/)

- CAD/Mechanical Engineering Technology, A.A.S. (p. 99)
- CAD/Mechanical Engineering Technology Diploma (p. 100)
- Computer Aided Design (CAD) Certificate (p. 100)

CAD/Mechanical Engineering Technology, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

The CAD/Mechanical Engineering Technology curriculum prepares students for entry-level positions as mechanical engineering technicians and provides skills for those already in the field to gain advancement to designer status. Students focus on engineering fundamentals and the means of conveying design intent from drawing layouts and symbols through geometric dimensioning and tolerancing. Industry standard CAD software is taught during all four semesters of the program to enhance employment opportunities. Competency in engineering fundamentals is built through courses in statics, strength of materials, kinematics, hydraulics, dynamics and machine design. A student can transfer credits from this program to U of I, UNI or William Penn University and work toward a B.S. in manufacturing, applied studies or industrial technology.

Industry Endorsements students can earn include the Solidworks and 3D Printing certificate.

Career Opportunities

- engineering technician
- test lab technician
- CAD operator/designer
- technical writer
- mechanical engineering assistant

Degree Requirements

Term 1		
Fall		**Credit Hours**
CAD-110	Intro to PSM	2
DRF-141	Engineering Drawings	2
DRF-142 or EGT-400	Engineering Design I or PLTW - Introduction to Engineering Design	3
MAT-745	Technical Mathematics I	4
PHY-190	Physics I	3
	Term Totals:	**14**

Term 2		
Spring		
CAD-140	Parametric Solid Modeling I	3
DRF-143	Engineering Design II	3
EGT-125	Applied Statics	4
MAT-746	Technical Mathematics II	4
PHY-192	Physics II	3
	Term Totals:	**17**
Term 3		
Summer		
Communications Course [1]		3
Humanities or History/Culture Course (p. 206)		3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
	Term Totals:	**9**
Term 4		
Fall		
CAD-141	Parametric Solid Modeling II	3
CAD-168	Introduction to 3D Printing	2
EGT-124	Strength of Materials	4
EGT-132	Kinematics	4
EGT-148	Hydraulics and Basic Circuits	3
MFG-202	Manufacturing Processes	2
	Term Totals:	**18**
Term 5		
Spring		
CAD-147	Parametric Solid Modeling III	3
CAD-237	Geometric Dimensioning and Tolerancing	3
EGT-136	Dynamics	4
EGT-185	Design Project	3
EGT-195	Machine Design	3
Communications Course [1]		3
	Term Totals:	**19**
	Program Totals:	**77**

[1] Students planning to transfer to a four-year college or university should consider substituting some or all of the following courses into the CAD/MET curriculum:
ENG-105 Composition I **and**
ENG-108 Composition II: Technical Writing **or**
ENG-106 Composition II **for**
------- Communications Electives

Optional Courses

Code	Title	Credit Hours
CAD-928	Independent Study	1
CAD-924	Honors Project	1
EGT-410	PLTW - Principles of Engineering	3
DRF-924	Honors Project	1

CAD/Mechanical Engineering Technology Diploma

Entry Time

Fall

Award

Diploma
1 year (3 terms including summer)

Students in the Associate Degree CAD/Mechanical Engineering Technology program may elect to receive a CAD/Mechanical Engineering Diploma after completing the required courses. Please consult with the Industrial Technologies Department for more information regarding this option.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		
Fall		**Credit Hours**
CAD-110	Intro to PSM	2
DRF-141	Engineering Drawings	2
DRF-142 or EGT-400	Engineering Design I or PLTW - Introduction to Engineering Design	3
MAT-745	Technical Mathematics I	4
PHY-190	Physics I	3
	Term Totals:	**14**
Term 2		
Spring		
CAD-140	Parametric Solid Modeling I	3
DRF-143	Engineering Design II	3
EGT-125	Applied Statics	4
MAT-746	Technical Mathematics II	4
PHY-192	Physics II	3
	Term Totals:	**17**
Term 3		
Summer		
Communications Course		3
Humanities or History/Culture Course (p. 206)		3

MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
	Term Totals:	**9**
	Program Totals:	**40**

Computer Aided Design (CAD) Certificate

Entry Time

Fall

Award

Certificate
2 year (4 terms)

This certificate provides individuals with skills in AutoCAD, Solidworks and Creo. Students will be challenged to apply the programming skills learned to create projects, assembly files and animated presentations. This certificate prepares individuals to work with basic CAD programming, is a valuable partner to many industrial degrees, and can be used to enhance employment skills.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
CAD-110	Intro to PSM	2
	Term Totals:	**2**
Term 2		
Spring		
CAD-140	Parametric Solid Modeling I	3
	Term Totals:	**3**
Term 3		
Fall		
CAD-141	Parametric Solid Modeling II	3
	Term Totals:	**3**
Term 4		
Spring		
CAD-147	Parametric Solid Modeling III	3
	Term Totals:	**3**
	Program Totals:	**11**

Carpentry

Department website. (http://www.kirkwood.edu/industrialtech/)

- Carpentry Diploma (p. 101)

Carpentry Diploma

Entry Time
Fall

Award
Diploma
1 year (2 terms)

The Carpentry program prepares students to enter the skilled building trades. Students are given a hands-on intensive introduction to the skills used by carpenters. The classroom experience combines lecture and lab activities that cover all aspects of a carpenter's job.

This program requires OSHA-10 Construction.

This diploma is eligible for state and federal financial aid.

Career Opportunities

- residential carpenter
- commercial carpenter
- gateway to apprenticeship program

Diploma Requirements

Term 1		
Fall		**Credit Hours**
CON-311	Building Construction Systems I	3
CON-101	Architectural Plans and Specs	3
CON-211	Carpentry Fundamentals I	3
CON-212	Carpentry Fundamentals II	3
CON-134	Building Foundations and Site Layout	2
CON-932	Internship	1
Select one of the following:		3
MAT-716	Industrial Math II	
Applied Math Course		
	Term Totals:	**18**
Term 2		
Spring		
CON-142	Carpentry Fundamentals III	3
CON-143	Carpentry Fundamentals IV	3
CON-126	Building Construction Systems II	3
CON-322	Estimating for Construction and Architecture	3

CON-932	Internship	2
	Term Totals:	**14**
	Program Totals:	**32**

Optional Courses

Code	Title	Credit Hours
CON-239	Construction Project	3

Carpentry Tool Requirements

Students in the Carpentry program are required to have a tool set for lab activities. Instructors will provide students with a list of minimum requirements. Students must purchase the tool set on their own.

Additional Program Requirements

Carpentry students are required to complete hands-on coursework at a job site out of town certain days of the week. Please see the instructor for more information.

CNC Machining Technology

Department website. (http://www.kirkwood.edu/industrialtech/)

- CNC Machining Technology, A.A.S. (p. 102)
- CNC Machining Technology Diploma (p. 103)
- Computer Aided Manufacturing Certificate (p. 103)
- Fabrication Certificate (p. 103)
- Milling Certificate (p. 104)
- Turning Certificate (p. 104)

CNC Machining Technology, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Computer Numerical Control (CNC) machinists manufacture precision parts and products. They often complete many set-ups for short runs to meet just-in-time delivery demands. People who enter this field must be flexible and have basic knowledge of machine tool CNC.

Students program, edit, set up and operate CNC lathes and mills, as well as study quality control methods known as statistical process control. They also learn special quality control equipment, such as coordinate measuring machines, and advanced automated production methods.

Students can transfer credits from this program to UNI and work toward a B.A. in Technology Management and the University of Iowa and work towards a B.A. in Applied Studies.

Students are required to attain the following third-party credentials as part of the two-year AAS degree program: NIMS Level 1 Certifications.

Career Opportunities

- machinist
- mold builder
- salesperson
- job shop technician
- CNC programmer/operator
- quality control technician
- tool and die maker

Degree Requirements

Term 1		
Fall		**Credit Hours**
MAT-735	Machinist Mathematics I	2
MFG-120	Mach Trade Printreading I	1
MFG-128	Measurement, Matls and Safety	2
MFG-129	JobPlan,Benchwork,Layout-NIMS	2
MFG-297	Milling Machine Operations (NIMS)	3
MFG-385	Engine Lathe Operations(NIMS)	5
	Term Totals:	**15**
Term 2		
Spring		
MAT-736	Machinist Mathematics II	1
MFG-130	Machine Trade Printreading II	1
MFG-173	CNC Mill Operator-NIMS	2
MFG-174	CNC Lathe Operator-NIMS	2
MFG-298	Surface Grinding Oper-NIMS	2
MFG-332	CNC Mill Program & Setup-NIMS	3
MFG-334	CNC Lathe Program/Setup-NIMS	3
	Term Totals:	**14**
Term 3		
Summer		
MFG-388	Mfg Sheetmetal Practices	5
MFG-420	Jig and Fixture Design	2
	Term Totals:	**7**
Term 4		
Fall		
CAD-237	Geometric Dimensioning and Tolerancing	3
CAD-300	AutoCAD for Applied Engineer	2
MFG-367	Advanced CNC Programming	3
MFG-373	Computer Aided Manufacturing I	4
Communications Course		3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	**18**
Term 5		
Spring		
MFG-374	Comp Aided Manufacturing II	4
MFG-378	Mfg Production Methods	3
MFG-396	Alt Manufacturing Processes	3
Communications Course		3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
	Term Totals:	**16**
	Program Totals:	**70**

Optional Courses

Code	Title	Credit Hours
MFG-924	Honors Project	1
MFG-928	Independent Study	1-3

CNC Machining Technology Diploma

Entry Time

Fall

Award

Diploma
1 year (3 terms including summer)

Computer Numerical Control (CNC) machines manufacture precision parts and products. They often complete many set-ups for short runs to meet just-in-time delivery demands. People who enter this field must be flexible and have basic knowledge of machine tool CNC.

Students program, edit, set up and operate CNC lathes and mills, as well as study quality control methods known as statistical process control. They also learn special quality control equipment, such as coordinate measuring machines, and advanced automated production methods.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		
Fall		**Credit Hours**
MAT-735	Machinist Mathematics I	2
MFG-120	Mach Trade Printreading I	1
MFG-128	Measurement, Matls and Safety	2
MFG-129	JobPlan,Benchwork,Layout-NIMS	2
MFG-297	Milling Machine Operations (NIMS)	3
MFG-385	Engine Lathe Operations(NIMS)	5
	Term Totals:	**15**
Term 2		
Spring		
MAT-736	Machinist Mathematics II	1
MFG-130	Machine Trade Printreading II	1
MFG-173	CNC Mill Operator-NIMS	2
MFG-174	CNC Lathe Operator-NIMS	2
MFG-298	Surface Grinding Oper-NIMS	2
MFG-332	CNC Mill Program & Setup-NIMS	3
MFG-334	CNC Lathe Program/Setup-NIMS	3
	Term Totals:	**14**
Term 3		
Summer		
MFG-388	Mfg Sheetmetal Practices	5

MFG-420	Jig and Fixture Design	2
	Term Totals:	**7**
	Program Totals:	**36**

Computer Aided Manufacturing Certificate

Entry Time

Fall

Award

Certificate
2 years (4 terms)

Students enrolled in the CNC Machining Technology program will earn an additional certificate in Computer Aided Manufacturing as they complete their AAS degree. Students already working in the industry can return to Kirkwood to earn this certificate on a part-time basis.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
MAT-735	Machinist Mathematics I	2
MFG-120	Mach Trade Printreading I	1
	Term Totals:	**3**
Term 2		
Spring		
MAT-736	Machinist Mathematics II	1
MFG-130	Machine Trade Printreading II	1
	Term Totals:	**2**
Term 3		
Fall		
CAD-237	Geometric Dimensioning and Tolerancing	3
MFG-373	Computer Aided Manufacturing I	4
	Term Totals:	**7**
Term 4		
Spring		
MFG-374	Comp Aided Manufacturing II	4
	Term Totals:	**4**
	Program Totals:	**16**

Fabrication Certificate

Entry Time

Fall

Award

Certificate
2 years (5 terms including summer)

Students enrolled in the CNC Machining Technology program will earn an additional certificate in Fabrication as they complete their AAS degree. Students already working in the industry can return to Kirkwood to earn this certificate on a part-time basis.

Certificate Requirements

Term 1		
Fall		Credit Hours
MAT-735	Machinist Mathematics I	2
MFG-120	Mach Trade Printreading I	1
	Term Totals:	3
Term 2		
Spring		
MAT-736	Machinist Mathematics II	1
MFG-130	Machine Trade Printreading II	1
	Term Totals:	2
Term 3		
Summer		
MFG-388	Mfg Sheetmetal Practices	5
	Term Totals:	5
Term 4		
Fall		
CAD-237	Geometric Dimensioning and Tolerancing	3
	Term Totals:	3
Term 5		
Spring		
MFG-396	Alt Manufacturing Processes	3
	Term Totals:	3
	Program Totals:	16

Milling Certificate

Entry Time

Fall

Award

Certificate
3 terms

Students enrolled in the CNC Machining Technology program will earn an additional certificate in Milling as they complete their AAS degree.

Students already working in the industry can return to Kirkwood to earn this certificate on a part-time basis.

Certificate Requirements

Term 1		
Fall		Credit Hours
MAT-735	Machinist Mathematics I	2
MFG-120	Mach Trade Printreading I	1
MFG-297	Milling Machine Operations (NIMS)	3
	Term Totals:	6
Term 2		
Spring		
MAT-736	Machinist Mathematics II	1
MFG-130	Machine Trade Printreading II	1
MFG-173	CNC Mill Operator-NIMS	2
MFG-332	CNC Mill Program & Setup-NIMS	3
	Term Totals:	7
Term 3		
Fall		
CAD-237	Geometric Dimensioning and Tolerancing	3
	Term Totals:	3
	Program Totals:	16

Turning Certificate

Entry Time

Fall

Award

Certificate
3 terms

Students enrolled in the CNC Machining Technology program will earn an additional certificate in Turning as they complete their AAS degree. Students already working in the industry can return to Kirkwood to earn this certificate on a part-time basis.

Certificate Requirements

Term 1		
Fall		Credit Hours
MAT-735	Machinist Mathematics I	2
MFG-120	Mach Trade Printreading I	1
MFG-385	Engine Lathe Operations(NIMS)	5
	Term Totals:	8

Term 2		
Spring		
MAT-736	Machinist Mathematics II	1
MFG-130	Machine Trade Printreading II	1
MFG-174	CNC Lathe Operator-NIMS	2
MFG-334	CNC Lathe Program/Setup-NIMS	3
	Term Totals:	**7**
Term 3		
Fall		
CAD-237	Geometric Dimensioning and Tolerancing	3
	Term Totals:	**3**
	Program Totals:	**18**

- CNC Machining Technology, A.A.S. (p. 102)
- CNC Machining Technology Diploma (p. 103)
- Computer Aided Manufacturing Certificate (p. 103)
- Fabrication Certificate (p. 103)
- Milling Certificate (p. 104)

Computer Software Development

Department website. (http://www.kirkwood.edu/businessdept/)

- Computer Software Development, A.A.S. (p. 106)
- Java Programming Certificate (p. 107)
- .NET Programming Certificate (p. 107)

Computer Software Development, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Those who can be both creative and logical, who enjoy working with computers, and especially those who would like to learn how to produce their own solutions for business and other computing needs, should consider a career in Computer Software Development.

This degree helps graduates enter the growing and well-paid field of computer programming. Students learn various phases of software development including how to design, write, test and document computer programs with a variety of tools, using in-demand languages such as Java, C# and SQL. In addition to learning to program for desktop computers and other devices, students also explore Internet programming with technologies such as ASP, JSP, HTML, CSS and JavaScript.

Career Opportunities

- computer programmer
- software developer
- systems analyst
- web designer
- software tester
- client/server application developer
- internet programmer

Degree Requirements

Term 1		Credit Hours
Select one of the following:		3
CIS-121	Intro to Programming Logic [1]	
CIS-450	PLTW-Computer Sci Principles [1]	
CSC-142	Computer Science [1]	
NET-130	Computer Concepts	3
NET-165	Network Plus	3
CIS-207	Fundamentals of Web Program [2]	3
Approved Math Course [3]		4
	Term Totals:	16

Term 2		
Select one of the following:		3
CIS-171	Java [1]	
CSC-142	Computer Science [1]	
CIS-335	Relational Database and SQL [2]	3
CIS-622	.NET Development I [2]	3
ENG-105	Composition I	3
Social Science Course		3
	Term Totals:	15
Term 3		
Summer		
Humanities or History/Culture Course (p. 206)		3
Select one of the following:		3
SPC-101	Fundamentals of Oral Comm	
ENG-106	Composition II	
SPC-112	Public Speaking	
ENG-108	Comp II: Technical Writing	
	Term Totals:	6
Term 4		
CIS-175	Java II [2]	3
CIS-624	.NET Development II [2]	3
WBL-110 or WBL-146	Employability Skills or Project: Info Solutions	1
CIS-238	Front End Development I [2]	3
CIS-504	Structured Systems Analysis [2]	3
Technical/Business Elective		3
	Term Totals:	16
Term 5		
CIS-181	Java III [2]	3
CIS-626	.NET Development III [2]	3
CIS-802	Software Development Capstone [2]	3
CSC-153	Data Structures [2]	4
Technical/Business Elective		3
	Term Totals:	16
	Program Totals:	69

[1] Earn a minimum C- in both CIS-121 Intro to Programming Logic and CIS-171 Java. CIS-450 PLTW-Computer Sci Principles taken in high school with a minimum C- can substitute for CIS-121 Intro to Programming Logic. Other option: Earn a C- in CSC-142 Computer Science

[2] Minimum grade requirement of C- for graduation

[3] MAT-138 College Algebra with Limits is recommended.

Technical/Business Electives

Code	Title	Credit Hours
BCA-290	Web Design Principles	3
CIS-241	Intro to Blockchain	3
CIS-328	Front End Development II	3
CIS-263	Web Application Development I	3
CIS-363	Web Application Development II	3
CIS-249	Web Languages	3
CIS-326	Business Intelligence Tools	3
CIS-327	Analytics and Reporting	3
CIS-342	PHP/Apache/MySQL II	3
CIS-334	PHP/Apache/MySQL	3
CIS-354	Data Analytics Projects	3
CIS-370	Fund of 2D Visuals and Games	3
CIS-371	Developing 3D Simulations and Games	3
CSC-160	Software Design & Development	4
CSC-175	Comp. Org. & Assem. Lang. Prog	4
MAT-136	Trigonometry & Analytic Geom	5
MAT-150	Discrete Math	3
MAT-156	Statistics	3
MAT-162	Business Statistics	4
MAT-165	Business Calculus	3
MDT-350	Android App Development	3
MGT-121	Project Management Basics	3
WBL-306	Intern: Info Solutions	1-5
Any course with the following subject codes: ACC-, EGR-, FIN-, NET-, PHY-		3

Java Programming Certificate

Entry Time

Fall

Award

Certificate
2 year (4 terms)

Students enrolled in the Computer Software Development program can choose to work toward a certificate in Java programming as they complete their AAS degree. Students already working in the industry can return to Kirkwood to focus on a new language with this part time certificate option.

Certificate Requirements

Term 1		Credit Hours
Select one of the following:		3
CIS-121	Intro to Programming Logic [1]	
CIS-450	PLTW-Computer Sci Principles [1]	
CSC-142	Computer Science [1]	
	Term Totals:	3

Term 2		
Select one of the following:		3
CIS-171	Java [1]	
CSC-142	Computer Science [1]	
CIS-335	Relational Database and SQL [2]	3
	Term Totals:	6
Term 3		
CIS-175	Java II [2]	3
	Term Totals:	3
Term 4		
CIS-181	Java III [2]	3
	Term Totals:	3
	Program Totals:	15

[1] Earn a minimum C- in both CIS-121 Intro to Programming Logic and CIS-171 Java. CIS-450 PLTW-Computer Sci Principles taken in high school with a minimum C- can substitute for CIS-121 Intro to Programming Logic. Other option: Earn a C- in CSC-142 Computer Science

[2] Minimum grade requirement of C- for graduation

.NET Programming Certificate

Entry Time

Fall

Award

Certificate
2 year (4 terms)

Students enrolled in the Computer Software Development program can choose to work toward a certificate in .NET programming as they complete their AAS degree. Students already working in the industry can return to Kirkwood to focus on a new language with this part time certificate option.

Certificate Requirements

Term 1		Credit Hours
Select one of the following:		3
CIS-121	Intro to Programming Logic [1]	
CIS-450	PLTW-Computer Sci Principles [1]	
CSC-142	Computer Science [1]	
	Term Totals:	3
Term 2		
CIS-622	.NET Development I [1]	3
CIS-335	Relational Database and SQL [1]	3
	Term Totals:	6

Term 3		
CIS-624	.NET Development II [1]	3
	Term Totals:	**3**
Term 4		
CIS-626	.NET Development III [1]	3
	Term Totals:	**3**
	Program Totals:	**15**

[1] Minimum grade requirement of C- for graduation

Computer Support Specialist

Department website. (http://www.kirkwood.edu/businessdept/)

- Computer Support Specialist, A.A.S. (p. 109)
- Customer Support Technician Diploma (p. 109)
- IT Fundamentals Certificate (p. 110)

Computer Support Specialist, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (4 terms)

Computer support specialists provide technical assistance to users as well as maintain, upgrade, and repair computer systems and networks. Students interested in this field should have an interest in working with people. Specialists constantly interact with customers and fellow employees as they answer questions and give valuable advice. They should also enjoy learning about new technology and be willing to work on both hardware and software systems. Good writing and communications skills are also required.

This degree focuses on a variety of IT skills that include hardware, software, networking and programming, as well as problem-solving and analytical skills.

Career Opportunities

- computer support specialists
- technical support specialists
- help desk technicians

Degree Requirements

Term 1		Credit Hours
NET-130	Computer Concepts [1]	3
NET-165	Network Plus [1]	3
CIS-207	Fundamentals of Web Program [1]	3
CIS-121	Intro to Programming Logic [1]	3
MAT-102	Intermediate Algebra	4
	Term Totals:	16
Term 2		
NET-235	CCNA Cisco 1 [1]	3
NET-650	Cloud Infrastructure [1]	3
NET-630	Ethics in Info Tech [1]	3
NET-168	Admin Windows Server [1]	3
ENG-105	Composition I	3
	Term Totals:	15

Term 3		
CSC-116	Information Computing	3
NET-600	Network Security Basics [1]	3
NET-785	Desktop Support [1]	3
ENG-108	Comp II: Technical Writing	3
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3
MKT-180	Customer Service Strategies	1
	Term Totals:	16
Term 4		
Humanities or History/Culture Course (p. 206)		3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
MGT-121	Project Management Basics	3
WBL-146 or WBL-110	Project: Info Solutions or Employability Skills	3
NET-850	Special Topics in Technology [1]	3
NET-860	Info Tech Specialist Cap [1]	3
	Term Totals:	18
	Program Totals:	65

[1] Minimum grade requirement of C-

Customer Support Technician Diploma

Entry Time

Fall

Award

Diploma
1 year (3 terms)

Building upon technical skills acquired in year one, the Customer Support Technician Diploma is designed to teach students the fundamental skills and knowledge required to apply customer support strategies to a variety of IT related issues. The required courses center heavily around customer support with an emphasis on written and oral communication.

In addition to the certificate and with additional study, coursework should give direction to the student for some of the following industry credentials: CompTIA Security+.

This diploma is eligible for state and federal financial aid.

Career Opportunities

- computer user support specialist
- help desk technician
- call center support technician

Diploma Requirements

Term 1		Credit Hours
ENG-105	Composition I	3
NET-130	Computer Concepts [1]	3
NET-165	Network Plus [1]	3
CIS-121	Intro to Programming Logic [1]	3
CIS-207	Fundamentals of Web Program [1]	3
	Term Totals:	15
Term 2		
NET-630	Ethics in Info Tech [1]	3
NET-650	Cloud Infrastructure [1]	3
NET-168	Admin Windows Server [1]	3
NET-235	CCNA Cisco 1 [1]	3
	Term Totals:	12
Term 3		
CSC-116	Information Computing	3
NET-785	Desktop Support [1]	3
NET-600	Network Security Basics [1]	3
MKT-180	Customer Service Strategies	1
	Term Totals:	10
	Program Totals:	37

[1] Minimum C- to graduate

IT Fundamentals Certificate
Entry Time
Fall

Award
Certificate
1 year (2 terms)

Technologists work in a fast-paced and challenging profession. They work with and support end users with various technology issues and needs. Certificate-seeking students will have an introduction to network infrastructure, desktop and server management, and basic web design and programming logic. In addition to technical course training, the student will have an introduction to teamwork and communication skills, critical thinking and problem solving, and legal aspects of technology.

The certificate strives to provide the award holder with the potential to enter the workforce in an introductory technology role with the opportunity to continue pursuit of a diploma and/or associates degree.

The coursework strives to provide vendor agnostic situations to give the graduate the greatest breadth of preparation, however vendor specifics

are necessary to learn, test and demonstrate the coursework student learning outcomes.

In addition to the certificate and with additional study, coursework should give direction to the student for some of the following industry credentials: CompTIA A+; CompTIA Network+; Microsoft Fundamentals Certifications.

This certificate is eligible for state and federal financial aid.

Career Opportunities
- help desk technician
- call center support technician

Certificate Requirements

Term 1		Credit Hours
NET-130	Computer Concepts [1]	3
NET-165	Network Plus [1]	3
CIS-121	Intro to Programming Logic [1]	3
CIS-207	Fundamentals of Web Program [1]	3
	Term Totals:	12
Term 2		
NET-630	Ethics in Info Tech [1]	3
NET-650	Cloud Infrastructure [1]	3
NET-168	Admin Windows Server [1]	3
NET-235	CCNA Cisco 1 [1]	3
	Term Totals:	12
	Program Totals:	24

[1] Minimum C- to graduate

Construction Management

Department website. (http://www.kirkwood.edu/industrialtech/)

- Construction Management, A.A.S. (p. 111)
- ACE Diploma (p. 112)
- Construction Estimator Certificate (p. 112)
- Construction Fundamentals Certificate (p. 112)

Construction Management, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer), some required evening classes

The Construction Management program provides entry-level skills and knowledge for students who want to pursue one of the many careers available in the construction industry. Classes during the first year emphasize hands-on laboratory experiences in construction practices, architectural drafting and CAD, estimating, and microcomputer applications. The summer session allows students to gain practical experience during a full-time, paid internship in the construction field. Second-year classes emphasize skills and knowledge development in management, scheduling, estimating and legal issues. Upon completion of this program students will receive the OSHA 10 Construction and Adult First Aid with CPR certifications.

Career Opportunities

- construction managers and supervisors
- building inspectors
- project managers
- sustainability specialists
- material suppliers
- cost estimators

Degree Requirements

Term 1		
Fall		**Credit Hours**
CON-101	Architectural Plans and Specs	3
CON-108	Construction Safety	1
CON-190	Construction Lab	3
CON-410	Architectural Modeling	3
MAT-716 or MAT-156	Industrial Math II [1] or Statistics	3
WBL-148	WBL Industrial Technology	2
	Term Totals:	**15**

Term 2		
Spring		
CON-313	Structures and Mechanical/Electrical/Plumbing Systems	3
CON-322	Estimating for Construction and Architecture	3
CON-331	Construction Materials Science	3
PHS-175 or ENV-115	Environmental Geology or Environmental Science	3
WBL-110	Employability Skills	1
Communications Course [2]		3
	Term Totals:	**16**

Term 3		
Summer		
CON-932	Internship	2
Communications Course [2]		3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	**8**

Term 4		
Fall		
CON-257	Pre-Construction Services	3
CON-324	Adv Construction Estimating	3
CON-328	Construction Documentation	3
MGT-130	Principles of Supervision	3
	Term Totals:	**12**

Term 5		
Spring		
CON-316	Sustainable Construct Science	3
CON-330	Construction Capstone	3
CON-400	Const Svcs, CloseOut, Comm	3
MGT-155 or MGT-101	Integrated Project Management or Principles of Management	3
Social Science Course		3
	Term Totals:	**15**
	Program Totals:	**66**

Optional Courses

Code	Title	Credit Hours
CON-924	Honors Project	1
CON-928	Independent Study	1-3

[1] Students planning to transfer to a four-year college or university should take MAT-156 Statistics.

[2] Students planning to transfer to a four-year college or university should consider the following communication classes:
ENG-105 Composition I and

ENG-106 Composition II or
ENG-108 Composition II: Technical Writing.

Construction Management Tool Requirements

Students in the Construction Management program are required to have safety equipment for lab activities. Instructors will provide students with a list of minimum requirements. Students must purchase the safety equipment on their own.

ACE Diploma

Entry Time

Fall

Award

Diploma
1 year (3 terms)

The ACE (Architecture, Construction & Engineering) diploma is an alternative and/or precursor to the A.A.S. degree, and provides entry-level skills and knowledge for students seeking entry-level positions in the construction or architecture industries.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		
Fall		**Credit Hours**
CON-101	Architectural Plans and Specs	3
CON-108	Construction Safety	1
CON-190	Construction Lab	3
CON-410	Architectural Modeling	3
MAT-716	Industrial Math II	3
WBL-148	WBL Industrial Technology	2
	Term Totals:	**15**
Term 2		
Spring		
CON-313	Structures and Mechanical/Electrical/Plumbing Systems	3
CON-322	Estimating for Construction and Architecture	3
CON-331	Construction Materials Science	3
PHS-175 or ENV-115	Environmental Geology or Environmental Science	3
WBL-110	Employability Skills	1
Communications Elective		3
	Term Totals:	**16**

Term 3		
Summer		
CON-932	Internship	2
	Term Totals:	**2**
	Program Totals:	**33**

Construction Estimator Certificate

Entry Time

Fall

Award

Certificate
3 terms

The Construction Estimator certificate is an alternative to the A.A.S. degree, and provides entry-level skills and knowledge for students who want to pursue a career as a construction estimator.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
CON-101	Architectural Plans and Specs	3
	Term Totals:	**3**
Term 2		
Spring		
CON-322	Estimating for Construction and Architecture	3
	Term Totals:	**3**
Term 3		
Fall		
CON-257	Pre-Construction Services	3
CON-324	Adv Construction Estimating	3
	Term Totals:	**6**
	Program Totals:	**12**

Construction Fundamentals Certificate

Entry Time

Fall

Award

Certificate
1 term

The Construction Fundamentals Certificate is a five-course certificate designed to provide foundational knowledge within the broader construction industry. Students will learn to read architectural plans

and specifications, practice basic construction and safety techniques, understand various wall assembly systems, and participate in team-based design/build exercises. A focus on safe tool usage and jobsite awareness will be incorporated. Students will earn the OSHA 10 Construction credential as part of this certificate.

Certificate Requirements

Term 1		Credit Hours
WBL-148	WBL Industrial Technology	2
CON-101	Architectural Plans and Specs	3
CON-108	Construction Safety	1
CON-410	Architectural Modeling	3
CON-190	Construction Lab	3
	Term Totals:	**12**
	Program Totals:	**12**

Criminal Justice

Department website. (http://www.kirkwood.edu/socialsciences/)

- Criminal Justice, A.A.S. (p. 114)

Criminal Justice, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science (4 terms)
Associate of Arts Liberal Arts (transfer degree)

This degree opens doors to a possible career in criminal justice including positions in law enforcement and corrections. Students enrolled in criminal justice may obtain a two-year Associate of Applied Science in Criminal Justice degree that will include both general education and criminal justice courses.

Career Opportunities

- sheriff
- police officer
- highway patrol officer
- corrections officer
- probation officer

Degree Requirements

Term 1		Credit Hours
CRJ-100	Introduction to Criminal Justice	3
SOC-110 or SOC-115	Introduction to Sociology or Social Problems	3
ENG-105	Composition I	3
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3
Math Course (from approved list)		3
	Term Totals:	15
Term 2		
CRJ-101	Ethics in Criminal Justice	3
WBL-109	Exploring Careers: Govt & CJ	2
SCI-120	Forensic Science	3
HSV-130	Interview/Interper Relation	3
ENG-106 or ENG-108	Composition II or Comp II: Technical Writing	3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	17
Term 3		
CRJ-111	Police and Society	3
CRJ-130	Criminal Law	3
CRJ-120	Introduction to Corrections	3
HSV-282	Health & Psychosocial Rehab	3
PSY-111	Intro to Psychology	3
	Term Totals:	15
Term 4		
CRJ-200	Criminology	3
CRJ-316	Juvenile Justice	3
CRJ-133	Constitutional Criminal Proc	3
CRJ-141	Criminal Investigation	3
Social Science Course (p. 203)		3
	Term Totals:	15
	Program Totals:	62

Culinary Arts

Department website. (http://www.kirkwood.edu/hospitality/)

- Culinary Arts, A.A.S. (p. 115)
- Food Service Assistant Diploma (p. 116)

Culinary Arts, A.A.S.

Entry Time

Fall or Spring

Award

Associate of Applied Science degree
2 years (4 terms)

Our program is designed to educate and develop future leaders for the culinary profession with a curriculum that blends a combination of practical cooking experiences, foodservice knowledge, and business application.

In addition to gaining culinary skills, you will learn how to create menu items that are nutritious, marketable, and profitable; understand the balance between culinary creativity and business operation realities; comprehend the responsibilities of safe food production and service; and become acquainted with the various career pathways within the profession.

Career Opportunities

- executive chef
- banquet chef
- restaurant chef
- chef de cuisine
- sous chef
- private chef
- business ownership
- catering manager
- line cook
- baker

Degree Requirements

Term 1		Credit Hours
HCM-109	Kitchen Essentials	1.5
HCM-147	Culinary Techniques	1.5
HCM-138	Food Fundamentals	3
HCM-100	Sanitation & Safety	2
HCM-260	Hospitality Math	3
Select one of the following:		3
COM-723	Workplace Communications	
ENG-105	Composition I [1]	
HCM-321	Intro to Hospitality Industry	1
	Term Totals:	15

Term 2		
HCM-161	Stocks and Sauces	1.5
HCM-140	Fabrication	3
HCM-117	Bakery Basics	3
HCM-381	International Cuisine	4.5
HCM-269	Garde Manger (lab/lec)	1.5
HCM-356	Beverage Fundamentals	3
HCM-288	Intro to Hospitality II	1
	Term Totals:	17.5
Term 3		
HCM-207	Menu Planning	1.5
HCM-231	Nutrition	2
HCM-279 or ACC-152	Hospitality Accounting or Financial Accounting	3
HCM-932	Internship	1
HCM-329	Advanced Garde Manger	3
HCM-359	Applied Culinary Skills	4
HCM-354	Service Techniques	2
	Term Totals:	16.5
Term 4		
HCM-342	Hospitality Events and Catering (BOH)	3
HCM-330	Hospitality Personnel Mgmt	3
HCM-251	Purchasing, Recvg & Inventory	2
Select one of the following:		3
SPC-101	Fundamentals of Oral Comm	
ENG-106	Composition II [1]	
FLS-118	Spanish for Professionals	3
HCM-530	Culinary Capstone	1
HCM-349	Advanced Baking and Pastry	2
	Term Totals:	17
	Program Totals:	66

[1] Those transferring to a four-year college or university may want to select this course.

Optional Courses

Code	Title	Credit Hours
HCM-405	Culinary Competition	3
HCM-924	Honors Project	1
HCM-928	Independent Study	1-3

When transferring to a four-year school, see your advisor for course requirements.

Food Service Assistant Diploma

Entry Time

Fall or Spring

Award

Diploma
1 year (2 terms)

Students in the Culinary Arts program may elect to receive a Food Service Assistant Diploma after completing the required courses. Please consult with the Hospitality Department for more information regarding this option.

Diploma Requirements

Term 1		Credit Hours
HCM-109	Kitchen Essentials	1.5
HCM-147	Culinary Techniques	1.5
HCM-138	Food Fundamentals	3
HCM-100	Sanitation & Safety	2
HCM-260	Hospitality Math	3
HCM-321	Intro to Hospitality Industry	1
COM-723	Workplace Communications	3
	Term Totals:	**15**
Term 2		
HCM-269	Garde Manger (lab/lec)	1.5
HCM-117	Bakery Basics	3
HCM-161	Stocks and Sauces	1.5
HCM-140	Fabrication	3
HCM-381	International Cuisine	4.5
HCM-288	Intro to Hospitality II	1
HCM-356	Beverage Fundamentals	3
	Term Totals:	**17.5**
	Program Totals:	**32.5**

When transferring to a four-year school, see your advisor for course requirements.

Cybersecurity and Compliance

Department website. (http://www.kirkwood.edu/businessdept/)

- Cybersecurity and Compliance, A.A.S. (p. 117)

Cybersecurity and Compliance, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

This degree program provides a foundation in cybersecurity concepts and regulatory compliance. Students with this degree will be able to install security software, monitor for security breaches, respond to cyber attacks, observe policies and documentation for long-term compliance.

Career Opportunities

- information security analysts

Degree Requirements

Term 1		Credit Hours
NET-165	Network Plus [1]	3
CIS-121	Intro to Programming Logic [1]	3
NET-130	Computer Concepts [1]	3
ENG-105	Composition I	3
MAT-772	Applied Math	3
	Term Totals:	15
Term 2		
NET-630	Ethics in Info Tech [1]	3
NET-168	Admin Windows Server [1]	3
NET-400	Linux Networking [1]	3
CIS-335	Relational Database and SQL [1]	3
NET-650	Cloud Infrastructure [1]	3
	Term Totals:	15
Term 3		
SPC-101 or ENG-108	Fundamentals of Oral Comm or Comp II: Technical Writing	3
CIS-171	Java [1]	3
Social Science Course		3
	Term Totals:	9
Term 4		
NET-600	Network Security Basics [1]	3
NET-618	Network Defense & Remote Access Configuration [1]	3

BUS-350	Risk Analysis and Management [1]	3
CIS-327	Analytics and Reporting [1]	3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	15
Term 5		
NET-619	Network Attacks [1]	3
NET-401	Ethical Hack Prac in Cybersec [1]	3
NET-460	Computer Forensic Cybersec [1]	3
BUS-450	Audit Practices Comp/Procedure [1]	3
WBL-306	Intern: Info Solutions	3
	Term Totals:	15
	Program Totals:	69

[1] Minimum grade requirement of C- for graduation

Dental Assisting

Department website. (http://www.kirkwood.edu/alliedhealth/)

- Dental Assisting, A.A.S. (p. 118)
- Dental Assisting Diploma (p. 119)

Dental Assisting, A.A.S.

Entry Time

Fall or Spring

Award

Associate of Applied Science degree after completion of additional required courses
2 years (4 terms)

Dental Assistants help the dentist at chair side and also perform functions such as polishing teeth, taking X-rays, mixing materials and sterilizing instruments. Some assistants also manage the office and patient accounts, schedule appointments and purchase supplies. During this program, students will gain classroom, laboratory and hands-on experience by working with patients at the College of Dentistry at the University of Iowa and in private dental offices.

This Allied Health program has a mandatory background check for clinical purposes.

Accreditation

The Dental Assisting program is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of compliance without reporting requirements. The Commission is a specialized accrediting body recognized by the United States Department of Education. Successful completion of the program entitles graduates to take the National Dental Assistant Certification Examination.

The Commission on Dental Accreditation
211 East Chicago Avenue
Chicago, IL 60611-2678
312-440-4653

Career Opportunities

- private dental office
- clinics
- research/teaching
- consulting
- hospitals
- sales and insurance claims
- specialty practices such as orthodontics or children's dentistry

Degree Requirements

Term 1		Credit Hours
HSC-107	Professionals in Health [1]	2
HSC-210	Health Skills I [1]	1
DEN-110	Dental Terminology [1,2]	2
DEN-120	Dental Anatomy [1,2]	3
DEN-100	Fundamentals of Dentistry [2]	3.5
DEA-403	Dental Materials [2]	3
DEA-517	Dental Assisting I [2]	3.5
	Term Totals:	**18**
Term 2		
DEA-580	Dental Assisting Clinic I [2]	4
DEA-518	Dental Assisting II [2]	1.5
DEN-300	Dental Radiography [2]	3
DEA-285	Oral Pathology for Dental Assisting [1,2]	1
DEN-200	Preventive Dentistry [2]	2
DEA-610	Specialty Dentistry [2]	4.5
DEN-130	Head and Neck Anatomy [1,2]	1.5
	Term Totals:	**17.5**
Term 3		
DEA-519	Dental Assisting III [2]	1.5
DEA-581	Dental Assisting Clinic II [2]	4.5
DEN-220	Dental Nutrition [1,2]	1
Select one of the following:		3
COM-222	Communication for Health Care Professionals [1]	
SPC-101	Fundamentals of Oral Communication [1]	
SPC-112	Public Speaking [1]	
DEA-701	Dental Office Procedures [2]	1
	Term Totals:	**11**
Term 4		
ENG-105	Composition I [1]	3
PSY-111	Intro to Psychology [1]	3
MAT-772	Applied Math [1]	3
Humanities or History/Culture Course (p. 206) [1]		3
Electives [1]		6
	Term Totals:	**18**
	Program Totals:	**64.5**

[1]   Courses may be taken before beginning the program.
[2]   Minimum C- required in all technical Dental Assisting courses and all DEN courses

Optional Courses

Code	Title	Credit Hours
DEA-924	Honors Project	1
HSC-103	Studies in Health Sciences	1-3

This curriculum is for fall start. Curriculum for spring start is slightly different. Contact Allied Health for information.

Dental Assisting Diploma

Entry Time

Fall, Spring

Award

Diploma
1 year (3 terms)

Dental Assistants help the dentist at chair side and also perform functions such as polishing teeth, taking X-rays, mixing materials and sterilizing instruments. Some assistants also manage the office and patient accounts, schedule appointments and purchase supplies. During this one year program, students will gain classroom, laboratory and hands-on experience by working with patients at the College of Dentistry at the University of Iowa and in private dental offices.

An Associate of Applied Science degree may be obtained upon completion of additional general education coursework.

This Allied Health program has a mandatory background check for clinical purposes.

Accreditation

The Dental Assisting program is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of compliance without reporting requirements. The Commission is a specialized accrediting body recognized by the United States Department of Education. Successful completion of the program entitles graduates to take the National Dental Assistant Certification Examination.

The Commission on Dental Accreditation
211 East Chicago Avenue
Chicago, IL 60611-2678
312-440-4653

This diploma is eligible for state and federal financial aid.

Career Opportunities

- private dental office
- clinics
- research/teaching
- consulting
- hospitals
- sales and insurance claims
- specialty practices such as orthodontics or children's dentistry

Diploma Requirements

Term 1		Credit Hours
HSC-107	Professionals in Health [1]	2
HSC-210	Health Skills I [1]	1
DEN-110	Dental Terminology [1,2]	2
DEN-120	Dental Anatomy [1,2]	3
DEN-100	Fundamentals of Dentistry [2]	3.5
DEA-403	Dental Materials [2]	3
DEA-517	Dental Assisting I [2]	3.5
	Term Totals:	**18**
Term 2		
DEA-580	Dental Assisting Clinic I [2]	4
DEA-518	Dental Assisting II [2]	1.5
DEN-300	Dental Radiography [2]	3
DEA-285	Oral Pathology for Dental Assisting [1,2]	1
DEN-200	Preventive Dentistry [2]	2
DEA-610	Specialty Dentistry [2]	4.5
DEN-130	Head and Neck Anatomy [1,2]	1.5
	Term Totals:	**17.5**
Term 3		
DEA-519	Dental Assisting III [2]	1.5
DEA-581	Dental Assisting Clinic II [2]	4.5
DEN-220	Dental Nutrition [1,2]	1
Select one of the following:		3
COM-222	Communication for Health Care Professionals [1]	
SPC-101	Fundamentals of Oral Communication [1]	
SPC-112	Public Speaking [1]	
DEA-701	Dental Office Procedures [2]	1
	Term Totals:	**11**
	Program Totals:	**46.5**

[1] Courses may be taken before beginning the program.
[2] Minimum C- required in all technical Dental Assisting courses and all DEN courses

Optional Courses

Code	Title	Credit Hours
HSC-103	Studies in Health Sciences	1-3

This curriculum is for fall start. Curriculum for spring start is slightly different. Contact Allied Health for information.

Dental Hygiene

Department website. (http://www.kirkwood.edu/alliedhealth/)

- Dental Hygiene, A.A.S. (p. 120)

Dental Hygiene, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Dental hygienists help prevent, detect and treat diseases of the mouth, playing a key role in the pursuit of optimal patient health via education and treatment planning. Hygienists work independently with patients.

Dental hygienists remove calculus deposits and stains from teeth, polish teeth, apply sealants and fluoride, take X-rays, record medical and dental histories, and educate patients on how proper brushing, flossing and eating habits can help maintain a healthy mouth.

This Allied Health program has a mandatory background check for clinical purposes.

Accreditation

The Dental Hygiene program is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of compliance without reporting requirements. The Commission is a specialized accrediting body recognized by the United States Department of Education. Dental Hygiene graduates are eligible to take the National Board Dental Hygiene Examination and the regional board examinations of their choice. Successful completion of both board examinations is required to receive a license to practice dental hygiene.

The Commission on Dental Accreditation
211 East Chicago Avenue
Chicago, IL 60611-2678
312-440-4653

Career Opportunities

- dental offices/clinics/hospitals
- government agencies
- public health
- insurance claims processing
- specialty dental practices
- sales
- teaching

Degree Requirements

Prerequisites		Credit Hours
BIO-168	Human Anatomy and Physiology I [1]	4
CHM-110	Introduction to Chemistry [1]	3
CHM-111	Introduction to Chemistry Lab [1]	1

MAT-772	Applied Math [1]	3
Select one of the following:		1
BCA-189	Microcomputer Literacy [1]	
CSC-116	Information Computing [1]	
	Term Totals:	**12**
Term 1		
Fall		
DEN-120	Dental Anatomy [2,3]	3
HSC-107	Professionals in Health [2]	2
DEN-100	Fundamentals of Dentistry [3]	3.5
DHY-173	Dental Hygiene I [3]	4
DEN-200	Preventive Dentistry [3]	2
DEN-130	Head and Neck Anatomy [2,3]	1.5
	Term Totals:	**16**
Term 2		
Spring		
BIO-173	Human Anatomy Physiology II [2]	4
CHM-132	Introduction to Organic and Biochemistry [2]	4
DEN-300	Dental Radiography [3]	3
DHY-140	General and Oral Pathology [3]	2
DHY-186	Dental Hygiene II [3]	4
	Term Totals:	**17**
Term 3		
Summer		
DEN-220	Dental Nutrition [2,3]	1
DHY-220	Dental Materials [3]	1
DHY-274	Local Anesthesia for the Dental Hygienist [3]	1.5
DHY-285	Dental Hygiene III [3]	3
Select one of the following:		3
SPC-101	Fundamentals of Oral Communication [2]	
COM-222	Communication for Health Care Professionals [2]	
SPC-112	Public Speaking [2]	
	Term Totals:	**9.5**
Term 4		
Fall		
DHY-250	Community Dental Health [3]	1.5
DHY-211	Periodontology [3]	2
DHY-134	Therapeutics and Pain Control [3]	2
DHY-296	Dental Hygiene IV [3]	5

BIO-186	Microbiology [2]	4
	Term Totals:	**14.5**
Term 5		
Spring		
DHY-306	Dental Hygiene V [3]	5
ENG-105	Composition I [2]	3
SOC-110	Introduction to Sociology [2]	3
PSY-111	Intro to Psychology [2]	3
Humanities or History/Culture Course (p. 206) [2]		3
	Term Totals:	**17**
	Program Totals:	**86**

[1] Completion of courses with a minimum grade of C- required before admission to the program.

[2] Courses may be taken before beginning the clinical portion of the program.

[3] Minimum C is required in all technical Dental Hygiene courses

Optional Courses

Code	Title	Credit Hours
DHY-910	Dental Hygiene Clinical Enrichment	1
HSC-103	Studies in Health Sciences	1-3

Note: Dental Hygiene graduates are eligible to take the National Board Dental Hygiene Examination and the regional board examinations of their choice. Successful completion of both board examinations is required to receive a license to practice dental hygiene.

Diagnostic Assistant (Radiologic Technology)

Department website. (http://www.kirkwood.edu/alliedhealth/)

- Diagnostic Assistant (Radiologic Technology), A.A.S. (p. 122)

Diagnostic Assistant (Radiologic Technology), A.A.S.

Entry Time

Summer (Application must be received by January 15 for consideration into the program)

Award

Associate of Applied Science degree
4 terms

Diagnostic Assistant is designed for Radiologic Technology students in partnership with the Mercy/St. Luke's School of Radiologic Technology.

The two-year radiologic technology technical program is taught through Mercy/St. Luke's, begins each summer and has a separate application process.

Students must complete prerequisite courses at Kirkwood in order to enter the Mercy/St. Luke's program. After they complete the program and receive their certificate in Radiologic Technology, students can transfer those credits back to Kirkwood and receive this degree as long as the prerequisite courses were taken at Kirkwood.

This Allied Health program has a mandatory background check for clinical purposes.

Career Opportunities

- hospitals
- outpatient clinics
- physicians' offices
- mobile imaging companies

Degree Requirements

Term 1		Credit Hours
BCA-189	Microcomputer Literacy [2]	1
BIO-168	Human Anatomy and Physiology I [2]	4
ENG-105	Composition I [2]	3
HSC-115	Medical Terminology [2]	4
	Term Totals:	12
Term 2		
BIO-173	Human Anatomy Physiology II [2]	4
MAT-102	Intermediate Algebra [2]	4
PSY-111	Intro to Psychology [2]	3
SPC-101	Fundamentals of Oral Communication [2]	3

Humanities or History/Culture Course (p. 206) [2]		3
	Term Totals:	17
Term 3		
Electives (from approved list) [2]		4
Courses from Mercy/St. Luke's School of Radiologic Technology [1]		12
	Term Totals:	16
Term 4		
Courses from Mercy/St. Luke's School of Radiologic Technology [1]		17
	Term Totals:	17
	Program Totals:	62

[1] Transfer credit is awarded upon receipt of an official transcript from Mercy/St. Luke's School of Radiologic Technology

[2] Minimum C grade required to graduate

Electives

Code	Title	Credit Hours
ASL-141	American Sign Language I [2]	4
WBL-110	Employability Skills [2]	1
MGT-145	Human Relations in Management [2]	3
BUS-280	Fundamentals of Lean Process Improvement [2]	3
HSC-107	Professionals in Health [2]	2
PEH-111	Personal Wellness [2]	3
PHI-105	Introduction to Ethics [2]	3
PSY-121	Developmental Psychology [2]	3
PSY-251	Social Psychology [2]	3
RDG-130	Effective Reading Strategies [2]	3
HSV-201	Loss, Trauma and Resilience [2]	3
SPC-132	Group Communication [2]	3

Upon completion of Mercy/St. Luke's School of Radiologic Technology program, 29 technical credits can be transferred to Kirkwood Community College toward an Associate of Applied Science (A.A.S.) degree.

Diesel Technologies

Department website. (https://www.kirkwood.edu/about-us/faculty-leadership/academic-departments/agriculture-sciences/agricultural-sciences/)

• Diesel Technologies, A.A.S. (p. 123)

Diesel Technologies, A.A.S.

Entry Time
Fall

Award
Associate of Applied Science degree
2 years (5 terms including summer)

The Diesel Technology Program offers a two year A.A.S. degree for students entering the workforce in Agricultural Equipment, Heavy Truck and Trailer, or Heavy Equipment maintenance and repair. Today's technicians not only diagnose and fix mechanical problems, they also must understand and troubleshoot the computer-controlled systems found in diesel engines, power trains and hydraulic systems, suspensions, and braking sytems. The program also provides industry training and professional development for graduates. Currently, more than 50 midwestern businesses employ one or more former students who participated in our program.

Career Opportunities
• diesel technician
• shop/service techs
• service managers
• owner operators
• shop foreman/managers

Degree Requirements

Term 1		
Fall		**Credit Hours**
AGM-124	Tech Proc/Power Mech Tech	3
DSL-355	Fundamentals of Internal Combustion Engines	3
DSL-347	Diesel Engines I	3
DSL-143	Fundamentals of Electricity	3
MAT-715	Industrial Math I	3
Communications Course		3
	Term Totals:	**18**
Term 2		
Spring		
AGM-406	Power Transfer I	3
AGM-113	Hydraulics I	3
AGM-427	Equipment Servicing	3
Humanities or History/Culture Course (p. 206)		3
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3
	Term Totals:	**15**
Term 3		
Summer		
WEL-331	Welding Fundamentals	2
MGT-145	Human Relations in Management	3
AGC-210	Employment Seminar	1
AGM-414	Fund of Air Conditioning	2
	Term Totals:	**8**
Term 4		
Fall		
DSL-348	Diesel Engines II	3
DSL-335	Advanced Diesel Electronics	3
AGM-426	Power Transfer II	3
Select one of the following:		6
AGM-404 & AGM-403	Combine Servicing and Combine Operation & Adjustment	
DSL-808 & DSL-809	Truck and Trailer Servicing and Truck and Trailer Chassis	
	Term Totals:	**15**
Term 5		
Spring		
AGM-450	Diesel Diagnosis	15
	Term Totals:	**15**
	Program Totals:	**71**

Digital Arts

Department website. (https://www.kirkwood.edu/programs/degrees/arts-humanities/index/)

- Digital Arts, A.A.S. (p. 124)

Digital Arts, A.A.S.

Entry Time

Fall, Spring or Summer

Award

Associate of Applied Science degree
2 years (4 terms)

The Digital Arts program prepares students for careers in fast-paced, and diverse areas of media technology including photography, graphic design, broadcast and film production, web design and social media marketing. The strong multi-media foundation also includes entrepreneurship plus general education courses that position graduates for employment in the multi-dimensional fields of communications strategies and media relations. Upon completion of the program, students will have the skills to directly enter the workforce with marketable credentials in addition to a solid foundation of coursework should they choose to transfer to one of the many regional four year institutions to continue their education.

Career Opportunities

- multimedia artists and animators
- artists and related workers
- photographers
- film and video editors
- producers and directors
- reporters and correspondents
- camera operators
- media and communication workers

Degree Requirements

Term 1		Credit Hours
ART-120	2-D Design	3
ART-186	Digital Photography	3
GRA-101	Survey of Graphic Communicatio	3
MMS-111	Video Production I	3
Communications Course		3
	Term Totals:	15
Term 2		
ART-161	Digital Art	3
ART-223	Advanced Photography	3
MKT-110	Principles of Marketing	3
MMS-209	Video Production II	3
Communications Course		3

Math Course		3
	Term Totals:	18
Term 3		
ART-224	Commercial Studio Lighting Table Top and Portrait	3
CIS-207	Fundamentals of Web Program	3
MKT-130	Social Media in Business	3
MMS-105	Audio Production	3
GRA-184	Layout Design	4
	Term Totals:	16
Term 4		
ART-945	Digital Arts Capstone	3
BCA-290	Web Design Principles	3
MMS-101	Mass Media	3
MKT-135 or MGT-300	Content Marketing or Intro to Entrepreneurship	3
MMS-241	Public Relations and Marketing	3
	Term Totals:	15
	Program Totals:	64

Early Childhood Education

Department website. (http://www.kirkwood.edu/socialsciences/)

- Early Childhood Education, A.A.S. (p. 125)
- Early Childhood Education Diploma (p. 126)
- Early Childhood Paraeducator Certificate (p. 126)
- Early Childhood Administration Certificate (p. 126)

Early Childhood Education, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science (4 terms)
Associate of Arts Liberal Arts (transfer degree)

The Early Childhood Education program provides several options for students interested in the care and education of young children. Students in the program have opportunities to participate in a variety of community early childhood programs, including Head Start centers, kindergarten classrooms, voluntary four-year-old programs and child care centers. Whenever possible, experience in inclusive and diverse settings will be encouraged.

Students planning to pursue an Early Childhood Education degree at a four-year institution follow the Liberal Arts program requirements while at Kirkwood, completing general education and elective courses that prepare them for transfer. Students hoping to start their careers without transferring should work with the Early Childhood Education advisor to choose from the Associate of Applied Science degree, diploma and certificate options. This program has a mandatory background check for service learning purposes.

Kirkwood has articulation agreements with a number of institutions offering degrees in early childhood. By working with your advisor in Early Childhood Education, you can select courses that will meet the requirements of your transfer institution such as foreign language, laboratory science, diversity and grade point average.

Career Opportunities

- lead teachers
- assistant teachers
- paraeducators
- early childhood program directors and child care providers in a variety of early childhood programs including child care centers
- child development homes
- preschools and Head Start programs

Degree Requirements

Term 1		Credit Hours
ECE-103	Intro to Early Childhood Ed [1]	3
EDU-255	Technology in the Classroom	3
ECE-158	ECE Curriculum I	3
ECE-170	Child Growth and Development	3
ENG-105	Composition I [2]	3
Math/Science Course (from approved list)		3
	Term Totals:	18
Term 2		
ECE-159	ECE Curriculum II	3
PSY-111	Intro to Psychology	3
SPC-101 or SPC-112	Fundamentals of Oral Communication or Public Speaking	3
ENG-106	Composition II [2]	3
ASL-141	American Sign Language I	4
	Term Totals:	16
Term 3		
ECE-133	Child Health/Safety/Nutrition	3
PSY-121	Developmental Psychology	3
EDU-248	Exceptional Persons	3
Program Electives		6
	Term Totals:	15
Term 4		
ECE-221	Inf/Toddler Care & Education	3
ECE-243	Early Childhood Guidance	3
ECE-262	Early Childhood Field Experience	3
Program Elective		3
ECE-290	Early Childhood Program Admin	3
	Term Totals:	15
	Program Totals:	64

[1] Leads to certification as a paraeducator.
[2] Your writing placement score may require prerequisite courses.

Program Electives

Code	Title	Credit Hours
EDU-110	Exploring Teaching [1]	3
EDU-119	Behavior Management [1]	3
EDU-129	Inclusion and Adaptation [1]	3
EDU-240	Educational Psychology	3
EDU-249	Cultural and Linguistic Diversity [1]	3
EDU-258	Autism Spectrum Disorder Support	3
ASL-171	American Sign Language II	4
ECE-928	Independent Study	1
FLF-141	Elementary French I	4
FLF-142	Elementary French II	4
FLS-141	Elementary Spanish I	4
FLS-142	Elementary Spanish II	4
LIT-105	Children's Literature	3
HSV-109	Intro to Human Services	3

| SOC-110 | Introduction to Sociology | 3 |
| SOC-120 | Marriage and Family | 3 |

[1] Leads to certification as a paraeducator.
[2] Your writing placement score may require prerequisite courses.

Early Childhood Education Diploma

Entry Time

Fall, Spring, Summer

Award

Diploma
3 terms

Students in the Early Childhood Education A.A.S. program may elect to receive this diploma after completing the required courses. Please consult with the Social Sciences Department for more information regarding this option.

Diploma Requirements

Term 1		Credit Hours
ECE-103	Intro to Early Childhood Ed	3
ECE-105	Technology for Early Childhood	1
ECE-158	ECE Curriculum I	3
ECE-133	Child Health/Safety/Nutrition	3
ENG-105	Composition I [1]	3
ECE-170	Child Growth and Development	3
	Term Totals:	16
Term 2		
ECE-159	ECE Curriculum II	3
ECE-221	Inf/Toddler Care & Education	3
ECE-243	Early Childhood Guidance	3
ECE-262	Early Childhood Field Experience	3
	Term Totals:	12
Term 3		
PSY-111	Intro to Psychology	3
SPC-101 or SPC-112	Fundamentals of Oral Communication or Public Speaking	3
	Term Totals:	6
	Program Totals:	34

[1] Your writing placement score may require prerequisite courses.

Optional Courses

Code	Title	Credit Hours
EDU-110	Exploring Teaching	3
EDU-119	Behavior Management	3

Early Childhood Paraeducator Certificate

Entry Time

Fall, Spring, Summer

Award

Certificate
2 terms

Students in the Early Childhood Education Associate of Applied Science program may elect to receive an Early Childhood Paraeducator certificate after completing the A.A.S. degree requirements. This certificate complements the Early Childhood Education program by offering additional classes for those students pursuing a career as an early childhood teacher or provider. The Early Childhood Paraeducator certificate also fulfills the educational requirement for those working toward an infant/toddler or preschool Child Development Associate (CDA) administrated by the Council for Professional recognition in Washington D.C. and meets the requirements for clock hours of formal child care education required for the CDA credential. Please consult with the Social Sciences department for more information regarding this option.

Certificate Requirements

Term 1		Credit Hours
ECE-103	Intro to Early Childhood Ed	3
ECE-133	Child Health/Safety/Nutrition	3
ECE-158	ECE Curriculum I	3
ECE-170 or PSY-121	Child Growth and Development or Developmental Psychology	3
	Term Totals:	12
Term 2		
ECE-243	Early Childhood Guidance	3
EDU-110	Exploring Teaching	3
EDU-119	Behavior Management	3
	Term Totals:	9
	Program Totals:	21

Early Childhood Administration Certificate

Entry Time

Fall, Spring, Summer

Award

Certificate
2 terms

Students in the Early Childhood Education Associate of Applied Science program may elect to receive an Early Childhood Administration certificate after completing the A.A.S. degree requirements. This certificate complements the Early Childhood Education program by offering additional classes for those students pursuing a career as an owner/operator of a daycare center. Please consult with the Social Sciences department for more information regarding this option.

Certificate Requirements

Term 1		Credit Hours
Elective Courses [1]		12
	Term Totals:	12
Term 2		
ECE-290	Early Childhood Program Admin	3
ECE-930	Administrative Practicum	1
MGT-130	Principles of Supervision	3
MGT-300	Intro to Entrepreneurship	3
MGT-145	Human Relations in Management	3
	Term Totals:	13
	Program Totals:	25

[1] Any 12 credits from courses in the ECE discipline, other than those specifically required in the plan of study.

Electroneurodiagnostic Technology

Department website. (http://www.kirkwood.edu/alliedhealth/)

- Electroneurodiagnostic Technology, A.A.S. (p. 128)

Electroneurodiagnostic Technology, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Electroneurodiagnostics is the study and recording of electrical activity in the brain and nervous system. An Electroneurodiagnostic (END) Technologist uses an electroencephalograph (EEG) instrument to record electrical impulses transmitted by the brain and nervous system. These recordings assist physicians in the diagnosis of a variety of neurological problems - from headaches and dizziness to seizure disorders, strokes, degenerative brain disease and sleep disorders.

This is a cooperative program between Kirkwood and the Department of Neurology at the University of Iowa Hospitals and Clinics. All technical course work for the program is through the Department of Neurology at the University of Iowa Hospitals and Clinics. The clinical experiences are at area hospitals and the Department of Neurology at the University of Iowa Hospitals and Clinics. Graduates are prepared for the Registry Exam of American Board of Registration of Electroencephalographic and Evoked Potential Technologists.

This Allied Health program has a mandatory background check for clinical purposes.

Accreditation

The Electroneurodiagnostic Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org (http://www.caahep.org)) upon the recommendation of the Committee on Accreditation for Education in Neurodiagnostic Technology.

Commission on Accreditation of Allied Health Education Programs
9355 113th Street N, #7709
Seminole, FL 33775
727-210-2350
www.caahep.org (http://www.caahep.org)

Career Opportunities

- hospitals
- outpatient clinics
- sleep labs
- research
- doctors' offices

Degree Requirements

Prerequisites		Credit Hours
Select one of the following:		2.5
HSC-117	Basic Medical Terminology [3]	
HSC-115	Medical Terminology [3]	
Select one of the following:		3
SPC-101	Fundamentals of Oral Communication [3]	
COM-222	Communication for Health Care Professionals [3]	
SPC-112	Public Speaking [3]	
	Term Totals:	**5.5**
Term 1		
Fall		
HSC-107	Professionals in Health [2]	2
HSC-210	Health Skills I [2]	1
Select one of the following:		1
BCA-189	Microcomputer Literacy [2]	
CSC-116	Information Computing [2]	
BIO-168	Human Anatomy and Physiology I [1,2]	4
END-100	Introduction to Electroneurodiagnostics [1]	2.5
MAT-772	Applied Math [2]	3
	Term Totals:	**13.5**
Term 2		
Spring		
END-310	Electroneurodiagnostic Technical Science [1]	7
END-330	Electroneurodiagnostic Clinical Science [1]	2
BIO-173	Human Anatomy Physiology II [1,2]	4
Humanities or History/Culture Course (p. 206) [2]		3
	Term Totals:	**16**
Term 3		
Summer		
END-810	Electroneurodiagnostic Clinic I [1]	6
	Term Totals:	**6**
Term 4		
Fall		
END-405	Neurodiagnostic Procedures [1]	2
END-830	Electroneurodiagnostic Clinic II [1]	7.5
ENG-105	Composition I [2]	3
PSY-111	Intro to Psychology [2]	3
	Term Totals:	**15.5**

Term 5		
Spring		
END-870	Sleep Technology [1]	6.5
END-850	Electroneurodiagnostic Clinic III [1]	5.5
	Term Totals:	**12**
	Program Totals:	**68.5**

[1] *All technical END courses, prerequisite courses, and* BIO-168 Human Anatomy and Physiology I *and* BIO-173 Human Anatomy Physiology II *must be passed with a minimum grade of C.*

[2] *Courses may be taken before beginning the program.*

[3] *Prerequisites must be passed with a minimum grade of C prior to admission to the program.*

Optional Courses

Code	Title	Credit Hours
END-924	Honors Project	1
HSC-103	Studies in Health Sciences	1-3

Electronics Engineering Technology

Department website. (http://www.kirkwood.edu/industrialtech/)

- Electronics Engineering Technology, A.A.S. (p. 130)
- Electronics Engineering Technology Diploma (p. 131)

Electronics Engineering Technology, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

The Electronics Engineering Technology program balances theory and practical applications to help students design, test, analyze, operate and troubleshoot complex electronic systems. The program integrates LabVIEW®, a graphic-based programming language used by many of the major technology-based employers for data acquisition, process control and automated test instrumentation. Students can transfer more than 40 EET credit hours to UNI toward a B.S. in Electrical and Information Engineering Technology. The curriculum may also be modified to maximize credits transferable to BSEE and BSEET degree programs. EET graduates may also seek certification by the Electronics Technicians Association, International Inc.

Career Opportunities

- field-service technician
- electronics design technician
- electronics test technician
- biomedical electronics technician
- avionics technician
- technical writer
- computer-integrated manufacturing technician
- advanced industrial manufacturing technician
- electronic systems repair technician
- computer repair technician
- controls technician
- security systems technician
- radio communications technician
- component test technician

Degree Requirements

Term 1		
Fall		**Credit Hours**
ELT-279	Electronic Practices	4
ELT-345	Electric Circuits I	5
MAT-745	Technical Mathematics I	4

Communications Course [1]		3
	Term Totals:	16
Term 2		
Spring		
ELT-514	Active Devices I	7
MAT-746	Technical Mathematics II	4
ELT-341	Electric Circuits II	5
Communications Course [1]		3
	Term Totals:	19
Term 3		
Summer		
ELT-309 or EGT-420	Digital Circuits or PLTW - Digital Electronics	3
ELT-518	Active Devices II: Op Amps	3
ELT-299	Intro to LabView	3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	12
Term 4		
Fall		
ELT-618	Microprocessors I	5
PHY-230	Technical Physics I	3
ELT-350	Communications Systems I	7
PSY-111 or MGT-145	Intro to Psychology or Human Relations in Management	3
	Term Totals:	18
Term 5		
Spring		
ELT-399	Communications Systems II	4
ELT-621	Microprocessors II	4
ELT-845	Design Projects	4
PHY-232	Technical Physics II	3
	Term Totals:	15
	Program Totals:	80

[1] Students planning to transfer to a four-year college or university should consider substituting some or all of the following courses into the EET curriculum:
ENG-105 Composition I **and**
ENG-108 Comp II: Technical Writing **or**
ENG-106 Composition II **for**
-------- Communication electives

Optional Courses

Code	Title	Credit Hours
EGT-410	PLTW - Principles of Engineering	3
ELT-924	Honors Project	1
ELT-928	Independent Study	1-3

Electronics Engineering Technology Diploma

Entry Time

Fall

Award

Diploma
1 year (3 terms)

Students in the Associate Degree Electronics Engineering Technology program may elect to receive an Electronic Engineering Technology Diploma after completing the required courses. Please consult with the Industrial Technologies Department for more information regarding this option.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		
Fall		**Credit Hours**
ELT-345	Electric Circuits I	5
MAT-745	Technical Mathematics I	4
ELT-279	Electronic Practices	4
	Term Totals:	**13**
Term 2		
Spring		
MAT-746	Technical Mathematics II	4
ELT-341	Electric Circuits II	5
ELT-514	Active Devices I	7
	Term Totals:	**16**
Term 3		
Summer		
ELT-309 or EGT-420	Digital Circuits or PLTW - Digital Electronics	3
ELT-518	Active Devices II: Op Amps	3
	Term Totals:	**6**
	Program Totals:	**35**

Exercise Science and Wellness

Department website. (http://www.kirkwood.edu/exercisescience/)

- Exercise Science and Wellness, A.A.S. (p. 132)

Exercise Science and Wellness, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (4 terms)

Kirkwood Community College's Exercise Science program will provide the training necessary to become a nationally recognized fitness professional and/or to continue to an institution offering bachelor's degrees, or to further individual knowledge in order to serve the local community. Students within the exercise science program will attain skills in assessment and identification of health risks and fitness program design for general and special populations. Students would also gain knowledge and understanding of physical and physiological adaptations to the environment and exercise and be able to utilize that knowledge to educate others regarding proper exercise form, anatomy, physiology, and the nutrition required to meet health goals.

Graduates from the Exercise Science and Wellness program are eligible to take the Certified Personal Trainer examination offered by various organizations including the National Academy of Sports Medicine, the American Council on Exercise, and the National Strength and Conditioning Association.

Career Opportunities

- fitness centers
- health clubs
- physical therapy clinics
- sports teams
- hospitals
- build own business

Degree Requirements

Term 1		Credit Hours
Select one of the following:		3
BIO-151	Nutrition [1]	
PEH-191	Sports Nutrition [1]	
ENG-105 or ENG-120	Composition I or College Writing	3
Select one of the following: [1]		3
EXS-120	Human A&P for Exercise Sci	
BIO-168 & BIO-173	Human Anatomy Physiology I and Human Anatomy Physiology II	
Math Course		3
Program Elective [1]		3
Activity Course		1
	Term Totals:	16
Term 2		
ENG-106	Composition II	3
EXS-180	Fitness Programming and Design [1]	3
PEH-170	Principles of Weight Training [1]	3
PSY-111	Intro to Psychology	3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	15
Term 3		
EXS-280	Exercise Physiology [1]	4
Math Course		3
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3
Program Elective [1]		6
	Term Totals:	16
Term 4		
PEH-270	Exercise for Special Populatns [1]	3
EXS-285	Personal Trainer Capstone [1]	3
WBL-302	Intern: STEM [1]	2
PSY-121 or PEH-155	Developmental Psychology or Exercise Psychology	3
Humanities or History/Culture Course (p. 206)		3
Activities Course		1
	Term Totals:	15
	Program Totals:	62

Program Electives

Code	Title	Credit Hours
PEH-111	Personal Wellness [1]	3
PEC-111	Technique & Theory of Coaching [1]	2
PEC-126	Athletic Injury Prevention [1]	2
PEC-148	Theory of Coaching Basketball [1]	2
PEH-155	Exercise Psychology [1]	3
PEH-160	Fundamentals of Health Coaching [1]	3
PEH-165	Intro to Comp & Alt Medicine [1]	3
PEH-191	Sports Nutrition [1]	3
PEH-255	Principles Sports Management [1]	3
PEH-924	Honors Project [1]	1
PEH-928	Independent Study [1]	1

Activities Courses

Code	Title	Credit Hours
PEA-102	Aerobic Fitness I	1
PEA-162	Speed and Conditioning I	1
PEA-187	Weight Training I	1
PEA-287	Weight Training II	1

[1] Minimum grade of C- to graduate

Fire Science Technology

Department website. (https://www.kirkwood.edu/about-us/faculty-leadership/academic-departments/social-sciences/index/)

- Fire Science Technology, A.A.S. (p. 134)
- Entry-Level Firefighter Diploma (p. 134)
- Entry-Level Firefighter Certificate (p. 135)
- Fire Science Certificate (p. 135)

Fire Science Technology, A.A.S.

Entry Time

Fall or Summer

Award

Associate of Applied Science degree
2 years (5 terms including summer)

The Fire Science Technology program prepares graduates for a career in the fire service as firefighters. Students learn a variety of skills in fire protection and prevention, theories of fire behavior, and fire control. Students in this program have the opportunity to earn the Firefighter 1 and Firefighter 2 credentials through the Fire Service Training Bureau, as well as become a licensed EMT.

Career Opportunities

- firefighter
- emergency medical technician
- fire investigator
- fire inspector
- fire engineer
- fire safety technician
- fire sprinkler designer/technician
- fire alarm technician

Degree Requirements

Term 1		
Fall		**Credit Hours**
FIR-213	Principles of Emergency Svcs	3
FIR-127	Fire Behavior and Combustion	3
FIR-124	Building Construction	3
Select one of the following:		3
COM-723	Workplace Communications	
ENG-101	Elements of Writing	
ENG-105	Composition I	
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3
	Term Totals:	**15**

Term 2		
Spring		
FIR-150	Fire Detection/Suppression Sys	3
FIR-400	Emergency Safety and Survival	3
FIR-130	Fire Prevention	3
FIR-110	History/Phil of Fire Service	2
FIR-183	Hazardous Materials Management	3
	Term Totals:	**14**
Term 3		
Summer		
FIR-199	Firefighter I	8
	Term Totals:	**8**
Term 4		
Fall		
FIR-201	Firefighter II	3
FIR-146	Firefighting Tactic & Strategy	3
EMS-255	EMT I	4
EMS-350	EMT II	3.5
EMS-365	EMT II Clinical	1
	Term Totals:	**14.5**
Term 5		
Spring		
HSV-201	Loss, Trauma and Resilience (or Approved Social Science Course)	3
Humanities or History/Culture Course (p. 206)		3
FIR-250	Driver/Operator/Pumper	3
Approved Math Course		3
	Term Totals:	**12**
	Program Totals:	**63.5**

Optional Courses

Code	Title	Credit Hours
FIR-924	Honors Project	1
FIR-928	Independent Study	1-3

Entry-Level Firefighter Diploma

Entry Time

Fall or Summer

Award

Diploma
1 year (3 terms including summer)

This credential is a three semester diploma that gives students the fundamental knowledge and skills required for the fire service. Upon completion of this diploma, students have the opportunity to earn the Firefighter 1 credential through the Fire Service Training Bureau, as well as become a licensed EMT.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		
Fall		**Credit Hours**
FIR-213	Principles of Emergency Svcs	3
FIR-124	Building Construction	3
FIR-127	Fire Behavior and Combustion	3
FIR-150	Fire Detection/Suppression Sys	3
Select one of the following:		3
ENG-101	Elements of Writing	
COM-723	Workplace Communications	
ENG-105	Composition I	
	Term Totals:	**15**
Term 2		
Spring		
FIR-183	Hazardous Materials Management	3
EMS-255	EMT I	4
EMS-350	EMT II	3.5
EMS-365	EMT II Clinical	1
Social Science Course		3
	Term Totals:	**14.5**
Term 3		
Summer		
FIR-199	Firefighter I	8
	Term Totals:	**8**
	Program Totals:	**37.5**

Entry-Level Firefighter Certificate

Entry Time

Fall or Summer

Award

Certificate
3 terms

The Entry-Level Firefighter Certificate introduces students to the basics of fire and emergency services. Upon completion of this certificate, students have the opportunity to earn the Firefighter 1 credential through the Fire Service Training Bureau, as well as become a licensed EMT.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
FIR-213	Principles of Emergency Svcs	3
FIR-124	Building Construction	3
FIR-127	Fire Behavior and Combustion	3
	Term Totals:	**9**
Term 2		
FIR-150	Fire Detection/Suppression Sys	3
FIR-199	Firefighter I	8
	Term Totals:	**11**
Term 3		
EMS-255	EMT I	4
EMS-350	EMT II	3.50
EMS-365	EMT II Clinical	1
	Term Totals:	**8.5**
	Program Totals:	**28.5**

Fire Science Certificate

Entry Time

Fall or Summer

Award

Certificate
2 terms

This certificate covers a variety of skills in fire protection and prevention, theories of fire behavior, and fire control. This certificate is intended for career firefighters looking to advance in the field.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
Select three program electives		9
	Term Totals:	**9**
Term 2		
Select three program electives		9
	Term Totals:	**9**
	Program Totals:	**18**

Program Electives

Code	Title	Credit Hours
FIR-124	Building Construction	3
FIR-127	Fire Behavior and Combustion	3
FIR-130	Fire Prevention	3
FIR-146	Firefighting Tactic & Strategy	3
FIR-150	Fire Detection/Suppression Sys	3
FIR-183	Hazardous Materials Management	3
FIR-400	Emergency Safety and Survival	3
FIR-213	Principles of Emergency Svcs	3

Horticulture Sciences

Department website. (http://www.kirkwood.edu/agrisciences/)

- Horticulture Sciences, A.A.S. (p. 137)
- Landscape Design and Construction Certificate (p. 137)
- Turfgrass Management Certificate (p. 138)

Horticulture Sciences, A.A.S.

Entry Time

Fall, Spring

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Horticulture Science AAS prepares students for employment in the "green industry". Students can pursue specialized studies (options) In landscape horticulture studies or golf course and athletic turfgrass management. Students who want to take courses from more than one of these areas can customize their studies with the assistance of a faculty member. This program includes an internship. Specialization certificates can be earned as a part of the AAS degree or earned separately.

The entire Kirkwood campus is an outdoor learning laboratory for our classes. Students will work on real world projects that require problem solving, communication with clients, and time management skills. Using computers, operating large equipment and learning to identify native and ornamental plants are just a few of the opportunities students will have while taking classes in our curriculum.

Career Opportunities

- landscape designer for private homes or corporate campuses
- garden center or greenhouse manager
- salesperson
- commercial grounds foreman
- nursery production

Degree Requirements

Term 1		Credit Hours
AGH-112	Introduction to Turfgrass Management	3
AGH-236	Plant Material Maintenance	3
AGH-220	Plant Identification I	3
AGH-110	Success in Horticulture	1
AGH-152	Landscape Design Techniques	3
AGH-141	Equipment Operations	3
	Term Totals:	16
Term 2		
AGH-221	Principles of Horticulture	3
AGH-102	Horticulture Math	3

COM-723 or ENG-105	Workplace Communications or Composition I	3
AGH-144	Landscape Construction	3
AGH-282	Pesticide App Cert-Hort	1
AGH-211 or AGH-167	Advanced Turfgrass Management or Intro to Landscape Comp Design	3
	Term Totals:	16
Term 3		
Approved industry internship required for graduation as outlined by internship supervisor		
	Term Totals:	0
Term 4		
Humanities or History/Culture Course (p. 206)		3
AGH-240	Plant Identification II	3
AGH-166	Turfgrass and Landscape Irrigation	3
AGH-238	Soil and Water Conservation	3
Select two of the following:		6
AGH-405	Golf Course Maintenance	
AGH-400	Athletic Field Maintenance	
AGH-304	Hardscape Installation	
AGH-168	Hardscape Design	
	Term Totals:	18
Term 5		
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
Select three of the following:		9
AGH-303	Sustainable Site Management	
AGH-445	Turfgrass Management and Administration	
AGH-264	Hydroponic Production	
AGH-297	Landscape Business Operations	
AGH-465	Turf and Landscape Capstone	3
SPC-101	Fundamentals of Oral Communication	3
	Term Totals:	18
	Program Totals:	68

Landscape Design and Construction Certificate

Entry Time

Fall, Spring

Award

Certificate
1 year (2 terms)

The Landscape Design & Construction Certificate allows students to experience the latest trends in landscape design, construction, and maintenance. Students learn to operate industry specific equipment and technology, and discuss current issues in sustainable site management.

Certificate Requirements

Term 1		Credit Hours
AGH-220 or AGH-240	Plant Identification I or Plant Identification II	3
AGH-236	Plant Material Maintenance	3
AGH-141	Equipment Operations	3
AGH-152	Landscape Design Techniques	3
AGH-238	Soil and Water Conservation	3
	Term Totals:	15
Term 2		
AGH-167	Intro to Landscape Comp Design	4
AGH-144	Landscape Construction	3
AGH-297	Landscape Business Operations	4
AGH-303	Sustainable Site Management	3
	Term Totals:	14
	Program Totals:	29

Term 2		
AGH-211	Advanced Turfgrass Management	3
AGH-282	Pesticide App Cert-Hort	1
AGH-141	Equipment Operations	3
AGH-238	Soil and Water Conservation	3
AGH-221	Principles of Horticulture	3
	Term Totals:	13
	Program Totals:	28

Turfgrass Management Certificate

Entry Time

Fall, Spring

Award

Certificate
1 years (2 terms)

The Turfgrass Management Certificate allows students to gain more experience with athletic field and golf course maintenance, best practices in growing and maintaining turf, irrigation repair, and equipment operations.

Certificate Requirements

Term 1		Credit Hours
AGH-220 or AGH-240	Plant Identification I or Plant Identification II	3
AGH-236	Plant Material Maintenance	3
AGH-112	Introduction to Turfgrass Management	3
AGH-166	Turfgrass and Landscape Irrigation	3
AGH-400 or AGH-405	Athletic Field Maintenance or Golf Course Maintenance	3
	Term Totals:	15

Hospitality Management

Department website. (http://www.kirkwood.edu/hospitality/)

- Hospitality Management, A.A.S. (p. 139)
- Hospitality Operations Diploma (p. 140)

Hospitality Management, A.A.S.

Entry Time
Fall

Award
Associate of Applied Science degree
2 years (5 terms including summer)

The goal of this program is to prepare students to work in entry-level leadership positions (e.g., supervisor and assistant managers) in various departments of full-service hotel or food and beverage operations. There continues to be strong industry demand for college-educated individuals who have practical work experience in hospitality operations.

Students in this program will participate in the day-to-day operations of a successful full-service facility by gaining practical training experience at The Hotel at Kirkwood Center. Management-related coursework includes food and beverage, front office and guest services, engineering and risk, housekeeping/laundry operations, legal responsibilities of the industry, the business functions of marketing and accounting, and other hospitality-related business management areas.

In addition to on-the-job training at The Hotel at Kirkwood Center, a separate industry internship allows students to apply their program learning within various other segments of the hospitality industry.

Students in this program earn the following third-party credential: National Restaurant Association's Food Protection Management Certificate.

Career Opportunities
- hotel general manager
- hotel operations supervisor
- meeting and convention manager
- property operations manager
- director of housekeeping
- event planner
- front office manager
- restaurant manager
- director of food and beverage

Degree Requirements

Term 1		Credit Hours
HCM-100	Sanitation & Safety	2
HCM-260	Hospitality Math	3
HCM-321	Intro to Hospitality Industry	1
HCM-600	Introduction to Lodging Operations	2
HCM-601	Housekeeping and Environmental Services	3

COM-723
  or ENG-105
	Workplace Communications
	  or Composition I
		3

CSC-116
  or BCA-213
	Information Computing
	  or Intermediate Computer Bus Apps
		3

	Term Totals:	**17**
Term 2		
HCM-330	Hospitality Personnel Mgmt	3
HCM-618	Food and Beverage Operations	3
HCM-597	Front Office and Revenue Management	4
HCM-354	Service Techniques	2

HCM-279
  or ACC-152
	Hospitality Accounting
	  or Financial Accounting
		3

HCM-616	Hospitality Professionalism	1
	Term Totals:	**16**
Term 3		
HCM-930	Internship Seminar	3
HCM-933	Internship	3
	Term Totals:	**6**
Term 4		
HCM-310	Hospitality Law	3
HCM-599	Engineering and Risk Management	1
MKT-110	Principles of Marketing	3
HCM-213	Service Management (Lab)	4
HCM-934	Internship Seminar II	2
HCM-935	Internship II	1
HCM-616	Hospitality Professionalism	1
	Term Totals:	**15**
Term 5		
Select one of the following:		3
SPC-101	Fundamentals of Oral Comm	
ENG-105	Composition I	
ENG-106	Composition II	
FLS-118	Spanish for Professionals	3
HCM-614	Leadership in Hospitality	3
HCM-251	Purchasing, Recvg & Inventory	2
HCM-603	Hotel Sales, Catering and Event Management	3
	Term Totals:	**14**
	Program Totals:	**68**

Optional Course

Code	Title	Credit Hours
HCM-924	Honors Project	1

When transferring to a four-year school, see your advisor for course requirements. Those transferring to a four-year college or university may want to substitute the following courses:

- PSY-111 Intro to Psychology **for** HCM-330 Hospitality Personnel Mgmt
- ENG-105 Composition I **for** COM-723 Workplace Communications
- ACC-152 Financial Accounting **for** HCM-279 Hospitality Accounting

When transferring to a four-year school, see your advisor for course requirements. Those transferring to a four-year college or university may want to substitute the following courses:

- ENG-105 Composition I **for** COM-723 Workplace Communications

Hospitality Operations Diploma

Entry Time

Fall

Award

Diploma
1 year (2 terms)

Students in the Hospitality Management program may elect to receive a Hospitality Operations Diploma after completing the courses listed under the Diploma option. Please consult with the Hospitality Department for more information regarding this option.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		Credit Hours
HCM-100	Sanitation & Safety	2
HCM-260	Hospitality Math	3
HCM-321	Intro to Hospitality Industry	1
HCM-600	Introduction to Lodging Operations	2
HCM-601	Housekeeping and Environmental Services	3
COM-723	Workplace Communications	3
	Term Totals:	**14**
Term 2		
HCM-330	Hospitality Personnel Mgmt	3
HCM-354	Service Techniques	2
HCM-618	Food and Beverage Operations	3
HCM-597	Front Office and Revenue Management	4
HCM-616	Hospitality Professionalism	1
HCM-279	Hospitality Accounting	3
	Term Totals:	**16**
	Program Totals:	**30**

Human Services

Department website. (http://www.kirkwood.edu/socialsciences/)

- Human Services, A.A.S. (p. 141)
- Behavioral Health Paraprofessional Diploma (p. 141)

Human Services, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science degree (5 terms)
Associate of Arts Liberal Arts (transfer degree)

The Human Services program has a strong focus on human behaviors, social policy, social programs, communication, record keeping, interviewing, observing, group processes and problem solving. An important aspect of this program is student involvement with community agencies, including observations and hands-on experiences.

Career Opportunities

- adolescent residential centers
- advocacy groups
- centers for drug and alcohol abuse
- community action programs
- community education and prevention programs
- community mental health centers
- correctional centers
- crisis centers
- facilities for people with mental illness
- group homes/supervised apartment living
- nursing homes; program for seniors
- social/recreational programs
- supported employment services

Degree Requirements

Term 1		Credit Hours
HSV-109	Intro to Human Services	3
ENG-105	Composition I	3
SOC-110	Introduction to Sociology	3
PSY-111	Intro to Psychology	3
MAT-156	Statistics	3
	Term Totals:	15
Term 2		
HSV-110	Human Serv Policy & Programs	3
HSV-120	Observation Skills	3
HSV-282	Health & Psychosocial Rehab	3
ENG-106 or ENG-108	Composition II or Comp II: Technical Writing	3
HSV-130	Interview/Interper Relation	3
	Term Totals:	15
Term 3		
HSV-201	Loss, Trauma and Resilience	3
HSV-801	Human Services Field Exp	3
	Term Totals:	6
Term 4		
HSV-200	Adaptation Strategies	3
PSY-121	Developmental Psychology	3
SPC-101	Fundamentals of Oral Comm	3
SOC-120	Marriage and Family	3
Select one of the following:		3
SOC-200	Minority Group Relations	
SOC-220	Sociology of Aging	
SOC-265	Intro to LGBTQ+ Studies	
	Term Totals:	15
Term 5		
HSV-287	Counseling Theories & Techniq	3
HSV-292	Substance Abuse and Treatment	3
HSV-801	Human Services Field Exp	3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	12
	Program Totals:	63

Optional Courses

Code	Title	Credit Hours
HSV-813	Alc & Drug Couns Fld Exp I	6
HSV-814	Alc & Drug Couns Fld Exp II	6
HSV-924	Honors Project	1
HSV-928	Independent Study	1-3

Behavioral Health Paraprofessional Diploma

Entry Time

Fall, Spring, Summer

Award

Diploma
3 terms

The Behavioral Health Paraprofessional Diploma has a strong focus on community mental health and substance abuse issues. The students in the diploma program will engage with community providers, organizations and institutions to provide support and resources to individuals dealing with the above listed issues/concerns. The

credits taken in this diploma program along with the completion of the Associate's degree in Human Services will allow the individual student to apply and sit for the national exam to become a certified alcohol and drug counselor.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		Credit Hours
HSV-109	Intro to Human Services	3
HSV-200	Adaptation Strategies	3
HSV-282	Health & Psychosocial Rehab	3
HSV-120	Observation Skills	3
	Term Totals:	**12**
Term 2		
HSV-130	Interview/Interper Relation	3
HSV-201	Loss, Trauma and Resilience	3
HSV-287	Counseling Theories & Techniq	3
HSV-292	Substance Abuse and Treatment	3
	Term Totals:	**12**
Term 3		
HSV-800 or HSV-813	Human Service Fld Exp/Seminar or Alc & Drug Couns Fld Exp I	6
	Term Totals:	**6**
	Program Totals:	**30**

HVAC Installer

Department website. (http://www.kirkwood.edu/industrialtech/)

- HVAC Installer Diploma (p. 143)

HVAC Installer Diploma

Entry Time

Fall

Award

Diploma
1 year (2 terms)

The HVAC Installer program prepares students to enter the skilled trade of heating, ventilation and air conditioning installation. The program focuses primarily on residential and light commercial equipment and covers installation procedures, code requirements, electrical applications and refrigerant handling procedures. The one-year, hands-on program also includes system design and HVAC component operation.

This diploma is eligible for state and federal financial aid.

Career Opportunities

- HVAC installer
- HVAC repair
- technician
- sheet metal worker

Diploma Requirements

Term 1		
Fall		**Credit Hours**
HCR-410	Electrical Applications I	3
HCR-605	HVAC Installation I	5
HCR-710	Fundamentals of Plan and Print Reading	2
HCR-932	Internship	1
MAT-719	Applied HVAC Math	3
Communications Course		3
	Term Totals:	**17**
Term 2		
Spring		
HCR-450	Electrical Apps for HVAC II	3
HCR-600	Pipe Joining Methods	3
HCR-610	HVAC Installation II	7
HCR-932	Internship	1.5
Social Science Course		3
	Term Totals:	**17.5**
	Program Totals:	**34.5**

Optional Courses

Code	Title	Credit Hours
HCR-924	Honors Project	1
HCR-928	Independent Study	1-3

HVAC Installer Tool Requirements

Students in the HVAC Installer program are required to have a tool set for lab activities. Instructors will provide students with a list of minimum requirements. Students can purchase tool set through the Kirkwood bookstore. An additional equipment list will be provided for students to purchase on their own.

Industrial Maintenance Technology

Department website. (http://www.kirkwood.edu/industrialtech/)

- Industrial Maintenance Technology, A.A.S. (p. 144)
- Electromechanical Technology Diploma (p. 145)
- Industrial Automation Certificate (p. 145)
- Operator Certificate (p. 145)

Industrial Maintenance Technology, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

The Industrial Maintenance Technology program prepares students for a broad range of industrial maintenance-related careers using industry-guided curriculum combined with practical hands-on labs.

First-year studies focus on the concepts and technologies that include, but are not limited to, basic electrical theory, motors and transformers, industrial controls and wiring, electrical print design and reading, industrial maintenance concepts (mechanical and electrical), applied physics, and mathematics.

During the second year, students are introduced to a broad range of industrial technologies and processes that are commonplace in today's industrial environments. While in this program, students gain experience and skills in a variety of disciplines, such as plumbing, print reading, welding, fabrication, and light machining.

Career Opportunities

- commercial electrician
- plant maintenance technician
- maintenance mechanic
- maintenance electrician
- millwright

Degree Requirements

Term 1		
Fall		**Credit Hours**
ATR-303	Mechanical Power Transmission	4
ELE-364	Basic Electrical Circuits	4
ELT-796	Fundamentals of Fluid Power	3
MAT-232	Industrial Math	3
Communications Course		3
	Term Totals:	**17**

Term 2		
Spring		
ATR-136	PLC for Manufacturing	4
ATR-310	Industrial Controls	5
CAD-108	CAD for Electrical Design	2
ELT-224	Motors and Transformers	5
	Term Totals:	**16**
Term 3		
Summer		
ATR-328	Instrumen & Process Control	6
ELE-365	Industrial Wiring	3
WEL-267	Welding for Maintenance	3
	Term Totals:	**12**
Term 4		
Fall		
ATR-210	Electromechanical Systems	4
Select one of the following:		4
ATR-311	Controls Capstone [1]	
ATR-254	PLC Integration [2]	
PHY-180	Applied Physics I	2
Communications Course		3
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	**16**
Term 5		
Spring		
Select one of the following:		4
ATR-126 & ATR-279	Advanced Maintenance Tech and Intro to Industrial Networking [1]	
ATR-201	Automation & Instrum Capstone [2]	
MFG-145	Light Machining-Maint Trades	4
Select one of the following:		2
WEL-208	Intro to Fabrication [1]	
ATR-105	Industrial Robotics [2]	
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
	Term Totals:	**13**
	Program Totals:	**74**

[1] Required class for students that are interested in completing the Industrial Maintenance Technology AAS and do not want the Industrial Automation certificate.

[2] Required class for students that are interested in completing both the Industrial Maintenance Technology AAS as well as the Industrial Automation certificate.

Optional Courses

Code	Title	Credit Hours
ATR-450	Computer Integrated Manufactg	3

Industrial Maintenance Technology Tool Requirements

Students in the Industrial Maintenance Technology program are required to have a tool set for lab activities in the third term. Instructors will provide students with a list of minimum requirements. Students can purchase tool set through the Industrial Technologies Department or on their own. An additional equipment list will be provided for students to purchase on their own. Payment plans can be arranged with the financial aid office.

Electromechanical Technology Diploma

Entry Time

Fall

Award

Diploma
1 year (2 terms)

Students in the Associate Degree Industrial Maintenance program may elect to receive an Electromechanical Technology Diploma after completing the required courses. Please consult with the Industrial Technologies Department for more information regarding this option.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		
Fall		**Credit Hours**
ATR-303	Mechanical Power Transmission	4
ELE-364	Basic Electrical Circuits	4
ELT-796	Fundamentals of Fluid Power	3
MAT-232	Industrial Math	3
Communications Course		3
	Term Totals:	**17**
Term 2		
Spring		
ATR-136	PLC for Manufacturing	4
ATR-310	Industrial Controls	5
CAD-108	CAD for Electrical Design	2

ELT-224	Motors and Transformers	5
	Term Totals:	**16**
	Program Totals:	**33**

Industrial Automation Certificate

Entry Time

Fall

Award

Certificate
1 year (2 terms)

Students enrolled in the Industrial Maintenance Technology program will have the option to take classes in the Automation track and earn a certificate in Industrial Automation as they complete their AAS degree.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
ATR-254	PLC Integration	4
	Term Totals:	**4**
Term 2		
Spring		
ATR-105	Industrial Robotics	3
ATR-201	Automation & Instrum Capstone	4
	Term Totals:	**7**
	Program Totals:	**11**

Operator Certificate

Entry Time

Fall

Award

Certificate
1 term

This certificate provides individuals with skills directly applicable to operator roles, such as equipment operation, safety protocols, and basic troubleshooting. Students enrolled in the Industrial Maintenance Technology program will earn the Operator certificate as they complete their AAS degree. Students also have the option to complete the certificate as a standalone credential and go directly into the workforce after one semester.

Certificate Requirements

Term 1		
Fall		**Credit Hours**
ATR-303	Mechanical Power Transmission	4
ELE-364	Basic Electrical Circuits	4
ELT-796	Fundamentals of Fluid Power	3
MAT-232	Industrial Math	3
Communications Elective		3
	Term Totals:	**17**
	Program Totals:	**17**

Interior Design and Interior Architecture

Department website. (https://www.kirkwood.edu/programs/degrees/arts-design/index/)

Interior Design and Interior Architecture, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (6 terms)

Interior Designers are creative business professionals who have the ability to innovatively solve design problems functionally and aesthetically while also improving the overall health, safety and welfare of users through design.

The Interior Design and Interior Architecture program prepares and equips students to practice and serve the community by providing education and training in residential design, commercial design, sustainability, and other areas of specialization in the field of interior design.

This highly interactive program is taught with a student-centered approach within a positive and respectful learning environment. Students are provided with a combination of classroom projects, hands-on training, and classroom instruction that emphasizes ethical, creative, technical, and responsible problem solving design.

Students study all areas of interior design and interior architecture including, but not limited to: Residential Design, Commercial Design, Hospitality Design, Product Design, Sustainable Design, Historical Design, and software including Photoshop, SketchUp, and Revit. Students also learn professional practice concepts and are able to apply those concepts toward assembling a portfolio and resume which are then used to obtain an internship in the field of interior design. Additionally, students have the option of attending numerous field trips to major urban cities such as Chicago, Minneapolis, Kansas City and more. Other national and international trips are open to students at various times throughout the year.

For individuals interested in entering the Interior Design and Interior Architecture Program at Kirkwood Community College, existing knowledge of basic computer applications is highly recommended. If you are currently a high school student, any additional training or classes you can take relating to art, design or drafting will assist in building your knowledge of design as you prepare to enter the Interior Design and Interior Architecture Program at Kirkwood.

A laptop is required for this program.

Career Opportunities

- interior design and architecture firms
- manufacturer's representative
- furniture design
- kitchen design and dealerships
- residential design
- residential staging
- commercial design firms
- contract furniture dealerships
- historic preservation or restoration
- interior design photography
- professional rendering (manual or digital)
- model building and 3D rendering
- upholstery design and fabrication
- professional organizations
- sustainability consultant
- design journalist
- lighting design
- manufacturer sales representative
- interior architecture firms
- real estate
- facilities planning and design
- corporate design
- healthcare design
- education design
- transportation design
- hospitality design

Degree Requirements

Term 1		Credit Hours
CON-101	Architectural Plans and Specs	3
INT-126	Intro to Interior Design [1]	3
INT-128	Historical Interior/Architec [1]	3
INT-129	SketchUp for Interior Design [1]	3
INT-312	Interior Design Topics [1]	3
Select one of the following:		1
INT-315	Regional Perspectives-Int Des [1]	
INT-311	Global Perspective-Int Design [1]	
	Term Totals:	16
Term 2		
INT-132	Theories and Visual Apps [1]	3
INT-300	Textiles for Interior Design [1]	3
INT-201	Revit ID I [1]	3
INT-185	Architectural Photoshop [1]	1
ART-133	Drawing	3
ENG-105	Composition I	3
	Term Totals:	16
Term 3		
Select one of the following:		3

MGT-145	Human Relations in Management	
PSY-111	Intro to Psychology	
SOC-110	Introduction to Sociology	
INT-200	Interior Design Studio [1]	3
Select one of the following:		3
ENG-106	Composition II	
ENG-108	Comp II: Technical Writing	
SPC-101	Fundamentals of Oral Comm	
SPC-112	Public Speaking	
	Term Totals:	9
Term 4		
INT-206	Residential Design I [1]	4
INT-207	Commercial Design I [1]	4
INT-211	CAD REVIT for Interior Design II [1]	3
CON-316	Sustainable Construct Science	3
	Term Totals:	14
Term 5		
INT-208	Costing/Estimating Interiors [1]	3
INT-216	Residential Design II [1]	4
INT-217	Commercial Design II [1]	4
INT-218	Professional Practice & Dev [1]	3
INT-262	Codes and Structures [1]	3
	Term Totals:	17
Term 6		
INT-932	Internship [1]	3
	Term Totals:	3
	Program Totals:	75

[1] Minimum C- required to graduate

Optional Courses

Code	Title	Credit Hours
INT-924	Honors Project	1
INT-928	Independent Study	1-3

Design Introductions Certificate

Entry Time

Fall

Award

Certificate
1 term

The Design Introductions Certificate is available to students, as part of the Interior Design Program, who begin their collegiate Interior Design career and comprises 15 credits from foundation Interior Design coursework. Earning the credential of a Design Introductions Certificate will demonstrate a student's knowledge and understanding of content as it relates to design basics, principles of design, entry-level design software, and design concepts. The certificate will serve as groundwork for building an education in Interior Design and Interior Architecture. Certificate holders may also use the credential as one of many additional resume builders which can be obtained as part of the Interior design program at Kirkwood Community College.

Certificate Requirements

Term 1		Credit Hours
INT-129	SketchUp for Interior Design [1]	3
CON-101	Architectural Plans and Specs [1]	3
INT-126	Intro to Interior Design [1]	3
INT-128	Historical Interior/Architec [1]	3
INT-312	Interior Design Topics [1]	3
	Term Totals:	15
	Program Totals:	15

[1] Minimum C- required for graduation.

Medical Assisting

Department website. (http://www.kirkwood.edu/alliedhealth/)

- Medical Assisting, A.A.S. (p. 149)
- Medical Assisting Diploma (p. 150)

Medical Assisting, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science degree
4 terms (including summer)

After earning a Medical Assisting diploma, graduates are eligible to take the nationally-recognized Certified Medical Assistant exam. Most employers require certification upon employment.

In the clinical area, medical assistants (MAs) take patients to the examination room, ask about and record symptoms, and measure the patient's height, weight and blood pressure. MAs also prepare instruments for and assist with minor surgeries, assist the physician with patient exams, obtain EKGs, give injections and draw blood for routine lab work. MAs may also be employed in an administrative position responsible for greeting patients, answering phones, scheduling appointments, and managing medical records, insurance payments and patient accounts.

This Allied Health program has a mandatory background check for clinical purposes.

Accreditation

The Kirkwood Medical Assisting diploma program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org (http://www.caahep.org)) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs
9355-113th Street N, #7709
Seminole, FL 33775
727-210-2350

Career Opportunities

- physician/specialty clinics
- hospital clinics, public health, laboratories and insurance companies

The graduate may work as:

- an administrative medical assistant
- clinical medical assistant
- patient service representative
- phlebotomist
- scribe
- unit secretary or
- any combination of these positions

Degree Requirements

Prerequisites		Credit Hours
Select one of the following: [3]		3
BIO-161	Basic Anatomy and Physiology	
BIO-168 & BIO-173	Human Anatomy Physiology I and Human Anatomy Physiology II	
	Term Totals:	**3**
Term 1		
MAP-123	Admin Medical Office Procedure [3]	3
MAP-502	Math for Medical Assistants [3]	2
MAP-125	Intro to Clinical Procedures [3]	2
HSC-107	Professionals in Health [1,3]	2
HSC-115	Medical Terminology [1,3]	4
BCA-189	Microcomputer Literacy [1,3]	1
	Term Totals:	**14**
Term 2		
MAP-214	Medical Lab [3]	3
MAP-312	MA Clinical Procedures [3]	3
MAP-402	Medical Law and Ethics [3]	2
MAP-403	Basic Med Office Insurance [3]	2
MAP-513	Medical Assisting Pharmacology [3]	3
	Term Totals:	**13**
Term 3		
Select one of the following:		3
SPC-101	Fundamentals of Oral Comm [1]	
COM-222	Communication for Health Care Professionals [1]	
SPC-112	Public Speaking [1]	
MAP-618	Medical Assisting Externship [2,3]	7
PSY-111	Intro to Psychology [1]	3
	Term Totals:	**13**
Term 4		
ENG-105	Composition I [1]	3
Electives [1]		10
Humanities or History/Culture Course (p. 206) [1]		3
Behavioral/Social Science Elective [1]		3
	Term Totals:	**19**
	Program Totals:	**62**

[1] Courses may be taken before beginning the program.

[2] No program (MAP) courses may be taken with externship. Proof of compliance completion must be done prior to registration for externship.

[3] Minimum C- is required in all MAP courses, in addition to BIO-courses, HSC-107 Professionals in Health, HSC-115 Medical Terminology, and BCA-189 Microcomputer Literacy.

Optional Courses

Code	Title	Credit Hours
HSC-205	Exploration of Healthcare Careers	3
HSC-103	Studies in Health Sciences	1-3
HSC-168	Nurse Aide	3.5
HSC-162	Health Support Professional	3.5
HSC-118	Academic Success in Healthcare	1

Medical Assisting Diploma

Entry Time

Fall, Spring, Summer

Award

Diploma
3 terms

Students in the Medical Assisting program may elect to receive a Medical Assisting Diploma after completing the required courses. Please consult with the Allied Health Department for more information regarding this option.

This Allied Health program has a mandatory background check for clinical purposes.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Prerequisites		Credit Hours
Select one of the following: [3]		3
BIO-161	Basic Anatomy and Physiology	
BIO-168 & BIO-173	Human Anatomy Physiology I and Human Anatomy Physiology II	
	Term Totals:	3
Term 1		
MAP-123	Admin Medical Office Procedure [3]	3
MAP-502	Math for Medical Assistants [3]	2
MAP-125	Intro to Clinical Procedures [3]	2
HSC-107	Professionals in Health [1,3]	2
HSC-115	Medical Terminology [1,3]	4
BCA-189	Microcomputer Literacy [1,3]	1
	Term Totals:	14
Term 2		
MAP-214	Medical Lab [3]	3
MAP-312	MA Clinical Procedures [3]	3

MAP-402	Medical Law and Ethics [3]	2
MAP-403	Basic Med Office Insurance [3]	2
MAP-513	Medical Assisting Pharmacology [3]	3
	Term Totals:	13
Term 3		
MAP-618	Medical Assisting Externship [2,3]	7
PSY-111	Intro to Psychology [1]	3
Select one of the following:		3
SPC-101	Fundamentals of Oral Comm [1]	
COM-222	Communication for Health Care Professionals [1]	
SPC-112	Public Speaking [1]	
	Term Totals:	13
	Program Totals:	43

[1] Courses may be taken before beginning the program.
[2] No program (MAP) courses may be taken with externship. Proof of compliance completion must be done prior to registration for externship.
[3] Minimum C- is required in all MAP courses, in addition to BIO-courses, HSC-107 Professionals in Health, HSC-115 Medical Terminology, and BCA-189 Microcomputer Literacy.

Optional Courses

Code	Title	Credit Hours
HSC-103	Studies in Health Sciences	1-3

Medical Laboratory Technology

Department website. (https://www.kirkwood.edu/about-us/faculty-leadership/academic-departments/allied-health/index/)

- Medical Laboratory Technology, A.A.S. (p. 151)
- Clinical Laboratory Assistant Certificate (p. 152)

Medical Laboratory Technology, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (6 terms)

Medical Laboratory Technicians (MLTs) are members of the healthcare and quality teams who perform, evaluate, assure the accuracy and validity of laboratory test information and collaborate in the diagnosis, treatment and therapy of patients. MLTs are trained to work in multiple settings such as hospitals, physician's offices, private reference laboratories, research, biotechnology, public health, non-clinical industrial laboratories and sales or technical services.

Various diverse functions of sample collection, test analysis, principle application, quality control monitoring, use and maintenance of automated and electronic instruments, trouble shooting and problem solving techniques are performed under the supervision of a Medical Laboratory Scientist or Pathologist in compliance with safety and governmental regulations. The individual will develop competencies in areas such as chemistry, hematology, blood bank, microbiology, immunology, molecular diagnostics and quality assurance.

This Allied Health program has a mandatory background check for clinical purposes.

Upon successful completion of the program the student is eligible to take the national certification exam from the American Society for Clinical Pathology (ASCP.)

The Kirkwood Community College Medical Laboratory Technology program is accredited by the National Accrediting Agency for Clinical Laboratory Services (NAACLS):

5600 N River Road, Suite 720
Rosemont, IL 60018-5119
773-714-8880

Degree Requirements

Term 1		Credit Hours
MLT-105	Pathophysiology for Lab [1]	3
MLT-106	Introduction to Biosafety [1]	1
MLT-109	Principles of Phlebotomy [1]	3
MLT-115	Clinical Lab Fundamentals [1]	3
COM-222	Communication for Health Care Professionals [1,2,3]	3
Select one of the following: [1,2,3]		3
BIO-161	Basic Anatomy and Physiology	
BIO-168 & BIO-173	Human Anatomy Physiology I and Human Anatomy Physiology II	
	Term Totals:	16
Term 2		
MLT-120	Urinalysis [1]	3
MLT-130	Hematology [1]	3
BIO-186	Microbiology [1,3]	4
CHM-110	Introduction to Chemistry [1,2,3]	3
CHM-111	Introduction to Chemistry Lab [1,2,3]	1
	Term Totals:	14
Term 3		
MLT-230	Advanced Hematology [1]	3
MLT-233	Hemostasis and Thrombosis [1]	2
MLT-270	Immunology and Serology [1]	2
Select one of the following:		3
ENG-105	Composition I [1,2,3]	
ENG-120	College Writing [1,2,3]	
ENG-108	Comp II: Technical Writing [1,2,3]	
	Term Totals:	10
Term 4		
MLT-245	Clinical Chemistry [1]	5
MLT-255	Clinical Microbiology [1]	5
MLT-260	Immunohematology [1]	4
MLT-290	Clinical Seminar and Review [1]	2
	Term Totals:	16
Term 5		
MLT-283	Clinical Practicum: Urinalysis [1,4]	1
MLT-286	Clin Prac Immunology/Serology [1,4]	1
MLT-287	Clinical Practicum Hematology [1,4]	4
MLT-293	Clin Prac: Immunohematology [1,4]	3
MLT-297	Clinical Practicum: Chemistry [1,4]	3
Humanities or History/Culture Course (p. 206) [1,2,3]		3
	Term Totals:	15
Term 6		
MLT-288	Clinical Practicum Microbio [1,4]	4
MLT-271	Lab Survey and Preparation	1

Social Science Course [1, 2, 3]		3
	Term Totals:	8
	Program Totals:	79

[1] Minimum C grade in all MLT courses to graduate
[2] Recommended course, other options available, see advisor
[3] Courses may be taken before beginning the technical portion of the program.
[4] This course involves off campus clinical experience.

Social Science Courses

Code	Title	Credit Hours
SOC-110	Introduction to Sociology	3
SOC-115	Social Problems	3
SOC-200	Minority Group Relations	3
SOC-220	Sociology of Aging	3
SOC-265	Intro to LGBTQ+ Studies	3

Clinical Laboratory Assistant Certificate

Entry Time

Fall

Award

Certificate
1 term

The Clinical Laboratory Assistant (CLA) Certificate is designed to provide exposure to clinical laboratory techniques and procedures needed in entry-level laboratory jobs. This certificate can be completed within one semester and can be applied toward an Associate of Applied Science degree in Medical Laboratory Technology. It can also benefit students in other health career programs who are interested in enhancing their skills.

A Clinical Laboratory Assistant plays a supporting role in collecting and processing specimens in a medical laboratory. Their responsibilities can include tasks such as drawing blood samples (phlebotomy) and running laboratory tests for disease detection using manual methods or automated instruments. CLAs are also trained in infection control, biosafety practices and quality assurance. A CLA works directly under a Medical Laboratory Scientist or Pathologist. In non-hospital laboratories, they may also help with administrative and clerical tasks.

It is important that CLAs possess an interest in the sciences in addition to being professional and detail-oriented.

Upon successful completion students are eligible to take the National Healthcareer Association Certified Phlebotomy Technician (CPT) exam.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
MLT-105	Pathophysiology for Lab [1]	3
MLT-106	Introduction to Biosafety [1]	1
MLT-109	Principles of Phlebotomy [1]	3
MLT-115	Clinical Lab Fundamentals [1]	3
COM-222	Communication for Health Care Professionals [2]	3
Select one of the following: [1]		3
BIO-161	Basic Anatomy and Physiology	
BIO-168 & BIO-173	Human Anatomy Physiology I and Human Anatomy Physiology II	
	Term Totals:	16
	Program Totals:	16

[1] Minimum C grade in all MLT courses to graduate
[2] Recommended course, other options available, see advisor

Music

Department website. (https://www.kirkwood.edu/programs/degrees/arts-humanities/index/)

- Music, A.A.A. (p. 153)

Music, A.A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Arts degree
2 years (5 terms including summer)

The Associate of Applied Arts in Music prepares students for successful transfer into a four-year college or university music program, and for a variety of occupations in the music industry, including performing, instrument repair, community music instruction, and music sales. Students will demonstrate their understanding of musical properties through performance, listening, and collaborative opportunities. Students will engage in the study of music in a variety of historical and cultural contexts. An internship experience is also part of the program where students will apply the skills they have learned through the program to the music industry.

Career Opportunities

- musicians and singers
- music directors and composers
- private studio music instructor or group lessons
- music instrument retail or repair/tuner

Degree Requirements

Term 1		Credit Hours
MUA-147	Applied Instrumental [1]	1
MUS-120	Music Theory I	3
MUS-135	Music Theory Lab I	1
Large Ensemble Course		1
Small Ensemble Course		1
Applied Music Course		2
ENG-105	Composition I [2]	3
Program Electives [3]		2
Math/Science Course (p. 205)		3
	Term Totals:	17
Term 2		
MUA-147	Applied Instrumental [1]	1
MUS-121	Music Theory II	3
MUS-136	Music Theory Lab II	1
Large Ensemble Course		1

Small Ensemble Course		1
Applied Music Course		2
Humanities Course [4]		3
Program Electives [3]		2
ENG-106	Composition II [2]	3
	Term Totals:	17
Term 3		
MUS-933	Music Internship	1
History/Cultures Course (p. 205)		3
	Term Totals:	4
Term 4		
Program Electives [3]		7
Applied Music Course		2
Humanities Course [4]		3
Social Science Course (p. 205)		3
	Term Totals:	15
Term 5		
Program Electives [3]		7
Applied Music Course		2
MUS-945	Music Capstone	3
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3
	Term Totals:	15
	Program Totals:	68

[1] Piano proficiency (2 credits OR until proficiency is passed)
[2] Take both ENG-105 and ENG-106, or take ENG-120
[3] Must take 18 credits from this list. 5 credits must be MUS prefix.
[4] Humanities requires 3 credits from MUS-100, MUS-207, MUS-208 AND 3 credits from MUS-100, MUS-207, MUS-208, DRA-101, DRA-125

Large Ensemble Courses

Code	Title	Credit Hours
MUS-140	Concert Choir	1
MUS-144	Orchestra	1
MUS-145	Concert Band	1
MUS-163	Instrumental Jazz Ensemble	1

Small Ensemble Courses

Code	Title	Credit Hours
MUS-152	Vocal Ensemble	1
MUS-162	Instrumental Ensembles	1
MUS-157	Vocal Jazz Ensemble	1

Applied Music Courses

Code	Title	Credit Hours
MUA-300	Applied Euphonium	2
MUA-301	Applied Bassoon	2
MUA-302	Applied Cello	2
MUA-303	Applied Clarinet	2
MUA-304	Applied Percussion	2
MUA-305	Applied Flute	2
MUA-306	Applied French Horn	2
MUA-307	Applied Guitar	2
MUA-308	Applied Oboe	2
MUA-310	Applied Piano	2
MUA-311	Applied Saxophone	2
MUA-312	Applied String Bass	2
MUA-314	Applied Trombone	2
MUA-315	Applied Trumpet	2
MUA-316	Applied Tuba	2
MUA-317	Applied Viola	2
MUA-318	Applied Violin	2
MUA-319	Applied Voice	2

Program Electives

Code	Title	Credit Hours
MUS-138	Jazz Improvisation	3
MUS-139	Jazz Improvisation II	3
MUS-140	Concert Choir	1
MUS-144	Orchestra	1
MUS-145	Concert Band	1
MUS-152	Vocal Ensemble	1
MUS-157	Vocal Jazz Ensemble	1
MUS-162	Instrumental Ensembles	1
MUS-163	Instrumental Jazz Ensemble	1
MUS-220	Music Theory III	3
MUS-235	Music Theory Lab III	1
MUS-221	Music Theory IV	3
MUS-236	Music Theory Lab IV	1
MUS-409	Integrated Music Theory	1-3
DRA-130	Acting I	3
DRA-132	Acting II	3
DRA-230	Acting Lab	1
DRA-162	Technical Theatre	3
DRA-172	Technical Theatre Lab	1
DRA-200	Intro to Design for Theatre	3
EDU-129	Inclusion and Adaptation	3
EDU-240	Educational Psychology	3
EDU-248	Exceptional Persons	3
GRA-151	Web Design	3
MGT-300	Intro to Entrepreneurship	3
MMS-105	Audio Production	3
PHY-120	Introductory Physics	3

Humanities Courses

Code	Title	Credit Hours
MUS-100	Music Appreciation	3
DRA-101	Introduction to Theatre	3
DRA-125	Introduction to Play Analysis	3
MUS-207	Intro to Film Music	3
MUS-208	American Popular Music & Jazz	3

Network and System Administration

Department website. (http://www.kirkwood.edu/businessdept/)

- Network and System Administration, A.A.S. (p. 155)
- System Administration Diploma (p. 156)

Network and System Administration, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (4 terms)

Network and system administrators work in a fast-paced and challenging area of technology that designs, builds, integrates, maintains and secures local area networks. They design and support server systems and related software, as well as provide end-user support for all LAN-based applications.

Network Administration students will specialize in LAN and WAN infrastructure including wireless, desktop systems and protocol suites.

In addition to training for the specialization, this program also focuses on communication skills, professionalism, critical thinking and problem solving, teamwork and life-long learning that are essential for success in the workplace and in life.

The program strives to be vendor neutral to give the graduate the greatest breadth of preparation. In addition to the degree and with additional study, coursework should prepare the student for some of the following industry credentials:

- CompTIA A+
- CompTIA Network+
- CompTIA Security+
- Microsoft Certified Solution Associate
- CompTIA Linux+
- Cisco Certified Network Associate
- Microsoft Certified Professional
- Microsoft Certified Solutions Expert
- VMware Certified Professional

Career Opportunities

- Entry Level:
  - network technician
  - systems technician
  - cloud technician
  - network operations technician
- Some Experience:
  - network administrator/analyst
  - systems administrator/analyst
  - cloud administrator
  - network operations administrator

Degree Requirements

Term 1		Credit Hours
NET-130	Computer Concepts [1]	3
NET-165	Network Plus [1]	3
CIS-207	Fundamentals of Web Program [1]	3
CIS-121	Intro to Programming Logic [1]	3
MAT-102	Intermediate Algebra	4
	Term Totals:	16
Term 2		
NET-235	CCNA Cisco 1 [1]	3
NET-630	Ethics in Info Tech [1]	3
NET-650	Cloud Infrastructure [1]	3
NET-168	Admin Windows Server [1]	3
ENG-105	Composition I	3
	Term Totals:	15
Term 3		
NET-236	CCNA Cisco 2 [1]	3
NET-600	Network Security Basics [1]	3
NET-176	Admin Red Hat Server [1]	3
NET-616	VMware VCP [1]	3
MKT-180	Customer Service Strategies	1
Communication Course		3
	Term Totals:	16
Term 4		
NET-619	Network Attacks [1]	3
NET-844	Network/Systems Capstone [1]	3
Humanities or History/Culture Course (p. 206)		3
NET-237	CCNA Cisco 3 [1]	3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
Select one of the following:		1
WBL-110	Employability Skills	
MGT-121	Project Management Basics	
WBL-146	Project: Info Solutions	
	Term Totals:	16
	Program Totals:	63

[1] Minimum grade of C- for graduation

System Administration Diploma

Entry Time

Fall

Award

Diploma
3 terms

System administrators work in a fast-paced and challenging area of technology that designs, builds, integrates, maintains and secures local area networks. They may design and support server systems and related software, as well as provide end-user support for many cloud-based and local applications.

Diploma-seeking students will have a good working knowledge of network infrastructure, server and desktop systems, and protocol suites. In addition to training for the technical specialization, the coursework also focuses on communication skills, professionalism, critical thinking and problem solving, legal aspects of technology, basic web design and programming logic as well as teamwork and life-long learning that are essential for success in the workplace and in life.

The coursework strives to provide vendor agnostic situations to give the graduate the greatest breadth of preparation, however vendor specifics are necessary to learn, test and demonstrate the coursework through student learning outcomes.

In addition to the diploma and with additional study, coursework should give direction to the student for some of the following industry credentials:

- CompTIA A+
- CompTIA Network+
- CompTIA Security+
- Microsoft Fundamentals Certifications
- CompTIA Linux+
- CompTIA Cloud Essentials
- AWS Cloud Practitioner
- Red Hat Administrator, and
- VMware Certified Professional

This diploma is eligible for state and federal financial aid.

Career Opportunities

- network field technician
- network support technician
- network operations center (NOC)
- entry-level network administrator
- help desk technician
- call center support technician

Diploma Requirements

Term 1		Credit Hours
ENG-105	Composition I	3
NET-130	Computer Concepts [1]	3
NET-165	Network Plus [1]	3
CIS-121	Intro to Programming Logic [1]	3
CIS-207	Fundamentals of Web Program [1]	3
	Term Totals:	**15**
Term 2		
NET-235	CCNA Cisco 1 [1]	3
NET-630	Ethics in Info Tech [1]	3
NET-650	Cloud Infrastructure [1]	3
NET-168	Admin Windows Server [1]	3
	Term Totals:	**12**
Term 3		
NET-236	CCNA Cisco 2 [1]	3
NET-600	Network Security Basics [1]	3
NET-176	Admin Red Hat Server [1]	3
NET-616	VMware VCP [1]	3
MKT-180	Customer Service Strategies	1
	Term Totals:	**13**
	Program Totals:	**40**

[1]   Minimum C- required for graduation

Nursing - LPN/RN

Department website. (http://www.kirkwood.edu/nursing/)

Nursing - LPN/RN, A.A.S.

Entry Time

Fall, Spring, Summer

Note: The Nursing Program is a day program. However, some evening or weekend experiences may be required.

Award

Associate of Applied Science degree
2 years (5 terms plus prerequisites)

Accreditation

The Nursing program is approved by the Iowa Board of Nursing:
River Point Business Park
400 S.W. 8th Street, Suite B
Des Moines, IA 50309-4685
515-281-3255
https://nursing.iowa.gov

NLN CNEA Accreditation

- The Kirkwood Community College Associate Degree in Nursing program holds accreditation status from the
  National League for Nursing Commission for Nursing Education Accreditation
  2600 Virginia Avenue, NW
  Washington, DC, 20037
  202-909-2526

Program Description

The first two semesters of the Practical Nursing (PN) and Associate Degree Nursing (ADN) programs are identical and provide a core of knowledge and skills that are common to both nursing roles. Kirkwood nursing classes cover medical, surgical, geriatric, maternal-child, mental health and home health nursing over the five-semester program. Patient care skills are learned in a supervised lab setting. Clinical experience begins in the first semester. Students receive clinical experience in all of the major areas of nursing and complete their clinicals in area hospitals, nursing homes, clinics, mental health facilities, home health agencies and a variety of specialty clinics.

Additional Requirements

- GPA of 2.75 in pre-requisites with Minimum C in each course EXCEPT: minimum B- in Introduction to Nursing and Anatomy & Physiology I and II
- May take each pre-requisite course only twice
- Anatomy & Physiology I and II courses must be taken within 5 years of entry into the nursing program and must be 3 credits didactic course with a 1 credit lab
- Introduction to Nursing must be taken within 2 semesters of entry into the nursing program

- TOEFL IBT of 84 with a minimum Speaking score of 26 for those who have not graduated from a high school or college in the United States
- Meet the program Math requirement listed below by achieving one of the requirements below:
  - ACT math score of ≥ 19
  - ALEKS algebra score of 30 (effective October 1, 2016)
  - College level Math course equivalency
  - Earned AA or Bachelor's Degree
  - Please Note: Test scores expire after 2 years
- Personal laptop is required for all computer based testing. Specifications of laptop requirements are available on the Kirkwood Nursing website or at the Department of Nursing office; 2172 Linn Hall.
- Certified Nursing Assistant OR Health Support Professional
  - Certified Nursing Assistant demonstrated by the following:
    - Certificate of completion of an Iowa CNA course (with completion of the clinical component of the course)
    - Listing in the Iowa Department of Inspections and Appeals Direct Care Worker Registry as eligible
    - **Note:** Students may obtain CNA training through Kirkwood's Continuing Education

or

- Health Support Professional demonstrated by the following:
  - Certificate of completion of all Health Support Professional (HSP) modules in the Iowa Prepare to Care Direct Care Professional Career Pathway (https://iowapreparetocare.training-source.org/) curriculum
  - Listing in the Care Book as an HSP
  - Minimum of 80 hours of work experience as an HSP supported with the following:
  - Letter from nurse manager
  - Official job description
- **Compliance Requirements:**
  - Criminal and Dependent Adult Abuse and Child Abuse Background Checks
  - Immunizations
  - Current certification for American Heart Association Health Care Provider in CPR
  - Administrative requirements
  - **Note:** Students must provide immunization paperwork for specified immunizations and pass a Criminal and Dependent Adult Abuse and Child Abuse Background Check prior to admission to the program. Failure to pass these background checks, complete the immunizations or administrative requirements will prevent admission to the Nursing Program.
- **Note: Nursing courses with a clinical component may not be taken by a person:**
  - Who has been denied licensure by the Iowa Board of Nursing.
  - Whose license is currently suspended, surrendered or revoked in any United States jurisdiction.
  - Whose license/registration is currently suspended, surrendered or revoked in another country due to disciplinary action.

Career Opportunities

- hospitals
- long-term care facilities

- home health care
- hospice
- nurse educator
- public health
- clinics
- school nursing
- military
- correctional nursing
- wellness centers
- occupational-industry

Degree Requirements

Prerequisites		Credit Hours
BIO-168	Human Anatomy and Physiology I [1]	4
BIO-151	Nutrition [2]	3
Select one of the following:		3
ENG-105	Composition I [2]	
ENG-120	College Writing [2]	
PSY-111	Intro to Psychology [2]	3
SOC-110	Introduction to Sociology [2]	3
Humanities or History/Culture Course (p. 206) [2]		3
	Term Totals:	19
Term 1		
BIO-173	Human Anatomy Physiology II [1]	4
HSC-189	Introduction to Nursing [1]	4
PSY-121	Developmental Psychology [2]	3
BIO-186	Microbiology [2]	4
Select one of the following:		3
SPC-101	Fundamentals of Oral Communication [2]	
SPC-112	Public Speaking [2]	
	Term Totals:	18
Term 2		
PNN-228	Foundations of Nursing I [1]	6
PNN-280	Pharmacology I [1]	2
PNN-721	Foundations of Nursing Clinical I	2
PNN-293	Health Assessment [1]	3
	Term Totals:	13
Term 3		
PNN-229	Foundations of Nursing II [1]	4
PNN-282	Pharmacology II [1]	2
PNN-446	Nursing Care of the Growing Family [1]	4
PNN-723	Foundations of Nursing Clinical II	2
	Term Totals:	12

Term 4		
ADN-171	Concepts of Nursing I [1]	5
ADN-740	Concepts of Nursing Clinic	3
ADN-176	Adv Concepts in Mental Health [1]	4
	Term Totals:	12
Term 5		
ADN-180	Advanced Concepts of Nursing [1]	4
ADN-760	Advanced Concepts of Nursing Clinical	4
ADN-183	Advanced Concepts in Obstetric and Pediatric Nursing [1]	4
	Term Totals:	12
	Program Totals:	86

[1]   Completion of courses with a B- minimum required.
[2]   Completion of courses with a minimum of a C required prior to acceptance.

Optional Courses

Code	Title	Credit Hours
ADN-924	Honors Project	1
HSC-160	Healthcare Communication	3
HSC-224	Geriatric Specialist	3

Nursing - LPN Diploma

Entry Time

Fall, Spring, Summer
Note: The Nursing Program is a day program. However, some evening or weekend experiences may be required.

Award

Diploma
1 year (3 terms plus prerequisites)

Program Description

Students in the Associate Degree Nursing (ADN) program may elect to receive a Practical Nursing (PN) Diploma after completing the required courses. Please consult with the Nursing Department for more information regarding this option. A 75 hour CNA course is required to start the technical part of the program.

This diploma is eligible for state and federal financial aid.

Additional Requirements

- GPA of 2.75 in pre-requisites with Minimum C in each course EXCEPT: minimum B- in Introduction to Nursing and Anatomy & Physiology I and II
- May take each pre-requisite course only twice
- Anatomy & Physiology I and II courses must be taken within 5 years of entry into the nursing program and must be 3 credits didactic course with a 1 credit lab

- Introduction to Nursing must be taken within 2 semesters of entry into the nursing program
- TOEFL IBT of 84 with a minimum Speaking score of 26 for those who have not graduated from a high school or college in the United States
- Meet the program Math requirement listed below by achieving one of the requirements below:
  - ACT math score of ≥ 19
  - ALEKS algebra score of 30 (effective October 1, 2016)
  - College level Math course equivalency
  - Earned AA or Bachelor's Degree
  - Please Note: Test scores expire after 2 years
- Personal laptop is required for all computer based testing. Specifications of laptop requirements are available on the Kirkwood Nursing website or at the Department of Nursing office; 2172 Linn Hall.
- Certified Nursing Assistant OR Health Support Professional
  - Certified Nursing Assistant demonstrated by the following:
    - Certificate of completion of an Iowa CNA course (with completion of the clinical component of the course)
    - Listing in the Iowa Department of Inspections and Appeals Direct Care Worker Registry as eligible
    - **Note**: Students may obtain CNA training through Kirkwood's Continuing Education

or

- Health Support Professional demonstrated by the following:
  - Certificate of completion of all Health Support Professional (HSP) modules in the Iowa Prepare to Care Direct Care Professional Career Pathway (https://iowapreparetocare.training-source.org/) curriculum
  - Listing in the Care Book as an HSP
  - Minimum of 80 hours of work experience as an HSP supported with the following:
  - Letter from nurse manager
  - Official job description
- **Compliance Requirements:**
  - Criminal and Dependent Adult Abuse and Child Abuse Background Checks
  - Immunizations
  - Current certification for American Heart Association Health Care Provider in CPR
  - Administrative requirements
  - **Note**: Students must provide immunization paperwork for specified immunizations and pass a Criminal and Dependent Adult Abuse and Child Abuse Background Check prior to admission to the program. Failure to pass these background checks, complete the immunizations or administrative requirements will prevent admission to the Nursing Program.
- **Note: Nursing courses with a clinical component may not be taken by a person:**
  - Who has been denied licensure by the Iowa Board of Nursing.
  - Whose license is currently suspended, surrendered or revoked in any United States jurisdiction.
  - Whose license/registration is currently suspended, surrendered or revoked in another country due to disciplinary action.

Diploma Requirements

Prerequisites		Credit Hours
BIO-168	Human Anatomy and Physiology I [1]	4
BIO-151	Nutrition [2]	3
PSY-111	Intro to Psychology [2]	3
	Term Totals:	**10**
Term 1		
BIO-173	Human Anatomy Physiology II [1]	4
HSC-189	Introduction to Nursing [1]	4
PSY-121	Developmental Psychology [2]	3
	Term Totals:	**11**
Term 2		
PNN-228	Foundations of Nursing I [1]	6
PNN-280	Pharmacology I [1]	2
PNN-721	Foundations of Nursing Clinical I	2
PNN-293	Health Assessment [1]	3
	Term Totals:	**13**
Term 3		
PNN-229	Foundations of Nursing II [1]	4
PNN-282	Pharmacology II [1]	2
PNN-446	Nursing Care of the Growing Family [1]	4
PNN-723	Foundations of Nursing Clinical II	2
	Term Totals:	**12**
	Program Totals:	**46**

[1] Completion of courses with a B- minimum required.
[2] Completion of courses with a minimum of a C required prior to acceptance.

Optional Course

Code	Title	Credit Hours
PNN-924	Honors Project	1

Occupational Therapy Assistant

Department website. (http://www.kirkwood.edu/alliedhealth/)

- Occupational Therapy Assistant, A.A.S. (p. 160)

Occupational Therapy Assistant, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Occupational therapy assistants (OTAs) work with patients of all ages and help them learn skills to lead independent lives. OTAs work under the supervision of an occupational therapist (OT) to provide hands-on services to clients who are learning new ways to succeed in the occupation of life. This program starts each year in the fall.

This Allied Health program has a mandatory background check for clinical purposes.

Accreditation

The Occupational Therapy Assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE). Graduates of the program are eligible to sit for the national certification exam administered by the National Board for Certification in Occupational Therapy (NBCOT). Successful completion of the exam leads to the Certified Occupational Therapy Assistant (COTA) designation. Most states, including Iowa, require a license to practice. A felony conviction may affect a graduate's ability to sit for the NBCOT certification exam or obtain state licensure.

The Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA)
7501 Wisconsin Avenue, Suite 510E
Bethesda, MD 20814
(301) 652-AOTA
www.acoteonline.org (http://www.acoteonline.org)

Career Opportunities

- school systems
- assisted living facilities
- hospitals
- outpatient clinics
- long-term care facilities
- private practice

The primary location for Occupational Therapy Assistant students will be the Linn County Regional Center in Hiawatha.

Degree Requirements

Prerequisites		Credit Hours
Select one of the following:		2.5
HSC-117	Basic Medical Terminology [3]	
HSC-115	Medical Terminology [3]	
BIO-168	Human Anatomy Physiology I [3]	4
	Term Totals:	6.5
Term 1		
OTA-101	Foundations of Occupational Therapy [3]	2
OTA-207	OT Methods I [3]	3
OTA-213	Occupational Development [3]	2
BIO-173	Human Anatomy Physiology II [1,3]	4
HSC-107	Professionals in Health [1]	2
PSY-111	Intro to Psychology [1]	3
	Term Totals:	16
Term 2		
OTA-211	Pathophysiology for the OTA [3]	4
OTA-212	Functional Kinesiology [3]	3
OTA-306	OT Methods II [3]	3
OTA-405	Psychosocial Dysfunction [3]	4
OTA-850	Occupational Therapy Assistant Fieldwork I-A [3]	1
Select one of the following:		3
SPC-101	Fundamentals of Oral Comm [1]	
COM-222	Communication for Health Care Professionals [1]	
SPC-112	Public Speaking [1]	
	Term Totals:	18
Term 3		
ENG-105	Composition I [1]	3
OTA-308	Physical Dysfunction I [3]	4
OTA-309	Physical Dysfunction II [3]	4
OTA-851	Occupational Therapy Assistant Fieldwork I-B [2,3]	1
	Term Totals:	12
Term 4		
OTA-205	Occupational Therapy Assistant Management [3]	2
OTA-206	Comm Health & Special Pops [3]	3
OTA-406	OT Methods III [3]	3
OTA-411	Geriatric Interventions for the OTA [3]	1.5
OTA-412	Pediatric Interventions [3]	3
OTA-853	OTA Fieldwork I-C [2,3]	2.5

Humanities or History/Culture Course (p. 206) [1]		3
	Term Totals:	**18**
Term 5		
OTA-409	Professional Development [3]	2
OTA-852	Occupational Therapy Assistant Fieldwork II-A [2,3]	6
OTA-854	Occupational Therapy Assistant Fieldwork II-B [2,3]	6
	Term Totals:	**14**
	Program Totals:	**84.5**

[1] Courses may be taken before beginning the technical portion of the program.

[2] Indicates a course which involves off-campus clinical experience.

[3] Minimum grade of C is required in all technical OTA courses, as well as all program prerequisites courses and BIO-168 Human Anatomy Physiology I, BIO-173 Human Anatomy Physiology II.

Optional Courses

Code	Title	Credit Hours
HSC-103	Studies in Health Sciences	1-3

Paralegal Studies

Department website. (http://www.kirkwood.edu/socialsciences/)

- Paralegal Studies, A.A.S. (p. 162)

Paralegal Studies, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science degree
2 years (4 terms)

Paralegals are legal professionals who assist attorneys in all areas of the law. An attorney may delegate any legal work to a paralegal except tasks that involve giving legal advice or representing a client in court (although paralegals may assist at trial). Iowa prohibits the practice of law by non-attorneys.

Kirkwood Community College is a longstanding member of the American Association for Paralegal Education. Kirkwood's Paralegal Studies helps prepare students for entry-level positions in the paralegal profession. The plan of study also provides career-enhancing credentials for people already employed in law related work. Graduates work in law firms, corporate legal departments, and other business and governmental offices such as prosecutors' offices, banks, title companies and insurance companies.

The program coordinator shall have discretion to evaluate and approve the transfer of all legal specialty courses. A maximum transfer of 12 credits of legal specialty course work is allowed. Students planning to pursue a degree at a four-year institution follow the Liberal Arts program requirements while at Kirkwood, completing general education and Paralegal elective courses that prepare them to transfer.

Graduates who have gone on to law school after completing their bachelor's degree have found their paralegal education at Kirkwood served as an excellent pre-law experience. In addition, any student wishing to explore a legal career will find program courses useful. Introduction to Law, the first program course, satisfies three credit hours of social science requirement toward an A.A. or A.A.S. degree. It is recommended that you work closely with your paralegal advisor.

Degree Requirements

Term 1		Credit Hours
PRL-103	Introduction to Law	3
Select one of the following:		5
ENG-120	College Writing	
ENG-105 & ENG-106	Composition I and Composition II	
ENG-105 & ENG-108	Composition I and Comp II: Technical Writing	
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3

BCA-189 or CSC-116	Microcomputer Literacy or Information Computing	1
Humanities or History/Culture Course (p. 206)		3
Math Course		3
	Term Totals:	18
Term 2		
PRL-116	Fund of Legal Research/Writing	3
PRL-176	Civil Litigation	3
Program Elective		3
Social Sciences Course		3
	Term Totals:	12
Term 3		
PRL-117	Adv Legal Research/Writing	3
PRL-174	Contracts	3
Humanities or History/Culture Course (p. 206)		3
Social Sciences Course		3
Program Elective		6
	Term Totals:	18
Term 4		
PRL-133	Torts	3
Humanities or History/Culture Course (p. 206)		3
Science Course		3
Program Elective		6
	Term Totals:	15
	Program Totals:	63

Program Electives

Code	Title	Credit Hours
PRL-121	Investigation for Paralegals	3
PRL-143	Business Organization Law	3
PRL-151	Real Estate Law	3
PRL-161	Family Law	3
PRL-166	Estate Planning/Administration	3
PRL-171	Administrative Law	3
PRL-186	Employment Law Topics	3
PRL-192	Criminal Law and Procedure for the Paralegal	3
PRL-193	Constitutional Law	3
WBL-309	Intern: Govt/Crim Justice	3

Paramedic

Department website. (http://www.kirkwood.edu/paramedic/)

- Paramedic, A.A.S. (p. 163)
- Emergency Medical Technician (EMT) Certificate (p. 164)

Paramedic, A.A.S.

Entry Time

Spring

Award

Associate of Applied Science degree
2 years (5 terms)

Paramedics provide the highest level of pre-hospital emergency care. The paramedic is an allied health professional whose primary focus is to provide advanced emergency medical care for critical and emergent patients who access the emergency medical system. This individual possesses the complex knowledge and skills necessary to provide patient care and transportation. Paramedics function as part of a comprehensive EMS response, under physician oversight. They perform interventions with the basic and advanced equipment typically found on an ambulance. The paramedic is a link between the scene and the health care system.

Paramedics provide advanced care in a variety of settings. Utilizing critical thinking skills, paramedics rapidly assess, treat and stabilize injured or ill patients and provide transport to or between hospitals. Settings may include ground and air ambulances, emergency departments, critical care units or cardiac cath labs. Along with advanced assessment techniques, paramedics utilize medications, cardiac monitoring and interpreting, defibrillation and advanced invasive skills as guided by state and local protocols, as well as the medical direction of each service.

The Paramedic program follows the current National Emergency Medical Services Education Standards from the National Highway Traffic Safety Administration. The standards prepare the EMT and AEMT for the more advanced scope of practice of the paramedic. This allied health program has a mandatory background check for clinical purposes.

Career Opportunities

- ambulance services
- fire departments
- hospitals
- law enforcement agencies
- other health care facilities

Degree Requirements

Term 1		Credit Hours
Prerequisites [*]		
Select one of the following: [1, 2]		8.5
EMS-255 & EMS-350 & EMS-365	EMT I and EMT II and EMT II Clinical	
EMS-300	Advanced Emergency Medical Technician	
MAT-772	Applied Math [4]	3
	Term Totals:	**11.5**
Term 2		
EMS-601	Paramedic Operations [1]	3
EMS-602	Cardiorespiratory Prep [1]	3.5
EMS-656	Clinical Introduction [1]	1
PSY-111	Intro to Psychology [3, 4]	3
Select one of the following: [4]		3
SPC-101	Fundamentals of Oral Comm [3]	
SPC-112	Public Speaking [3]	
SPC-122	Interpersonal Communication [3]	
COM-222	Communication for Health Care Professionals [3]	
	Term Totals:	**13.5**
Term 3		
EMS-658	Cardiorespiratory Emergencies [1]	4
EMS-659	Paramedic Clinical I [1]	4
EMS-813	ACLS & PALS [1]	1.5
Select one of the following: [4]		3
ENG-105	Composition I [3]	
ENG-108	Comp II: Technical Writing [3]	
ENG-120	College Writing [3]	
	Term Totals:	**12.5**
Term 4		
EMS-691	Medical Emergencies I [1]	3.75
EMS-692	Medical Emergencies II [1]	3.75
EMS-693	Gyn/OB/Neonatology [1]	2.5
EMS-696	Paramedic Clinical II [1]	4
BCA-189	Microcomputer Literacy [3, 4]	1
	Term Totals:	**15**
Term 5		
EMS-697	Trauma Emergencies [1]	3.5
EMS-698	Paramedic Clinical III [1]	3
EMS-701	Paramedic Test Prep [1]	1.5
EMS-822	PHTLS & AMLS [1]	1.5
EMS-699	Paramedic Capstone [1]	3
Humanities or History/Culture Course (p. 206) [3, 4]		3
	Term Totals:	**15.5**
	Program Totals:	**68**

* A current Iowa EMT License is required before acceptance into the technical portion of the program.

[1] Minimum C- required to graduate.

[2] Students are recommended to take EMS-255 EMT I, EMS-350 EMT II and EMS-365 EMT II Clinical. EMS-300 Advanced Emergency Medical Technician may be taken instead.

[3] Course may be taken before the technical portion of the program with program director's permission.

[4] Does not need to be taken in this specific term. Course can be moved throughout the program.

Emergency Medical Technician (EMT) Certificate

Award

Certificate
1 term

The Emergency Medical Technician Certificate program develops skill and knowledge in providing basic life support management of medical and traumatic emergencies. The program focuses on patient assessment, history-taking, and management of cardiopulmonary, medical, behavioral, environmental, and childbirth emergencies. The program prepares students for the state and National Emergency Medical Technician Certification exams - the minimal certification required to provide emergency medical care for transport ambulance services. Students who complete the required coursework will have satisfied the academic requirements for entry into the Paramedic A.A.S degree program.

Certificate Requirements

Term 1		Credit Hours
Select one of the following: [1,2]		8.5
EMS-255 & EMS-350 & EMS-365	EMT I and EMT II and EMT II Clinical	
EMS-300	Advanced Emergency Medical Technician	
	Term Totals:	**8.5**
	Program Totals:	**8.5**

[1] Students are recommended to take EMS-255 EMT I, EMS-350 EMT II and EMS-365 EMT II Clinical. EMS-300 Advanced Emergency Medical Technician may be taken instead.

[2] Minimum C- required to graduate

Parks and Natural Resources

Department website. (http://www.kirkwood.edu/agrisciences/)

- Parks and Natural Resources, A.A.S. (p. 165)
- Parks and Natural Resources Diploma (p. 166)

Parks and Natural Resources, A.A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Science degree
2 years (5 terms)

If you enjoy the outdoors and have a deep concern for preserving and managing our natural resources, take a look at our Parks and Natural Resources program. As a student in this program, you'll learn to

- maintain and build campgrounds and lake areas
- identify and manage fish, amphibians, reptiles, mammals, and nesting and game birds
- operate and maintain equipment
- manage plant material and land
- maintain park facilities

Career Opportunities

Graduates work in beautiful outdoor surroundings. Most jobs are in government parks and entail park maintenance, security, public relations and management.

You may need to relocate to work year-round. Job opportunities include:

- working in a city, county or state park as an attendant or naturalist;
- working in conservation, lake, trail or prairie management;
- environmental education, or
- making land improvements in a soil conservation district.

A bachelor's degree will help in getting desired jobs in county, state and national parks and wildlife areas.

Degree Requirements

Term 1		Credit Hours
AGH-220	Plant Identification I	3
AGH-282	Pesticide App Cert-Hort	1
AGH-110	Success in Horticulture	1
SPC-101	Fundamentals of Oral Communication	3
AGN-105	Applications of Natural Resources	3
Humanities or History/Culture Course (p. 206)		3
Technical Elective		3
	Term Totals:	17

Term 2		
COM-723 or ENG-105	Workplace Communications or Composition I	3
AGC-313	Leadership in Agriculture	1
AGH-141	Equipment Operations	3
AGN-250	Park Maintenance Programs	3
AGH-102	Horticulture Math	3
Technical Elective		3
	Term Totals:	16

Term 3		
Approved industry internship required for graduation as outlined by internship supervisor		
	Term Totals:	0

Term 4		
AGN-248	Natural Resources Appreciation	3
AGN-140	Native Plants	3
AGN-280	Intro to Forestry	3
AGN-220	Avian Wildlife	3
AGN-223	Aquatic Wildlife	3
Technical Elective		3
	Term Totals:	18

Term 5		
AGN-226	Mammalian Wildlife	3
AGN-235	Park and Recreation Administration	3
AGN-240	Natural Resources Interpretation	3
AGN-244	Wildlife Management	3
Behavioral/Social Science Course [1]		3
	Term Totals:	15
	Program Totals:	66

[1] CRJ-100 Introduction to Criminal Justice is the recommended course. PSY-111 Intro to Psychology, SOC-110 Introduction to Sociology and other gen ed social science courses also fulfill this requirement.

Technical Electives

Code	Title	Credit Hours
ENV-115	Environmental Science	3
AGH-236	Plant Material Maintenance	3
AGN-270	Watershed Assessment and Management	3
AGN-260	Wildland Firefighter Training	3
AGH-144	Landscape Construction	3
AGH-238	Soil and Water Conservation	3
AGH-264	Hydroponic Production	3

| AGH-303 | Sustainable Site Management | 3 |
| AGH-221 | Principles of Horticulture | 3 |

Parks and Natural Resources Diploma

Entry Time

Fall, Spring, Summer

Award

Diploma
3 terms

Students in the Parks & Natural Resources AAS program may elect to receive the diploma after completing the required courses. Please consult with the Agriculture Sciences Department for more information regarding this option.

Diploma Requirements

Term 1		Credit Hours
AGH-220	Plant Identification I	3
CRJ-100	Introduction to Criminal Justice	3
COM-723	Workplace Communications	3
AGH-102	Horticulture Math	3
	Term Totals:	12
Term 2		
AGN-250	Park Maintenance Programs	3
AGH-141	Equipment Operations	3
AGH-238	Soil and Water Conservation	3
AGH-144	Landscape Construction	3
	Term Totals:	12
Term 3		
AGN-248	Natural Resources Appreciation	3
AGN-223	Aquatic Wildlife	3
AGN-220	Avian Wildlife	3
AGN-226	Mammalian Wildlife	3
AGN-140	Native Plants	3
	Term Totals:	15
	Program Totals:	39

Pharmacy Technician

Department website. (http://www.kirkwood.edu/pharmtech/)

- Pharmacy Technician Diploma (p. 167)

Pharmacy Technician Diploma

Entry Time

Fall

Award

Diploma
2 terms

The pharmacy technician, under the supervision of a pharmacist, assists in day-to-day pharmacy operations. Pharmacy technicians work in hospitals or retail pharmacies receiving written prescriptions, taking prescription refill requests, preparing intravenous medications, operating computer and automation systems, applying prescription and auxiliary labels to medication bottles, pricing and controlling inventory, and preparing insurance claim forms.

Graduates are eligible to take a national Pharmacy Technician certification exam. National certification is required for employment as a pharmacy technician in Iowa and many other states.

This diploma is eligible for state and federal financial aid.

Career Opportunities

- retail pharmacies
- hospital pharmacies
- medical clinic pharmacies
- home health agencies

Diploma Requirements

Term 1		Credit Hours
PHR-154	Pharmacology for Pharm Tech I [2]	2
PHR-175	Pharm Tech Ops/Regulations [2]	4
Select one of the following:		3
COM-222	Communication for Health Care Professionals	
SPC-112	Public Speaking	
SPC-101	Fundamentals of Oral Communication	
Select one of the following: [1]		3
BIO-161	Basic Anatomy and Physiology	
BIO-168 & BIO-173	Human Anatomy and Physiology I and Human Anatomy Physiology II	
CSC-116	Information Computing	3
	Term Totals:	15
Term 2		
PHR-156	Pharmacology for Pharm Tech II [2]	2
PHR-165	Pharm Tech Calc-Comp W/Lab [2]	4
PHR-173	Pharm Tech Clinical [2]	1.5
PSY-111	Intro to Psychology	3
HSC-115	Medical Terminology	4
HSC-107	Professionals in Health	2
	Term Totals:	16.5
	Program Totals:	31.5

[1] Must complete either BIO-161 Basic Anatomy and Physiology or both BIO-168 Human Anatomy and Physiology I and BIO-173 Human Anatomy Physiology II

[2] Minimum C grade to graduate

Physical Therapist Assistant

Department website. (http://www.kirkwood.edu/alliedhealth/)

• Physical Therapist Assistant, A.A.S. (p. 168)

Physical Therapist Assistant, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

PTA graduates qualify to take the licensure exam given by the Federation of State Boards in Physical Therapy. Licensure is granted by the Iowa Board of Physical Therapy and Occupational Therapy Examiners. Most states, including Iowa, require a license to practice as a PTA. Annual continuing education hours are required to maintain a license.

Physical therapist assistants (PTAs) work closely with physical therapists (PTs) to provide services to people with physical disabilities. Patient treatments may include exercise, functional activities, gait training, massage, electrical stimulation, hot/cold packs, traction and ultrasound and other therapeutic interventions. The PT performs an initial patient examination and identifies patient problems and goals, then outlines a plan of care. The PTA assists the PT by carrying out all or part of the plan of care, monitoring the patient's progress and documenting the care.

This Allied Health program has a mandatory background check for clinical purposes.

Accreditation

The Physical Therapist Assistant program at Kirkwood Community College is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

Commission on Accreditation in Physical Therapy Education (CAPTE)
3030 Potomac Ave, Suite 100
Alexandria, VA, 22305-3085
(703) 706-3245
website: www.capteonline.org (http://www.capteonline.org)
Email: accreditation@apta.org

To contact the program/institution directly, call (319) 398-5566.

Career Opportunities

• outpatient clinics - orthopedics, sports medicine, pediatrics, etc.
• hospitals
• home health
• skilled nursing facilities
• nursing homes
• rehabilitation centers
• school systems

The primary location for Physical Therapist Assistant students will be the Linn County Regional Center in Hiawatha.

Degree Requirements

Prerequisites		Credit Hours
PTA-101	Introduction to PTA [3]	2
BIO-168	Human Anatomy and Physiology I [3]	4
Select one of the following:		2.5
HSC-117	Basic Medical Terminology [3]	
HSC-115	Medical Terminology [3]	
Select one of the following:		3
COM-222	Communication for Health Care Professionals [3]	
SPC-101	Fundamentals of Oral Communication [3]	
SPC-112	Public Speaking [3]	
	Term Totals:	**11.5**
Term 1		
Fall		
PTA-103	PTA Patient Assessment [3]	2
PTA-120	Kinesiology [3]	3
PTA-140	Functional Motor Development [3]	3
BIO-173	Human Anatomy Physiology II [1, 3]	4
HSC-107	Professionals in Health [1]	2
	Term Totals:	**14**
Term 2		
Spring		
PTA-110	Fundamentals for PTA [2, 3]	3
PTA-150	Pathophysiology [3]	3
PTA-196	PTA Modalities [3]	4
PTA-203	PTA Therapeutic Exercise [3]	2
PSY-111	Intro to Psychology [1]	3
Humanities or History/Culture Course (p. 206) [1]		3
	Term Totals:	**18**
Term 3		
Summer		
ENG-105	Composition I [1]	3
PTA-160	PTA Procedures I [3]	3
PTA-161	PTA Procedures II [3]	3
PTA-301	PTA Clinic I [2, 3]	2
	Term Totals:	**11**
Term 4		
Fall		
PTA-215	Orthopedic Issues [3]	4
PTA-232	Rehab for Medical Conditions [3]	4

PTA-241	Neurology for PTA [3]	4
PTA-302	PTA Clinic II [2, 3]	2
	Term Totals:	**14**
Term 5		
Spring		
PTA-250	PTA Career Essentials [3]	2
PTA-432	PTA Clinic III [2, 3]	6
PTA-433	PTA Clinic IV [2, 3]	6
	Term Totals:	**14**
	Program Totals:	**82.5**

[1] Courses may be taken before beginning the technical portion of the program.
[2] Indicates a course which involves off-campus clinical experience.
[3] Minimum C grade required for graduation

Optional Courses

Code	Title	Credit Hours
HSC-103	Studies in Health Sciences	1-3
PTA-924	Honors Project	1

Plumbing Pre-Apprenticeship

Department website. (http://www.kirkwood.edu/industrialtech/)

- Plumbing Pre-Apprenticeship Diploma (p. 170)

Plumbing Pre-Apprenticeship Diploma

Entry Time

Fall

Award

Diploma
1 year (2 terms)

The Plumbing Technology program provides entry-level skills and knowledge for students preparing to enter the plumbing industry. Classes in the first semester focus on safety, hand and power tools, materials, pipe joining methods, code book layout, plan and print reading and trade calculation. Hands-on classes concentrate on pipe joining, pipe materials and basic pipe fitting practices.

The second semester covers plumbing code requirements, installation requirements for drain, waste and vent systems, water pipe systems, gas pipe systems, gas venting systems, cross connection and backflow prevention. The hands-on class includes design and construction of a three-fixture washroom group and testing and troubleshooting backflow prevention devices.

This diploma is eligible for state and federal financial aid.

Career Opportunities

- plumbing installation technician
- plumbing maintenance technician
- plumbing service technician
- plumbing apprenticeship program

Diploma Requirements

Term 1		
Fall		**Credit Hours**
MAT-737	Applied Plumbing Math	3
PLU-130	Plumbing Theory I	6
PLU-140	Plumbing Practices I	4
PLU-148	Plan & Print Reading-Plumbing	2
PLU-932	Internship	2
	Term Totals:	**17**
Term 2		
Spring		
MAT-738	Applied Plumbing Math II	1
PLU-132	Plumbing Theory II	8
PLU-142	Plumbing Practices II	4
PLU-150	Plumb Plan/Print Reading II	2
Communications Course		3
	Term Totals:	**18**
	Program Totals:	**35**

Plumbing Pre-Apprenticeship Tool Requirements

Students in the Plumbing Pre-Apprenticeship program are required to have a tool set for lab activities. Instructors will provide students with a list of minimum requirements. Students can purchase tool set through the Industrial Technologies Department or on their own.

Respiratory Therapist

Department website. (http://www.kirkwood.edu/alliedhealth/)

- Respiratory Therapist, A.A.S. (p. 171)

Respiratory Therapist, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Accreditation

The Kirkwood Respiratory Therapy program, CoARC program number 200190, located in Cedar Rapids, Iowa, is accredited by the Commission on Accreditation for Respiratory Care (www.coarc.com (http://www.coarc.com)). To prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practices as performed by registered respiratory therapists (RRT). Upon completion of the Respiratory Therapy program, you should have the skills and knowledge needed for board exams; TMC (Therapist Multiple Choice) exam (entry level), WRRT and/or CSE exam(s) (Registered Respiratory Therapist). Exams are administered by the National Board of Respiratory Care (NBRC). Listed exams are required for employment, along with licensure to practice respiratory therapy. The Commission on Accreditation for Respiratory Care can be contacted at:

264 Precision Blvd
Telford, TN 37690
www.coarc.com (http://www.coarc.com)

Award Description

Respiratory therapists, also known as respiratory care practitioners, provide treatment, evaluation, monitoring and management of patients with breathing disorders or cardiovascular problems. Respiratory therapists administer oxygen, perform cardiopulmonary resuscitation, manage mechanical ventilators, administer medications, monitor cardiopulmonary systems and measure lung function. Respiratory therapists treat all types of patients: premature infants whose lungs are not fully developed, elderly patients with chronic asthma or emphysema, as well as emergency care for heart attack, stroke, drowning or shock.

Respiratory therapists work closely with physicians, nurses and other health care professionals to provide direct care to children and adults, including delivery of oxygen, administration of aerosolized drugs, endotracheal intubation, suctioning, management of life support, weaning of ventilation or life support, insertion of arterial lines, management of tracheotomies, drawing and interpretation of arterial blood gas samples. Advanced skills include intravenous, chest tube and central line insertions, as well as bronchoscopy procedures.

The Respiratory Therapist curriculum consists of classroom, laboratory and hospital-based clinical experiences at area hospitals and in-home health. This program begins each fall semester.

This Allied Health program has a mandatory background check for clinical purposes.

Career Opportunities

- hospitals
- training centers
- hospital outreach programs
- pharmaceutical sales
- sleep labs
- outpatient clinics
- home health agencies
- health education
- medical research
- physician offices

Degree Requirements

Prerequisites		Credit Hours
Select one of the following: [1]		3
BIO-161	Basic Anatomy and Physiology	
BIO-168 & BIO-173	Human Anatomy Physiology I and Human Anatomy Physiology II	
BIO-186	Microbiology [1]	4
Select one of the following:		3
CHM-110	Introduction to Chemistry [1]	
CHM-165	General Chemistry I [1]	
MAT-102	Intermediate Algebra [1]	4
	Term Totals:	14
Term 1		
RCP-101	Respiratory A&P Enrichment [3]	1
RCP-120	Cardiopulmonary Assessment [3]	1
RCP-212	Introduction to Respiratory Care [3]	3.5
HSC-107	Professionals in Health [2,3]	2
HSC-115	Medical Terminology [2,3]	4
ENG-105	Composition I [2,3]	3
	Term Totals:	14.5
Term 2		
RCP-220	Respiratory Care I [3]	3
RCP-730	Respiratory Care Clinic I [3]	2.5
RCP-300	Respiratory Physiology [3]	4
PSY-111	Intro to Psychology [2,3]	3
Select one of the following:		3
SPC-101	Fundamentals of Oral Comm [2,3]	
SPC-112	Public Speaking [2,3]	

COM-222	Communication for Health Care Professionals [2,3]	
	Term Totals:	**15.5**
Term 3		
RCP-370	Respiratory Pathology I [3]	2
RCP-420	Pulmonary Function Testing [3]	2
RCP-511	Respiratory Care II-A [3]	4
RCP-512	Respiratory Care II-B [3]	4
	Term Totals:	**12**
Term 4		
RCP-470	Cardiac Monitoring [3]	1.5
RCP-850	Respiratory Care III [3]	2.5
RCP-610	Perinatology [3]	2.5
RCP-380	Respiratory Pathology II [3]	2.5
RCP-736	Respiratory Care Clinic II [3]	6
	Term Totals:	**15**
Term 5		
RCP-740	Respiratory Care Clinic III [3]	6.5
RCP-891	Respiratory Care Applications [3]	2.5
RCP-480	Advanced Cardiac Care [3]	2.5
Humanities or History/Culture Course (p. 206) [2,3]		3
	Term Totals:	**14.5**
	Program Totals:	**85.5**

[1] Courses must be completed with a C- or better before admission into the technical portion of the program.

[2] Courses may be taken before beginning the program.

[3] All Respiratory Therapist technical and elective courses must be completed with a C- or better to continue to the next semester.

Respiratory Therapist graduates take the Therapist Multiple Choice Exam administered by the National Board for Respiratory Care to become a certified respiratory therapist (CRT) and be eligible for their Registered Respiratory Therapy licensure upon passing the CRT exam.

Optional Courses

Code	Title	Credit Hours
HSC-103	Studies in Health Sciences	1-3
RCP-924	Honors Project	1

Surgical Technology

Department website. (http://www.kirkwood.edu/alliedhealth/)

- Surgical Technology, A.A.S. (p. 173)

Surgical Technology, A.A.S.

Entry Time

Spring (Cedar Rapids site)
Fall (Distance Education)

Award

Associate of Applied Science degree
2 years (4 terms)

Surgical technologists are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings. The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works under the supervision of a surgeon to ensure that the operating room or environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety. A surgical technologist possesses expertise in the theory and application of sterile and aseptic technique and combines the knowledge of human anatomy, surgical procedures, and implementation tools and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

This Allied Health program has a mandatory background check for clinical purposes.

Accreditation

The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in collaboration with the American College of Surgeons (ACS) and the Association of Surgical Technologies (AST) based on the recommendations of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA). ST graduates will apply to take the Certified Surgical Technologist test. Certification is strongly recommended, and occasionally required, for employment. The Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC-STSA) can be contacted at:

19751 E. Main Street, Suite 339
Parker, CO 80138
303-694-9262
http://www.arcstsa.org

CAAHEP
9355-113th Street N, #7709
Seminole, FL 33775
727-210-2350
www.caahep.org (http://www.caahep.org)

Career Opportunities

- hospital operating rooms
- ambulatory surgery centers
- hospital labor and delivery
- hospital central supply/sterile processing
- sales representative
- teaching
- advancement to management positions possible with experience and education

This curriculum is for the Cedar Rapids-based program or the spring start. Curriculum for the Distance Education program, or fall start, is slightly different. Contact Allied Health for information.

Degree Requirements

Prerequisites		Credit Hours
HSC-115	Medical Terminology [1,4]	4
Select one of the following: [1,4]		3
BIO-161	Basic Anatomy and Physiology	
BIO-168 & BIO-173	Human Anatomy Physiology I and Human Anatomy Physiology II	
SUR-108	Intro to Surgical Technology [1,4]	2
	Term Totals:	**9**
Term 1		
ENG-105	Composition I [2,4]	3
REL-101	Survey of World Religions [2,4]	3
PSY-111	Intro to Psychology [2,4]	3
SPC-101	Fundamentals of Oral Comm [2,4]	3
	Term Totals:	**12**
Term 2		
SUR-230	Fundamentals of Surgical Tech [4]	4
SUR-232	Fundamentals of Surgl Tech Lab [4]	3
SUR-235	Sciences of Surgical Tech [4]	3
SUR-342	Surgical Specialties I [4]	6
	Term Totals:	**16**
Term 3		
SUR-343	Surgical Specialties II [4]	6
SUR-335	Surgical Specialties Lab [4]	3
HSC-107	Professionals in Health [4,5]	2
	Term Totals:	**11**
Term 4		
SUR-344	Surgical Specialties III [4,5]	6
SUR-500	Surgical Technology Clinic I [3,4,5]	3
SUR-501	Surgical Technology Clinic II [3,4]	7
	Term Totals:	**16**
	Program Totals:	**64**

[1] Course must be completed meeting minimum grade requirement for admission to technical program.

[2] Courses may be taken before beginning the program.

[3] Indicates a course which involves off-campus clinical experience.

[4] Students must receive a B in all Surgical Technology courses.

[5] Distance Education students should take HSC-107 in term 4; SUR-344 and SUR-500 should be taken in term 3.

Surgical Technology graduates will apply and take the Certified Surgical Technologist exam.

Optional Courses

Code	Title	Credit Hours
HSC-103	Studies in Health Sciences	1-3
SUR-924	Honors Project	1

Veterinary Technician

Department website. (http://www.kirkwood.edu/agrisciences/)

- Veterinary Technician, A.A.S. (p. 175)

Veterinary Technician, A.A.S.

Entry Time

Summer

Award

Associate of Applied Science degree
2 years (6 terms including summers)

Veterinary technicians provide professional technical support to veterinarians, biomedical researchers and other scientists. They also care for hospitalized patients; assist the doctor in surgery; perform physical exams, lab work and technical procedures (blood draws, IV placement); take health histories and X-rays; give and monitor anesthesia; provide client education; and perform reception duties.

At Kirkwood, veterinary technician students work with a variety of animals including dogs, cats, horses, cows, pigs, birds, snakes, guinea pigs, hamsters and rats. A strong background in biological sciences is needed for this program.

Accreditation

This program is accredited by the AVMA (American Veterinary Medical Association) Committee on Veterinary Technician Education and Activities (CVTEA). For more information, go to www.avma.org (https://www.avma.org/).

Career Opportunities

- small, mixed or large animal practices
- humane societies
- animal shelters
- zoos
- specialty veterinary practices
- pet shops
- biological research labs
- animal control agencies
- veterinary teaching hospitals
- state and federal agencies

Entrance Requirements

Prospective students for the Veterinary Technician program are required to take an entrance exam. There are minimum cut scores that must be achieved for admission into the program. For more information about the entrance exam, visit: http://www.kirkwood.edu/veterinarytechnician (http://www.kirkwood.edu/veterinarytechnician/). You can also contact the Kirkwood Ag Sciences Department at 319-398-5609.

Degree Requirements

Term 1		
Summer		**Credit Hours**
AGV-116	Introduction to the Veterinary Technology Program [1]	1
AGV-126	Animal Anatomy and Physiology I [1]	3
AGV-152	Veterinary Computer Applications [1]	2
AGV-120	Veterinary Medical Terminology [1]	1
ENG-105	Composition I	3
	Term Totals:	**10**
Term 2		
Fall		
AGV-127	Animal Anatomy & Physiol II [1]	4
AGV-142	Math for Vet Tech [1]	3
AGV-105	Animal Behavior/Kennel Mgmt [1]	5
AGC-313	Leadership in Agriculture [1]	1
CHM-110	Introduction to Chemistry	3
CHM-111	Introduction to Chemistry Lab	1
	Term Totals:	**17**
Term 3		
Spring		
SPC-101 or ENG-106	Fundamentals of Oral Communication or Composition II	3
AGV-214	Small Animal Medicine I [1]	3
AGV-167	Vet Clinic Pathology I [1]	3
AGV-161	Animal Nursing I [1]	3
MGT-145	Human Relations in Management	3
AGV-140	Veterinary Pharmacology [1]	3
	Term Totals:	**18**
Term 4		
Summer		
WBL-301	Intern: Ag/Food/Natural Resrc	4
	Term Totals:	**4**
Term 5		
Fall		
AGV-162	Animal Nursing II [1]	3
AGV-215	Small Animal Medicine II [1]	3
AGV-168	Vet Clinic Pathology II [1]	3
AGV-144	Fund of Small Animal Nutrition [1]	3
BIO-186	Microbiology	4

AGV-117	Professionalism for Vet Tech [1]	1
	Term Totals:	**17**
Term 6		
Spring		
AGV-171	Large Animal & Poultry Med [1]	4
AGV-163	Animal Nursing III [1]	3
AGV-169	Vet Clinic Pathology III [1]	3
AGV-216	Avian and Exotics [1]	2
AGV-217	Diagnostic Technologies [1]	2
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	**17**
	Program Totals:	**83**

[1] Minimum C- required for graduation.

Visual Arts

Department website. (https://www.kirkwood.edu/programs/degrees/arts-humanities/index/)

- Visual Arts, A.A.A. (p. 177)

Visual Arts, A.A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Applied Arts degree
2 years (5 terms including summer)

The Associate of Applied Arts in Visual Arts prepares students for successful transfer into a four-year college or university art program, or entry-level employment in the visual arts field. Students will gain skills to pursue work as an independent entrepreneur through diverse coursework in visual arts, business, and entrepreneurship.

Career Opportunities

- pottery and glass blowing manufacturers
- studio artists
- muralists
- tattoo artists
- illustrators
- art gallery coordinators

Degree Requirements

Term 1		
Fall		**Credit Hours**
ART-120	2-D Design	3
ART-133	Drawing	3
ART-143 or ART-184	Painting or Photography	3
ENG-105	Composition I [1]	3
Math/Science Course (p. 205)		3
	Term Totals:	**15**
Term 2		
Spring		
ART-123	3-D Design	3
ART-161	Digital Art	3
Art Elective [2]		3
SPC-101	Fundamentals of Oral Comm	3
BCA-290	Web Design Principles	3
	Term Totals:	**15**

Term 3		
Summer		
WBL-307	Intern: Dig/Visual/Comm Art	3
ENG-106	Composition II [1]	3
	Term Totals:	**6**
Term 4		
Fall		
ART-203	Art History I	3
ART-173 or ART-420	Ceramics or Intro to Glass	3
Art Elective [2]		9
	Term Totals:	**15**
Term 5		
Spring		
ART-204	Art History II	3
Social Science Course (p. 205)		3
Art Elective [2]		3
ART-946	Visual Arts Capstone	3
History/Cultures Course (p. 205)		3
	Term Totals:	**15**
	Program Totals:	**66**

[1]   Take both ENG-105 and ENG-106, or take ENG-120
[2]   Must take 15 credits from this list. 12 credits must be ART prefix.

Art Electives

Code	Title	Credit Hours
ART-143	Painting	3
ART-157	Printmaking	3
ART-184	Photography	3
ART-163	Sculpture	3
ART-173	Ceramics	3
ART-420	Intro to Glass	3
ART-134	Drawing II	3
ART-138	Figure Drawing	3
ART-144	Painting II	3
ART-158	Printmaking II	3
ART-164	Sculpture II	3
ART-174	Ceramics II	3
ART-175	Ceramics III	3
ART-220	Ceramics IV	3
ART-223	Advanced Photography	3
ART-224	Commercial Studio Lighting	3
ART-430	Glass Fusing, Slumping, Cast	3
ART-431	Glas-Fusing, Slumping, and Casting II Casting	3

ART-440	Hot Glass I - Blow, Sculpt	3
ART-441	Hot Glass II - Blow, Sculpt	3
DRA-200	Intro to Design for Theatre	3
GRA-101	Survey of Graphic Communicatio	3
GRA-127	Illustrator I	3
MGT-300	Intro to Entrepreneurship	3

Visual Communication and Design

Department website. (https://www.kirkwood.edu/programs/degrees/arts-design/index/)

- Visual Communication and Design, A.A.S. (p. 179)

Visual Communication and Design, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (4 terms)

Those interested in our Visual Communication and Design program will be able to explore their creative interest in managing, manipulating and merging text and graphic components used to communicate information that sells a product, service or an idea. You will experience the application of art, photography, graphic design principles, marketing, interactive and motion design that reflects our creative industry. Students will have opportunities to develop design solutions individually and as part of a team and do this within our dedicated studio.

The Visual Communication and Design program prepares students for employment in the creative and technical production related to marketing and graphic design. Following an introduction to the visual communication industry, the core program develops students' practical knowledge and provides hands-on experience that align with current standards in visual communication. Students learn design, layout, image manipulation and illustration principles for application in 2D design, print, web and motion graphics, plus receive extensive experience using industry standard software from Adobe.

Career Opportunities

- advertising designer
- design and marketing departments
- in-house graphic designer
- photo editor
- publication designer
- point of purchase/retail display design
- graphical home goods design
- apparel graphic designer
- identity/logo designer
- packaging designer
- environmental design/outdoor advertising
- multimedia designer
- UX/UI/web designer

Degree Requirements

Term 1		
Fall		**Credit Hours**
GRA-101	Survey of Graphic Communicatio [1]	3
ART-133	Drawing	3
ART-120	2-D Design	3
MKT-110	Principles of Marketing	3
ENG-105 or ENG-101	Composition I or Elements of Writing	3
	Term Totals:	**15**
Term 2		
Spring		
MKT-140 or SPC-101	Principles of Selling or Fundamentals of Oral Comm	3
MAT-772	Applied Math	3
ENG-106 or ENG-105	Composition II or Composition I	3
GRA-181	Image Design	4
GRA-182	Illustration Design	4
	Term Totals:	**17**
Term 3		
Fall		
CIS-290	Web Content & E-Commerce Sys	3
GRA-151	Web Design	3
GRA-195	Intro to Web Media	3
GRA-184	Layout Design	4
CIS-207	Fundamentals of Web Program	3
	Term Totals:	**16**
Term 4		
Spring		
GRA-153	Web Media II	3
GRA-157	Web Design II	3
GRA-191	Graphic Communication Apps	3
MGT-145 or PSY-111	Human Relations in Management or Intro to Psychology	3
WBL-157	Job Shadow: Digital/Vis Art	2
	Term Totals:	**14**
	Program Totals:	**62**

[1] GRA-101 Survey of Graphic Communicatio must be completed in the first semester.

Water Environmental Technology

Department website. (http://www.kirkwood.edu/industrialtech/)

- Water Environmental Technology, A.A.S. (p. 180)
- Water Environmental Technology Diploma (p. 181)
- Water Treatment Specialist Diploma (p. 181)
- Wastewater Specialist Diploma (p. 182)

Water Environmental Technology, A.A.S.

Entry Time

Fall, Spring or Summer

Award

Associate of Applied Science degree
2 years (5 terms including summer)

This innovative program provides students with real-world experience with either a one-year or two-year program for preparation in the water and wastewater fields. The two-year degree includes technical study in water/wastewater procedures, complemented by math, science, social science, humanities classes as well as an internship. The Water Environmental Technology program comes to you via Environmental Technology Online. The classes were developed by the Kirkwood Community College, Environmental Training Center. Students may transfer credits from this program to the University of Northern Iowa toward a bachelor's degree in technology management.

Graduates of this program work in municipal water and wastewater treatment plants and the collection systems and distribution systems that serve them. All operators are required by law to be certified. This program provides training and educational experiences that will prepare you for certification examinations. Work experience requirements must be met before you are eligible to take an examination for certification. Be sure to refer to the certifying body in your state to determine eligibility.

The main objective of the program is to provide a comprehensive educational opportunity for immediate and future plan operators and treatment employees and managers. People who may be interested in the program:

- Entry-level students interested in entering the field of water or wastewater treatment technology.
- Plant operators working on improving their industry certification level through attainment of coursework.
- Plant operators laddering their education into the Water Environmental Technology degree.

Career Opportunities

- municipal water utilities
- municipal wastewater treatment plants
- rural water systems
- industrial waste treatment facilities
- engineering firms
- privately owned water/wastewater plants

Degree Requirements

Term 1		
Fall		**Credit Hours**
WAT-308	Wastewater Analysis	3
WAT-307	Wastewater Treatment I	4
WAT-306	Wastewater Collection Systems	4
CHM-110	Introduction to Chemistry	3
MAT-102	Intermediate Algebra [1]	4
	Term Totals:	**18**
Term 2		
Spring		
WAT-304	Water Treatment I	4
WAT-305	Water Distribution Systems	4
WAT-300	Water Analysis	3
Communications Course [1]		3
	Term Totals:	**14**
Term 3		
Summer		
WAT-932	Internship	3
	Term Totals:	**3**
Term 4		
Fall		
CSC-116	Information Computing [1]	3
WAT-312	Water Treatment II	4
WAT-400	Permits and Administration	1
WAT-301	Basic Mech Maint & Pumps	3
Communications Course [1]		3
	Term Totals:	**14**
Term 5		
Spring		
WAT-311	Wastewater Treatment II	4
WAT-210	Wastewater Treatment: Industrial	4
SOC-110	Introduction to Sociology [1]	3
WAT-401	Water and Wastewater Management	2
Select one of the following:		3
ENV-115	Environmental Science [1]	
BIO-186	Microbiology [1]	

Humanities or History/Culture Course (p. 206) [1]		3
	Term Totals:	19
	Program Totals:	68

[1] Courses may be taken before beginning the program.

Optional Courses

Code	Title	Credit Hours
WAT-924	Honors Project	1

Water Environmental Technology Diploma

Entry Time

Fall, Spring

Award

Diploma
1 year (3 terms including summer)

The Water Environmental Technology Diploma awards the student with a credential recognizing completion of the first two semesters of coursework plus the internship.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

Term 1		Credit Hours
WAT-304	Water Treatment I	4
WAT-305	Water Distribution Systems	4
WAT-400	Permits and Administration	1
Approved Math Course [1]		4
	Term Totals:	13
Term 2		
WAT-308	Wastewater Analysis	3
WAT-307	Wastewater Treatment I	4
WAT-306	Wastewater Collection Systems	4
CHM-110	Introduction to Chemistry	3
WAT-401	Water and Wastewater Management	2
	Term Totals:	16
Term 3		
WAT-932	Internship	3
Communications Course [1]		3
	Term Totals:	6
	Program Totals:	35

[1] Courses may be taken before beginning the program.

Water Treatment Specialist Diploma

Entry Time

Fall, Spring

Award

Diploma
1 year (3 terms including summer)

The Water and Wastewater Treatment Specialist diplomas are designed to address the education requirements of both operators working in the water treatment industry and entry-level students interested in entering the water treatment and wastewater treatment industry. The diploma credential can be further laddered into the Water Environmental Technology AAS degree program.

The main objective of the program is to provide a comprehensive educational opportunity for immediate and future plant operations and treatment employees and managers. People who may be interested in this program:

- Entry-level students interested in entering the field of water or wastewater treatment technology.
- Plant operators working on improving their industry certification level through attainment of coursework.
- Plant operators laddering their education into the Water Environmental Technology degree.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

First Semester		Credit Hours
WAT-304	Water Treatment I	4
WAT-305	Water Distribution Systems	4
WAT-300	Water Analysis	3
MAT-102	Intermediate Algebra	4
	Term Totals:	15
Second Semester		
WAT-312	Water Treatment II	4
WAT-400	Permits and Administration	1
WAT-301	Basic Mech Maint & Pumps	3
WAT-401	Water and Wastewater Management	2
ENV-115	Environmental Science [1]	3
	Term Totals:	13
Third Semester		
WAT-932	Internship	3

Communications Course [1]		3
	Term Totals:	6
	Program Totals:	34

[1] Courses may be taken before beginning the program.

Wastewater Specialist Diploma

Entry Time

Fall, Spring

Award

Diploma
1 year (3 terms including summer)

The Water and Wastewater Treatment Specialist diplomas are designed to address the education requirements of both operators working in the water treatment industry and entry-level students interested in entering the water treatment and wastewater treatment industry. The diploma credential can be further laddered into the Water Environmental Technology AAS degree program.

The main objective of the program is to provide a comprehensive educational opportunity for immediate and future plant operators and treatment employees and managers. People who may be interested in this program:

- Entry-level students interested in entering the field of water or wastewater treatment technology.
- Plant operators working on improving their industry certification level through attainment of coursework.
- Plant operators laddering their education into the Water Environmental Technology degree.

This diploma is eligible for state and federal financial aid.

Diploma Requirements

First Semester		Credit Hours
WAT-307	Wastewater Treatment I	4
WAT-306	Wastewater Collection Systems	4
WAT-301	Basic Mech Maint & Pumps	3
MAT-102	Intermediate Algebra	4
	Term Totals:	15
Second Semester		
WAT-311	Wastewater Treatment II	4
WAT-308	Wastewater Analysis	3
WAT-210	Wastewater Treatment: Industrial	4
WAT-401	Water and Wastewater Management	2
	Term Totals:	13
Third Semester		
WAT-932	Internship	3

Web Application Development

Department website. (http://www.kirkwood.edu/businessdept/)

Web Application Development, A.A.S.

Entry Time

Fall

Award

Associate of Applied Science degree
2 years (5 terms including summer)

Web Application Development is a comprehensive and dynamic program that provides students with the opportunity to pursue an associate degree built on a strong base of Web programming related course work. It is specifically designed to equip students with the knowledge and skills required to excel in the web development career field.

This degree appeals to students with a range of interests connected with the internet. Students begin with a set of basic courses covering HTML, introductory computer hardware and networking, along with necessary programming skills. As the program progresses, students learn various aspects of Web design and development through courses emphasizing the workflow associated with the planning process, site design, and the use of standard technologies to provide client solutions. Students also focus on the development side of the web through courses in database management, frameworks and libraries, client-side and server-side programming in a project-based learning environment. Graduates of the Associate's Degree in Web Application Development will be well-prepared to pursue a variety of careers, including web developer, front-end developer, back-end developer, and full-stack developer.

Career Opportunities

- front-end developer
- back-end developer
- full-stack developer
- web software developer
- mobile web application developer
- web systems manager
- website content editor/manager
- eBusiness web designer
- web application developer

Degree Requirements

Term 1		Credit Hours
Select one of the following:		3
CIS-121	Intro to Programming Logic [2]	
CIS-450	PLTW-Computer Sci Principles [2]	
CSC-142	Computer Science [2]	

CIS-207	Fundamentals of Web Program [1]	3
NET-165	Network Plus	3
NET-130	Computer Concepts	3
MAT-138	College Algebra with Limits	4
	Term Totals:	**16**
Term 2		
CIS-335	Relational Database and SQL [1]	3
CIS-263	Web Application Development I [1]	3
Select one of the following:		3
CIS-171	Java [2]	
CSC-142	Computer Science [2]	
ENG-105	Composition I	3
Social Science Course		3
	Term Totals:	**15**
Term 3		
Select one of the following:		3
ENG-106	Composition II	
ENG-108	Comp II: Technical Writing	
SPC-101	Fundamentals of Oral Comm	
SPC-112	Public Speaking	
Humanities or History/Culture Course (p. 206)		3
	Term Totals:	**6**
Term 4		
CIS-175	Java II [1]	3
CIS-238	Front End Development I [1]	3
CIS-363	Web Application Development II [1]	3
CIS-504	Structured Systems Analysis [1]	3
WBL-110 or WBL-146	Employability Skills or Project: Info Solutions	1
Technical/Business Elective		3
	Term Totals:	**16**
Term 5		
CIS-181	Java III [1]	3
CIS-328	Front End Development II [1]	3
CIS-802	Software Development Capstone [1]	3
CSC-153	Data Structures [1]	4
Technical/Business Elective		3
	Term Totals:	**16**
	Program Totals:	**69**

Technical/Business Electives

Code	Title	Credit Hours
BCA-290	Web Design Principles	3
CIS-241	Intro to Blockchain	3
CIS-249	Web Languages	3
CIS-326	Business Intelligence Tools	3
CIS-327	Analytics and Reporting	3
CIS-342	PHP/Apache/MySQL II	3
CIS-354	Data Analytics Projects	3
CIS-370	Fund of 2D Visuals and Games	3
CIS-371	Developing 3D Simulations and Games	3
CSC-160	Software Design & Development	4
CSC-175	Comp. Org. & Assem. Lang. Prog	4
GRA-101	Survey of Graphic Communicatio	3
GRA-184	Layout Design	4
MAT-136	Trigonometry & Analytic Geom	5
MAT-150	Discrete Math	3
MAT-156	Statistics	3
MAT-162	Business Statistics	4
MAT-165	Business Calculus	3
MDT-350	Android App Development	3
MGT-121	Project Management Basics	3
MKT-110	Principles of Marketing	3
Any course with the following subject codes: ACC-, EGR-, FIN-, NET-, PHY-		3

[1] Grade requirement C- or higher

[2] Earn a minimum C- in both CIS-121 Intro to Programming Logic and CIS-171 Java. CIS-450 PLTW-Computer Sci Principles taken in high school with a minimum C- can substitute for CIS-121 Intro to Programming Logic. Other option: Earn a C- in CSC-142 Computer Science

Web Development Certificate

Entry Time

Fall

Award

Certificate
3 terms

Students pursuing the AAS for Web Application Development or Computer Software Development may pick up this certificate. This specializes in the development areas.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
CIS-121	Intro to Programming Logic [1]	3
CIS-207	Fundamentals of Web Program [1]	3
	Term Totals:	6
Term 2		
CIS-335	Relational Database and SQL [1]	3
BCA-290	Web Design Principles [1]	3
	Term Totals:	6
Term 3		
CIS-238	Front End Development I [1]	3
CIS-263	Web Application Development I [1]	3
	Term Totals:	6
	Program Totals:	18

[1] Grade requirement C- or higher

Web Design Certificate

Entry Time

Fall

Award

Certificate
3 terms

Students pursuing the AAS for Web Application Development or Computer Software Development may pick up this certificate. This specializes in the design areas.

This certificate is eligible for state and federal financial aid.

Certificate Requirements

Term 1		Credit Hours
MKT-110	Principles of Marketing	3
GRA-101	Survey of Graphic Communicatio	3
CIS-290	Web Content & E-Commerce Sys [1]	3
	Term Totals:	9
Term 2		
BCA-290	Web Design Principles [1]	3
CIS-207	Fundamentals of Web Program [1]	3
	Term Totals:	6

Term 3		
GRA-184	Layout Design	4
	Term Totals:	**4**
	Program Totals:	**19**

[1] Grade requirement C- or higher

TRANSFER MAJORS

Biology - Transfer Major, A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Science degree
2 years

The Biology Transfer Major is an Associate of Science degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Biology. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
CHM-165	General Chemistry I	4
Writing Course (p. 202) [1]		3
Social Science Course (p. 203)		3
Electives		5
	Term Totals:	15
Term 2		
MAT-210	Calculus I	4
CHM-175	General Chemistry II	4
Writing Course (p. 202) [1]		3
Humanities or History/Cultures Course (p. 202)		3
	Term Totals:	14
Term 3		
Speech Course (p. 202)		3
Social Science Course (p. 203)		3
	Term Totals:	6
Term 4		
BIO-112	General Biology I	4
Humanities or History/Cultures Course (p. 202)		3
Electives		7
	Term Totals:	14
Term 5		
BIO-113	General Biology II	4
Humanities or History/Cultures Course (p. 202)		3
Electives		7
	Term Totals:	14
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Business - Transfer Major, A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Arts degree
2 years

The Business Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Business. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
Writing Course (p. 202) [1]		3
ECN-120	Principles of Macroeconomics	3
MAT-156	Statistics	3
CSC-116	Information Computing	3
Speech Course (p. 202)		3
	Term Totals:	15
Term 2		
Writing Course (p. 202) [1]		3
ECN-130	Principles of Microeconomics	3
Humanities Course (p. 202)		3
Science Course (p. 203)		3
MAT-165	Business Calculus	3
	Term Totals:	15
Term 3		
ACC-152	Financial Accounting	4
BUS-185	Business Law I	3
Social Science Course (p. 203)		3
Literature Course (p. 202)		3
History/Cultures Course (p. 202)		3
	Term Totals:	16
Term 4		
ACC-156	Managerial Accounting	4
Science Course (p. 203)		3
History/Cultures Course (p. 202)		3
Humanities Course (p. 202)		3

Electives		4
	Term Totals:	17
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Chemistry - Transfer Major, A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Science degree
2 years

The Chemistry Transfer Major is an Associate of Science degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Chemistry. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
MAT-210	Calculus I	4
CHM-165	General Chemistry I	4
Writing Course (p. 202) [1]		3
Social Science Course (p. 203)		3
	Term Totals:	14
Term 2		
MAT-216	Calculus II	4
CHM-175	General Chemistry II	4
Writing Course (p. 202) [1]		3
Humanities or History/Cultures Course (p. 202)		3
Social Science Course (p. 203)		3
	Term Totals:	17
Term 3		
CHM-262	Organic Chemistry I	4.5
Speech Course (p. 202)		3
Humanities or History/Cultures Course (p. 202)		3
Electives		5
	Term Totals:	15.5
Term 4		
CHM-272	Organic Chemistry II	4.5
Humanities or History/Cultures Course (p. 202)		3
Electives		9
	Term Totals:	16.5
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Computer Science - Transfer Major, A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Science degree
2 years

The Computer Science Transfer Major is an Associate of Science degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Computer Science. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
CSC-142	Computer Science	4
Writing Course (p. 202) [1]		3
Humanities or History/Cultures Course (p. 202)		3
MAT-210	Calculus I	4
	Term Totals:	14
Term 2		
CSC-160	Software Design & Development	4
Writing Course (p. 202) [1]		3
Social Science Course (p. 203)		3
MAT-216	Calculus II	4
	Term Totals:	14
Term 3		
Speech Course (p. 202)		3
Social Science Course (p. 203)		3
	Term Totals:	6
Term 4		
Humanities or History/Cultures Course (p. 202)		3
MAT-150	Discrete Math	3
Math or Science Course (p. 203)		5
Electives		3
	Term Totals:	14
Term 5		
CSC-153	Data Structures	4
Humanities or History/Cultures Course (p. 202)		3

Electives		8
	Term Totals:	15
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Early Childhood Education - Transfer Major, A.A.

Entry Time

Fall

Award

Associate of Arts degree
2 years

The Early Childhood Education Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Early Childhood Education. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
ECE-103	Intro to Early Childhood Ed	3
EDU-255	Technology in the Classroom	3
Writing Course (p. 202) [1]		3
MAT-117	Math for Elementary Teachers	3
Speech Course (p. 202)		3
PSY-111	Intro to Psychology	3
	Term Totals:	18
Term 2		
PSY-121	Developmental Psychology	3
Writing Course (p. 202) [1]		3
Electives		3
Select one of the following:		3
HIS-151	U.S. History to 1877	
HIS-152	U.S. History Since 1877	
POL-111	American National Government	
Humanities Course (p. 202)		3
	Term Totals:	15
Term 3		
Electives		3
LIT-105	Children's Literature	3
EDU-248	Exceptional Persons	3
Literature Course (p. 202)		3
Science Course (p. 203)		3
	Term Totals:	15

Term 4		
Science Course (p. 203)		3
History/Cultures Course (p. 202)		3
Humanities Course (p. 202)		3
Electives		6
	Term Totals:	15
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Elementary Education - Transfer Major, A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Arts degree
2 years

The Elementary Education Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Elementary Education. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
EDU-110	Exploring Teaching	3
EDU-255	Technology in the Classroom	3
PSY-111	Intro to Psychology	3
MAT-117	Math for Elementary Teachers	3
Writing Course (p. 202) [1]		3
	Term Totals:	15
Term 2		
Writing Course (p. 202) [1]		3
Speech Course (p. 202)		3
EDU-248	Exceptional Persons	3
HIS-151	U.S. History to 1877	3
Science Course (p. 203)		3
	Term Totals:	15
Term 3		
LIT-105	Children's Literature	3
PSY-121	Developmental Psychology	3
EDU-210	Foundations of Education	3
EDU-119	Behavior Management	3
History/Cultures Course (p. 202)		3
Humanities Course (p. 202)		3
	Term Totals:	18
Term 4		
Humanities Course (p. 202)		3
Literature Course (p. 202)		3
EDU-240	Educational Psychology	3
Science Course (p. 203)		3
EDU-810	Field Experience	3
	Term Totals:	15
	Program Totals:	63

[1]   Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Engineering - Transfer Major, A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Science degree
2 years

The Engineering Transfer Major is an Associate of Science degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Engineering. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
CHM-165	General Chemistry I	4
EGR-160	Engineering I	3
Writing Course (p. 202) [1]		3
MAT-210	Calculus I	4
	Term Totals:	14
Term 2		
EGR-167	Engineering II	4
Writing Course (p. 202) [1]		3
MAT-216	Calculus II	4
Speech Course (p. 202)		3
	Term Totals:	14
Term 3		
Humanities or History/Cultures Course (p. 202)		6
Social Science Course (p. 203)		3
	Term Totals:	9
Term 4		
PHY-212	Classical Physics I	5
Electives		8
	Term Totals:	13
Term 5		
MAT-227	Differential Equation/Laplace	4
Humanities or History/Cultures Course (p. 202)		3
Social Science Course (p. 203)		3
Electives		3
	Term Totals:	13
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Fine Arts - Transfer Major, A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Arts degree
2 years

The Fine Arts Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Fine Arts. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
Writing Course (p. 202) [1]		3
Math Course (p. 203)		3
Social Science Course (p. 203)		3
ART-120	2-D Design	3
ART-133	Drawing	3
	Term Totals:	15
Term 2		
Writing Course (p. 202) [1]		3
Speech Course (p. 202)		3
ART-123	3-D Design	3
History/Cultures Course (p. 202)		3
ART-161	Digital Art	3
	Term Totals:	15
Term 3		
ART-134	Drawing II	3
Art Studio Elective		3
Literature Course (p. 202)		3
ART-203	Art History I	3
Social Science Course (p. 203)		3
Science Course (p. 203)		3
	Term Totals:	18
Term 4		
ART-204	Art History II	3
Art Studio Elective		3
Science Course (p. 203)		3
Social Science Course (p. 203)		3

History/Cultures Course (p. 202)		3
	Term Totals:	15
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Art Studio Electives

Code	Title	Credit Hours
ART-138	Figure Drawing	3
ART-143	Painting	3
ART-144	Painting II	3
ART-157	Printmaking	3
ART-163	Sculpture	3
ART-164	Sculpture II	3
ART-173	Ceramics	3
ART-174	Ceramics II	3
ART-175	Ceramics III	3
ART-220	Ceramics IV	3
ART-184	Photography	3
ART-186	Digital Photography	3
ART-223	Advanced Photography	3
ART-290	Projects in Photography	1
ART-420	Intro to Glass	3
ART-430	Glass Fusing, Slumping, Cast	3
ART-431	Glas-Fusing, Slumping, and Casting II Casting	3
ART-440	Hot Glass I - Blow, Sculpt	3
ART-441	Hot Glass II - Blow, Sculpt	3

History - Transfer Major, A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Arts degree
2 years

The History Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study History. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
ENG-105	Composition I	3
Math Course (p. 203)		3
HIS-151	U.S. History to 1877	3
Humanities Course (p. 202)		3
SPC-101	Fundamentals of Oral Comm	3
	Term Totals:	15
Term 2		
ENG-106	Composition II	3
HIS-152	U.S. History Since 1877	3
Humanities Course (p. 202)		3
Electives		3
HIS-126	West & World I Prehistory-500	3
	Term Totals:	15
Term 3		
HIS-127	West & World II 500-1750	3
Literature Course (p. 202)		3
Social Science Course (p. 203)		6
Science Course (p. 203)		3
Electives		3
	Term Totals:	18
Term 4		
HIS-128	West & World III 1750-Present	3
Science Course (p. 203)		3
Social Science Course (p. 203)		3
Electives		6
	Term Totals:	15
	Program Totals:	63

Journalism - Transfer Major, A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Arts degree
2 years

The Journalism Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Journalism. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
ENG-105	Composition I	3
MMS-131	News Reporting	3
MAT-156	Statistics	3
History/Cultures Course (p. 202)		3
	Term Totals:	12
Term 2		
MMS-101	Mass Media	3
Science Course (p. 203)		3
History/Cultures Course (p. 202)		3
ENG-106	Composition II	3
Electives		4
	Term Totals:	16
Term 3		
Science Course (p. 203)		3
Literature Course (p. 202)		3
SPC-112	Public Speaking	3
Social Science Course (p. 203)		3
Electives		6
	Term Totals:	18
Term 4		
MMS-241	Public Relations and Marketing	3
Social Science Course (p. 203)		3
Humanities Course (p. 202)		6
Electives		4
	Term Totals:	16
	Program Totals:	62

Mathematics - Transfer Major, A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Science degree

2 years

The Mathematics Transfer Major is an Associate of Science degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Mathematics. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
Writing Course (p. 202) [1]		3
Humanities or History/Cultures Course (p. 202)		3
MAT-210	Calculus I	4
Social Science Course (p. 203)		3
Electives		4
	Term Totals:	17
Term 2		
Writing Course (p. 202) [1]		3
Humanities or History/Cultures Course (p. 202)		3
MAT-156	Statistics	3
MAT-216	Calculus II	4
Social Science Course (p. 203)		3
	Term Totals:	16
Term 3		
Humanities or History/Cultures Course (p. 202)		3
MAT-219	Calculus III	4
Speech Course (p. 202)		3
Electives		5
	Term Totals:	15
Term 4		
MAT-227	Differential Equation/Laplace	4
Math or Science Course (p. 203)		1
Electives		10
	Term Totals:	15
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Physics - Transfer Major, A.S.

Entry Time

Fall, Spring, Summer

Award

Associate of Science degree
2 years

The Physics Transfer Major is an Associate of Science degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Physics. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
MAT-210	Calculus I	4
Writing Course (p. 202) [1]		3
Social Science Course (p. 203)		3
Humanities or History/Cultures Course (p. 202)		3
Electives		4
	Term Totals:	17
Term 2		
MAT-216	Calculus II	4
Writing Course (p. 202) [1]		3
Social Science Course (p. 203)		3
Humanities or History/Cultures Course (p. 202)		3
Electives		4
	Term Totals:	17
Term 3		
MAT-219	Calculus III	4
PHY-212	Classical Physics I	5
Speech Course (p. 202)		3
Humanities or History/Cultures Course (p. 202)		3
	Term Totals:	15
Term 4		
PHY-222	Classical Physics II	5
Electives		9
	Term Totals:	14
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Political Science - Transfer Major, A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Arts degree
2 years

The Political Science Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Political Science. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
ENG-105	Composition I	3
POL-111	American National Government	3
SPC-101 or SPC-112	Fundamentals of Oral Comm or Public Speaking	3
History/Cultures Course (p. 202)		3
MAT-156	Statistics	3
	Term Totals:	15
Term 2		
ENG-106	Composition II	3
Humanities Course (p. 202)		3
Science Course (p. 203)		3
Electives		6
	Term Totals:	15
Term 3		
Humanities Course (p. 202)		3
POL-125	Comparative Gov & Politics	3
POL-121	International Relations	3
Science Course (p. 203)		3
Electives		3
	Term Totals:	15
Term 4		
Literature Course (p. 202)		3
History/Cultures Course (p. 202)		3

Electives	11
Term Totals:	17
Program Totals:	62

Psychology - Transfer Major, A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Arts degree
2 years

The Psychology Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Psychology. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Degree Requirements

Term 1		Credit Hours
Writing Course (p. 202) [1]		3
PSY-111	Intro to Psychology	3
PHI-105 or PHI-101	Introduction to Ethics or Intro to Philosophy	3
MAT-156	Statistics	3
Electives		3
	Term Totals:	15
Term 2		
Writing Course (p. 202) [1]		3
History/Cultures Course (p. 202)		3
PSY-251	Social Psychology	3
Speech Course (p. 202)		3
BIO-112	General Biology I	4
	Term Totals:	16
Term 3		
PSY-121	Developmental Psychology	3
Humanities Course (p. 202)		3
Literature Course (p. 202)		3
Electives		9
	Term Totals:	18
Term 4		
History/Cultures Course (p. 202)		3
Science Course (p. 203)		3
Electives		8
	Term Totals:	14
	Program Totals:	63

Social Work - Transfer Major, A.A.

Entry Time

Fall

Award

Associate of Arts degree
2 years

The Social Work Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Social Work. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
HSV-109	Intro to Human Services	3
SOC-110	Introduction to Sociology	3
Writing Course (p. 202) [1]		3
Science Course (p. 203)		3
MAT-156	Statistics	3
	Term Totals:	15
Term 2		
Writing Course (p. 202) [1]		3
PSY-111	Intro to Psychology	3
POL-111	American National Government	3
Electives		6
	Term Totals:	15
Term 3		
HSV-801	Human Services Field Exp	3
Humanities Course (p. 202)		3
	Term Totals:	6
Term 4		
History/Cultures Course (p. 202)		3
Speech Course (p. 202)		3
Humanities Course (p. 202)		3
BIO-154	Human Biology	3
	Term Totals:	12
Term 5		
History/Cultures Course (p. 202)		3
Literature Course (p. 202)		3

Electives		9
	Term Totals:	15
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

Sociology - Transfer Major, A.A.

Entry Time

Fall, Spring, Summer

Award

Associate of Arts degree
2 years

The Sociology Transfer Major is an Associate of Arts degree designed for students transferring to participating regent and private institutions in the state of Iowa to study Sociology. Requirements may vary at other institutions so students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer.

Degree Requirements

Term 1		Credit Hours
Writing Course (p. 202) [1]		3
SOC-110	Introduction to Sociology	3
POL-111	American National Government	3
MAT-156	Statistics	3
Electives		3
	Term Totals:	15
Term 2		
Writing Course (p. 202) [1]		3
History/Cultures Course (p. 202)		3
SOC-115	Social Problems	3
PSY-251	Social Psychology	3
Speech Course (p. 202)		3
	Term Totals:	15
Term 3		
SOC-120	Marriage and Family	3
Science Course (p. 203)		6
Literature Course (p. 202)		3
History/Cultures Course (p. 202)		3
Electives		3
	Term Totals:	18
Term 4		
Humanities Course (p. 202)		6
Electives		9
	Term Totals:	15
	Program Totals:	63

[1] Take both ENG-105 and ENG-106 (6 credits total) or take ENG-120 (5 credits)

ARTS AND SCIENCES CORE COURSES

Applicable to A.A. and A.S. degree requirements. One diversity course is required for the A.A. degree. Courses with (D) next to the course title satisfy the diversity requirement.

Communication - Speech

Code	Title	Credit Hours
SPC-101	Fundamentals of Oral Communication	3
or SPC-112	Public Speaking	

Communication - Writing

Code	Title	Credit Hours
Select one of the following:		5-6
ENG-120	College Writing (Composition I-II equivalent)	
ENG-105 & ENG-106	Composition I and Composition II	
ENG-105 & ENG-108	Composition I and Composition II: Technical Writing	

History - Cultures

Students seeking an A.A. degree complete two History - Cultures courses. Students seeking an A.S. degree complete any three History - Cultures or Humanities courses.

Code	Title	Credit Hours
ANT-105	Cultural Anthropology (D)	3
ASL-171	American Sign Language II (D)	4
ASL-245	American Sign Language III (D)	4
ASL-281	American Sign Language IV (D)	4
CLS-151	Understanding Cultures: Latin America (D)	3
CLS-159	Understanding Cultures: Indigenous Central America (D)	3
CLS-165	Understanding Cultures: Modern Japan (D)	3
FLF-142	Elementary French II (D)	4
FLF-241	Intermediate French I (D)	4
FLF-242	Intermediate French II (D)	4
FLS-142	Elementary Spanish II (D)	4
FLS-241	Intermediate Spanish I (D)	4
FLS-242	Intermediate Spanish II (D)	4
HIS-126	West and the World I: Ancient to Medieval	3
HIS-127	West and the World II: Medieval to Enlightenment	3
HIS-128	West and the World III: Enlightenment to Modern	3
HIS-151	U.S. History to 1877	3
HIS-152	U.S. History Since 1877	3
HIS-221	Holocaust and Genocide in Memory and Literature (D)	3
HIS-254	American Indian History (D)	3
HIS-257	African American History (D)	3
HIS-291	History of Science	3
REL-101	Survey of World Religions (D)	3
REL-120	Judaism, Christianity and Islam (D)	3
REL-125	Introduction to Islam (D)	3
REL-130	Introduction to Religions of the East (D)	3
REL-140	Religion in the United States (D)	3

Humanities

Students seeking an A.A. degree complete one course from group 1, one course from group 2, and one course from group 1 or 2.

Group 1 - Introductory Art & Humanities

Code	Title	Credit Hours
ART-101	Art Appreciation	3
ART-143	Painting	3
ART-163	Sculpture	3
ART-173	Ceramics	3
ART-184	Photography	3
ART-186	Digital Photography	3
ART-203	Art History I	3
ART-204	Art History II	3
ART-420	Introduction to Glass	3
DRA-101	Introduction to Theatre	3
DRA-116	Film Analysis	3
DRA-117	Film Topics	3
DRA-125	Introduction to Play Analysis	3
HUM-105	Working in America	3
HUM-116	Encounters in Humanities	3
HUM-123	U.S. Film History	3
HUM-124	World Film History	3
HUM-142	Popular Culture	3
HUM-190	Culture and Technology	3
HUM-200	International Study in Humanities (D)	3
MUS-100	Music Appreciation	3
MUS-207	Introduction to Film Music	3
MUS-208	American Popular Music & Jazz	3
PHI-101	Introduction to Philosophy	3
PHI-105	Introduction to Ethics	3
PHI-111	Basic Reasoning	3
PHI-126	Chinese Philosophies (D)	3
PHI-135	Multicultural Ethics (D)	3
PHI-160	Environmental Ethics	3

Group 2 - Literature

(Prereq: ENG-105 Composition I or ENG-120 College Writing)

Code	Title	Credit Hours
LIT-130	African American Literature (D)	3
LIT-180	Mythology (D)	3
LIT-203	Forms of Literature: Story Cycle	3

LIT-204	Forms of Literature: Nonfiction	3
LIT-205	Forms of Literature: Drama	3
LIT-206	Forms of Literature: Fiction	3
LIT-207	Forms of Literature: Poetry	3
LIT-208	Forms of Literature: New Media	3
LIT-209	Forms of Literature: Film Adaptation	3
LIT-222	Literature and Culture: American Dreams (D)	3
LIT-224	Literature and Culture: Women and Work (D)	3
LIT-226	Literary Themes: Literature and the Search for Identity	3
LIT-227	Literature and Culture: World Poetry (D)	3

Mathematics

Students seeking an A.A. degree complete one college-level math course. Students seeking an A.S. degree complete 20 credit hours of Mathematics/ Science including at least one college-level math course.

Code	Title	Credit Hours
CSC-142	Computer Science	4
MAT-115	Mathematics and Society	3
MAT-117	Math for Elementary Teachers	3
MAT-136	Trigonometry and Analytic Geometry	5
MAT-138	College Algebra with Limits	4
MAT-149	Linear Algebra	3
MAT-150	Discrete Math	3
MAT-156	Statistics	3
MAT-162	Business Statistics	4
MAT-163	Quantitative Reasoning for Business	4
MAT-165	Business Calculus	3
MAT-210	Calculus I	4
MAT-216	Calculus II	4
MAT-219	Calculus III	4
MAT-227	Differential Equations With Laplace	4

Science

Students seeking an A.A. degree complete six credit hours from Group A below. See an adviser for requirements specific to your degree.

Group A

Code	Title	Credit Hours
BIO-104	Introductory Biology With Lab	3
BIO-112	General Biology I	4
BIO-113	General Biology II	4
BIO-131	Genetics and Society	3
BIO-151	Nutrition	3
BIO-154	Human Biology	3
BIO-168	Human Anatomy and Physiology I	4
BIO-173	Human Anatomy and Physiology II	4
BIO-186	Microbiology	4
BIO-195	Human Evolution	3
CHM-110	Introduction to Chemistry	3
CHM-111	Introduction to Chemistry Lab	1
CHM-132	Introduction to Organic and Biochemistry	4
CHM-165	General Chemistry I	4
CHM-175	General Chemistry II	4
ENV-115	Environmental Science	3
PHS-151	Introduction to Astronomy	3
Select one of the following:		
PHS-170	Physical Geology [1]	
PHS-175	Environmental Geology [1]	
PHS-171	Physical Geology Lab	1
PHS-176	Environmental Geology Laboratory	1
PHS-180	Evolution of the Earth	3
PHY-120	Introductory Physics	3
PHY-162	College Physics I	4
PHY-172	College Physics II	4
PHY-212	Classical Physics I	5
PHY-222	Classical Physics II	5
SCI-120	Forensic Science	3

[1] Only one Geology course can count as Science credit.

Group B

Code	Title	Credit Hours
CHM-262	Organic Chemistry I	4.5
CHM-272	Organic Chemistry II	4.5

Social Science

Students seeking an A.A. degree complete 3 courses. Students seeking an A.S. degree complete 2 courses.

Code	Title	Credit Hours
CRJ-100	Introduction to Criminal Justice	3
CRJ-200	Criminology	3
CRJ-201	Juvenile Delinquency	3
CRJ-316	Juvenile Justice	3
ECE-103	Introduction to Early Childhood Education	3
ECE-170	Child Growth and Development	3
ECN-120	Principles of Macroeconomics	3
ECN-130	Principles of Microeconomics	3
EDU-110	Exploring Teaching	3
EDU-240	Educational Psychology	3
HSV-109	Introduction to Human Services	3
HSV-201	Loss, Trauma and Resilience	3
HSV-292	Substance Abuse and Treatment	3
MMS-101	Mass Media	3
POL-110	Introduction to Political Science	3
POL-111	American National Government	3

POL-121	International Relations	3
POL-125	Comparative Government and Politics (D)	3
PRL-103	Introduction to Law	3
PSY-111	Introduction to Psychology	3
PSY-121	Developmental Psychology	3
PSY-251	Social Psychology	3
SOC-110	Introduction to Sociology	3
SOC-115	Social Problems	3
SOC-120	Marriage and Family	3
SOC-200	Minority Group Relations (D)	3
SOC-220	Sociology of Aging (D)	3
SOC-265	Introduction to Lesbian, Gay, Bisexual, Transgender, and Queer+ Studies (D)	3

Additional Diversity

Students seeking an A.A. degree may take one of these courses to satisfy the diversity requirement. They count as electives, not as core.

Code	Title	Credit Hours
EDU-248	Exceptional Persons (D)	3
GLS-120	Education Experience Abroad (D)	1-3

A.A.A. DEGREE CORE COURSES

History/Cultures Courses

Code	Title	Credit Hours
ANT-105	Cultural Anthropology	3
ASL-171	American Sign Language II	4
ASL-245	American Sign Language III	4
ASL-281	American Sign Language IV	4
CLS-151	Understanding Cultures: Latin America	3
CLS-159	Understanding Cultures: Indigenous Central America	3
CLS-165	Understanding Cultures: Modern Japan	3
FLF-142	Elementary French II	4
FLF-241	Intermediate French I	4
FLF-242	Intermediate French II	4
FLS-142	Elementary Spanish II	4
FLS-241	Intermediate Spanish I	4
FLS-242	Intermediate Spanish II	4
HIS-126	West and the World I: Ancient to Medieval	3
HIS-127	West and the World II: Medieval to Enlightenment	3
HIS-128	West and the World III: Enlightenment to Modern	3
HIS-151	U.S. History to 1877	3
HIS-152	U.S. History Since 1877	3
HIS-221	Holocaust and Genocide in Memory and Literature	3
HIS-254	American Indian History	3
HIS-257	African American History	3
HIS-291	History of Science	3
REL-101	Survey of World Religions	3
REL-120	Judaism, Christianity and Islam	3
REL-125	Introduction to Islam	3
REL-130	Introduction to Religions of the East	3
REL-140	Religion in the United States	3

Math/Science Courses

Code	Title	Credit Hours
CSC-142	Computer Science	4
MAT-115	Mathematics and Society	3
MAT-117	Math for Elementary Teachers	3
MAT-136	Trigonometry and Analytic Geometry	5
MAT-138	College Algebra with Limits	4
MAT-149	Linear Algebra	3
MAT-150	Discrete Math	3
MAT-156	Statistics	3
MAT-162	Business Statistics	4
MAT-163	Quantitative Reasoning for Business	4
MAT-165	Business Calculus	3
MAT-210	Calculus I	4
MAT-216	Calculus II	4
MAT-219	Calculus III	4
MAT-227	Differential Equations With Laplace	4
BIO-104	Introductory Biology With Lab	3
BIO-112	General Biology I	4
BIO-113	General Biology II	4
BIO-131	Genetics and Society	3
BIO-151	Nutrition	3
BIO-154	Human Biology	3
BIO-168	Human Anatomy and Physiology I	4
BIO-186	Microbiology	4
BIO-195	Human Evolution	3
CHM-110	Introduction to Chemistry	3
CHM-111	Introduction to Chemistry Lab	1
CHM-132	Introduction to Organic and Biochemistry	4
CHM-165	General Chemistry I	4
CHM-175	General Chemistry II	4
ENV-115	Environmental Science	3
PHS-151	Introduction to Astronomy	3
PHS-170	Physical Geology	3
PHS-171	Physical Geology Lab	1
PHS-175	Environmental Geology	3
PHS-176	Environmental Geology Laboratory	1
PHS-180	Evolution of the Earth	3
PHY-120	Introductory Physics	3
PHY-162	College Physics I	4
PHY-172	College Physics II	4
PHY-212	Classical Physics I	5
PHY-222	Classical Physics II	5
SCI-120	Forensic Science	3
BIO-173	Human Anatomy and Physiology II	4
CHM-262	Organic Chemistry I	4.5
CHM-272	Organic Chemistry II	4.5

Social Science Courses

Code	Title	Credit Hours
EDU-110	Exploring Teaching	3
EDU-240	Educational Psychology	3
PSY-111	Introduction to Psychology	3
PSY-121	Developmental Psychology	3
PSY-251	Social Psychology	3
SOC-110	Introduction to Sociology	3
SOC-115	Social Problems	3
SOC-120	Marriage and Family	3
SOC-200	Minority Group Relations	3
SOC-220	Sociology of Aging	3
SOC-265	Introduction to Lesbian, Gay, Bisexual, Transgender, and Queer+ Studies	3

A.A.S. DEGREE HUMANITIES REQUIREMENT

Art

Code	Title	Credit Hours
ART-101	Art Appreciation [1]	3
ART-120	2-D Design	3
ART-123	3-D Design	3
ART-133	Drawing	3
ART-143	Painting [1]	3
ART-157	Printmaking	3
ART-163	Sculpture [1]	3
ART-173	Ceramics [1]	3
ART-184	Photography [1]	3
ART-186	Digital Photography [1]	3
ART-203	Art History I [1]	3
ART-204	Art History II [1]	3
ART-420	Introduction to Glass [1]	3

[1] Also Associate of Arts core courses

Communication

Code	Title	Credit Hours
ENG-221	Creative Writing	3

Drama

Code	Title	Credit Hours
DRA-101	Introduction to Theatre [1]	3
DRA-130	Acting I	3
DRA-162	Technical Theatre	3

[1] Also Associate of Arts core courses

Foreign Language

Code	Title	Credit Hours
ASL-141	American Sign Language I	4
ASL-171	American Sign Language II (D) [1]	4
FLF-141	Elementary French I	4
FLF-142	Elementary French II (D) [1]	4
FLS-118	Spanish for Professionals	3
FLS-141	Elementary Spanish I	4
FLS-142	Elementary Spanish II (D) [1]	4

[1] Also Associate of Arts core courses

Humanities

Code	Title	Credit Hours
ANT-105	Cultural Anthropology (D) [1]	3
CLS-192	Communication and Culture	3
DRA-116	Film Analysis [1]	3
DRA-117	Film Topics [1]	3
DRA-125	Introduction to Play Analysis [1]	3
HUM-105	Working in America [1]	3
HUM-116	Encounters in Humanities [1]	3
HUM-123	U.S. Film History [1]	3
HUM-124	World Film History [1]	3
HUM-142	Popular Culture [1]	3
HUM-190	Culture and Technology [1]	3
HUM-200	International Study in Humanities (D) [1]	3

[1] Also Associate of Arts core courses

Interdisciplinary Studies

Code	Title	Credit Hours
CLS-151	Understanding Cultures: Latin America (D) [1]	3
CLS-159	Understanding Cultures: Indigenous Central America (D) [1]	3
CLS-165	Understanding Cultures: Modern Japan (D) [1]	3
GLS-120	Education Experience Abroad (D)	1-3

[1] Also Associate of Arts core courses

Literature

(note: most LIT courses have a pre-requisite of ENG-105 Composition I**)**

Code	Title	Credit Hours
LIT-105	Children's Literature	3
LIT-130	African American Literature (D) [1]	3
LIT-180	Mythology (D) [1]	3
LIT-203	Forms of Literature: Story Cycle [1]	3
LIT-204	Forms of Literature: Nonfiction [1]	3
LIT-205	Forms of Literature: Drama [1]	3
LIT-206	Forms of Literature: Fiction [1]	3
LIT-207	Forms of Literature: Poetry [1]	3
LIT-208	Forms of Literature: New Media [1]	3
LIT-209	Forms of Literature: Film Adaptation [1]	3
LIT-222	Literature and Culture: American Dreams (D) [1]	3
LIT-224	Literature and Culture: Women and Work (D) [1]	3
LIT-226	Literary Themes: Literature and the Search for Identity [1]	3

Code	Title	Credit Hours
LIT-227	Literature and Culture: World Poetry (D) [1]	3
LIT-945	Selected Topics	1-3

[1] Also Associate of Arts core courses

Music

Code	Title	Credit Hours
MUA-101	Applied Voice (lower level 1 or 2 credit) [1]	1-2
MUA-147	Applied Instrumental (private music lessons for beginning students, 1 or 2 credits) [1,2]	1-2
MUS-100	Music Appreciation [3]	3
MUS-138	Jazz Improvisation [1]	3
MUS-140	Concert Choir [1]	1
MUS-145	Concert Band (or Wind Ensemble) [1,4]	1
MUS-152	Vocal Ensemble [1,4]	1
MUS-157	Vocal Jazz Ensemble [1,4]	1
MUS-162	Instrumental Ensembles [1]	1
MUS-163	Instrumental Jazz Ensemble [1]	1
MUS-207	Introduction to Film Music [3]	3
MUS-208	American Popular Music & Jazz [3]	3

[1] Repeatable for credit
[2] Instrument choices: Euphonium, Bassoon, Cello, Clarinet, Percussion, Flute, French Horn, Guitar, Oboe, Piano, Saxophone, String Bass, Trombone, Trumpet, Tuba, Viola, Violin
[3] Also Associate of Arts core courses
[4] By audition - contact arts@kirkwood.edu for more information

Philosophy and Religion

Code	Title	Credit Hours
Philosophy		
PHI-101	Introduction to Philosophy [1]	3
PHI-105	Introduction to Ethics [1]	3
PHI-111	Basic Reasoning [1]	3
PHI-126	Chinese Philosophies (D) [1]	3
PHI-135	Multicultural Ethics (D) [1]	3
PHI-160	Environmental Ethics [1]	3
Religion		
REL-101	Survey of World Religions (D) [1]	3
REL-120	Judaism, Christianity and Islam (D) [1]	3
REL-125	Introduction to Islam (D) [1]	3
REL-130	Introduction to Religions of the East (D) [1]	3
REL-140	Religion in the United States (D) [1]	3

[1] Also Associate of Arts core courses

History

Code	Title	Credit Hours
HIS-126	West and the World I: Ancient to Medieval [1]	3
HIS-127	West and the World II: Medieval to Enlightenment [1]	3
HIS-128	West and the World III: Enlightenment to Modern [1]	3
HIS-151	U.S. History to 1877 [1]	3
HIS-152	U.S. History Since 1877 [1]	3
HIS-221	Holocaust and Genocide in Memory and Literature (D) [1]	3
HIS-254	American Indian History (D) [1]	3
HIS-257	African American History (D) [1]	3
HIS-291	History of Science [1]	3

[1] Also Associate of Arts core courses

COURSE DESCRIPTIONS

How to Read Course Descriptions
ENG-105 Composition I (3)

Develops expository writing with emphasis on organization, supporting details, style, vocabulary and library research skills. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture
Prerequisite: Take ENG-101 or meet qualifying placement score

Three-letter prefix (ENG) stands for the subject or department of study. (See Course Key (p. 208).)

Credit value (3) of the course is indicated in semester hours.

Hours per week Indicates hours per week spent in lecture, lab, clinic and internships respectively, based on a 16-week schedule.

Prerequisite Indicates requirements that must be completed prior to taking the course.

Corequisite Indicates course(s) that must be taken in the same semester as the course.

Pre/corequisite Indicates requirements that must be completed prior to taking, or taken in the same semester as, the course.

Arts & Sciences Elective Code

Code	Description
A	Transfer courses
B	Applied Science and Technology program courses
D	Developmental courses

Course descriptions are listed according to the following prefixes:

Prefix	Description
ACC	Accounting
ADM	Administrative Assistant
ADN	Associate Degree Nursing
AGA	Ag - Agronomy
AGB	Ag - Farm Management
AGC	Ag - Comprehensive
AGH	Ag - Horticulture
AGM	Ag- Mechanics
AGN	Ag - Natural Resources/Forestry
AGP	Ag - Precision Ag
AGS	Ag - Animal Science
AGV	Ag - Vet Tech
ANT	Anthropology
APP	Apparel Merchandising
ARC	Architectural
ART	Art
ASL	American Sign Language
ATR	Automation Tech & Robotics
AUT	Automotive Technology
AVM	Aviation Maintenance
BCA	Business Computer Applications

Prefix	Description
BIO	Biology
BUS	Business
CAD	Computer Aided Drafting
CHM	Chemistry
CIS	Computer Information Systems
CLS	Cultural Studies
COM	Communication
CON	Construction
CRJ	Criminal Justice
CRR	Collision Repair/Refinishing
CSC	Computer Science
DEA	Dental Assistant
DEN	Dental
DHY	Dental Hygiene
DRA	Film and Theatre
DRF	Drafting
DSL	Diesel
ECE	Early Childhood Education
ECN	Economics
EDU	Education
EGR	Engineering
EGT	Engineering Technology
ELE	Electrical Technology
ELT	Electronics
EMS	Emergency Medical Services
END	Electroneurodiagnostic
ENG	English Composition
ENV	Environmental Science
ESI	Intensive English Second Language
EXS	Exercise Science
FIN	Finance
FIR	Fire Science
FLF	Foreign Language - French
FLS	Foreign Language - Spanish
GLS	Global Studies
GRA	Graphic Communications
HCM	Hospitality, Culinary, Management
HCR	Heating and Air Conditioning
HIS	History
HSC	Health Sciences
HSV	Human Services
HUM	Humanities
IND	Industrial Technology
INT	Interior Design
LIT	Literature
MAP	Medical Assistant
MAT	Mathematics
MDT	Mobile Development Technology
MFG	Manufacturing
MGT	Management
MIL	Military
MKT	Marketing

MLT	Med Lab Tech
MMS	Mass Media Studies
MUA	Music - Applied
MUS	Music - General
NET	Computer Networking
OTA	Occupational Therapy Assistant
PEA	Physical Education Activity
PEC	Coaching Officiating
PEH	General Physical Education and Health
PEV	Intercollegiate Physical Education
PHI	Philosophy
PHR	Pharmacy Tech
PHS	Physical Science
PHY	Physics
PLU	Plumbing
PNN	Practical Nursing
POL	Political Science
PRL	Paralegal
PSY	Psychology
PTA	Physical Therapist Assistant
PWL	Powerline
RCP	Respiratory Therapy
RDG	Reading
REL	Religion
SCI	Science
SDV	Student Development
SOC	Sociology
SPC	Speech
SUR	Surgical Technology
UTL	Utilities
VIN	Viticulture
WAT	Water Environmental Technology
WBL	Work-Based Learning
WEL	Welding

Accounting (ACC)

ACC-111 Introduction to Accounting (3)
Introduces accounting principles for non-accounting majors. Includes analyzing, classifying and recording business transactions. Emphasizes understanding the complete accounting cycle and preparing financial statements, bank reconciliations and payroll. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

ACC-152 Financial Accounting (4)
Introduces the basic concepts and procedures of accounting including the accounting cycle, merchandise accounting, internal control, long-term and contingent liabilities, corporate accounting and the collection of data for external reporting. Includes the preparation and analysis of financial statements. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

ACC-156 Managerial Accounting (4)
Surveys the basic concepts and procedures of accounting to include managerial, manufacturing and cost accounting for decision making. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take ACC-152. Accounting majors must have a minimum C- in ACC-152.

ACC-161 Payroll Accounting (3)
Covers payroll laws, state and federal withholding taxes, state and federal forms, salary deductions including cafeteria insurance plans and pensions plans, and computerized payroll software packages. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Pre/corequisite: Take ACC-111 or ACC-152.

ACC-222 Cost Accounting (4)
Relates the principles and methods of analyzing accounting data for planning and control, product costing and decision-making. Emphasizes job order, process and standard cost accounting systems, budgeting and cost-volume-profit analysis. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Minimum C- in ACC-152. Minimum C- in ACC-156. Take MAT-156, MAT-140 or MAT-138.

ACC-231 Intermediate Accounting I (4)
Includes a review of accounting procedures and the reporting process. Provides an in-depth analysis of the asset section of the balance sheet. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Minimum C- in ACC-152. Minimum C- in ACC-156. Take MAT-156, MAT-140 or MAT-138.

ACC-232 Intermediate Accounting II (4)
Emphasizes corporate financial accounting using accounting theory with a practical procedural focus. Provides in-depth coverage of corporate accounting and reporting requirements concerning equity investments, bond issuance, leases, deferred taxes, pensions, and post-retirement benefits, as well as all facets of shareholders' equity. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Minimum C- in ACC-231.

ACC-265 Income Tax Accounting (4)

Introduces the federal income tax law, its purpose and development, and its significance for tax planning. Emphasizes individual and small business taxation with an introduction to partnerships. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Pre/corequisite: Take ACC-152 or ACC-111.

ACC-313 Accounting Applications (4)

Compares the manual accounting cycle system to professional accounting software. Introduces concepts and procedures used in determining payroll taxes, and laws and regulations affecting payroll. Emphasizes accounting cycles and the management of accounting data through student projects. Integrates use of a commercial accounting package. Arts & Sciences Elective Code: B

Hours per week: 4.0 lecture

Prerequisite: Accounting majors must earn C- in ACC-152. Non-Accounting majors take ACC-111 (no minimum grade required).

Pre/corequisite: Take BCA-213 or CSC-116.

ACC-362 Accounting Spreadsheets (4)

Addresses the use of spreadsheet software as a problem-solving tool for the accountant to develop models for data analysis, creation of what-if scenarios, automated computations, sorting and grouping data, and graphically viewing data. Includes planning, building, testing, documenting worksheets, functions, charts, solver, data management, multiple worksheets, data tables through integration with applications and macros. Arts & Sciences Elective Code: B

Hours per week: 4.0 lecture

Prerequisite: Take CSC-116 or BCA-213. Minimum C- in ACC-152. Minimum C- in ACC-156. Take MAT-707, ADM-133, higher math, or appropriate math placement score.

ACC-491 Accounting Capstone (3)

Covers accounting concepts introduced in earlier coursework. Demonstrates how the various components of an accounting system work together. Emphasizes project-based evaluation and analysis of accounting reports. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Minimum C- in ACC-222. Minimum C- in ACC-231. Minimum C- in ACC-265. Minimum C- in ACC-313.

Pre/corequisite: Take ACC-362. Take ACC-232.

ACC-924 Honors Project (1-3)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. Requires approval of supervising professor and dean. May be taken more than once. Arts & Sciences Elective Code: A

Hours per week: 1.0 lecture

ACC-928 Independent Study (1-3)

Provides readings, training and basic research under the guidance of a faculty member. Frequently includes an extensive community service component. Arts & Sciences Elective Code: B; Comments: Permission of sponsoring faculty member

Hours per week: 2.0 lab

Administrative Assistant (ADM)

ADM-015 Basic Keyboarding (1)

Teaches proper keyboarding technique and how to touch type the alphabetic keyboard. The final exam covers proper keyboarding technique and the use of the keyboard. Arts & Sciences Elective Code: D

Hours per week: 2.0 lab

ADM-133 Business Math and Calculators (3)

Provides for the integration of business math concepts and formulas. Emphasizes current business math practices built on the foundation of mathematical problem solving. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take MAT-052 or earn a qualifying placement test score.

ADM-157 Business English (3)

Provides improvement for English language skills. Studies the principles of English grammar, punctuation and style. Emphasizes correct grammar usage, spelling, vocabulary and proofreading/editing skills for the office professional. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

ADM-163 Office Concepts and Procedures (3)

Provides an understanding of the concepts, terminology, skills and procedures needed for employment in an office. Covers topics including telephone and teleconference procedures and techniques, travel arrangements, scheduling meetings, mail and shipping services, ethics and professionalism, office supplies and other basic office information. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Pre/corequisite: Take BCA-136.

ADM-164 Administrative Office Applications (3)

Integrates the skills, knowledge and personal qualities necessary for an administrative assistant to perform the operational and supervisory functions for today's computerized office. Provides simulated office activities in a team environment using integrated software, problem-solving techniques and decision-making experiences with special emphasis on creativity, computer applications and professionalism. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take ADM-163.

ADM-187 Administrative Management Capstone (1)

Focuses on assembling artifacts highlighting individual learning while attending college. Creates electronic and paper portfolios showcasing competency levels for each program outcome. Builds employment conversation skills. Incorporates learned skills and e-portfolio into the final exam presentation. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

Prerequisite: Take ADM-164.

ADM-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

Associate Degree Nursing (ADN)

ADN-171 Concepts of Nursing I (5)
Focuses on the care of adult patients with health alterations that require medical and/or surgical intervention. Integrates patient centered care, cultural sensitivity, pharmacology, health promotion and education, safety, evidence based practice, interdisciplinary collaboration and professionalism throughout the course. Arts & Sciences Elective Code: B
Hours per week: 4.6 lecture, 0.8 lab

Prerequisite: Take PNN-229. Take PNN-282. Take PNN-446. Take PNN-723.

ADN-176 Advanced Concepts in Mental Health Across the Continuum (4)
Builds on the concepts of previous material, with an emphasis on the care of high risk mental health patients. Focuses on the provision of ethical/legal, safe, quality, evidence-based patient centered care of the patient with alterations in mental health. Emphasizes health promotion, prevention and condition management of common alterations seen in mental health patients. Provides the opportunity to apply concepts and demonstrate skills and care for patients in a supervised laboratory, simulation, and/or clinical setting. Emphasizes patient safety, application of the nursing process, and development of physical and communication skills. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 0.32 lab, 2.52 clinical

Prerequisite: Take PNN-229. Take PNN-282. Take PNN-446. Take PNN-723. Take SPC-101 or SPC-112. Minimum C in BIO-186. Minimum C in SOC-110.

ADN-180 Advanced Concepts of Nursing (4)
Introduces nursing students to advanced principles of patient care, building on acquired knowledge and development of critical thinking skills from previous course work. Focuses on patient care associated with acute and chronic multi-system disease dysfunction and the physical and psychosocial adaptation of adult patients. Discusses professional nursing roles in the community, leadership and management, as well as nursing trends. Integrates the nursing process and evidence-based practice throughout the course. Emphasizes acquiring knowledge to facilitate clinical decision-making skills needed to provide safe patient care. This course is taught concurrently with Advance Concepts of Nursing Clinic. Arts & Sciences Elective Code: B
Hours per week: 3.75 lecture, 0.5 lab

Prerequisite: Take ADN-171. Take ADN-740.

Corequisite: Take ADN-760.

ADN-183 Advanced Concepts in Obstetric and Pediatric Nursing (4)
Builds on the concepts of previous nursing courses, with an emphasis on the care of high risk obstetric and pediatric patients. Focuses on the provision of ethical/legal, safe, quality, evidence-based patient and family-centered care of the patient with alterations in women and children's health. Emphasizes health promotion, prevention and condition management of common alterations seen in high risk pediatric and obstetric patients. Provides students with the opportunity to apply concepts and demonstrate skills in a supervised laboratory, simulation, and/or clinical setting. Emphasizes patient safety and application of the nursing process. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take ADN-171. Take ADN-176. Take ADN-740.

ADN-740 Concepts of Nursing Clinic (3)
Provides clinical experiences in which students have an opportunity to apply theoretical concepts and implement safe patient care to adult patients and families with health alterations that require medical and/or surgical intervention in a variety of settings. Incorporates application of the nursing process, advanced assessment skills, family-centered care, interdisciplinary collaboration, professionalism, cultural sensitivity, use of informatics and evidence based practice to promote clinical reasoning and safe practice. The student is required to successfully complete the lab portion of this course before progressing to clinical. Arts & Sciences Elective Code: B
Hours per week: 9.0 clinical

Prerequisite: Take PNN-229. Take PNN-723.

ADN-760 Advanced Concepts of Nursing Clinical (4)
Focuses on the advanced nursing care of patients, families and communities with complex multi-system health problems in the acute and community settings. Provides students an opportunity to apply theoretical concepts and implement safe patient care to adult patients, families and communities with complex health alterations that require medical and/or surgical intervention in a variety of settings. Emphasizes leadership, time management and organizational skills, while managing the care of multiple patients and collaborating with the interdisciplinary team in the acute and community settings. Focuses on effective care, assessment and evaluation of patients, families and populations using evidence-based best practices, informatics, safety and clinical reasoning. Arts & Sciences Elective Code: B
Hours per week: 12.0 clinical

Prerequisite: Take ADN-171. Take ADN-740.

ADN-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. Requires approval of supervising professor and dean. May be taken more than once. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

Ag - Agronomy (AGA)

AGA-114 Principles of Agronomy (3)
Provides a foundation course in agronomy. Applies crop, soil, and environmental sciences in understanding agricultural systems in the world. Introduces concepts of plant, soil, tillage, pest, environmental, and sustainable aspects of crop production. Includes hands-on learning experiences. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGA-154 Fundamentals of Soil Science (3)
Introduces physical, chemical, and other biological properties of soils, their formation, classification, and distribution. Uses soil survey and other information sources in balancing agronomic, economic, and environmental concerns in soil management. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGA-170 Fertilizer Management (3)
Covers principles of nutrient management as they relate to soil, plants, fertilizer practices, management systems and the environment. Discusses manure management plans, handling laws and how they impact farming operations. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGA-216 Row Crop and Forage Production (4)
Studies and compares different types of tillage methods, seed varieties, fertilizer program, diseases and chemical application, as well as weed control and new harvest methods used in modern row crop and forage production. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

AGA-221 Field Crop Harvesting and Drying (4)
Focuses on how to harvest and store grain, and forage crops in agricultural systems. Includes the basics of combine safety, set up, adjustment, operation, and calibration of mechanical and data logging systems. Reinforce principles through operation of a combine simulator as well as with actual in-the-field adjustment and operation of machines. Teaches the basics of a yield monitoring system, and how to analyze data obtained from a yield monitor. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

AGA-283 Pesticide Application Certification (2)
Provides a core background and specialty topics in agricultural pesticide applicator certification. Allows students to select certification categories and have the opportunity to obtain pesticide applicator certification at the completion of the course. Commercial pesticide applicator certification is emphasized. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

AGA-376 Integrated Pest Management (3)
Develops observation and identifies symptoms of insect damage, weed and herbicide problems. Utilizes the concept of integrated pest management and economic threshold in recommending control methods. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGA-948 Special Projects (1-3)
Includes an agreed-to development plan for an applied problem solution. Students and instructor meet regularly for discussion, observation and evaluation of the project development. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Ag - Farm Management (AGB)

AGB-101 Agricultural Economics (3)
Covers microeconomic topics, such as supply and demand, production efficiency and consumer decision making, as well as macroeconomics topics, including Gross Domestic Product, inflation, unemployment, international agriculture, and fiscal and monetary policy. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGB-133 Introduction to Ag Business (3)
Introduces basic areas of study in the field of Agribusiness sectors, economics, financial statements and budgets, management, marketing and entrepreneurship. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGB-235 Introduction to Agriculture Markets (3)
Presents basic concepts and economics principles related to markets for agricultural inputs and products. Reviews current marketing problems faced by farms and agribusinesses, farm and retail price behavior, structure of markets, food marketing channels, food quality and food safety, and the role of agriculture in the general economy. Analyzes the implications of consumer preferences at the farm level. Introduces hedging, futures, and other risk management tools. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGB-252 Ag Industry Business Management (3)
Focuses on the agricultural industry and providing inputs to farm producers and processing farm commodities. Covers how agribusinesses, such as cooperatives, and the agribusiness industry are structured. Issues unique to managers in the agribusiness sector are emphasized. Looks at budgeting, financing, facilities management, logistics, teamwork and how to be successful as a manager. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take AGB-470 or ACC-152. Take AGB-466.

AGB-323 Agricultural Procedures and Safety (1)
Focuses on the development, implementation and assessment of appropriate actions in a variety of agricultural settings. Covers the theory and application of modern agricultural safety movement in the United States. Emphasizes the reduction of unnecessary risks in agriculture. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

AGB-330 Farm Business Management (3)

Applies business and economic principles of decision making and problem solving in the management of a farm business. Covers cash flow, partial, enterprise, and whole farm budgeting. Reviews information systems for farm accounting, analysis, and control. Examines obtaining and managing land, capital, and labor resources. Provides alternatives for farm business organization and risk management. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGB-470 or ACC-152.

AGB-331 Entrepreneurship in Agriculture (3)

Covers the organization, research and planning necessary to be a successful entrepreneur in the agriculture and food sectors. Focuses on opportunity recognition and assessment, and business plan development, which includes research, organization, location, competition, production of the product or service, marketing, finance, staffing, monitoring and measuring for both private and social enterprises. Emphasizes financial needs and projection. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

AGB-336 Agricultural Selling (3)

Teaches principles of selling with application to agricultural and food related businesses. Reviews attitudes, value systems, and behavioral patterns that relate to agricultural sales. Examines marketing, selling strategies, preparing for sales calls, making sales presentations, handling objections, and closing sales. Analyzes the buying or purchasing process. Evaluates the agri-selling profession. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

AGB-466 Agricultural Finance (3)

Emphasizes general principles associated with managing money in an agricultural business. Application of the effective use of financial statements, financial statement analysis, risk management, and the use and sources of credit will be taught. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take AGC-130, MAT-102, MAT-120, MAT-156 or MAT-607.

AGB-470 Farm Records, Accounts, Analysis (3)

Provides knowledge of methods for keeping farm records and accounts for farm management, credit and tax purposes. Students complete a record keeping project and prepare a balance sheet, income statement, statement of cash flows, and cash flow budget. Uses cash accounting procedures along with a farm accounting computer program. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGC-103 or CSC-116.

Ag - Comprehensive (AGC)

AGC-103 Ag Computers (3)

Studies the use of personal microcomputers for processing firm and financial records. Emphasizes word processing, database management, spreadsheets, PowerPoint presentations and Internet use. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

AGC-115 Ag Career Orientation (1)

Provides students with an overview of their chosen career field. Students identify areas of interest within the industry and make an educational plan to attain their career goals. Includes activities to assist students in adjusting to college life and exploring Kirkwood opportunities. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

AGC-116 Professionalism in Agriculture (1)

Develops academic and professional skillsets in preparation for a career in agriculture. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

AGC-123 Applied Agricultural Concepts (1)

Provides the background and fundamental skills to be employed in the Ag industry. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

AGC-130 Mathematics I - Agriculture (3)

Provides the student with math skills relating to agricultural economics, agribusiness, animal science, agronomy and agricultural mechanics. Applies the basic math functions and basic algebra to practical agricultural situations. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

AGC-210 Employment Seminar (1)

Assists the student in planning and knowing the rules in employment internship. Includes current topics on resume writing, interviewing techniques and other job-hunting skills. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

AGC-313 Leadership in Agriculture (1)

Develops skills in using parliamentary procedure, business meeting agendas, techniques of delegation, applied communication skills, organization structure and job-seeking skills. Includes determining cooperative activities, organization funding, committee functions and leading discussion groups. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

AGC-314 Leadership in Agriculture (2)

Develops skills in using parliamentary procedure, business meeting agendas, techniques of delegation, applied communication skills, organization structure and job-seeking skills. Includes determining cooperative activities, organization funding, committee functions and leading discussion groups. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

AGC-420 Issues in Agriculture (3)

Studies the policies and issues that affect American agriculture and rural society. Explores the methods of accessing those who form agricultural policy and economic/social systems. Focuses on agricultural/environmental laws, regulations and technologies driving current policymaking, and how they impact stakeholders in a rapidly changing agricultural economy. Prepares students to think critically within today's global economy and changing workforce. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

AGC-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of an honors faculty member. Requires completion of an honors project learning contract. Requires approval of supervising professor and dean. May be taken more than once. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

AGC-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Ag - Horticulture (AGH)

AGH-102 Horticulture Math (3)
Reviews basic math calculations including math operations, fractions, decimals, introductory algebra and geometry. Relates math problems to horticulture applications. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGH-110 Success in Horticulture (1)
Acquaints students with critical issues relevant to horticulture, and provides information, skills and opportunities to be successful in the program, as well as their chosen career. Encourages students to stay engaged in their educational experience, both in and outside the classroom. This class is a source for both personal and academic growth, where students can develop lasting relationships and acquire skills to help them in making difficult choices. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

AGH-112 Introduction to Turfgrass Management (3)
Introduces the students to the field of turfgrass science. Applies principles and practices involved in successful maintenance of turfgrass areas. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-141 Equipment Operations (3)
Teaches the proper techniques for using common pieces of horticulture equipment and attachments. Applied skills include safe operating techniques, daily inspection checklists, and start-up procedures, as well as basic maintenance and troubleshooting of equipment used in the horticulture industry. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-144 Landscape Construction (3)
Involves the construction of segmental paving systems, segmental retaining walls, basic wood construction for landscape use, landscape lighting and water feature construction. Covers calculations necessary to order materials and bid procedures. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-152 Landscape Design Techniques (3)
Provides information and practice in basic graphic communication and introductory landscape design. Topics covered include use of scales, basic drafting, landscape symbols, design process, master planning, design with plant material and cost estimating. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-156 Landscape Design II (3)
Expands graphic communication and landscape design skills. Topics include freehand plan graphics, quick sketching, perspective and color drawing, landscape master planning, advanced plant design, amenity design, commercial layout. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 2.0 lecture, 2.0 lab

Pre/corequisite: Take AGH-152.

AGH-166 Turfgrass and Landscape Irrigation (3)
Assists students in developing career skills for many areas of irrigation and water management. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-167 Introduction to Landscape Computer Design (4)
Introduces software used in landscape, nursery, and garden centers with an emphasis on design, marketing, inventory control, customer relations, sales, and presentation. Builds landscape design skills. Teaches computer design software to improve design efficiency and graphic communication. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Take AGH-152.

AGH-168 Hardscape Design (2)
Introduces how to create a hardscape area involving sizing, material selection, pricing, and design and site layout. Uses landscape design software to create and construct a design. Requires completion of Hardscape Installation Techniques. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Corequisite: Take AGH-304.

AGH-211 Advanced Turfgrass Management (3)
Presents management techniques used in high-maintenance turf areas. Students receive advanced instruction in fertilization, pesticides, etc. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 3.0 lecture

Pre/corequisite: Take AGH-112.

AGH-220 Plant Identification I (3)
Studies the identification and use of a set of woody ornamental shrubs and trees currently used in Midwestern landscape horticulture. Includes plant identification using botanical nomenclature, specific cultural requirements and how each is used in landscape design. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-221 Principles of Horticulture (3)
Provides an introduction to horticulture covering the basic knowledge and skills associated with growth and development of plants including fruits, vegetables, turfgrass, and ornamentals. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-236 Plant Material Maintenance (3)
Studies pruning, fertilizing, staking and other maintenance practices utilized in tree and shrub care. Emphasizes proper planting and transplanting procedures. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-238 Soil and Water Conservation (3)
Studies the different components of soil, soil forming factors, soil erosion and soil conservation. Introduces the student to surveying techniques and use of soil survey reports. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-240 Plant Identification II (3)
Studies the identification and use of a set of annual, herbaceous perennial, and woody ornamental shrubs and trees currently used in Midwestern landscape horticulture. Includes the identification of plants using botanical nomenclature, the specific cultural requirements of each plant and how the plant can be used in landscape design. Second of a two-course sequence. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGH-220.

AGH-264 Hydroponic Production (3)
Examines the urban horticulture practices of hydroponics and aquaponics in a controlled environment. Focuses on the establishment of correct growing environments, plant selection and nutrition, growing techniques, common pests and diseases, harvesting, and marketing crops. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGH-282 Pesticide Application Certification-Horticulture (1)
Reviews materials and testing procedures used to certify pesticide applicators. Concentration is provided on core testing. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

AGH-297 Landscape Business Operations (4)
Introduces business structures, how to establish a business, business administration, and landscape project estimating. Strong emphasis on the fundamentals of creating a landscape project estimate. Includes material take-offs, plant pricing, labor rates, measuring, reading landscape plans and math calculations. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

AGH-303 Sustainable Site Management (3)
Covers the latest topics in environmentally-sound landscape practices. Introduces green building, on-site water management strategies and habitat preservation. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGH-304 Hardscape Installation (4)
Elevates students beyond basic hardscape installation. Studies contemporary design and installation trends. Provides hands-on experience with the latest construction materials. Also provides activities and demonstration with the use of laser instruments for project site measurements and project layout. Includes opportunities for professional certifications in product installation. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

AGH-400 Athletic Field Maintenance (3)
Involves the design, preparation, and maintenance of athletic fields for various sports. Includes the study of various playing surfaces, drainage systems and specialized equipment used on athletic fields. Course includes field trips to local athletic complexes. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGH-112.

AGH-405 Golf Course Maintenance (3)
Involves the theory of design, installation and maintenance of specialized turf and other areas commonly found on golf courses. Student is provided with experience maintaining an on-campus golf green, fairway and tee. Course includes field trips to local golf courses. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 2.0 lecture, 2.0 lab

AGH-445 Turfgrass Management and Administration (3)
Examines the management and administration practices of the turfgrass industry. Includes budgeting, turfgrass facilities organization, crew motivation and management, business plan proposals, project management, managing meetings, dealing with conflict, and managing an increasingly diverse work force. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take AGH-112.

AGH-465 Turf and Landscape Capstone (3)
Focuses on three components in the turf and landscape industry - career, management, and operations. Examines career path opportunities. Reviews the business and economic principles applied to decision-making and problem-solving in managing a business. Identifies the unique business activities including golf course, sports turf, landscape, greenhouse, and lawn care businesses. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGH-948 Special Projects (1-3)
Involves individualized study programs or projects supervised by instructional staff. Students resolve special interests/needs through research, experimentation or other related methods. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Ag - Mechanics (AGM)

AGM-113 Hydraulics I (3)
Introduces the basic laws and theories of fluid power. Includes operation and testing of pumps, valves, cylinders and motors commonly found in vehicles and equipment. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGM-124. Take DSL-355. Take DSL-347. Take DSL-143.

AGM-124 Technical Procedures for Power Mechanics Technicians (3)
Identifies the general knowledge and procedures used by power technicians. Covers tool selection, general shop safety, fire safety and forklift operation. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGM-334 Advanced Ag Electronics (2)

Introduces diagnosis, operation and repair of electrical systems in precision farming equipment. Covers machinery construction and diagnostic wiring harnesses. Includes identifying guidance and application control components on machinery. Utilizes multimeters and fault codes to diagnose electrical system malfunctions. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

AGM-403 Combine Operation & Adjustment (2)

Introduces combine operation and safety. Includes hands-on, in-the-field machine operation and adjustment. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AGM-406. Take AGM-113. Take AGM-427.

AGM-404 Combine Servicing (4)

Emphasizes repairing and reconditioning combines and chopper units. Includes basic hydraulic, electric, power train, monitor, and chassis adjustments. Arts & Sciences Elective Code: B

Hours per week: 8.0 lab

Prerequisite: Take AGM-406. Take AGM-113. Take AGM-427.

AGM-405 Ag Engines (3)

Introduces diesel engines commonly used in the ag industry. The design of engine components and subassemblies is examined with an emphasis on why certain design features are used. Correct procedures for testing and servicing ag engines are explained and demonstrated. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take DSL-355.

AGM-406 Power Transfer I (3)

Includes an introduction to basic drive trains including clutches, manual transmissions, propeller shafts, rear axle assemblies and planetary gears. Emphasizes operation, diagnosis, repair and maintenance procedures. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGM-124. Take DSL-355. Take DSL-347. Take DSL-143.

AGM-409 Agricultural Diagnosis (13)

Teaches diesel and gas-powered engine diagnosis and overhaul from a hands-on perspective. Integrates actual farm equipment repair with minimal instructor supervision. Emphasizes extensive engine testing, troubleshooting, repairing, inspecting and assembling. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture, 20.0 lab

Prerequisite: Take AGM-124. Take AGM-334. Take AGM-405. Take AGM-406. Take AGM-422. Take AGM-440. Take DSL-143. Take DSL-355.

Corequisite: Take AGM-414.

AGM-414 Fundamentals of Air Conditioning (2)

Provides a comprehensive introduction to air conditioning in diesel powered vehicles to gain a basic understanding of theory, diagnostic practices and procedures essential to air conditioning servicing. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AGM-406. Take AGM-113. Take AGM-427.

AGM-419 Machinery Servicing (3)

Allows students to recondition used farm equipment such as planters, sprayers, disks and other tillage equipment. Does not include the engine-powered part of the machine. Includes testing and diagnosis of electronic monitoring systems. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

AGM-422 Diesel Fuel Systems (4)

Covers diesel fuel systems in relation to the engine itself. Diagnosis and testing or troubleshooting take place using special testing tools. Particular fundamentals are covered in compression testing, pump timing, engine component testing, and injector removal testing and repair. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Take DSL-355.

AGM-426 Power Transfer II (3)

Covers operation, theory, diagnosis and overhaul of fluid driven equipment. Includes power shift, hydrostatic-assist transmissions and torque converters. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take AGM-406. Take AGM-113. Take AGM-427.

AGM-427 Equipment Servicing (3)

Allows the servicing or reconditioning of used or new equipment such as heavy trucks, trailers, tractors, implements, machinery, and attachments. This does not include overhauls, clutch replacement, or any major repairs not approved by the instructor. Includes testing and diagnosis of electrical systems, such as lighting, charging and battery maintenance. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take AGM-124. Take DSL-355. Take DSL-347. Take DSL-143.

AGM-440 Power Shift Transmissions (3)

Covers operation, theory, diagnosis and overhaul of fluid-driven equipment. Includes power shift, hydrostatic- and hydraulic-assist transmissions. Also includes torque converters. Arts & Sciences Elective Code: B

Hours per week: 1.5 lecture, 3.0 lab

Prerequisite: Take AGM-406.

AGM-450 Diesel Diagnosis (15)
Teaches diesel and gas powered engine diagnosis and overhaul from a hands on perspective. Integrates actual repair with minimal instructor supervision. Emphasizes extensive engine repair as well as transmission. Includes trouble shooting, testing, inspecting and correct assembly according to manufactures specifications. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 24.0 lab

Prerequisite: Take AGM-414. Take DSL-348. Take AGM-426. Take AGM-404. Take DSL-808. Take AGM-403. Take DSL-809. Take DSL-355.

Ag - Natural Resources/Forestry (AGN)

AGN-105 Applications of Natural Resources (3)
Explores software, hardware and applications used in the natural resource field. Emphasizes desktop publishing, GPS/GIS and interpretive applications. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGN-140 Native Plants (3)
Identifies plant materials existing in natural woodlands, roadsides and prairies. Special emphasis is placed on prairie forbs. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 2.0 lecture, 2.0 lab

AGN-220 Avian Wildlife (3)
Includes training in identification and management of nesting and game birds of the upper Midwest. Environmental requirements and relationships are included. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 3.0 lecture

AGN-223 Aquatic Wildlife (3)
Studies the identification of fish, amphibians and reptiles native to Iowa. Emphasis is placed on habitat requirements and management concerns. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 3.0 lecture

AGN-226 Mammalian Wildlife (3)
Provides training in identification and management of upper Midwest mammals. Environmental requirements and relationships are stressed. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 3.0 lecture

AGN-235 Park and Recreation Administration (3)
Examines the organization and administration of park systems and recreational programs. Current issues in park management are covered. Arts & Sciences Elective Code: B; Comments: Must be a second-year student
Hours per week: 3.0 lecture

AGN-240 Natural Resources Interpretation (3)
This course develops skills in all facets of interpretation. Nature walks, public presentations, displays, news releases and photography are incorporated into interpretive exercises. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 3.0 lecture

AGN-244 Wildlife Management (3)
Students learn proper wildlife management through carefully planned and maintained reserves, preserves and refuges. Management techniques presented include those for game, non-game and aquatic animals. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 2.0 lecture, 2.0 lab

AGN-248 Natural Resources Appreciation (3)
Surveys the nonliving natural resources of Iowa. Examines how park and recreation agencies integrate these resources into their overall programs. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 3.0 lecture

AGN-250 Park Maintenance Programs (3)
Includes development and analysis of maintenance programs for buildings, campgrounds, lake areas and related recreational facilities. Arts & Sciences Elective Code: B; Comments: Second-year student
Hours per week: 2.0 lecture, 2.0 lab

AGN-260 Wildland Firefighter Training (3)
Covers the four training segments required for wildland firefighter certification: S-130 reviews basic wildland firefighting skills, S-190 studies fire behavior and the environmental factors that affect fire behavior, L-180 addresses human factors on the fireline, and I-100 studies the wildland firefighting management system. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGN-270 Watershed Assessment and Management (3)
Focuses on the basic concepts of watershed processes, including how water, sediment and nutrients are transported downstream in the drainage network. Describes the primary components of streams and how stream hydrology and water quality can be altered by human activities. Discusses strategies for watershed assessment and implementing best management practices. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGN-280 Introduction to Forestry Management (3)
Examines the application of silvicultural practices to the management of rural and urban forest resources in Iowa. Includes basic tree structure and function, forest communities in Iowa, the identification of forest pests, forest mensuration, and the development of a management plan. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGN-300 Rain Gardens and Bioretention Cells (3)
Addresses the use of rain gardens and bioretention cells for stormwater quality management and landscape beautification. Covers function, design, landscape positioning, installation, and maintenance of rain gardens and bioretention cells. Focuses on integrating rain gardens and bioretention cells into site planning and design, as well as installing and maintaining them on Iowa landscapes. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Ag - Precision Ag (AGP)

AGP-143 Fundamentals of Electricity for GPS (1)
Introduces basic electricity fundamentals, such as voltage, amperage and resistance, with an emphasis on Ohm's Law and its practical application. Covers operation and understanding of a digital volt/ohm meter, and series and parallel circuits. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

AGP-333 Precision Farming Systems (3)
Provides an overview of precision farming concepts and the tools of precision farming (GPS, GIS and VRT). Introduces the use of each of these tools within the processes of a precision farming system. Provides hands-on activities in the use of these tools. Discusses economic and environmental benefits. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGP-405 Ag Applications of GIS (3)
Provides an overview of the various applications of geographic information systems (GIS). Covers basic interface, views, themes, tables and layouts using ARCView software. Previews basic functions such as query and editing layers. Provides practical experience with hands-on computer exercises in several disciplines, including agriculture, city/government planning or transportation. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGP-420 Geospatial Data Collection (3)
Provides detailed instruction and hands-on use of GPS receivers and dataloggers to collect field data. The process for creating spatial data structure, maintenance of equipment and use of datalogging software is the main focus. Data management and evaluation are also covered. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGP-333.

AGP-425 Agricultural Spatial Analysis (3)
Provides a background in the analysis of spatial data. Specific topics include transformation and retrieval of data, analytical techniques and spatial modeling. Concepts of multivariate and multitemporal analysis are also discussed. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGP-405.

AGP-435 Advanced Precision Farming: Software (3)
Introduces various precision farming software in real-world applications. Focuses on initial setup, creating management and production lists, saving and unloading data cards, processing field data, and compiling reports and prescription/application maps. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGP-333.

AGP-437 Precision Ag Hardware (Machinery Servicing & Retrofitting) (1)
Prepares the student to use various precision farming hardware components. Requires students to read and understand technical manuals for the updating and retrofitting of agricultural machinery with new technology and monitoring systems. Focuses on preparing a planter assembly for field operation in the spring by installing necessary technology upgrades, and control and guidance systems. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

Prerequisite: Take AGP-333.

AGP-439 Ag Hardware, Maintenance and Technology (3)
Emphasizes various farming hardware components. Incorporates technical manuals for the updating, retrofitting and maintenance of agricultural machinery with new technologies. Offers hands-on planter assembly and updating for planting season field operation, and tractor preparation upgrades for the control and guidance systems. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGP-333.

AGP-440 Ag Applications of Digital Imagery (3)
Provides background in the use of remotely sensed digital imagery for agricultural decision making. Specific topics include types of images, methods of collecting imagery, verification, interpretation and analysis of data. Use of data for decision making is also discussed. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Ag - Animal Science (AGS)

AGS-113 Survey of the Animal Industry (3)
Introduces students to the various species and breeds of domestic animals and to create an understanding of the principles of food animal production, product marketing, and issues confronting the animal industry. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGS-214 Domestic Animal Physiology (3)
Studies the comparative anatomy and physiology of the major body systems of cattle, sheep, swine and horses. Includes laboratory exercises involving physiology and anatomy of animals in healthy and diseased states. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGS-279 Livestock Merchandising (2)
Covers the fundamentals of preparing for successful livestock sales, including advertising, photography, livestock preparation, sale guidelines and customer support. Students participate in one to three livestock sales. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

AGS-305 Livestock Evaluation (3)

Examines the selection of breeding and meat animals based upon performance and visual appraisal. Students will use Kirkwood farm laboratory livestock and may include off-campus assignments. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGS-319 Animal Nutrition (3)

Examines the nutritional principles, digestive systems, composition, and nutritional characteristics of common feedstuffs, ration formulation, and recommended animal feeding programs. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGS-350 Artificial Insemination of Cattle (1)

Develops skills of artificial insemination, heat detection and supportive background knowledge of beef and dairy herds, and discusses recommended nutrition, management and genetics. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 1.0 lab

AGS-356 Livestock Behavior and Welfare (3)

Studies applications of basic animal behavior principles to ensure optimum performance and well being. Examines the effects of environment, stress, disease, and nutrition on animal physiology and performance. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGS-357 Livestock Behavior and Welfare Lab (2)

Meets concurrently with Livestock Behavior and Welfare. Examines the effects of environment, stress, disease, and nutrition on animal physiology and performance. Arts & Sciences Elective Code: B
Hours per week: 4.0 lab

Corequisite: Take AGS-356.

AGS-425 Swine Systems Management (3)

Identifies records needed in swine production and record keeping techniques. Students prepare budgets and cash flows as they relate to swine production. Also, various marketing opportunities and practices are examined and analyzed. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGS-441 Livestock Housing and Equipment (3)

Studies the design and management of livestock facilities to limit stress and optimize performance. Teaches methods to minimize the environmental impact of livestock operations. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGS-500 Beef Industry and Feedlot Management (3)

Presents an overview and introduction to the entire beef industry. Relates and applies methods of starting cattle on feed and fall management of weaned calves. Deals with feedlot budgeting, determination of 205-day weights, ratios and fall management of the beef cow herd. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGS-501 Stockmanship, Bunk Management and Cattle Processing Lab (2)

Meets concurrently with Beef Industry Feedlot Management. Works with Kirkwood cattle and custom-fed cattle to practice low stress cattle handling, effective bunk management, and proper receiving and processing. Arts & Sciences Elective Code: B
Hours per week: 4.0 lab

Corequisite: Take AGS-500.

AGS-502 Beef/Cow Calf Production (2)

Participates in calving of the Kirkwood Community College herd. Deals with proper nutrition, health, solving obstetrics problems, and preparation of cow's return to estrus. Also includes records, identification, and pasture management. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

AGS-503 Cow Calf Lab (1)

Meets concurrently with Beef Cow/Calf Production. Observes and assists with calving the Kirkwood Community College cow herd. Practices baby calf health and management along with preparation of the cow herd for rebreeding. Plans and implements early lactation nutrition for the cow herd. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

Corequisite: Take AGS-502.

AGS-512 Beef Breeding/Reproduction/Nutrition (3)

Studies the anatomy and physiology of the female and male reproductive systems. Develops an understanding of proper use of heat synchronization, A.I., super ovulation, embryo transplants, and new developments in biotechnology. Deals with health, heritability, and nutritional problems. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGS-513 Reproduction and Nutrition Lab (2)

Meets concurrently with Beef Breeding/Reproduction/Nutrition. Develops reproductive strategies and management plans along with practicing principles to enhance reproductive efficiency. Develops and implements nutritional programs for beef cattle herds. Arts & Sciences Elective Code: B
Hours per week: 4.0 lab

Corequisite: Take AGS-512.

AGS-516 Beef Science Management (2)

Works with evaluation management by identifying, measuring and selecting commercially important traits of beef cattle. Provides the basic information needed to understand terminology and predict performance through the use of sire summaries. Allows students to improve average performance of offspring by matching genetic potential to feed resources through multiple trait selection. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

AGS-517 Livestock Merchandising Lab (1)

Meets concurrently with Beef Science Management. Collects and analyzes beef cattle data for management and marketing use. Prepares cattle for sales and exhibition. Includes genomic, identification, phenotypic evaluation, and preparation for photography and videos. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

Corequisite: Take AGS-516.

AGS-531 Swine Reproduction and Management (3)

Recognizes swine reproductive characteristics and reproductive functions of swine breeding stock, and identifies type and confirmation necessary for economic production. Deals with breeds, breeding programs, breeding systems, including A.I., and appropriate management techniques. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGS-532 Swine Reproduction and Management Lab (2)

Meets concurrently with Swine Reproduction and Management. Teaches breeding systems, including heat detection, AI methods, and current industry breeding practices. Explains equation for proper collection and extension, as well as methods for processing and packaging. Arts & Sciences Elective Code: B
Hours per week: 4.0 lab

Corequisite: Take AGS-531.

AGS-948 Special Projects (1-3)

Includes an agreed-to development plan for an applied problem solution. Allows student to pursue exploration and fact gathering of special-interest projects. Student and instructor meet weekly for discussion, observation and evaluation of the project development. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Ag - Vet Tech (AGV)

AGV-103 Introduction to Veterinary Science (3)

Studies the comparative anatomy and physiology of the major body systems of domestic animals and how anatomy and physiology are altered in disease states. Examines the effects of environment, stress, disease and nutrition on animal physiology and well-being. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

AGV-105 Animal Behavior/Kennel Management (5)

Studies basic animal behavior and the influences that modify behavior and kennel management including laws, records and daily operation of kennels. Practical experience is included. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 4.0 lab

Prerequisite: Minimum C- in AGV-116. Minimum C- in AGV-120. Minimum C- in AGV-126. Minimum C- in AGV-152.

AGV-116 Introduction to the Veterinary Technology Program (1)

Provides students with an overview of the Veterinary Technician Program including program policies, the profession's legal and ethical considerations, and requirements for taking state and national credentialing examinations. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

AGV-117 Professionalism for Veterinary Technicians (1)

Focuses on professionalism and soft skills for veterinary technicians. Develops written and oral business communications. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Minimum C- in AGV-140. Minimum C- in AGV-214. Minimum C- in AGV-161. Minimum C- in AGV-167.

AGV-120 Veterinary Medical Terminology (1)

Focuses on reading and interpreting medical charts and records, and conversing with veterinary professionals. Designed for students to develop a working understanding of the language of veterinary medicine. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

AGV-126 Animal Anatomy and Physiology I (3)

Beginning anatomy and physiology with veterinary clinical emphasis. Provides the basis for study of conformation, production and pathological processes of diseases of dogs, cats, horses, sheep, goats, cattle, swine and laboratory animals. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGV-127 Animal Anatomy and Physiology II (4)

Studies anatomy and physiologic principles of domestic animals. Continuation of physiological principles in Animal Anatomy and Physiology I. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Minimum C- in AGV-126. Minimum C- in AGV-116. Minimum C- in AGV-120. Minimum C- in AGV-152.

AGV-140 Veterinary Pharmacology (3)

Studies medications and products commonly used in veterinary medicine. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in AGV-127. Minimum C- in AGV-142. Minimum C- in AGV-105. Minimum C- in AGC-313.

AGV-142 Mathematics for Veterinary Technicians (3)

Covers pharmaceutical mathematics with an emphasis on dosage calculations and fluid therapy as related to veterinary medicine. Course is open to Vet Tech students only. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in AGV-116. Minimum C- in AGV-120. Minimum C- in AGV-126. Minimum C- in AGV-152.

AGV-144 Fundamentals of Small Animal Nutrition (3)

Covers essential nutrients and the roles of each in an animal's metabolism, with an emphasis on the nutritional management of dogs and cats. Basic clinical and therapeutic nutrition are covered in depth. Includes analysis of many commercial pet foods. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Minimum C- in AGV-140. Minimum C- in AGV-214. Minimum C- in AGV-161. Minimum C- in AGV-167.

AGV-146 Large Animal Care (3)

Provides general livestock husbandry, handling and restraint involving horses, cattle, sheep and swine. Includes major breed identification, characteristics, behavior traits, latest humane handling techniques and physical restraint. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take AGV-126.

AGV-152 Veterinary Computer Applications (2)

Introduces the student to computer software commonly used in veterinary practice. Students will become proficient in the use of Microsoft Office software and software used in the routine management of veterinary records. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

AGV-161 Animal Nursing I (3)

Introduces the fundamentals of animal nursing. Includes animal handling and restraint, patient admission and history, preparation and administration of vaccines and medications, care of hospitalized patients, introduction to radiology, practice management, client relations and sanitation. Limited to Veterinary Technician students. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Minimum C- in AGV-105. Minimum C- in AGV-142. Minimum C- in AGV-127.

AGV-162 Animal Nursing II (3)

Continuation of Animal Nursing I. Covers foundation material in pre- and post-surgical care, surgical assisting, fluid therapy, dental prophylaxis, anesthesiology, clinical pharmacy and basic nursing skills. Clinic and hospital record keeping are covered with an introduction to practical radiology. Arts & Sciences Elective Code: B

Hours per week: 6.0 lab

Prerequisite: Minimum C- in AGV-140. Minimum C- in AGV-161. Minimum C- in AGV-214. Minimum C- in AGV-167.

AGV-163 Animal Nursing III (3)

Continuation of Animal Nursing II. Emphasis is on radiology, record keeping, pharmacology associated with emergency care, inventory control, anesthesiology, dentistry, surgical assistance, and raptor care skills. Arts & Sciences Elective Code: B

Hours per week: 6.0 lab

Prerequisite: Minimum C- in AGV-162. Minimum C- in AGV-117. Minimum C- in AGV-144. Minimum C- in AGV-168. Minimum C- in AGV-215.

AGV-167 Veterinary Clinic Pathology I (3)

Introduction to veterinary clinical pathology with an emphasis on laboratory procedures commonly performed in private practice. Fecal analysis, basic urinalysis and basic hematology are covered. Proper care and maintenance of laboratory equipment is stressed. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in AGV-127. Minimum C- in AGV-105. Minimum C- in AGV-142. Minimum C- in AGC-313.

AGV-168 Veterinary Clinic Pathology II (3)

Basic clinical pathology laboratory procedures including specimen collection and preservation, hematology, and fecal exam preparation. Hematology will include preparation and performance of PCV, Hb, WBC, RBC counts, preparation and staining blood smears, and performance of differential cell counts. Limited to Veterinary Technician students. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in AGV-167. Minimum C- in AGV-140. Minimum C- in AGV-214. Minimum C- in AGV-161.

AGV-169 Veterinary Clinic Pathology III (3)

Refinement of hematology and other skills acquired in Veterinary Clinical Pathology II. Additional units include urinalysis, electrocardiography, necropsy, cytology and specialized clinical procedures. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in AGV-117. Minimum C- in AGV-144. Minimum C- in AGV-162. Minimum C- in AGV-168. Minimum C- in AGV-215.

AGV-171 Large Animal and Poultry Medicine (4)

Common and significant disease and health problems of livestock and poultry. Emphasis on herd/flock health, etiology, clinical symptoms, treatment and prevention. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C- in AGV-117. Minimum C- in AGV-144. Minimum C- in AGV-162. Minimum C- in AGV-168. Minimum C- in AGV-215.

AGV-206 Canine Behavior & Handling (3)

Introduces the observation and understanding of canine behavior and safe handling techniques for the pet groomer. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

AGV-214 Small Animal Medicine I (3)

Discusses diseases affecting small animals with emphasis on etiology, clinical symptoms, treatment and prevention. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Minimum C- in AGV-127. Minimum C- in AGC-313. Minimum C- in AGV-105. Minimum C- in AGV-142.

AGV-215 Small Animal Medicine II (3)
Continues Small Animal Medicine I. Discusses diseases affecting small animals with emphasis on etiology, clinical symptoms, treatment and prevention. Emphasizes metabolic diseases, diseases of the cardiovascular, digestive, and urogenital system. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in AGV-214. Minimum C- in AGV-140. Minimum C- in AGV-161. Minimum C- in AGV-167.

AGV-216 Avian, Exotics, and Small Mammals (2)
Introduces laboratory animals used in research and avian, reptiles, and small mammals. Teaches practical care with selected animals. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Minimum C- in AGV-162. Minimum C- in AGV-168. Minimum C- in AGV-117. Minimum C- in AGV-144. Minimum C- in AGV-215.

AGV-217 Diagnostic Technologies (2)
Introduces technology commonly used in veterinary practices to diagnose and treat animals. Emphasizes imaging technologies and proper positioning for quality results. Covers therapeutic and other technologies. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Minimum C- in AGV-162. Minimum C- in AGV-215. Minimum C- in AGV-117. Minimum C- in AGV-144. Minimum C- in AGV-168.

AGV-221 Professionalism for Pet Groomers (1)
Focuses on professionalism and soft skills necessary for pet groomers. Reviews successful communication techniques required by a retail grooming business. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

AGV-948 Special Projects (1-3)
Includes an agreed-to development plan for an applied problem solution. Student and instructor meet on a weekly basis to review progress. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Anthropology (ANT)

ANT-105 Cultural Anthropology (3)
Explores what it means to be human. A comparative, holistic study of group life in various cultures is undertaken. Selected aspects of physical and cultural anthropology perspectives provide the basis for these cross-cultural examinations. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ANT-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

ANT-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Apparel Merchandising (APP)

APP-120 Apparel Visual Merchandising (3)
Analyzes types of visual display construction, the relationship of display to the total promotional program, elements and principles of display design, construction materials, and merchandise selection. Performs field analyses and comparisons of visual displays and methods used by local retailers. Produces visual merchandising documents for the retail environment. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

APP-130 Principles of Fashion Merchandising (3)
Examines the apparel and textiles industry. Explores careers, terminology, fashion product life cycles, and industry practices. Provides instruction on how to develop portfolio artifacts for a student's chosen career. Participates in discussions with industry speakers. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

APP-140 Fashion History (3)
Examines historic dress from ancient times to present day and its relationship to contemporary fashion trends. Covers influencing factors connected to the context of dress. Explores diverse sources for historic dress to build research skills applicable for future careers. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

APP-160 Sewn Product Analysis (3)
Evaluates a variety of apparel and textile products. Investigates the product development processes, sourcing, and manufacturing practices. Teaches the principles and methods of garment assembly by focusing on materials and specifications relative to quality, performance, cost, and price. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

APP-170 Fashion Trends and Consumer Analysis (3)
Examines diverse markets and analyzes multiple factors related to dress in various societies. Investigates the influences and motivations of consumers' dress practices that impact the apparel and textiles industry. Explores research methods used to investigate consumer preferences and lifestyles. Researches current fashion trends to predict future directions in the industry. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

APP-210 Apparel Textiles (3)
Investigates diverse categories of fibers and analyzes the basic fiber processes and properties, yarn processing, fabric construction methods, and various fabric finishes. Examines textile qualities relating to factors of fiber properties and serviceability. Examines textile properties, characteristics, and various end uses of textiles. Experiments with identification methods. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take APP-160.

APP-215 Sustainability in the Apparel and Textiles Industry (3)

Investigates the key concepts of sustainability for the global apparel and textiles industry. Analyzes internal and external issues and sourcing strategies for the global context. Examines corporate and consumer responsibilities. Explores sustainable solutions through project-based learning. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

APP-220 Fashion Show Procedures (3)

Plans and executes the diverse components of a fashion show. Recruits and selects models and peer designers. Partners with local retailers and designers to select and coordinate merchandise as well as other local resources. Creates a budget, raises funds, and markets the show. Culminates in a fashion show hosted and produced by the class for the local community. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take APP-120. Take APP-130. Take APP-160. Take APP-210. Take APP-275.

Pre/corequisite: Take APP-240.

APP-240 Fashion Design (3)

Provides instruction on how to illustrate figures and products for diverse target markets utilizing a variety of artistic mediums. Develops fashion plates and focused apparel collections. Creates a digital portfolio in alignment with industry practices. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

APP-270 Fashion Buying (3)

Examines the buying process utilized in the apparel and textiles supply chain. Completes projects to practice applications of merchandise planning and control. Introduces retail technology and computer applications for buying practices. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

APP-275 Fashion Styling Processes (3)

Applies fashion styling skills for the apparel and textiles industry. Practices diverse types of styling including commercial, editorial, television/wardrobe, personal, celebrity, and prop and set. Prepares students to partner with industry, models, and clients. Produces artifacts for digital portfolios, magazines, and social media platforms. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Corequisite: Take APP-210.

APP-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

APP-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Architectural (ARC)

ARC-185 Architectural Photoshop Techniques (1)

Uses the capabilities of Photoshop to create architectural renderings. Focuses on understanding processes and developing techniques to enhance presentations. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Minimum C in ARC-195 or INT-126.

ARC-205 Design Studio-Residential (6)

Simulates an architectural (residential) design firm through real-life projects, employer/employee expectations, client additions/revisions and deadlines. Focuses on 3D CAD (Computer Aided Drafting) skills using Autodesk Revit software. Develops skills with file management, organization of architectural information, attention to detail, concept drawings, converting preliminary concept drawings into presentation drawings, construction documents and renderings. Emphasizes both teamwork, peer evaluation and general problem solving. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 8.0 lab

Prerequisite: Take CAD-201.

ARC-207 Design Studio-Commercial (6)

Simulates the workflow of a design professional that must create, present, and ultimately document an original solution to a construction-related scenario. Researches and analyzes a hypothetical client and a real-world site to find meaningful design possibilities. Creates presentation-type drawings and renderings to convince that client to proceed with those possibilities. Documents a design solution for construction. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 8.0 lab

Prerequisite: Take CAD-201.

ARC-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

ARC-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Art (ART)

ART-101 Art Appreciation (3)

Provides an overview of art from a historical, contemporary and aesthetic frame of reference. Recommended for non-Art majors. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ART-120 2-D Design (3)

Introduces design concepts and fundamental skills through studio exercises. Explores design principles and elements in two dimensions. Students generate creative ideas and employ a variety of media and materials to gain visual sensitivity through practical experience. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

ART-123 3-D Design (3)

Introduces design concepts and fundamental skills through studio exercises. Explores design principles and elements in three dimensions. Encourages creative ideas and employs a variety of media and materials to gain visual sensitivity through practical experience. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

ART-133 Drawing (3)

Introduces analysis of visual form and principles of responsive drawing. Includes perspective, chiaroscuro and figure drawing. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

ART-134 Drawing II (3)

Continues skills begun in Drawing. Emphasis on figure drawing from model, various media. Emphasizes development of personal expression and portfolio. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-133.

ART-138 Figure Drawing (3)

Introduces drawing the human figure. Focuses on observational drawing from the model, emphasizing the activity of drawing from life, refining skills in observation and rendering. Attention is given to formal aspects of drawing, including methods of approach and execution, personal expression and broader expectations vis-a-vis critique. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-133.

ART-143 Painting (3)

Provides the beginning student experience in handling a variety of painting material to foster growth in visual, scientific, conceptual and aesthetic responses. Explores painting from the Renaissance to the current era through examination of paintings and scholarly periodicals. Focuses on student proficiency through observational painting from the model, the still life, and interior and/or exterior spaces, perspective, light structure/chiaroscuro, positive negative spatial relationships, color theory and relationships, handling of materials, and abstraction. Develops artistic vocabulary and critical and conceptual thinking habits through participation in mandatory group critiques. Deepens student introspection through creation of a cohesive portfolio, body of work or artifact for final presentation. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

ART-144 Painting II (3)

Builds on skills learned in Painting with emphasis on development of independent aesthetic judgments. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-143.

ART-157 Printmaking (3)

Introduces intaglio, relief and stencil printmaking processes and composition. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

ART-158 Printmaking II (3)

Continues technical development in relief and intaglio techniques; aesthetics stressed. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-157.

ART-161 Digital Art (3)

Introduces the computer as a tool for visual communication and creation of various types of art in the Fine Art context. Includes raster- and vector-based image making, digital collage, digital image manipulation, basic animation, digital painting and drawing, blending of traditional and digital art-making, and experimentation in a variety of input and final output methods. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-301 or ART-120.

ART-163 Sculpture (3)

Introduces techniques and concepts of sculpture using materials such as plaster, clay, wire, glass, and other applied materials. Historical references of objects, artists, and movements will be discussed alongside modern sculpture references. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

ART-164 Sculpture II (3)

Continues the instruction and exploration of techniques and concepts as well as historical and contemporary lessons taught in Sculpture ART-163. Similar materials will be used in class. A higher expectation is held to develop technical skills, material knowledge, and conceptual ideas. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-163.

ART-165 Sculpture III (3)

Continues the exploration and development of techniques and concepts of sculptural form. Assignments are geared for progressive development of the individual's ability. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-164.

ART-173 Ceramics (3)

Introduces ceramic making techniques through hand building and the potter's wheel. Traditional and modern processes will be instructed. Historical references of ceramic objects, artists, and movements will be discussed alongside modern ceramic references. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

ART-174 Ceramics II (3)

Continues the instruction of hand-built and wheel-thrown techniques demonstrated in Ceramics ART-173. Similar materials and processes will be available to complete assignments. A higher expectation is held for students to advance their technical skills, material knowledge, and conceptual ideas. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-173.

ART-175 Ceramics III (3)

Further develops an individual's skill, material knowledge, and personal interest of ceramic art. Assignments, lectures, and demonstrations will be organized similarly to prior sections. Ceramic studio operations such as mixing glazes and loading kilns will be introduced. Independent work time in the studio is expected to be a more rigorous commitment than in previous sections. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-174.

ART-184 Photography (3)

Provides cultural and historic frameworks used in understanding the contemporary world of photography. Focuses on both film and digital cameras. Highlights principles and elements of design and photographic composition. Photographs are created in a traditional and contemporary setting for portfolio and display. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

ART-186 Digital Photography (3)

Provides an understanding of the unique cultural and historic context of digital photographic technology. Develops familiarity and proficiency with digital cameras, computers, and printers. Studies technical and aesthetic issues in visual communication and digital image capture/presentation. Includes presentations, critiques online, portfolio, and displays. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

ART-203 Art History I (3)

Introduces the history of art chronologically, from the prehistoric period in Europe to the early Renaissance. Cultivates a meaningful recognition of different styles, concepts and concerns through an analysis of selected paintings, sculpture, architecture and other mediums. Emphasizes the thematic issues prevalent in various time periods and geographic/cultural areas. Examines interpretation, concepts, theories, and comparison of styles and techniques through readings, visual presentations, lecture and discussion. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ART-204 Art History II (3)

Introduces the history of art chronologically, from the Renaissance to the 21st century. Cultivates a meaningful recognition of different styles, concepts and concerns through an analysis of selected paintings, sculpture, architecture and other mediums. Emphasizes the thematic issues prevalent in various time periods and geographic/cultural areas. Examines interpretation, concepts, theories, and comparison of styles and techniques through readings, visual presentations, lecture and discussion. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ART-220 Ceramics IV (3)

Instruction and guidance is provided for students to refine their developed skills, broaden their knowledge of ceramic art, and further their experience in ceramic studio operations. Assignments are organized for students to produce self-directed work within guidelines set by Instructor. Expectations of a student's independent work ethic is of a high caliber. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-175.

ART-223 Advanced Photography (3)

Improves proficiency with digital SLR cameras, computer applications and printing. Introduces commercial studio lighting techniques for product and portraiture. Builds on techniques and aesthetic values in visual communication using a combination of digital, traditional and alternative photographic practices. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-186 or ART-184.

ART-224 Commercial Studio Lighting Table Top and Portrait (3)

Studies the use of commercial studio lighting techniques and skills in photography as a way to communicate or make art. Includes table top or product lighting, portrait lighting and special events photography. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-184 or ART-186.

ART-290 Projects in Photography (1)

Studies photography as a way to communicate or make art. Students propose a personal project that can be created in traditional or digital capture. Work is displayed and weekly meetings mark progress on student project. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

ART-420 Introduction to Glass (3)

Introduces contemporary and historic glass working techniques and concepts. Covers fusing, slumping, bead making, kiln casting and hot glass blowing. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

ART-430 Glass-Fusing, Slumping and Casting (3)

Introduces glass fusing, slumping, pate de verre, stencil, inclusions, torch working, pattern bars, casting and cold-working techniques and concepts. Involves group and individual demonstrations, discussions and critiques. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

ART-431 Glass-Fusing, Slumping, and Casting II (3)

Explores advanced contemporary and traditional warm glass working techniques and concepts, through lectures, demonstrations, discussions, practice and critiques. Includes flat fusing, slumping, torch working and solid cast forms. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-430.

ART-440 Hot Glass I - Blowing and Sculpting (3)

Furthers contemporary and traditional hot glass working techniques and concepts. Consists of group and individual demonstrations, discussions and critiques. Includes the creation of hollow forms, solid forms, functional and non-functional objects using hot glass. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-420.

ART-441 Hot Glass II - Blowing and Sculpting (3)

Focuses on advanced contemporary and traditional hot glass working techniques and concepts. Consists of group and individual demonstrations, discussions and critiques. Introduces the application of bases, the use of color, color manipulation, annealer pick ups, advanced sculpting, and making cane using hot glass. Once passed, this course may be repeated one time. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ART-440.

ART-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

ART-928 Independent Study (1-3)

Allows the student to do readings, papers, research and/or production work under the guidance of an art faculty member. Independent study contract required. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

ART-945 Digital Arts Capstone (3)

Focuses on advanced concepts that examine the business of digital arts - including web design, motion media, commercial photography, graphic design and marketing ethics, and project management. Includes internship/job shadow requirements. Provides the option of a semester abroad for a student to take transferable courses with a portfolio and job shadow/internship possibility in partner institutions of IUT Lumieriere in Lyon, France or the University of Abertay in Scotland, UK. The choice of institution is dependent on the student's focus in the media arts. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

ART-946 Visual Arts Capstone (3)

Examines the business and execution of the visual arts, including a selected area of concentration. Requires an internship/job shadow position of one credit hour or 15 hours per week, in addition to the 3 hours per week of classroom contact hours. The three credit hours per week will involve teaching portfolio production, web design of the portfolio, gallery arts installation, professional matting and framing, photographing art work, artist's statement, and marketing strategies for exhibition of the work. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

American Sign Language (ASL)

ASL-141 American Sign Language I (4)

Provides a beginning development of basic language and conversational skills in American Sign Language (ASL). Teaches basic vocabulary and grammatical knowledge to build comprehension and production skills, including introductions, describing others, and detailing family and living environments. Includes signed conversations and basic conversational tasks using American Sign Language. Explains simple and basic grammatical structures to ask questions and give simple information. Introduces Deaf culture through readings and assignments. The course is taught in American Sign Language. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

ASL-171 American Sign Language II (4)

Continues development of basic language and conversational skills in American Sign Language. Expands vocabulary and grammatical knowledge, building comprehension and production skills. Explores expanded grammatical structure to give more detailed information about people, places, or events. Increases awareness of Deaf culture through readings and assignments. The course is taught in American Sign Language. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take ASL-141.

ASL-245 American Sign Language III (4)

Expands on the development of language and conversational skills in American Sign Language. Enhances vocabulary and grammatical knowledge; strengthens comprehension and production skills. Develops basic complex discourse skills and encourages engagement in meaningful, detailed dialogues. Teaches the use of new language structures and advanced questioning forms to give information, provide recommendations, and compare people, items, or events. Continues exploration and increases awareness of Deaf culture through readings and assignments. The course is taught in American Sign Language. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take ASL-171.

ASL-281 American Sign Language IV (4)

Focuses on the advanced development of language and conversational skills in American Sign Language. Expands vocabulary and grammatical knowledge at an advanced level, further strengthening comprehension and production skills. Explains advanced complex discourse skills while engaging in meaningful and detailed extended dialogues, providing skills to explain rules, provide facts, and engage in storytelling forms. Continues exploring and increasing awareness of Deaf culture through readings and assignments. The course is taught in American Sign Language. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take ASL-245.

ASL-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

ASL-928 Independent Study (1-3)

Allows the student to do readings, papers, research /or other projects under the individual guidance of a staff member. Independent study contract required. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean

Hours per week: 2.0 lab

Automation Tech/Robotics (ATR)

ATR-105 Industrial Robotics (3)

Covers the tasks and procedures that an operator, technician, engineer or programmer needs to set up and program a Fanuc Robotics ArcTool software package. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

ATR-126 Advanced Maintenance Technologies (2)

Teaches fundamentals of shaft alignment, predictive, and preventative maintenance at the intermediate level. Integrates hands-on shaft alignment with dial indicators and laser alignment. Includes training in technologies used for predictive maintenance in the workplace, e.g., thermal imaging, vibration analysis, and trend analysis. Utilizes labs to reinforce concepts and theory covered in lecture and online material. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take ATR-303.

ATR-136 Programmable Logic Controllers for Manufacturing (4)

Covers installing, programing and troubleshooting PLC systems as they are used in the manufacturing industry. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Take ELE-364.

ATR-201 Automation and Instrumentation Capstone (4)

Explores manufacturing- and process-automation control systems while applying abilities, techniques and knowledge learned throughout program. Develops a control system from conception to completion. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Take ATR-254.

ATR-210 Electromechanical Systems (4)

Integrates the concepts and components from mechanical and electrical courses to demonstrate how they function in different systems that are found in an industrial environment. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture, 2.0 lab

ATR-254 PLC Integration (4)

Provides an introduction to intermediate PLC software and the concepts associated with system integration. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Take ATR-136.

ATR-279 Introduction to Industrial Networking (2)

Introduces the concepts of the TCP/IP suite of protocol. Covers IP addressing, universal naming conventions, and how this protocol is used to connect to the devices. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take ATR-136.

ATR-303 Mechanical Power Transmission (4)

Examines power transmission installation for a variety of mechanical systems. Includes torque and tensioning, couplings, chain drives, pulley drives, bearings, gear drives, motor leveling, and alignment of systems. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 6.0 lab

ATR-310 Industrial Controls (5)
Introduces industrial control theory and applications. Covers AC and DC power sources, circuit protection devices, switching devices, pilot lights, schematic symbols, motor contactors, motor overloads, motor circuit breakers, sensors, and the use of schematics and wiring diagrams. Considers application, installation, and troubleshooting of control components. Students design, draw, wire, and troubleshoot circuits. Theory and classroom study are reinforced with practical lab exercises. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 6.0 lab

Prerequisite: Take ELE-364.

ATR-311 Controls Capstone (4)
Integrates the concepts covered in the Industrial Control courses into project-based lab activities. Focuses on utilizing skills acquired to design solutions for specific situations. Features assembling, testing, and evaluating original designs after approval. Includes larger scale electrical print reading. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take ATR-310.

ATR-328 Instrumentation and Process Control Devices (6)
Provides an introduction to various types of instrumentation, control devices, and distributed control systems. Explores commissioning, practical application, integration, and troubleshooting through lecture, reading, and hands-on labs. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 6.0 lab

ATR-450 Computer Integrated Manufacturing (3)
Introduces robotics and automated manufacturing concepts including computer modeling, production, and design analysis. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Automotive Technology (AUT)

AUT-100 Maintenance and Light Repair (4)
Emphasizes student knowledge of the skills necessary to successfully perform common maintenance and light repair tasks in engine systems, automatic transmission/transaxle, manual drive train and axles, suspension and steering, brakes, electrical, and heating and air conditioning. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

AUT-104 Introduction to Automotive Technology (3)
Introduces students to the automotive industry. Includes safety, standards, service information, tools, certifications, vehicle inspection/servicing, and soft skills. Focuses on theories in practical, hands-on applications in both the classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

AUT-164 Automotive Engine Repair (4)
Introduces internal combustion engine fundamentals. Covers engine operation, servicing, diagnosis and overhaul. Teaches engine disassembly, making precision measurements and engine reassembly. Emphasizes theories in practical, hands-on applications in classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take AUT-309. Take AUT-310. Take AUT-614.

AUT-204 Automotive Automatic Transmissions and Transaxles (4)
Introduces automatic transmission hydraulic and electronic shift control fundamentals. Covers automatic transmission operation, inspection, servicing, diagnosis, and overhaul. Students R&R an automatic transmission or transaxle. Students disassemble, inspect, overhaul and reassemble automatic transmissions. Includes powerflow through several planetary gearset designs. Covers late model transmission inspection, service, programing, and electronic fault diagnosis. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take AUT-311.

AUT-221 Hybrid Electric Vehicle Fundamentals (4)
Introduces the fundamentals of hybrid electric vehicles. Explores the high- and low-voltage systems, inverters, HEV batteries, safety procedures, hybrid maintenance, and diagnosis. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Take the Automotive Arc Flash safety training. Take AUT-680.

AUT-308 Automotive Manual Drive Train and Axles I (2)
Introduces manual drivetrain fundamentals. Includes manual drivetrain operation and servicing. Focuses on theories in practical, hands-on applications in both the classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AUT-100 or AUT-888.

AUT-309 Automotive Manual Drive Train and Axles II (2)
Reinforces manual drivetrain fundamentals. Includes manual drivetrain diagnosis and overhaul. Teaches disassembly, making precision measurements and reassembly of a manual transmission, transaxle, and differential and transfer case. Focuses on theories in practical, hands-on applications in both the classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AUT-308. Take AUT-614.

AUT-310 Computerized Engine Controls I (2)
Introduces engine performance fundamentals. Focuses on identifying components, servicing fuel and ignition systems. Includes introduction to OBD II and NC3 scanner certification. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AUT-100 or AUT-888. Take AUT-614.

AUT-311 Computerized Engine Controls II (3)
Introduces input sensors, ignition, fuel, and emission systems. Focuses on operational theory and testing using state-of-the-art diagnostic equipment and techniques. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take AUT-310. Take AUT-614. Take AUT-658.

AUT-312 Computerized Engine Controls III (4)
Diagnose several ignition, fuel, and emission system faults, including tailpipe emission failures. Focuses on engine performance and emission system diagnostics using state-of-the-art diagnostic equipment and techniques. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take AUT-311.

AUT-402 Automotive Suspension and Steering (2)
Introduces chassis fundamentals, including tire and wheel service. Focuses on front and rear chassis system principles and components. Teaches how to remove and replace steering and suspension components, and how to perform wheel alignment procedures. Reinforces theories in a practical hands-on application through lab activities. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AUT-100 or AUT-888.

AUT-406 Advanced Automotive Suspension and Steering (2)
Diagnose chassis systems faults, including electric power steering (EPS), vehicle dynamics, and handling complaints. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AUT-402.

AUT-502 Automotive Brake Systems (2)
Introduces automotive brake hydraulic system fundamentals. Covers brake system operation and servicing. Instructs how to machine rotors and drums and inspect disc/drum brakes. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

AUT-536 Advanced Automotive Brake Systems (2)
Diagnose braking system electrical problems on advanced braking systems, including antilock, electronic stability control and hybrid braking systems. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AUT-502.

AUT-603 Basic Automotive Electricity (3)
Introduces electrical and electronic circuit theory. Covers voltage, amperage, resistance, Ohm's Law and practical application on series, parallel and series-parallel circuits. Emphasizes studying circuits through electrical wiring diagrams and introduces scan tools. Covers diagnosis of electrical circuits with and without multiplex network control. Includes certification as power users of the Snap-On 525D multi-meter. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AUT-614 Automotive Electrical I (3)
Introduces electrical and electronic circuit theory. Covers voltage, amperage, resistance, Ohm's Law and practical application on series, parallel and series-parallel circuits. Emphasizes studying circuits through automotive electrical wiring diagrams to diagnose electrical circuits. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

AUT-658 Automotive Electrical II (3)
Covers automotive diagnosis, repair and service of electrical and electronic components found on current vehicles. Reinforces theories in practical, hands-on lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take AUT-614.

AUT-680 Automotive Electrical III (3)
Covers automotive electrical systems with an emphasis on network controlled systems, including CAN, LIN and MOST. Builds diagnostic skills through extensive use of scan tools, oscilloscopes and multi-meter for body electrical circuit faults. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take AUT-658.

AUT-702 Automotive Heating and Air Conditioning (2)
Introduces HVAC fundamentals. Focuses on refrigerant identification, recovery/recycling, evacuation, recharging, and leak testing skills. Covers identifying components, operational theory, and servicing HVAC systems. Includes EPA 609 Technician Certification. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AUT-100 or AUT-888.

AUT-708 Advanced Automotive Heating and Air Conditioning (2)

Focuses on diagnosis of HVAC systems, including automatic temperature controls. Remove and install HVAC system components, including evaporator/heater core assemblies. Reinforces theories in practical, hands-on classroom and lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AUT-702. Take AUT-614.

AUT-888 Technical Lab I (4)

Simulated automotive repair environment. Learning activities include complaint, cause and correction to customer vehicles. Parts and labor calculations also covered. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

AUT-889 Technical Lab II (4)

Continues to explore an automotive repair environment. Learning activities include complaint, cause and correction to customer vehicles. Parts and labor calculations also covered. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take AUT-100 or AUT-888. Take AUT-614.

Pre/corequisite: Take MAT-715.

AUT-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

AUT-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

AUT-932 Internship (2)

Builds applied skills through employment, providing practical, on-the-job training at businesses related to instructional programs. Students are required to prepare training plans and other reports. Arts & Sciences Elective Code: B
Hours per week: 8.0 internship

Prerequisite: Take AUT-889.

Aviation Maintenance (AVM)

AVM-102 Fundamentals of Electricity and Electronics (5)

Focuses on the fundamentals of electricity and electrical theory as applicable to aviation maintenance. Includes theory and physical laws of electricity, types of circuits and circuit components, electricity generation, electrical safety, measurement, and tools. Introduces troubleshooting techniques and addresses fundamental concepts needed to understand various aircraft systems. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 6.0 lab

AVM-106 Materials and Processes (3.5)

Focuses on various types of aircraft materials and hardware, as well as precision measuring, torque, and common and specialized tooling. Includes examination of the purposes of various construction materials as well as the role of heat treating metals. Applies non-destructive testing techniques and reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 5.0 lab

AVM-108 Physics for Aviation (1.5)

Focuses on physics principles that are applicable to aircraft operation and aviation maintenance. Concepts include force and motion; energy, work, and power; simple machines and mechanics; states of matter and heat; pressure; gas laws; and fluid mechanics. Addresses theory describing the principles of flight and aerodynamics. Introduces flight controls and their purpose. Applies physics principles to problems in aviation settings. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 1.0 lab

AVM-114 Aircraft Electrical Systems (4)

Focuses on aircraft electrical systems for the airframe and the powerplant. System components include generators, alternators, starter generators, lighting, switches, relays, and power distribution. Demonstrates aircraft wiring, soldering, schematic reading, and troubleshooting. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take AVM-102.

AVM-116 Aircraft Drawings (1)

Focuses on using aircraft drawings to perform maintenance tasks. Visuals include drawings and sketches, blueprints, charts and graphs, and system schematics. Schematics introduces commonly used lines, symbols, and terminology. Focuses on skills associated with interpreting technical drawings for parts identification and assembly and with using drawings and charts to facilitate maintenance and repairs. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

AVM-118 Aircraft Handling (2.5)

Addresses concepts including safety, aircraft hand signals, fuel selection and fueling procedures, towing, taxiing, running engines, and securing aircraft. Explains aircraft cleaning and corrosion control principles and procedures as well as aircraft coating and finishing materials. Focuses on aircraft weight and balance principles, procedures, and recordkeeping requirements. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 3.0 lab

AVM-128 Federal Aviation Regulations (1.5)

Focuses on federal aviation regulations related to aircraft maintenance, aircraft forms and records, and the duties, responsibilities, and limitations of aviation maintenance technicians. Discusses manufacturer and Federal Aviation Administration (FAA) publications as well as continuing airworthiness regulations. Addresses "human factors" that can lead to maintenance errors and applies corresponding mitigation techniques. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 1.0 lab

AVM-136 Metallic Structures (5)

Focuses on applying the principles associated with working on sheet metal structures, including layout, forming, repairs, and assembly. Addresses various metallic aircraft materials and their uses and introduces basic welding principles. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 6.0 lab

Prerequisite: Take AVM-106.

AVM-138 Non-Metallic Structures (4)

Focuses on applying the principles associated with working modern composite structures, including lay-ups, repair procedures, installing composite hardware, and testing and inspection procedures. Addresses repair and inspection of acrylic and Plexiglas windows and discusses legacy materials (e.g., wood, fabric coverings). Reinforces theoretical concepts and safety with lab-based exercises, incorporating fiberglass, carbon fiber, and various core materials. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take AVM-106.

AVM-144 Landing Gear and Hydraulic and Pneumatic Systems (2.5)

Focuses on the principles, components, and operation of hydraulic and pneumatic systems and their applications in aircraft use. Addresses landing gear and associated components (e.g., wheels and tires, brakes, struts) along with mechanical and electric elements used in extension and retraction systems. Incorporates troubleshooting associated with landing gear systems. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 3.0 lab

Prerequisite: Take AVM-102. Take AVM-106.

AVM-146 Aircraft Instrument Systems (2)

Focuses on the principles, components, and operation of aircraft instrument systems. Introduces the purpose and operation of aircraft instruments (e.g., compasses, direction indicating instruments, pressure and temperature indicating instruments, position indicating instruments) as well as powerplant instrument systems (e.g., cylinder head temperature, exhaust gas temperature, turbine inlet temperature, fuel and oil pressure and temperature, speed indicating systems). Demonstrates testing of pilot-static systems and vacuum systems, in addition to inspection, maintenance, and troubleshooting procedures. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AVM-102.

AVM-150 Aircraft Fuel Systems (2.5)

Focuses on the principles, components, and operation of aircraft fuel systems. Introduces airframe components (e.g., lines, filters, selectors, tanks, fuel pumps), powerplant components (e.g., engine-driven fuel pumps, pumps, filters, valves, lines), and fuel metering components (e.g., carburetors, fuel-injection systems, fuel control units, digital engine control modules). Demonstrates inspection, maintenance, and troubleshooting procedures. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 3.0 lab

Prerequisite: Take AVM-102. Take AVM-106.

AVM-152 Communications and Navigation Systems (1.5)

Focuses on the principles of aircraft communication systems including radio operation and communication bands. Addresses systems associated with traffic collision avoidance, landing assistance, location, and navigation. Explores various antennas used for communication and navigation, and applies inspection and installation techniques. Introduces autopilot theory and operation. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 1.0 lab

Prerequisite: Take AVM-102.

AVM-156 Flight Controls and Airframe Inspection (2.5)

Focuses on aircraft flight control systems and rigging techniques as well as assembly and inspection of aircraft control cables. Introduces airframe inspection procedures, types of inspections, and inspection recordkeeping. Discusses rotorcraft (helicopter) principles. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 3.0 lab

Prerequisite: Take AVM-106.

AVM-158 Aircraft Fire Protection Systems (2)

Focuses on the principles, components, and operation of aircraft fire protection systems for airframes and powerplants. Components of fire protection systems include fire, smoke, and heat detectors. Addresses types of fires and extinguishing agents and delivery methods of those agents. Demonstrates inspection, testing, and troubleshooting for fire protection systems. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AVM-102.

AVM-162 Environmental Systems (2.5)

Focuses on the principles, components, and operation of environmental systems including vapor-cycle, air-cycle, combustion, and electrical heaters and cabin pressurization and oxygen systems, as well as water and waste water systems. Addresses servicing and troubleshooting procedures for environmental systems. Introduces components of, operation of, and troubleshooting for ice and rain control systems. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 3.0 lab

Prerequisite: Take AVM-102.

AVM-163 Reciprocating Engines (5)

Focuses on the components of reciprocating engines. Addresses different types of aircraft reciprocating engines as well as the theory of operation. Demonstrates disassembly, cleaning, inspection, and reassembly of reciprocating aircraft engines. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 6.0 lab

Prerequisite: Take AVM-106.

AVM-164 Propellers (2)

Focuses on the principles, components, and operation of aircraft propellers. Investigates fixed pitch and constant speed (variable pitch) propellers. Reinforces theoretical concepts and safety will be reinforced with lab-based exercises, including allowable propeller repairs. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

AVM-166 Ignition and Starting Systems (2)

Focuses on the principles, components, and operation of ignition systems for reciprocating and turbine engines. Addresses magnetos, electrical and solid state ignition systems, and turbine igniters. Demonstrates installation, inspection, and timing procedures for magnetos. Introduces principles, components, and operation of aircraft engine starting systems. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AVM-102.

AVM-167 Turbine Engines (4)

Focuses on the components of turbine engines. Addresses different types of aircraft turbine engines as well as the theory of operation. Demonstrates disassembly, cleaning, inspection, and reassembly of turbine aircraft engines. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take AVM-106.

AVM-169 Air, Exhaust, and Lubricating Systems (2.5)

Focuses on the principles, components, and operation of aircraft engine air intake/induction systems, cooling systems, turbine bleed air systems, and exhaust systems and thrust reversers. Addresses principles, components, and operation of aircraft engine lubrication systems. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 3.0 lab

AVM-171 Engine Inspection (1.5)

Focuses on engine inspection procedures for reciprocating and turbine engines. Includes aspects of inspection such as visual inspection, recordkeeping, and checking for compliance, conformity, and life-limited parts. Demonstrates operational checks for proper operating parameters. Reinforces theoretical concepts and safety with lab-based exercises. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 1.0 lab

Business Computer Applications (BCA)

BCA-136 Advanced Word Processing (3)

Begins with a review of basic business correspondence. Instruction includes advanced topics such as mail merge, macros, styles, complex tables, long reports, graphics and online forms. Guided drills are designed to increase speed to 55 words per minute with five or fewer errors on five-minute timed writings. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

BCA-179 Emerging Technology Trends (3)

Develops knowledge of multimedia and social media concepts by studying multimedia software components and social media platforms. Assessment projects are used by students for demonstration of knowledge of multimedia elements (copyright, video, graphic design, sound, animation), knowledge of tools (smart phones, tablets, digital camera, video camera, digital scanner), knowledge of editing software (sound editing, video editing, graphics editing), and knowledge of social media marketing (platforms, algorithms, content marketing, engagement data). Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

BCA-189 Microcomputer Literacy (1)

Introduces the student to the personal computer concepts and basic computer applications. Students gain knowledge and skills in the basic concepts of Microsoft Windows and Word. They also gain experience using the Internet and email. The course introduces students to spreadsheet and presentation software. This introductory course is intended for students with no knowledge or experience using personal computers. Arts & Sciences Elective Code: B

Hours per week: 0.5 lecture, 1.0 lab

BCA-213 Intermediate Computer Business Applications (3)

Extends basic knowledge of Microsoft Word, Access, Excel and PowerPoint. Demonstrates proficiency at the core level of the MOS (Microsoft Office Specialist) certification. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

BCA-290 Web Design Principles (3)

Discusses the process of website design and production. Focuses on aesthetic design, which is style, theme and layout, as well as functional design, including usability, content and navigation. Incorporates the use of Web authoring software to produce and maintain websites. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

BCA-302 Graphics and Multimedia for the Web (3)

Introduces a number of commercial and open source tools for manipulating graphics, audio and multimedia files for presentation on the web. While not a content creation course, some content editing is covered. Primary emphasis is placed on file types, encoding standards, plug-in issues, file optimization and markup options for various browsers and platforms. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

BCA-320 Content Management Systems (3)

Explores a variety of open-source Web platforms based on Apache/PHP/MySQL technology. Emphasizes content management systems such as WordPress and Drupal, although more specialized systems are also considered. Focuses on deploying, configuring and styling these systems to meet a variety of business and client needs. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take BCA-290.

BCA-800 Web Technologies Capstone (3)

Provides a cumulative experience for students to independently complete a portfolio-quality Web project. Integrates skills acquired in core and emphasis courses with individual strengths to develop comprehensive solutions. Arts & Sciences Elective Code: B; Comments: Students need to register for this course in the final term of program
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CIS-334.

Biology (BIO)

BIO-104 Introductory Biology With Lab (3)

Includes genetics, cell biology, cellular metabolism, cell division, evolution, ecology, plant and animal reproduction, and biodiversity. Covers current topics in life science. Offers laboratory through investigations, discussion, written expression and readings. Beginning-level course for liberal arts students. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

BIO-112 General Biology I (4)

Serves as an introductory course for biology, science and health science majors. Covers principles of cellular biology, elementary biochemistry, energy functions, cell division, DNA/RNA, genetics, and evolution theory. Arts & Sciences Elective Code: A; Comments: Besides taking a prerequisite course, proficiency may be demonstrated by a passing score on the Biology Readiness Exam. Contact the Test Center for details.
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Earn a passing grade on the biology readiness exam. You are exempt from the exam if you have completed BIO-104, BIO-110 or CHM-165. To take the test at main campus, go to 2055 Cedar Hall. To take it at the Iowa City campus, an appointment is needed-call 319-887-3642.

BIO-113 General Biology II (4)

Serves as an introductory course for biology, science and health science majors. Covers principles of organismal biology, ecology, the evolution and diversity of the Bacteria, Archaea, Protista, Fungi, Plantae and Animalia, followed by a comprehensive study of ecology. Includes plant anatomy and physiology, and animal systems including, but not limited to, nervous, circulatory, reproductive and immune systems. Arts & Sciences Elective Code: A; Comments: This course is intended for STEM majors. One year of high school Biology and Chemistry is strongly recommended.
Hours per week: 3.0 lecture, 2.0 lab

BIO-131 Genetics and Society (3)

Provides a fundamental knowledge of genes, genomes, and how they are regulated to affect the function of an organism. Explores patterns of inheritance, and how genetic information can be used to determine genealogy, evolution, and in forensics. Reviews tools needed to critically explore the ethics of how modern genetic techniques will have an impact on us personally and as a society. Teaches the science of genes, genomes, heredity, evolution, crop production, genetics of cancer, genes as medicine, and the ethical considerations of gene manipulation. This is a non-science majors course. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

BIO-151 Nutrition (3)

Demonstrates the relationship between sound nutrition and good health. Explores energy requirements, carbohydrates, lipids, proteins, vitamins, minerals, metabolism, physical exercise, dieting, weight problems, evaluation of nutritional claims, vegetarianism, and proper nutrition during pregnancy and lactation. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

BIO-154 Human Biology (3)

Examines how human form and function work together to maintain homeostatic balance, and how dysfunctions can lead to disease processes. Explores fundamental biological principles as they apply to the human body. Intended for liberal arts students. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

BIO-161 Basic Anatomy and Physiology (3)

Presents an overview of human form and function through lecture and laboratory. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

BIO-168 Human Anatomy and Physiology I (4)

Introduces the structure and function of the human body. Emphasizes organization at the cellular and tissue level, and selected organ systems. Reinforces concepts through laboratory activities in computer simulations, dissection, and/or human specimens. Arts & Sciences Elective Code: A; Comments: One year of recent high school biology/chemistry with a grade of B or higher strongly recommended, or completion of Basic Biological Concepts or other college-level biology course
Hours per week: 3.0 lecture, 2.0 lab

BIO-173 Human Anatomy and Physiology II (4)

Continues the study of human organ systems. Reinforces concepts through laboratory activities in computer simulations, dissection, and/or human specimens. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take BIO-168.

BIO-186 Microbiology (4)

Surveys bacteria, viruses and fungi through their growth characteristics, morphology and pathogenicity. Introduces immunology and explores epidemiology and diagnosis of pathogenic bacteria. Emphasizes culturing, identification, aseptic technique and basic immunological assays in the laboratory. Arts & Sciences Elective Code: A; Comments: One year of recent high school biology/chemistry with a grade of B or higher is strongly recommended, or completion of Basic Biological Concepts or other college-level biology course
Hours per week: 3.0 lecture, 2.0 lab

BIO-195 Human Evolution (3)

Explores biological evolution of the human species, including primate comparisons and prehistoric culture. Examines the development of evolutionary theory, natural selection, principles of inheritance, mechanisms of evolution, human biological diversity and adaptation, the behavioral and ecological diversity of nonhuman primates, and the human fossil and archaeological records. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

BIO-208 Agricultural Biology and Chemistry (3)

Provides a basic understanding of the biological and chemical concepts and processes necessary for the study of agricultural crop and livestock production, and their end-use products. Applies these concepts to practical agricultural situations. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

BIO-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean

Hours per week: 1.0 lecture

BIO-928 Independent Study (1)

Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean

Hours per week: 2.0 lab

Business (BUS)

BUS-101 Orientation to Business Professionalism (1)

Develops students' personal and professional skills in the business world. Focuses on the components of business image including professional dress, networking with business professionals, the art of handshaking, and proper dining, email and meeting etiquette. Students will create employment documents/tools and explore professional organizations. Emphasizes professionalism in the business industry with additional insight on how to be successful as a Kirkwood student. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

BUS-102 Introduction to Business (3)

Focuses on American and global business and introduces the student to each primary facet of operating a business. This course will help the student understand economic, social and political influences that affect business success. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

BUS-185 Business Law I (3)

Surveys the general source of law and structure of the American legal system. Students learn basic principles of tort law, administrative law, constitutional law and contract law with an emphasis on business applications. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

BUS-190 Professionalism: BPA (1)

Develops and recognizes leadership and teamwork utilizing a student professional organization, Business Professionals of America (BPA). Special emphasis is placed on leadership development activities. Students are provided the opportunity to participate in state and national business competitions, earn awards, perform community service and seek local, state and national office. This course may be repeated for credit. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

BUS-192 Professionalism: Business Competition (1)

Recognizes and develops leadership and teamwork skills utilizing an online, team-based simulation in a virtual environment. Prepares students for the modern digital age in business. Addresses the importance of virtual communication, collaboration, and problem-solving in future career success. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

BUS-280 Fundamentals of Lean Process Improvement (3)

Focuses on learning and practicing Lean methods of minimizing waste, increasing efficiency and improving quality within organizations. Provides basic understanding and practical applications of organization techniques (5S), Lean mapping tools, streamlining work processes and problem-solving methodologies (A3). Concludes with a comprehensive capstone project using real-world Lean applications. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

BUS-294 Business Administration Capstone (1)

Covers business concepts introduced in earlier coursework. Focuses on the skills, knowledge, qualities, and attributes required to be a business professional. Emphasizes project-based evaluation and analysis of business scenarios. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

Prerequisite: Take BUS-102. Take MGT-101. Take CSC-116. Take PHI-105 or PHI-135. Take SPC-101 or SPC-112.

Pre/corequisite: Take ACC-152.

BUS-350 Foundations of Risk Analysis and Management (3)

Provides a foundation in risk assessment, mitigation, and management. Focuses on the knowledge and practical skills required to identify and propose solutions for security risks, and apply methodologies to identify, assess, and manage risks effectively. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Corequisite: Take NET-618.

BUS-450 Auditing Practices and Compliance Procedures (3)

Reviews auditing practices and compliance procedures commonly required in various industries. Provides practice in completing industry-standard documentation required by industry and government regulations for reporting and documenting compliance. An emphasis will also be placed on communicating information to stakeholders. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Minimum C- in BUS-350.

BUS-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

BUS-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

Computer Aided Drafting (CAD)

CAD-108 CAD for Electrical Design (2)

Introduces creating and editing electrical drawings using CAD software. Covers project files, electrical schematics, panel drawings, PLC symbols, creating custom symbols, and generating reports. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

CAD-110 Introduction to Parametric Solid Modeling (2)

Covers basic operations for creating drawings and assemblies. Uses a software platform called Solidworks. Allows for some self-paced work, but instructor-led demonstrations and additional exercises outside the text are required. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

CAD-140 Parametric Solid Modeling I (3)

Extends the skills with Solidworks covered in Intro to Parametric Modeling. Covers intermediate topics in mastering part modeling, assembly modeling, surfacing, sheet metal, and simulation xpress. The CSWA certification will be offered. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CAD-110.

CAD-141 Parametric Solid Modeling II (3)

Extends the skills with Solidworks covered in Parametric Solid Modeling I. Focuses on Solidworks advanced features of the software useful to the design/manufacturing workplace. Covers advanced topics in surfacing, sheet metal modeling, Weldments, Mold tools, drawings, and 3-D drawing annotations as time allows. Additional certifications tests will be offered. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CAD-140.

CAD-147 Parametric Solid Modeling III (3)

Introduces the fundamentals of drafting, such as graphic language and vocabulary, orthographic projection, drawing layouts, section views, title blocks and dimensioning. Explains the tools and techniques of the trade. Covers the basic concepts of creating engineering drawings that are submitted to be manufactured. Uses a software platform called Creo. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CAD-141.

CAD-168 Introduction to 3D Printing (2)

Introduces students to the historical factors that have helped shape manufacturing over centuries. Covers the current and emerging 3D printing applications and describes advantages and limitations of each technology. Evaluates real-life scenarios. Includes hands-on components of this class. Requires that students download and print a model, as well as create a 3D model and then make a .stl file and print it. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take CAD-110.

CAD-201 Introduction to Building Information Modeling (3)

Introduces the basic principles and skills to use 3D CAD (BIM) software for the creation of architectural construction documents. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

CAD-237 Geometric Dimensioning and Tolerancing (3)

Introduces the special symbols used on mechanical drawings. Geometric dimensioning and tolerancing is a means of specifying engineering design and drawing requirements with respect to actual function and relationship of part features. It is a technique that ensures the most economical and effective production of these features for fabrication and inspection. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take DRF-141, or both MFG-120 and MFG-130.

CAD-300 AutoCAD for Applied Engineering (2)

Provides instruction in entry-level computer-aided design (CAD) skills. Covers basic commands, CAD hardware and applications, and complete 2-D drawings with AutoCAD. Requires keyboard familiarity. Allows for some self-paced work. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

CAD-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

CAD-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

Chemistry (CHM)

CHM-110 Introduction to Chemistry (3)

Explores atoms, molecules, and how chemical reactions behave by practicing scientific measurements and using fundamental natural laws. Arts & Sciences Elective Code: A; Comments: The lab is optional.

Hours per week: 3.0 lecture

Pre/corequisite: Take MAT-052 or MAT-772.

CHM-111 Introduction to Chemistry Lab (1)
Accompanies CHM-110 as a laboratory. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Pre/corequisite: Take CHM-110.

CHM-132 Introduction to Organic and Biochemistry (4)
Introduces structure, nomenclature and reactions in organic chemistry as well as the study of life processes including carbohydrate, protein, lipid, nucleic acid metabolism and the interrelationships involved. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take CHM-110 or CHM-165.

CHM-165 General Chemistry I (4)
Studies the basic principles of inorganic chemistry with emphasis on such concepts as measurements and problem solving, chemical reactions and equations, stoichiometry, atomic structure and nuclear models, periodicity, chemical bonding, kinetic molecular theory and gas laws, and the structure and properties of matter. Arts & Sciences Elective Code: A; Comments: CHM-110 or one year high school chemistry highly recommended
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take MAT-102, MAT-708 or a qualify with placement test score.

CHM-175 General Chemistry II (4)
Continues General Chemistry I. Studies colligative properties along with thermodynamics and kinetics, chemical equilibrium, electrochemistry, acids, bases and complex ions. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take CHM-165.

CHM-262 Organic Chemistry I (4.5)
Introduces the theory and practice of organic chemistry with emphasis on the chemistry of functional groups. Emphasizes nomenclature, stereoisomerism, chemical bonding, reaction mechanisms, the characterization of hydrocarbons, alkyl halides and alcohols. Teaches appropriate organic chemistry separation, isolation and synthetic techniques through laboratory experiments. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 3.0 lab

Prerequisite: Take CHM-175.

CHM-272 Organic Chemistry II (4.5)
Continues the study of ethers, aldehydes, ketones, carboxylic acids and their derivatives, amines and biologically important fats, proteins and carbohydrates. Stresses qualitative organic analysis and spectroscopic methods. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 3.0 lab

Prerequisite: Take CHM-262.

CHM-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

CHM-928 Independent Study (1-1.5)
Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 2.0 lab

Computer Programming (CIS)

CIS-121 Introduction to Programming Logic (3)
Introduces students to basic computer programming ideas and foundational principles such as problem decomposition and step-wise refinement. Explores problem solving using well-developed programming logic derived with pseudo code, flow charts and related techniques. Focuses on translating student developed solutions into simple programs for testing using an instructor-selected, high-level programming or scripting language. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

CIS-171 Java (3)
Introduces Java programming language focusing on the syntax of the language and the object-oriented model upon which it is based. Teaches to code, test, and debug simple Java applications, creating original classes as well as using classes in the API. Demonstrates the concepts of encapsulation, inheritance, information/implementation hiding, state retention, messages, classes, and polymorphism. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-121, CIS-450 or CSC-142.

CIS-175 Java II (3)
Continues Java. Covers advanced GUI, exception handling, multithreading, multimedia, files and streams, networking, and data structures. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- either in CIS-171, or in both CIS-335 and CSC-142. Take MAT-102 or MAT-708.

CIS-181 Java III (3)
Provides practical application of server-side Java development. Emphasizes meeting business needs through database integration, web and Internet services, servlets and Java server pages (JSP). Explores development of web interfaces for desktop and mobile devices. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-175 or CIS-176.

CIS-207 Fundamentals of Web Programming (3)
Presents hypertext markup language and cascading style sheets for encoding Web pages. Introduces Server Side Includes and simple JavaScript for enhancing them. Emphasizes a structured approach to page layout, coding and styling, exposing students to a variety of software tools. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

CIS-238 Front End Development I (3)
Offers practical front-end programming, utilizing JavaScript to enhance the user experience of web applications. Explores the implementation and modification of various JavaScript libraries and related technologies to create interactive, user-friendly, and dynamic front end web applications. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-121, CIS-450 or CSC-142. Minimum C- in CIS-207.

CIS-241 Introduction to Blockchain with Java (3)
Explores the fundamentals of blockchain using the Java language. Teaches about blockchain ledgers, transactions, mining, and consensus protocols by building and testing a simple cryptocurrency in a multithreaded application. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

CIS-249 Web Languages (3)
Introduces concepts and methods for implementing advanced web languages used in web programming to produce dynamic websites. Focuses on the following languages: advanced HTML 5 and CSS3, JS Frameworks, SASS or LESS, and introduces Angular JS and jQuery techniques. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CIS-207.

CIS-263 Web Application Development I (3)
Introduces Server-Side programming, using open-source technologies and software to create dynamic, database-driven Web applications. Teaches the coding, testing, and debugging of both procedural and object-oriented server-side web applications. Includes how to use a server-side scripting language to write applications that interact with a database to provide Internet users with data-driven web sites. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-121, CIS-450 or CSC-142.

CIS-280 Client Side Scripting (3)
Offers in-depth practical Web client script programming. Emphasizes JavaScript and DOM scripting. Explores the use and modification of open-source scripts and script libraries. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-121, CIS-450 or CSC-142. Minimum C- in CIS-207.

CIS-290 Web Content and E-Commerce Systems (3)
Introduces the infrastructure, components and management tools necessary for a successful content-driven website that includes e-commerce solutions. Examines techniques for successful content driven and e-commerce Web sites. Explores a variety of open-source web platforms based on Apache/PHP/MySQL technology. Identifies how to deploy, configure and style these systems to meet a variety of business and client needs. Includes the basic concepts, tools and techniques of Web analytics, search engine optimization, payment systems, content management, security, and legal and privacy issues. Includes laboratory experiences with shopping cart, content management systems, tracking and analytics. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Pre/corequisite: Take MKT-110.

CIS-326 Business Intelligence Tools (3)
Reviews different business intelligence tools and teaches how to use these tools. Discusses how to apply the tools to move data, search the data for invalid values, and ready the data for display to users in standard formats. Emphasizes understanding of the correct applications and how to use tools by multiple vendors. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CIS-335.

CIS-327 Applied Analytics and Reporting (3)
Covers the basic tasks used in a reporting career. Focuses on interpreting requests in business terminology for data, generating repeatable and ad hoc reports, identifying questionable data, and basic data cleanup. Teaches how to describe reporting activities to both a technical and non-technical audience. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CIS-335.

CIS-328 Front End Development II (3)
Extends knowledge of front-end programming utilizing JavaScript to enhance the user experience of web applications. Explores the integration of JavaScript APIs, AJAX, React, and relational databases utilizing a Node.Js server-side environment. Topics will also include user authentication, web security, state management, and local storage techniques. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-238. Minimum C- in CIS-335.

CIS-334 PHP/Apache/MySQL (3)
Introduces PHP, Apache and MySQL open source technologies used to create dynamic, database-driven Web applications. Create MySQL databases and use server-side scripting language (PHP) to write applications that interact with the database through Apache Web server technology. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-121. Minimum C- in CIS-207.

Pre/corequisite: Take CIS-335.

CIS-335 Relational Database and SQL (3)

Emphasizes basic concepts and principles of database systems. Introduces database systems and databases, normalization, table creation, and basic system and language support (SQL) for database systems. Focuses on data management and design inquiries to produce information for decision making, data analysis and integration with other software applications. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-121, CIS-450 or CSC-142.

CIS-342 PHP/Apache/MySQL II (3)

Continues instruction on PHP programming language for building Web-based structure. Focuses on the object-oriented method of the PHP programming language as students create reusable assets and modular systems for use on a Web site project. Emphasizes SQL query knowledge and application. Develops knowledge of Apache Web server management through work with a local Apache server. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CIS-334.

CIS-354 Data Analytics and Reporting Projects (3)

Provides realistic hands-on project experience, building on learned data analytics and reporting skills. Applies strategies and methodologies for database and data warehouse design, implementation, security, and database tuning methods per industry standards in a group setting. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-326. Minimum C- in CIS-327.

CIS-363 Web Application Development II (3)

Continues instruction on server-side programming for building Web-based applications and websites using an MVC framework. Emphasizes object-oriented method of server-side programming, along with the creation of reusable assets and modular systems for use on a Web site project. Includes further instruction on databases for the development of data-driven web applications for both desktop and mobile devices. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-263. Minimum C- in CIS-335.

CIS-370 Fundamentals of 2D Visualizations and Games (3)

Introduces 2D casual game development using freely available programming libraries as well as handwritten code. Includes fundamental game concepts such as game loops, animation cycles, collision detection, user controls and scoring algorithms. Emphasizes learning games and interactive simulations intended to blend entertainment with education-related goals. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-121.

CIS-371 Developing 3D Simulations and Games (3)

Introduces 3D simulations and game development with the Unity Game Engine and the C# programming language. Introduces asset and game editing tools along with the terminology associated with virtual 3D environments. Includes scripting actions, applying physics, multiplayer issues, and the use of animation and effects. Includes walk-through simulations or training games intended to blend entertainment with business-related goals. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Pre/corequisite: Minimum C- in CIS-121.

CIS-450 PLTW - Computer Science Principles (3)

Develops computational thinking, generates excitement for career paths utilizing computing, and introduces professional tools to foster creativity and collaboration. Develops programming expertise and explores the functionality of the Internet. Offers projects and problem solving associated with computing including application development, visualization of data, cybersecurity and simulation. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

CIS-504 Structured Systems Analysis (3)

Covers the foundational aspects of system analysis and design, and the role of the systems analyst in a business information systems environment. Teaches the tools, techniques and methodologies used to analyze and design information systems and produce technical solutions for companies' information technology needs. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-335. Minimum C- in CIS-622 or CIS-263.

Pre/corequisite: Take CIS-624 or CIS-363.

CIS-622 .NET Development I (3)

Introduces the C# programming language and the Microsoft .NET architecture, the Visual Studio IDE and object-oriented programming with .NET. Emphasizes building stand-alone desktop projects with graphical user interfaces using WinForm components. Focuses on applying the principles of programming and problem solving within an object-based design and event-driven paradigm. Includes interface design, using common libraries and features of the common language runtime. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-121, CIS-450 or CSC-142.

CIS-624 .NET Development II (3)

Extends knowledge of the C# programming language and the Microsoft .NET and related tools. Emphasizes the use of SQL and ADO.NET for the creation of stand-alone and distributed database applications to solve common business problems. Covers issues related to n-tier design, network communications, error handling and the production of flexible database reports. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-335. Minimum C- in CIS-622.

CIS-626 .NET Development III (3)
Provides a practical introduction to Internet programming with the C# programming language and the Microsoft .NET MVC framework. Emphasizes development of websites and web services with ASP.NET and related tools. Focuses on creating multi-tier business web applications. Includes basic ASP.NET web controls and script integration, along with server-side issues such as authentication, state management and database connectivity. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-624.

CIS-802 Software Development Capstone (3)
Requires application of knowledge gained from programming design and systems analysis classes in the analysis, design, scheduling and implementation of a complete systems development effort. Note: Capstone should be taken in the final semester. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-504. Minimum C- in CIS-624 or CIS-363.

Pre/corequisite: Take CIS-626 or CIS-328.

CIS-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

CIS-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Cultural Studies (CLS)

CLS-151 Understanding Cultures: Latin America (3)
Examines human spatial and cultural behavior in Latin America by exploring political, economic, religious and social institutions. Theoretical readings are balanced with case studies to enable students to explore theoretical perspectives in a cross-cultural context. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

CLS-159 Understanding Cultures: Indigenous Central America (3)
Explores the ethnographic, political, economic and historical contexts of contemporary indigenous life in Central America, with particular emphasis on the indigenous people of Guatemala and Mexico. While contemporary culture is the main focus of the course, students also explore the themes of continuity and change from pre-Hispanic times to the present. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

CLS-165 Understanding Cultures: Modern Japan (3)
Begins with a survey of Japanese history and culture to the Meiji Restoration of 1868. Focuses on the Japanese adaptation to the challenges of modernization, with emphasis on accommodating industry and modern systems of government within a traditional Japanese cultural system. Issues include the relationship with China, World War II and the economic expansion of Japan from 1945 to the present. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

CLS-192 Communication and Culture (3)
Examines the implications and impacts of various communication media, especially modern ones, on human culture and society. Using tools of historical and cultural studies, as well as the interpretive methods of the humanities, students will explore, for example, how new communications media affect interpersonal relations, self concept, democracy, experiences of space/time and human creativity. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

CLS-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project learning contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

CLS-928 Independent Study (1-3)
Allows the student to pursue a special concentration of study under the guidance of a faculty member. Requires an independent study contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 2.0 lab

Communication (COM)

COM-222 Communication for Health Care Professionals (3)
Introduces the theories and skills used to analyze and understand communication variables affecting human relationships, such as personal perception, feedback, idea development and nonverbal cues. Builds competencies and skills relevant to various interpersonal contexts within health care settings. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

COM-723 Workplace Communications (3)
Emphasizes practical application of theories and principles to develop writing skills essential to encounters in contexts of occupational communications. Includes writing business letters, resumes, memos, instructional materials and reports, and using visual aids, taught through a blend of formal lectures and student participation. Offered for students enrolled in Applied Science and Technology programs. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

COM-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

COM-928 Independent Study (1-3)
Allows the student to pursue a special concentration of study under the guidance of a faculty member. Requires an independent study contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 2.0 lab

Construction (CON)

CON-101 Architectural Plans and Specs (3)
Introduces the idea of scaled and technical drawings, including common graphic conventions. Teaches how to navigate, read, and interpret residential and commercial construction documents, including drawings, specifications, and shop drawings. Compares and contrasts residential and commercial documents. Applies digital take-off and mark-up processes. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

CON-108 Construction Safety (1)
Provides an introduction to job safety and best practices as they pertain to the construction industry. Achieves a general philosophy of safety awareness through the study of specific hazards and case studies. Navigates OSHA regulations and personal obligations within the construction industry. Receives the OSHA 10 Construction and Adult First Aid with CPR certifications upon completion of this course. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

CON-126 Building Construction Systems II (3)
Continues the study of materials, methods, and terminology used in modern construction. Focuses on general knowledge of a broad range of exterior and interior finish systems, mechanical, electrical and plumbing systems - including their coordination with other construction systems. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take CON-311.

CON-134 Building Foundations and Site Layout (2)
Provides class and laboratory activities to gain knowledge in the use of conventional and laser instruments, building site layout, site investigation, leveling, topographic maps and route surveying. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

CON-142 Carpentry Fundamentals III (3)
Introduces the terminology and methods used in modern residential and commercial construction systems. Offers hands-on instruction in insulation and building envelope systems, exterior finishes including roofing, window and exterior door installation, siding, and cornice construction. Uses project-based lab exercises to emphasize proper technique and component recognition. Identifies proper and safe tool and equipment use. Outlines the soft skills necessary for success in the construction industry. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 3.0 lab

Prerequisite: Take CON-212.

CON-143 Carpentry Fundamentals IV (3)
Introduces the terminology and methods used in modern residential and commercial construction systems. Offers hands-on instruction in light gauge interior wall systems, gypsum wall board installation and finishing, finish flooring, and interior door and millwork installation. Uses project-based lab exercises to emphasize proper technique and component recognition. Identifies proper and safe tool and equipment use. Identifies the soft skills necessary for success in the construction industry. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 3.0 lab

Pre/corequisite: Take CON-142.

CON-190 Construction Lab (3)
Provides introductory construction lab experience in a project-based environment encompassing teamwork, communication, productivity, and technical skills required for success in the design and construction industries. Performs tasks associated with light wood frame, heavy timber, plastics, and composite framing systems. Addresses personal and environmental safety requirements. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Pre/corequisite: Take CON-101. Take CON-108.

CON-211 Carpentry Fundamentals I (3)
Introduces the terminology and methods used in modern residential and commercial construction systems. Offers hands-on instruction in insulation and building envelope systems, exterior finishes including roofing, window and exterior door installation, siding, and cornice construction. Uses project-based lab exercises to emphasize proper technique and component recognition. Identifies proper and safe tool and equipment use. Outlines the soft skills necessary for success in the construction industry. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 3.0 lab

CON-212 Carpentry Fundamentals II (3)
Introduces the terminology and methods used in modern residential construction systems and offers hands-on instruction in the framing of floor systems, wall systems, roof systems, and stair construction. Uses project-based lab exercises to emphasize proper technique and component recognition. Identifies proper and safe tool use. Outlines the soft skills necessary for success in the construction industry. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 3.0 lab

Pre/corequisite: Take CON-211.

CON-239 Construction Project (3)
Focuses on teamwork and leadership by rotating students through being team members and crew leaders in building a construction project. Emphasizes productivity and supervisory tasks. Arts & Sciences Elective Code: B
Hours per week: 6.0 lab

CON-257 Pre-Construction Services (3)

Studies the preconstruction phase of a building construction project by focusing on conceptual cost estimating, schedule analysis, and constructability reviews. Provides skills in the coordination of organizing, planning, controlling and monitoring resources, procedures and protocols related to residential and commercial projects. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take CON-101. Take CON-322.

CON-311 Building Construction Systems I (3)

Introduces the materials, methods and terminology used in modern construction. Focuses on general knowledge of a broad range of building materials and framing systems, and their coordination with other construction systems. Arts & Sciences Elective Code: B; Comments: A classroom-based discussion course that includes field trips to construction sites
Hours per week: 3.0 lecture

CON-313 Structures and Mechanical/Electrical/ Plumbing Systems (3)

Provides a fundamental knowledge of mechanical, electrical, and plumbing systems. Analyzes HVAC, lighting, plumbing, fire and security systems regarding their impact on building design, space planning, construction cost, and sustainable design. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take CON-101.

CON-316 Sustainable Construction Science (3)

Provides an understanding of building science theory and applications in residential and commercial construction. Discusses sustainable design issues such as climate, environment, durability, air and moisture transfer. Teaches traditional building methods as well as newer technologies of construction. Offers knowledge and resources beneficial to future certifications in many related industry credentials. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take CON-101.

CON-322 Estimating for Construction and Architecture (3)

Introduces the basic principles and skills necessary to develop estimates for residential projects. Concentrates on calculating material and labor quantities. Introduces techniques for pricing. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take CON-101.

CON-324 Advanced Construction Estimating (3)

Introduces the basic principles and skills needed to develop a complete estimate for commercial construction projects through use of spreadsheets and interactive estimating software. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take CON-322.

CON-328 Construction Documentation (3)

Facilitates analysis and use of construction documents, including drawings and specifications. Provides an overview of procedural, legal, contractual, and regulatory issues that govern those documents. Teaches the value of, and difference between, documents at various stages of the design and construction processes. Prepares examples of contract documentation. Contrasts roles and responsibilities within the delivery process. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take CON-101.

CON-330 Construction Capstone (3)

Demonstrates knowledge and skills acquired throughout the construction management program of study. Simulates construction project management processes on a commercial and/or residential project including a student presentation of their comprehensive construction project binder. Addresses project cost estimating, planning and scheduling, project control processes, construction safety, and risk management. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CON-328.

Corequisite: Take CON-400.

CON-331 Construction Materials Science (3)

Provides an overview of various performance criteria that must be solved in order to design a structure. Emphasizes material science, site design/survey, and structural characteristics. Formulates solutions within a set of tolerances for a variety of design situations and mathematically justifies those solutions. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Pre/corequisite: Take CON-101.

CON-400 Construction Services, Project Close-Out and Commissioning (3)

Introduces the functions of project management in the construction industry. Studies the defining, planning, executing and closing phases of a project. Focuses on teamwork, leadership and problem solving. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Pre/corequisite: Take CON-257.

CON-410 Architectural Modeling (3)

Utilizes 3D modeling software in order to explore and recreate common building units, assemblies, and materials; examine typical and best-practice building assemblies; articulate common regulations and standards that limit building design and construction; create massing diagrams of various building configurations. Solidifies plan reading skills. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Pre/corequisite: Take CON-101.

CON-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

CON-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

CON-932 Internship (1-6)
Provides full-time work in an approved, construction-related position that includes instructor visitations/evaluations and employer evaluations of performance. Provides experience in planning and production monitoring. Arts & Sciences Elective Code: B; Comments: All first-year courses or permission of instructor
Hours per week: 4.0 internship

Prerequisite: Take CON-190 or CON-211.

Criminal Justice (CRJ)

CRJ-100 Introduction to Criminal Justice (3)
Provides an overview of the American criminal justice system and examines the process of justice administration through the agencies of law enforcement, courts and corrections. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

CRJ-101 Ethics in Criminal Justice (3)
Examines the ethical considerations facing the criminal justice practitioner. Includes determining moral behavior, developing moral and ethical behavior, ethics and law enforcement, ethics and the courts, ethics and corrections, policy and management issues, professionalism, pride and ethics for practitioners. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Pre/corequisite: Take CRJ-100.

CRJ-111 Police and Society (3)
Examines police as part of society's official control apparatus. Studies police history, police role and organization, the making of a police officer, police behavior, stress, delivery of effective police services, and the future of law enforcement. Explores community-oriented policing philosophy and problem-oriented policing methods. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take CRJ-100.

CRJ-120 Introduction to Corrections (3)
Examines the history and theories of corrections that apply to institutional and community-based correctional systems. Explores the principles and practice of corrections as applied in the community setting and institutional settings. Studies the use and effectiveness of correctional alternatives. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take CRJ-100.

CRJ-130 Criminal Law (3)
Reviews the historical development of criminal law and the resulting philosophy of law that has developed. The law-making process, with the societal and political influences, is examined and discussed. Comparisons of common law with contemporary law are analyzed in an attempt to determine what impact historical events and societal changes have had in bringing about change. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take CRJ-100.

CRJ-133 Constitutional Criminal Procedure (3)
Studies the development of fundamental principles in constitutional law, integrating a case-by-case study of United States Supreme Court decisions and a broad examination of the judicial legal processes. Coverage includes the nature of judicial review, powers of the Supreme Court, president, Congress and federalism. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take CRJ-100. Take CRJ-130.

CRJ-141 Criminal Investigation (3)
Presents the basic principles of investigation, both public and private, including: examination of the scene, collecting physical evidence, interrogations and interviews, sketching a scene, report writing, and basic photography. Special methods of investigating certain crimes are explored, and the function of the crime laboratory discussed. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take CRJ-111.

CRJ-200 Criminology (3)
Surveys the nature, causes, and extent of crime and delinquency. Explores various explanations from numerous disciplines. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

CRJ-201 Juvenile Delinquency (3)
Analyzes the various components of delinquency: home, school, peer group and community structure. Explores the role of therapeutic and detention centers and the juvenile court, as well as approaches to prevention and treatment. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take CRJ-100. Take SOC-110 or SOC-115.

CRJ-220 Community-Based Corrections (3)
Studies the principles and practice of corrections as applied in the community setting. Includes examination of theories of corrections that apply to the correctional practices of parole and probation. Also explores alternative treatment programs utilized in community halfway houses, alternative jails and outpatient facilities. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take CRJ-100.

CRJ-316 Juvenile Justice (3)

Examines the juvenile system from a practitioner perspective. Provides operational knowledge of how law enforcement, the courts, and correctional facilities navigate the juvenile offender. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take CRJ-100.

CRJ-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

CRJ-928 Independent Study (1)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

CRJ-932 Internship (1-6)

Provides placement in a criminal justice agency in a student capacity. Work experience in an agency under supervision of professionals in the field permits students to learn what career opportunities are offered. Arts & Sciences Elective Code: A
Hours per week: 4.0 internship

Prerequisite: Take CRJ-100.

Collision Repair/Refinishing (CRR)

CRR-121 Introduction to Metalworking & Refinishing I (3)

Provides the beginning technician with an introduction to the collision repair industry. Introduces the student technician to shop, personal and environmental safety, and health issues related to automotive collision repair. Establishes procedures and techniques used in metalworking and refinishing, as well as shop equipment, hand and power tool usage. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

CRR-122 Introduction to Metalworking & Refinishing II (3)

Continues concepts learned in Introduction to Metalworking and Refinishing I. Covers metal straightening theory and procedures, body fillers and applications, surface preparation, application of undercoat and topcoat refinish materials, and accessing vehicle specific information. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Pre/corequisite: Take CRR-121.

CRR-342 Metalworking II (4)

Expands on previous material covered in Metalworking and Refinishing I. Reviews prior knowledge and procedures and emphasizes recycled part use, servicing movable and stationary glass and hardware, and noise vibration and harshness (NVH) materials. Introduces restraint systems, and identifying and servicing simple electrical system components. Knowledge will be applied to repairing various projects and live vehicles. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 7.0 lab

Prerequisite: Take CRR-820.

CRR-344 Metalworking III (4)

Expands previous material covered in Metalworking and Refinishing I, and Metalworking II. Emphasizes diagnosing and documenting vehicle structural damage. Establishes use of frame straightening equipment to restore vehicle dimensions. Introduces structural measuring, advanced high-strength steels used in unitized structures, and replacing weld-on cosmetic and structural panels on various projects and live vehicles. Encourages improvement of speed and quality of repairs. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Pre/corequisite: Take CRR-342.

CRR-545 Body Straightening/Painting and Restoration (7)

Introduces vehicle damage estimating and typical mechanical concerns related to repairing collision damage. Emphasizes increased work quality and speed in the lab setting, working on vehicle projects. Focuses on repairing minor vehicle damage from start to finish with minimal input from instructors. Provides practical application with an emphasis on industry standards of appearance, completion of work on time schedules, and material costs. Fine-tunes previously taught skills and sequences a repair plan while improving speed and work efficiency on a production basis. Students are given an opportunity to complete a project of their choice not to exceed two weeks in duration. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 12.0 lab

Prerequisite: Take CRR-344.

CRR-820 Metalworking and Refinishing Practices (3)

Reviews knowledge gained in Intro to Metalworking & Refinishing I and II to various projects. Emphasizes using proper welding equipment and techniques, metal straightening theory, and restoring sheet metal upset. Focuses on selecting and applying the proper types of fillers, undercoat and topcoat materials. Covers surface preparation and refinish applications, paint application problems, and finish defects and cures. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Pre/corequisite: Take CRR-121.

CRR-830 Metalworking and Refinishing I (3)
Expands on previous material covered in Intro to Metalworking and Refinishing I and II, and Metalworking and Refinishing Practices. Reviews knowledge and procedures already learned with an emphasis on identifying vehicle clips, and fasteners, interior trim components and exterior bolt-on panel removal, and replacement and alignment procedures. Introduces plastic and composite repair and adhesive bonding. Demonstrates advanced masking and blendable paint match techniques. Emphasizes refinishing equipment maintenance. Applies knowledge to repairing of various components and live vehicles. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Pre/corequisite: Take CRR-122.

CRR-833 Refinishing II (3)
Expands on previous material covered in Metalworking and Refinishing I. Emphasizes identifying and preparing plastic panels for refinishing, repairing and refinishing fiberglass surfaces, and mixing and applying flexible refinish materials. Introduces corrosion resistant material restoration, vehicle final detailing, and application of decals, appliqus and stripes. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 5.0 lab

Prerequisite: Take CRR-830.

CRR-837 Refinishing III (3)
Expands on previous material covered in Metalworking and Refinishing I, and Refinishing II. Emphasizes diagnosing and documenting vehicle finish damage. Introduces color theory, adjusting color, tinting and blending coatings, application of tri-stage paint systems, Waterborne paint systems, and mixing and application of custom refinish materials. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Pre/corequisite: Take CRR-833.

Computer Science (CSC)

CSC-116 Information Computing (3)
This course presents the basic concepts of information systems and computer literacy. The course incorporates theory as well as hands-on practice, which focuses on spreadsheets and database management systems (DBMS). Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

CSC-142 Computer Science (4)
Introduces computer programming including data types, expressions, input/output, control structures, functional and object-oriented programming, and simple data structures. Emphasizes problem-solving skills through program refinement, documentation and programming style. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take MAT-102, MAT-708 or a qualify with placement test score.

CSC-153 Data Structures (4)
Continues the study of program design and construction begun in CSC-142. Emphasizes data structures and practice in their specification, design, implementation and use. Includes container classes, arrays, lists, stacks, queues, trees, graphs, algorithm analysis, object-oriented programming, data abstraction, and searching and sorting techniques. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take CSC-142 or CIS-175.

CSC-160 Software Design and Development (4)
Builds on the foundation of basic programming skills acquired in CSC-142. Emphasizes the design and development of software systems. Includes user interface programming, graphics and multimedia, networking and concurrency. Provides experience developing software over an extended time period through long-term projects. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take CSC-142.

CSC-175 Computer Organization and Assembly Language Programming (4)
Emphasizes the organization and operation of computer systems at the assembly-language level. Covers mapping of statements and constructs in a high-level language onto sequences of machine instructions, as well as the internal representation of simple data types and structures. Offers programming practice with an assembly language to provide practical application of concepts presented in class. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take CSC-142.

CSC-924 Honors Project (1)
Allows qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

CSC-928 Independent Study (1-3)
Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 2.0 lab

Dental Assistant (DEA)

DEA-285 Oral Pathology for Dental Assisting (1)
Introduces the general principles of pathology. Emphasizes the specifics of disease entities of local and systemic origin to enable interpretation by the dental auxiliary of the medical and dental history with emphasis on specifics of oral pathology. Focuses on terminology, with descriptions of oral lesions and their treatment. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take DEN-120.

Pre/corequisite: Take DEN-130.

DEA-403 Dental Materials (3)
Introduces students to materials utilized in the dental field. Includes handling and preparation of specific materials. Prepares students for clinical procedures. Combines the science of the basic dental materials with manipulative practice. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 3.0 lab

DEA-517 Dental Assisting I (3.5)
Learn basic principles of dental assisting including fundamental chair-side concepts and techniques, team delivery systems, and intra-oral skills. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 3.0 lab

DEA-518 Dental Assisting II (1.5)
Learn principles of dental assisting with focus on intra-oral skill obtainment, sterilization processes and pharmacology. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 1.0 lab

Prerequisite: Take DEA-517.

DEA-519 Dental Assisting III (1.5)
Learn principles of dental assisting with a focus on expanded functions, occlusal registrations, gingival retraction, final impressions, temporary restorations, cavity liners, bases, desensitizing agents and bonding. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 2.0 lab

Prerequisite: Take DEN-120. Take DEN-130. Take DEA-518.

DEA-580 Dental Assisting Clinic I (4)
Acquire technical skills from clinical experiences by applying theoretical concepts in general and specialty dentistry areas at the University of Iowa College of Dentistry, Veterans Medical Center in Iowa City, and in private dental office settings. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 10.5 clinical

Prerequisite: Take DEA-403. Take DEA-517. Take DEN-100. Take DEN-110. Take DEN-120. Take HSC-107. Take HSC-210.

Pre/corequisite: Take DEN-200.

DEA-581 Dental Assisting Clinic II (4.5)
Requires students to comprehensively apply the skills of dental assisting in the private dental office setting. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 10.5 clinical

Prerequisite: Take DEN-200.

Pre/corequisite: Take DEA-580.

DEA-610 Specialty Dentistry (4.5)
Presents the specialty areas of dentistry including: endodontics, periodontics, orthodontics, oral surgery, pediatric dentistry and geriatric dentistry. Includes procedures, instruments and current concepts for assisting in these areas. Includes expanded functions: dry socket medication, periodontal dressings and pulp vitality testing. Also includes psychological considerations in dentistry. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture, 1.0 lab

Prerequisite: Take DEA-517. Take DEN-100. Take DEN-110. Take DEN-120.

DEA-701 Dental Office Procedures (1)
Introduces dental office related functions, including computer operations, telephone, recall systems, resumes, supply inventory, filing, record keeping, financial arrangements, patient accounts, credit and collection, banking, salaries, tax forms, patient correspondence, jurisprudence and ethical conduct. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Pre/corequisite: Take DEN-100. Take DEN-120.

DEA-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

Dental (DEN)

DEN-100 Fundamentals of Dentistry (3.5)
Provides the foundations of knowledge necessary to begin a study in the dental field. Introduction to instrumentation, dental specialties and special needs patients are discussed. Introductory oral hygiene instruction and basic radiography are provided. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 3.0 lab

DEN-110 Dental Terminology (2)
Enlists a comprehensive study of dental terminology for dental program preparation, career entry or review. Explains the composition of dental terms by exploring prefix, root combination and suffix divisions. Discusses common dental procedures, practices and disease processes. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

DEN-120 Dental Anatomy (3)
Introduces students to basics of embryology, histology, terms and anatomy of the oral cavity including a detailed study of crown and root morphology of both primary and permanent dentition. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

DEN-130 Head and Neck Anatomy (1.5)
Utilizes a systems approach to the gross anatomy of the head and neck with emphasis on the maxilla, mandible, oral tissues, neuromuscular and circulatory function, supporting structures and the temporomandibular joint. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture

DEN-200 Preventive Dentistry (2)
Provides an introduction to dental disease, the causes and methods for prevention. An intense focus on dental caries and preliminary information on periodontal disease. Students learn to utilize patient assessment techniques and provide oral health information. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 1.0 lab

DEN-220 Dental Nutrition (1)

Studies the role of diet upon oral structures and application of the role of dietary analysis to the treatment plan of a dental patient. Emphasizes analysis of the complete diet and preventive recommendations. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take DEN-120.

Pre/corequisite: Take DEN-110 or BIO-168.

DEN-300 Dental Radiography (3)

Teaches principles and techniques of dental radiography. Offers practical experience on manikins and selected patients. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take DEN-100. Take DEN-110 or BIO-168.

Pre/corequisite: Take DEN-200.

Dental Hygiene (DHY)

DHY-134 Therapeutics and Pain Control (2)

Provides students with knowledge of chemotherapeutics used in dentistry and the mechanisms of drugs in the body. Students are then able to understand manifestations of drug administration in dental treatment. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Take DHY-285.

DHY-140 General and Oral Pathology (2)

Introduces general principles of pathology for dental hygienists with emphasis on specifics of oral pathology. Builds upon and applies biomedical science knowledge to the diagnosis and treatment of oral and maxillofacial diseases. Focuses on terminology. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Take DEN-120. Take DEN-130.

Corequisite: Take DHY-186.

Pre/corequisite: Take DEN-300.

DHY-173 Dental Hygiene I (4)

Provides an introduction to the clinical portion of the dental profession. Emphasis is on skills necessary for preliminary patient care including health histories, basic instrumentation, and legal and ethical issues. Manikin and patient practice are utilized. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 6.0 clinical

DHY-186 Dental Hygiene II (4)

Provides experience in the application of dental hygiene techniques on a variety of patients in a clinical setting, Clinical experience includes oral prophylaxis, fluoride therapy and oral physiotherapy. Didactic training encompasses new clinical skills, assessment, treatment planning and effective communication skills. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 6.0 clinical

Prerequisite: Take DHY-173.

DHY-211 Periodontology (2)

Introduction to the aspects of periodontal disease, the disease process and management of periodontal patients. Emphasis is placed on periodontal instrument techniques and surgery as performed by the dentist. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Take DEN-120. Take DEN-200.

DHY-220 Dental Materials (1)

Introduces students to materials utilized in the dental field. Includes handling and preparation of specific materials. Prepares students for clinical procedures to be performed on patients. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Take DEN-120. Take DEN-100.

DHY-250 Community Dental Health (1.5)

Provides concepts of health education and promotion, community dental health, and public health dentistry with an emphasis on assessment, planning, implementation and evaluation of community oral health promotion. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 1.0 lab

Prerequisite: Take DEN-100. Take DEN-200. Take DHY-285.

DHY-274 Local Anesthesia for the Dental Hygienist (1.5)

Learn basic concepts for safe and effective administration of local anesthesia, including hands-on preparation in techniques used in the practice of administering local anesthesia. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 2.0 lab

Prerequisite: Take DEN-120. Take DEN-130.

DHY-285 Dental Hygiene III (3)

Emphasis on treatment of patients with moderate dental disease, continued application of diagnostic information and treatment planning by student. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 clinical

Prerequisite: Take DHY-186.

DHY-296 Dental Hygiene IV (5)

Provides continued development of oral prophylaxis skills. Emphasis is placed on accessory treatment, outside of a routine prophylactic appointment, and on aided scaling procedures. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 12.0 clinical

Prerequisite: Take DHY-285.

DHY-306 Dental Hygiene V (5)

Prepares students for transition to practice. Board preparation material, credentialing, advanced instrumentation and accessory procedure techniques are taught. Current trends in the dental field are discussed. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 12.0 clinical

Prerequisite: Take DHY-296.

DHY-910 Dental Hygiene Clinical Enrichment (1)
Provides focused reinforcement in the clinical portion of the dental hygiene profession, with emphasis placed on skills necessary for patient care. Content includes basic instrumentation and instruction in radiographic techniques. Manikin and patient practice are utilized for learning experience. Successful completion of this course fulfills the requirement to re-enter the second year of the Dental Hygiene program at Kirkwood or the remediation requirement for a clinical board examination. Arts & Sciences Elective Code: B
Hours per week: 3.0 clinical

Prerequisite: Take DHY-173. Take DHY-186.

DHY-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

Film and Theatre (DRA)

DRA-101 Introduction to Theatre (3)
Requires no previous experience. Introduces the student to the roles of actor, director, designer, playwright and critic, and provides a brief history of the art. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

DRA-116 Film Analysis (3)
Focuses on the methods and technologies of film art. Subjects for analysis include narrative structure/segmentation, mise-en-scene, cinematography, shot breakdowns, editing, sound, genre and production considerations/conventions. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

DRA-117 Film Topics (3)
Offers in-depth study of various topics in film studies. Some topics offered are the study of genre theory, specific genres, film adaptation of literature and drama, moral themes and documentary film. All film topics will study the relationship between the topic and culture, identify operating principles and relevant contextual forces, and apply these concepts to the study of specific films. Course may be repeated for credit. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

DRA-125 Introduction to Play Analysis (3)
Focuses on the reading, discussion, interpretation and analysis of dramatic texts. It is the aim of this course to provide a concentrated study of beginning play analysis through discussion and written analysis. Students gain an understanding of the important role that dramatic analysis plays when mounting a production in the theatre. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

DRA-130 Acting I (3)
Introduces basic acting techniques with emphasis on improvisation, concentration and self-analysis. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

DRA-132 Acting II (3)
Continues training in basic acting techniques with emphasis on creating characters in scripted scenes. Students present individual and group scenes. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take DRA-130.

DRA-162 Technical Theatre (3)
Provides information on and experience with the materials, tools, equipment, and techniques of manual drafting, scenery construction and painting, stage lighting, costuming, and make-up. Hands-on experience with each of the areas of study is emphasized. Students are required to work on the technical aspects for one Kirkwood production. The course is designed to produce students who have a working knowledge of the basic techniques of producing a live performance. The course is open to all students. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

DRA-172 Technical Theatre Lab (1)
Provides students credit for work as technicians in one Kirkwood production. A minimum of 24 hours of practical work is required for a passing grade. May be repeated up to six times. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

DRA-200 Introduction to Design for the Theatre (3)
Introduces language, concept and process for designing scenery and costumes in the theatre. Includes analysis, research, sketching, rendering and model-making. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

DRA-230 Acting Lab (1)
Provides students credit for work as actors in one Kirkwood production. A minimum of 24 hours of practical work is required for a passing grade. May be repeated up to six times. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

DRA-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

DRA-928 Independent Study (1-3)
Allows the student to do readings, papers, research and/or production work under the guidance of a theatre faculty member. Independent study contract required. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Drafting (DRF)

DRF-141 Engineering Drawings (2)
Introduces the fundamentals of drafting, such as graphic language and vocabulary, orthographic projection, drawing layouts, section views, title blocks and dimensioning. Familiarizes students with the tools and techniques of the trade. Covers creating engineering drawings that are submitted to be manufactured. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

DRF-142 Engineering Design I (3)

Provides the opportunity to gain an understanding of drawing mechanical parts used in design. Problem-solving approach is used to work out problems on the drafting board, resulting in a final drawing. Topics selected are: instrument instruction, lettering, geometric construction, sketching, multiview projection, sectional views, calculating weight of a mechanical part, auxiliary views, isometrics, obliques, weld symbols, threads and fasteners, dimensioning and tolerancing. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Pre/corequisite: Take DRF-141.

DRF-143 Engineering Design II (3)

Provides the opportunity to gain an understanding of drawing mechanical parts used in design. Covers detail drawing, bill of material, weight calculations, weld symbols, assembly drawings, exploded assembly drawings, structural, threads and fasteners, dimensioning and tolerancing. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take DRF-141.

Corequisite: Take CAD-140.

DRF-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

DRF-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

Diesel (DSL)

DSL-143 Fundamentals of Electricity (3)

Covers introduction to electricity, i.e. voltage, amperage and resistance with emphasis on Ohm's Law and its practical application. Meter fundamentals are covered. Series, parallel and series-parallel circuits are studied. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

DSL-156 Truck Electronics (3)

Continues the basic electrical coverage of DSL-143 with an additional emphasis on the types of electrical circuits and subassemblies found in most trucks. Students learn interior and exterior lighting, steering column, dash, wiper motors, temperature controls, power locks and windows, and on-board computers. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take DSL-143.

DSL-308 Cooling Systems (2)

Introduces the student to truck cooling systems. The principles of cooling systems and the standard components of cooling systems are examined. Testing and servicing of cooling systems from a truck perspective are explained. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

DSL-335 Advanced Diesel Electronics (3)

Continues the basic electrical coverage of DSL-143 Fundamentals of Electricity. Introduces operation, repair of electrical systems, and wiring harnesses. Utilizes multimeters, fault codes, and a variety of scan tools to diagnose electrical system malfunctions. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take AGM-406. Take AGM-113. Take AGM-427.

DSL-345 Truck Engines (3)

Covers the introduction to diesel engines commonly used in the trucking industry. The design of engine components and subassemblies is examined with emphasis on the reasons certain design features are used. Correct procedures for testing and servicing truck engines are explained and demonstrated. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take DSL-355.

DSL-347 Diesel Engines I (3)

Covers the introduction to diesel engines commonly used in the Trucking and Ag industry. The design of engine components and subassemblies is examined with emphasis on why certain design features are used. Correct procedures for testing and servicing truck and ag engines are explained and demonstrated. Introduces truck and ag cooling systems. The principles of cooling systems and the standard components of cooling systems are examined. Testing and servicing of cooling systems from a truck and perspective are explained. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Corequisite: Take DSL-355.

DSL-348 Diesel Engines II (3)

Covers diesel fuel systems in relation to the engine itself. Diagnose, test and troubleshooting take place using special tools. Particular fundamentals are covered in compression testing, pump timing, engine component testing, injector removal and testing and repair. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take AGM-406. Take AGM-113. Take AGM-427.

DSL-355 Fundamentals of Internal Combustion Engines (3)

Covers fundamentals of two- and four-stroke engine operation, servicing and adjustment. Learning activities concentrate on proper disassembly, measuring and reassembly of actual engines. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

DSL-424 EFI Engine Systems (4)
Provides a thorough explanation and hands-on experience in the theory, operation, diagnosis, maintenance and repair of electronic fuel injected diesel engines. Learning activities include the use of testing equipment used to diagnose EFI engines. Lab activities are designed to reinforce the understanding of the operation and maintenance of these engines. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Take DSL-355. Take DSL-345. Take DSL-143.

DSL-543 Truck Clutches (3)
Introduces students to the testing and servicing of clutches found on most trucks. Learning activities include examining, servicing and replacement of clutches. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

DSL-630 Air Brakes and ABS (2)
Covers a basic introduction to air brakes and anti-locking braking systems. Learning activities concentrate on theory, operation, diagnosis, maintenance, and repair of air and anti-lock brakes found on diesel trucks. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

DSL-642 Steering and Suspension (2)
Includes theory and operation of steering components and servicing. Students learn theory and operation of air ride and spring suspension components on light and heavy duty trucks. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

DSL-802 Trailer Servicing (3)
Involves servicing and minor repair to semi tractor and truck trailers. Learning activities include electrical, power train, brakes, air conditioning and tune-up. Arts & Sciences Elective Code: B; Comments: Completion of first-year technical courses.
Hours per week: 1.0 lecture, 4.0 lab

DSL-808 Truck and Trailer Servicing (4)
Involves servicing and repair to semi tractors and trailers. Learning activities include electrical, power train, brakes, air conditioning, DOT inspection, communication skills and tune-up. Arts & Sciences Elective Code: B
Hours per week: 8.0 lab

Prerequisite: Take AGM-406. Take AGM-113. Take AGM-427.

DSL-809 Truck and Trailer Chassis (2)
Covers a basic introduction to air brakes and anti-locking braking systems. Learning activities concentrate on theory, operation, diagnosis, maintenance, and repair of air and anti-lock brakes found on diesel trucks. Also covers operation of steering components and servicing. Teaches theory and operation of air ride and spring suspension components on light and heavy duty trucks. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take AGM-406. Take AGM-113. Take AGM-427.

Early Childhood Education (ECE)

ECE-103 Introduction to Early Childhood Education (3)
Provides a historical and philosophical foundation within the field of early childhood education. Includes an overview of assessment and evidence-based practices. Addresses the influences of family-centered practice, inclusion, culture and language. Explores early childhood careers. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ECE-105 Technology for Early Childhood (1)
Introduces appropriate use of technology in early childhood professional practice, including a focus on approaches for instructional use with young children. Introduces students to development of a personal eportfolio and discusses appropriate use of technology, including assistive technology, in early childhood classrooms. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Corequisite: Take ECE-103 or ECE-158.

ECE-133 Child Health, Safety, and Nutrition (3)
Focuses on evidence-based concepts in the fields of health, safety and nutrition, and their relationship to the growth and development of the young child ages birth to eight. Blends current theory with problem solving, practical applications and assessments. Includes collaboration with families and assesses the role of culture, language and ability on health, safety and nutrition decisions in early childhood settings. Arts & Sciences Elective Code: A; Comments: Successfully earning credentials in First Aid, CPR, and Mandatory Reporter Training outside of class is required.
Hours per week: 3.0 lecture

ECE-158 Early Childhood Curriculum I (3)
Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages three through eight. Utilizes evidence-based, developmentally appropriate practices in the context of culture, language and abilities. Emphasizes developmental stages and appropriate learning opportunities, interactions and environments to support each child in the areas of literature, dramatic play, art, music, and fine and gross motor play. Arts & Sciences Elective Code: A; Comments: Participation in this course requires successful completion of a background check. A fee is associated with this process.
Hours per week: 3.0 lecture

ECE-159 Early Childhood Curriculum II (3)
Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages three through eight. Utilizes evidence-based, developmentally appropriate practices in the context of children's culture, language and abilities. Emphasizes child developmental stages and development of appropriate learning opportunities, interactions and environments to support each child in the areas of emergent literacy, math, science, technology and social studies. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ECE-158.

ECE-170 Child Growth and Development (3)

Reviews typical and atypical development of children from conception to adolescence in all developmental domains. Examines interactions between child, family and society within a variety of community and cultural contexts and how each impacts the developing child. Examines theories and evidence-based practices associated with understanding and supporting children. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ECE-221 Infant/Toddler Care and Education (3)

Focuses on care, education and assessment of children from birth to thirty-six months. Utilizes developmentally appropriate evidence-based practices including responsive caregiving, routines as curriculum, collaborative relationships with culturally, linguistically and ability diverse children and families, with a focus on the whole child in inclusive settings. Arts & Sciences Elective Code: A; Comments: Participation in this course requires successful completion of a background check. A fee is associated with this process.
Hours per week: 3.0 lecture

Prerequisite: Take ECE-170 or PSY-121.

ECE-243 Early Childhood Guidance (3)

Focuses on developmentally appropriate evidence-based approaches and positive guidance strategies for supporting the development of each child. Emphasizes supportive interactions and developmentally appropriate environments. Uses assessment to analyze and guide behaviors. Studies impact of families, and each child's culture, language and ability on child guidance. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ECE-170 or PSY-121.

ECE-262 Early Childhood Field Experience (3)

Offers supervised experience in selected early childhood settings serving ages birth through eight years. Includes integration of theory and developmentally appropriate evidence-based practice. Provides an understanding of working with culturally, linguistically and ability-diverse young children and families. Emphasizes professional relationships and behavior, appropriate adult/child interactions, basic curriculum planning and program routines. Arts & Sciences Elective Code: A; Comments: Requires a minimum of 108 hours of direct work with children
Hours per week: 0.75 lecture, 6.75 clinical

Prerequisite: Minimum C in ECE-103. Minimum C in ECE-158. Minimum C in ECE-170. Minimum C in ECE-170. Minimum 2.0 grade point average in all other ECE courses required.

ECE-290 Early Childhood Program Administration (3)

Addresses the function common to administering quality child care programs, planning, implementation, operating and evaluating. Aspects covered include director responsibilities; policy setting; development; staff, fiscal and facility management; parent involvement; and marketing. Arts & Sciences Elective Code: A; Comments: Experience in child care setting, Early Childhood curriculum courses preferred
Hours per week: 3.0 lecture

ECE-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of an honors faculty member. Requires completion of an honors project learning contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

ECE-928 Independent Study (1-3)

Allows the student to pursue a special concentration of study under the guidance of a faculty member. Requires an independent study contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising faculty member and dean
Hours per week: 2.0 lab

ECE-930 Administrative Practicum (1)

Provides experience in a community-based setting designed to build on key competencies needed for early childhood program administration, management, and leadership. Arts & Sciences Elective Code: B
Hours per week: 3.0 clinical

Economics (ECN)

ECN-120 Principles of Macroeconomics (3)

Introduces principles of the economizing problem with emphasis on national income and employment analysis. Includes national income accounting, the business cycle, money and banking, fiscal and monetary theory, policy, and economic growth. Recommended for students pursuing a baccalaureate degree. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ECN-130 Principles of Microeconomics (3)

Emphasizes markets, the price system and the allocation of resources, demand and supply, market structures, price and output determination, and income distribution. Recommended for students pursuing a baccalaureate degree. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ECN-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of an honors faculty member. Requires completion of an honors project learning contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

ECN-928 Independent Study (1)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Education (EDU)

EDU-110 Exploring Teaching (3)
Introduces the rewards, challenges, roles and responsibilities of beginning teachers and paraeducators. Develops generic teaching skills applicable from preschool through high school. Utilizes microteaching to simulate actual teaching situations, and discusses common teaching problems through case studies. Includes 10 hours of hands-on service learning in a K-12 classroom. Meets part of the requirement for the Iowa Paraeducator Generalist Certification. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

EDU-119 Behavior Management (3)
Develops research-based, effective, and respectful skills of prevention, observation, data collection, diagnosis, and change of the behavior of students in K-12 classrooms. Develops strategies for helping others manage their own behavior. Meets part of the requirement for the Iowa Paraeducator Generalist Certification. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

EDU-129 Inclusion and Adaptation (3)
Develops the skills to facilitate the mainstreaming of students with disabilities, and work with gifted and talented students in school settings. Teaches strategies for instructing diverse groups of learners and adapting curriculum and materials. Includes an overview of the special education system and the evolving relationship with regular education. Discusses issues related to adults with disabilities. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

EDU-200 Topics in Education (1)
Provides an opportunity to study a current issue in education. Topics are selected from the following categories: teaching methods, learning theory, motivation and professionalism. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

EDU-210 Foundations of Education (3)
Examines American education from historical, philosophical, and sociological perspectives. Discusses challenges and issues in education in the context of school organization, politics, funding, curriculum, professionalism, legal issues, and effective school and teacher characteristics. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

EDU-240 Educational Psychology (3)
Applies psychological concepts to the field of education. Major focus is on cognitive, behavioral and humanistic theories. Areas of emphasis include child and adolescent development, learning theory, memory, motivation, intelligence, instruction and measurement. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take PSY-111.

EDU-248 Exceptional Persons (3)
Studies the educational, cultural, and social aspects of children and adults who are exceptional in the context of mental, emotional and physical development. Includes discussion of gifted and talented children in schools. 10 hours of hands-on service learning in a K-12 classroom. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take PSY-111.

EDU-249 Cultural and Linguistic Diversity (3)
Prepares staff to work with culturally and linguistically diverse children, including English language learners, those with language disorders, deaf and hard of hearing students. Includes use of technology, instructional methodology, appropriate translation and interpretation procedures, and communication with team members. Participants work collaboratively and individually to develop projects. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

EDU-255 Technology in the Classroom (3)
Teaches how to maximize learning in technology-rich Pre-K-12 environments. Includes hands-on experiences that integrate technology, pedagogy, and content knowledge to support clearly-defined student learning outcomes. Showcases a variety of digital tools and Internet resources along with best practices for classroom-related activities. Explores laws that have impacted technology use in schools as well as contemporary topics related to educational media and technology trends in education. Arts & Sciences Elective Code: A; Comments: Includes earning Google Certification. A fee applies to this process.
Hours per week: 3.0 lecture

EDU-258 Autism Spectrum Disorder Support (3)
Develops skills of observation, understanding and management of students with Autism Spectrum Disorders (ASD). Develops strategies for helping students with ASD manage behavior and develop social and communication skills. Meets Iowa paraeducator certification requirements for Autism Spectrum Disorders Area of Concentration. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

EDU-805 Literacy Tutor Experience (1-3)
Provides students with an opportunity to spend 30, 60 or 100 hours in a school or other community agency tutoring in reading and other basic skills. In addition, 12 hours of seminar are part of the course. Arts & Sciences Elective Code: A; Comments: Minimum GPA of 2.5 required to take this course
Hours per week: 3.0 clinical

EDU-810 Field Experience (3)
Offers experience in classrooms. Integrates 100 hours per semester at a school working under the supervision of a teacher. Choices include preschool, elementary and secondary settings. Includes a seminar. Arts & Sciences Elective Code: A; Comments: Minimum GPA of 2.5 required. Participation in this course requires successful completion of a background check process. A fee is associated with this process.
Hours per week: 1.0 lecture, 6.0 clinical

Prerequisite: Take EDU-110. Must also have minimum 2.4 GPA. Take PSY-111. Take PSY-121 or ECE-170.

EDU-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

EDU-928 Independent Study (1)

Provides readings, papers and basic research or other projects under the individual guidance of the staff members. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean.
Hours per week: 1.0 lecture

Engineering (EGR)

EGR-100 Engineering Orientation (1)

Introduces professional development as it relates to engineering. Explores various engineering disciplines and career paths. Covers the scientific and engineering method, engineering design process, problem-solving, ethics, and the teaching and learning process. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

Prerequisite: Take MAT-102, MAT-708 or a qualify with placement test score.

EGR-160 Engineering I (3)

Develops skills in modeling and solving engineering problems, data analysis, engineering graphics, and technical communication using computer application software. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take MAT-136 or a qualify with placement test score.

EGR-167 Engineering II (4)

Develops skills in solving engineering problems using the C-programming language. Applies programming and numerical techniques directly to the engineering discipline. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take MAT-136 or a qualify with placement test score.

EGR-170 Materials Science (3)

Covers the different structures of materials and the resulting mechanical, electrical and magnetic properties; phase diagrams; kinetics and materials in engineering design. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MAT-136 or a qualify with placement test score. Take CHM-165.

EGR-180 Statics (3)

Covers vector algebra, forces, couples, equivalent-force, couple system, Newton's laws, friction, equilibrium, centroids, area moments of inertia, and applications. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MAT-210.

EGR-280 Dynamics (3)

Emphasizes vector calculus, Newton's laws, kinetics and kinematics of particle motion, many-particles systems, and rigid bodies and applications. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MAT-216. Take EGR-180.

EGR-285 Introduction to Electrical Science (4)

Covers DC and AC circuits, Ohm's law, Kirchoff's voltage and current laws. Provides circuit analysis techniques including Thevenin equivalents, superposition, source transformation, nodal and mesh analysis, transient and steady state response, complex impedance, average power, RMS voltage and current. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take MAT-216.

EGR-290 Thermodynamics (3)

Includes basic elements of classical thermodynamics, first and second law, reversibility, irreversibility, Carnot cycle, properties of pure substance, closed and open simple systems and one dimension steady-state and transient flow systems, and engineering applications. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MAT-216. Take CHM-165.

EGR-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permissions of instructor and dean
Hours per week: 1.0 lecture

EGR-928 Independent Study (1-3)

Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 2.0 lab

Engineering Technology (EGT)

EGT-124 Strength of Materials (4)

Presents design and analysis of bars, beams, trusses, shafts, connectors, columns, and other structural members under various loadings. Covers stress, strain, deflection and geometric dimensions of various mechanical components. Includes thin walled pressure vessels, Poison effect, thermal stresses, combined loads, eccentric loads, statically indeterminate loads, buckling loads and Mohr's Circle of Stress. Utilizes Excel software and laboratory activities. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take EGT-125.

EGT-125 Applied Statics (4)
Analyzes forces and moments necessary to produce static equilibrium for bodies at rest. Covers vectors, free body diagrams, the equations of equilibrium, analysis of simple structures (trusses, frames, and simple machines), friction (wedges, screws, belts, rolling wheels), fluid statics, hanging cables, centroids and area moments of inertia. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take PHY-190.

EGT-132 Kinematics (4)
Covers terminology, classification, analyses and design of planar mechanisms, stressing graphical techniques with CAD software. Focuses on position, velocity (relative and instant center methods) and acceleration for a variety of mechanisms, typically containing 4-bar or slider/crank linkages. Emphasizes modeling of mechanisms using computer software with design and analysis applications as time allows. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Take EGT-125.

Corequisite: Take CAD-141.

EGT-136 Dynamics (4)
Uses problem solving to deepen student's understanding of the geometry of motion (kinematics) and the forces that create it (kinetics). Solves problems involving planar motion of both particles and rigid bodies. Analyzes the kinetics of planar motion will using Newton's Second Law, Work/Energy, and Impulse/Momentum methods. Uses PC based software as an analysis and visualization tool. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take EGT-125.

EGT-148 Hydraulics and Basic Circuits (3)
Introduces the use of hydraulic pumps and systems, and basic electronic circuit design, including analysis techniques for both. Emphasizes using Kirchhoff's Laws and Ohms Law to analyze circuits. Covers pumping, controlling, measuring flows, designing and analyzing hydraulic systems. Focuses on distinguishing between types of valves, pumps, hose and connection arrangements, flow patterns, as well as basic circuit parts, such as resistors, capacitors, switches and inductors. Introduces basic terminology and schematic drawing symbols for both hydraulics and circuit elements. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

EGT-185 Design Project (3)
Offers the opportunity to use creativity in designing specific products. Begins with a basic concept and progresses through analytic stage involving calculations and solid modeling. Includes solid modeling, final assembly and detail drawings and bill of materials. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CAD-141. Take MFG-202.

EGT-195 Machine Design (3)
Focuses on problem solving involving size, shape and material requirements of machine parts. Applies various loading conditions to the machine components. Focuses on analyzing plates, shafts, weldments, fasteners, springs, wire rope and bearings. Arts & Sciences Elective Code: B
Hours per week: 2.5 lecture, 1.0 lab

Prerequisite: Take EGT-124.

EGT-400 PLTW - Introduction to Engineering Design (3)
Examines the engineering design process through application of math, science and engineering standards to hands-on projects. Students design solutions to problems using 3D modeling software and create an engineering notebook. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

EGT-410 PLTW - Principles of Engineering (3)
Explores engineering topics including mechanisms, the strength of structures and materials, and automation. Develops problem solving, research and design skills and strategies for design process documentation, collaboration and presentation. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

EGT-420 PLTW - Digital Electronics (3)
Provides a foundation in electrical engineering, electronics and circuit design. Covers combinational and sequential logic, and circuit design tools including logic gates, integrated circuits and programmable logic devices. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

EGT-450 PLTW - Computer Integrated Manufacturing (3)
Teaches robotics and automated manufacturing concepts by creating three-dimensional designs with modeling software, then producing actual models of student designs. This course was developed by Project Lead the Way. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

EGT-460 PLTW - Civil Engineering and Architecture (3)
Explores the design and construction of residential and commercial building projects. Investigates careers in the design and construction industry. Introduces concepts involved in building design and construction including land use, codes, utilities and services, sustainable design, building components and systems, structural design, storm water management, and cost estimation. Integrates STEM (Science, Technology, Engineering, Math) principles and teaches Revit, an Autodesk 3D design software for course projects. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

EGT-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

EGT-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Electrical Technology (ELE)

ELE-364 Basic Electrical Circuits (4)
Focuses on basic safety and foundational principles for electrical trades. Covers basic electrical soldering techniques, electrical theory, terminology, symbols, abbreviations, calculations, and electrical meter usage. Introduces magnetic induction, transformer theory, and magnetic relays. Reinforces theory and classroom study with practical lab exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Pre/corequisite: Take MAT-232.

ELE-365 Industrial Wiring (3)
Covers industrial methods and practices used to install and maintain electrical distribution systems, busway, cable tray, conduit, panel boards, circuit protection, branch circuits, support methods, and NEC application. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Electronics (ELT)

ELT-224 Motors and Transformers (5)
Provides theory and hands-on experience with electric motors and transformers. Learning activities include reading, lecture and labs. Covers DC, three-phase and single-phase motors in depth, and studies three-phase and single-phase transformers, applications and connections. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 4.0 lab

Prerequisite: Take ELE-364.

ELT-279 Electronic Practices (4)
Presents DC current, voltage, energy, power, resistance, capacitance, inductance, and semiconductor theory in a practical laboratory setting. Focuses on lab safety, component identification, schematic reading, and the use of equipment to measure prototype circuits. Includes extensive laboratory sessions requiring schematic reading, constructing circuits, using soldering and solderless breadboard, and utilizes lab equipment to measure and troubleshoot circuits. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

ELT-299 Introduction to LabView (3)
Introduces LabView, including modular programming, loops, charts, arrays, clusters, case and sequence structures, strings and file I/O. Presents Windows operating system basics, word processing and Excel software. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

ELT-309 Digital Circuits (3)
Presents the analysis and design of digital circuits. Introduces Boolean algebra as a tool in working with basic gates, flip-flops, counters, shift registers, adders, timers and busses. Provides laboratory and computer-simulation exercises. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

ELT-341 Electric Circuits II (5)
Adapts DC circuit analysis techniques to the AC realm. Examines fundamental concepts of passive filters and frequency response. Includes computer simulations and laboratory sessions for further concept investigation. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture, 2.0 lab

Prerequisite: Take ELT-345.

ELT-345 Electric Circuits I (5)
Studies the fundamental DC concepts including current, voltage, polarity, energy and power. Describes the methods of analysis of DC electric circuits. Includes resistive-inductive and resistive capacitive circuits and introduces the fundamental concepts of AC electricity. Incorporates computer simulations and laboratory sessions for further investigation of concepts. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture, 2.0 lab

ELT-350 Communications Systems I (7)
Offers the theoretical background with complementary laboratory exercises necessary for working with systems used in today's communication industry. Focuses on signal representations, transmission of, modulation of, and coding of both analog and digital signals. Includes the application of the phase-locked loop, and propagation of electromagnetic waves in guided media and free space. Incorporates the building and measuring of active filters; balanced, FM, and AM modulators and demodulators. Arts & Sciences Elective Code: B
Hours per week: 5.0 lecture, 4.0 lab

Prerequisite: Take ELT-341. Take ELT-518.

ELT-399 Communications Systems II (4)
Continues Communications Systems I laboratory work related to the design, build and test of digital and analog communications links. Focuses on the measurement of antennas, transmission lines, the propagation of electro magnetic waves and waveguides, through lectures, comprehensive laboratory activities, lab report writing and computer simulations. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take ELT-350.

ELT-514 Active Devices I: Transistor Amplifiers (7)
Presents an analytical approach with laboratory and computer-simulation exercises related to the design and troubleshooting of transistor amplifier. Includes bipolar junction transistors, FETs, small signal amplifiers, power amplifiers, amplifier frequency responses, and amplifier transient responses. Introduces operational amplifiers. Arts & Sciences Elective Code: B
Hours per week: 5.0 lecture, 4.0 lab

Prerequisite: Take ELT-345.

ELT-518 Active Devices II: Operational Amplifiers (3)
Presents an analytical approach through laboratory and computer-simulation exercises regarding the design and troubleshooting of operational amplifier circuits. Examines four basic types of negative feedback. Includes voltage amplifiers, comparator, analog-to-digital conversion, wave shaping, active filters, and printed circuit design. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ELT-514.

ELT-618 Microprocessors I (5)
Studies counters, shift registers, memory, data storage, digital signal processing, and microprocessors. Learning activities include computer simulations and extensive laboratory sessions with PLDs (programmable logic devices). Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture, 2.0 lab

Prerequisite: Take ELT-309 or EGT-420.

ELT-621 Microprocessors II (4)
Introduces software engineering through a combination of C programming language, robotics, microcontrollers, and version control software. Incorporates writing programs in C. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take ELT-618.

ELT-796 Fundamentals of Fluid Power (3)
Focuses on proper usage and application of, as well as the theory and physics behind, fluid power systems and controls. Introduces the various components used in each type of system. Includes assembly, operation, and troubleshooting various types of fluid power systems and components. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

ELT-845 Design Projects (4)
Practices system design through teamwork. Emphasizes designing, building, troubleshooting, and testing a complex electronic system as specified and approved by the design team's customer. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take ELT-350.

ELT-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

ELT-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Emergency Medical Services (EMS)

EMS-255 Emergency Medical Technician I (4)
Provides emergency medical care information at an Emergency Medical Technician (EMT) level as outlined by the National Emergency Medical Services Education standards. Introduces basic emergency care concepts in a preparatory module, including fundamental knowledge of the EMS system, safety/well-being of the EMT and medical/legal and ethical issues to the provision of emergency care. Requires HIPAA, Infection Control and Mandatory Reporting for child/adult training for health care providers. Offers American Heart Association Basic Life Support certification with successful completion. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

EMS-300 Advanced Emergency Medical Technician (8)
Prepares students for the National Registry practical and written examinations for State of Iowa certification. Focuses on prehospital emergency care fundamentals, and advanced airway and cardiac management skills. Requires 72 hours of clinical internship at hospitals, ambulance services or fire departments. Arts & Sciences Elective Code: B; Comments: Current certification in CPR for health care providers and active EMT certification are required
Hours per week: 6.0 lecture, 1.0 lab, 4.5 clinical

Prerequisite: Take EMS-255. Take EMS-350. Take EMS-365.

EMS-350 Emergency Medical Technician II (3.5)
Continues EMS-255. Introduces shock and resuscitation, patient assessment, care and transportation of the acutely ill trauma patient, special patient populations and EMS operations. Focuses on Geriatric Education for EMS (GEMS), Hazmat Awareness and Incident Command. Requires demonstration of proficiency for skills within the scope of practice for patients of all ages. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 1.0 lab

Corequisite: Take EMS-255. Take EMS-365.

EMS-365 Emergency Medical Technician II Clinical (1)
Provides emergency medical assessment, care and transportation of acutely ill or injured patients of all ages. Develops proficiency in previously learned skills for direct patient care in selected clinical settings. Requires participation in and documentation of patient contacts and field experience approved by the medical director and the EMS program director. Requires demonstration of competency in skills for patients of all ages within the scope of practice. Arts & Sciences Elective Code: B
Hours per week: 3.0 clinical

Corequisite: Take EMS-255. Take EMS-350.

EMS-601 Paramedic Operations (3)
Provides an overview of EMS operations, including EMS systems, safety, research, documentation, communications, medicolegal, ethics, MCI, incident management, air medical, rescue, and HazMat. Includes an introduction to pharmacology. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in EMS-255. Minimum C- in EMS-350. Minimum C- in EMS-365.

Corequisite: Take EMS-602. Take EMS-656.

EMS-602 Cardiorespiratory Preparation (3.5)

Provides the didactic and lab components of essential paramedic skills, including IV/med administration, airway management, respiration & ventilation, needle decompression, needle cric, patient assessments, and basic EKG/12-lead interpretation. Arts & Sciences Elective Code: B
Hours per week: 2.25 lecture, 2.5 lab

Corequisite: Take EMS-601. Take EMS-656.

EMS-641 Introduction to Paramedicine (3)

Provides an overview of paramedic roles and responsibilities and the emergency medical service system. Includes discussion of medicolegal and ethical issues in EMS, agents of trauma and disease, and career opportunities for paramedics. Provides discussion and demonstration of proper documentation in EMS, emergency vehicle operations, and non-patient care aspects of EMS. Arts & Sciences Elective Code: B; Comments: Need to hold a current EMT-B Iowa Certification
Hours per week: 3.0 lecture

Prerequisite: Take EMS-255. Take EMS-350. Take EMS-365.

EMS-642 Pharmacology for Paramedicine (3)

Provides an introduction to drug classifications, mechanism of action and metabolism. Discusses indications, contraindications, dosages, routes of administration and side effects of drugs administered by the paramedic. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take BIO-168. Take MAT-772.

EMS-643 Cardiorespiratory Paramedicine (3)

Provides lecture, discussion and case-based teaching in the pathophysiology, recognition, and advanced life support of cardiovascular and respiratory emergencies and shock. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take EMS-641. Take EMS-642.

EMS-644 Paramedic Clinical I (3)

Provides opportunities for observation and supervised participation in the delivery of advanced life support in pre-hospital and emergency department settings. Arts & Sciences Elective Code: B
Hours per week: 9.0 clinical

Prerequisite: Take EMS-641. Take EMS-642.

EMS-645 Paramedic I (2.5)

Provides scenario-based teaching and student practice in techniques of assessment and management of patients with cardiovascular and respiratory emergencies. This course includes ACLS certification. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 4.0 lab

Prerequisite: Take EMS-641. Take EMS-642.

EMS-646 Paramedic Clinical II (4)

Provides opportunities for observation and supervised practice of patient assessment and management in various settings. Arts & Sciences Elective Code: B
Hours per week: 12.0 clinical

Prerequisite: Take EMS-644.

EMS-647 Paramedic II (3.5)

Provides demonstration and scenario-based practice of assessment and management of trauma, medical, psychological, pediatric, geriatric and obstetric patients. Includes PALS and PHTLS certification. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 5.0 lab

Prerequisite: Take EMS-645.

EMS-648 Special Patient Populations in Emergency Medical Services (4)

Provides lecture-discussion and case-based teaching of EMS, assessment and management of emergencies specific to pediatric, geriatric, disabled and obstetric patient populations. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Take EMS-643.

EMS-649 Trauma and Environmental Emergencies (4)

Provides lecture-discussion and case-based teaching in the kinematics of trauma, pathophysiology of shock and trauma, and techniques of trauma management. Discussion of identification and management of environmental emergencies including heat and cold, barotrauma, altitude, radiation, hazardous materials and drowning emergencies. Includes PEPP certification. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Take EMS-643.

EMS-650 Medical and Psychological Emergencies (4)

Lecture and case-based teaching in the pathophysiology, recognition and advanced life support assessment and management of emergencies involving the nervous, endocrine, renal, and gastrointestinal systems. Assessment and intervention in psychological emergencies. Includes AMLS certification. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Take EMS-643. Take EMS-648.

EMS-651 Paramedic Fieldwork (4)

Provides opportunities for guided paramedic practice and evaluation in the pre-hospital setting. Students are expected to achieve increasing independence as paramedic level practitioners. The student must complete a prescribed number of patient contacts as team leader. Arts & Sciences Elective Code: B
Hours per week: 12.0 clinical

Prerequisite: Take EMS-646.

EMS-653 Paramedic III (1)

Provides an opportunity for scenario-based skill and assessment practice in biweekly lab sessions that prepare the student for the NREMT paramedic practical examination for certification. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

Prerequisite: Take EMS-647.

Corequisite: Take EMS-650. Take EMS-651. Take EMS-652.

EMS-656 Clinical Introduction (1)
Provides opportunities for observation and supervised participation in the delivery of medications in the pharmacy setting. Deepens understanding of fire department operations. Arts & Sciences Elective Code: B
Hours per week: 3.0 clinical

Corequisite: Take EMS-601. Take EMS-602.

EMS-657 Paramedic Clinical III (3)
Provides an opportunity for guided paramedic practice and evaluation in hospital clinical environments. Arts & Sciences Elective Code: B
Hours per week: 9.0 clinical

Prerequisite: Take EMS-646.

Corequisite: Take EMS-650. Take EMS-651. Take EMS-653.

EMS-658 Cardiorespiratory Emergencies (4)
Provides didactic and psychomotor components of cardiology, shock, and pulmonology. Includes pertinent A&P, pathophysiology, and pharmacology for each body system presented. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C- in EMS-656.

Corequisite: Take EMS-813. Take EMS-659.

EMS-659 Paramedic Clinical I (4)
Provides the opportunity to observe and participate in skills performance and patient assessments in both a prehospital and hospital/clinic environment. Arts & Sciences Elective Code: B
Hours per week: 12.0 clinical

Prerequisite: Minimum C- in EMS-656.

Corequisite: Take EMS-658. Take EMS-813.

EMS-691 Medical Emergencies I (3.75)
Provides the didactic and lab components of medical emergencies related to neurology, endocrinology, GI/GU, and psychological emergencies. Includes pertinent A&P, pathophysiology, and pharmacology for each body system presented. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 1.5 lab

Prerequisite: Minimum C- in EMS-659.

Corequisite: Take EMS-692. Take EMS-693. Take EMS-696.

EMS-692 Medical Emergencies II (3.75)
Provides the didactic and lab components of medical emergencies related to immune system, infectious diseases, hematology, toxicology, musculoskeletal, and ENT. Includes pertinent A&P, pathophysiology, and pharmacology for each body system presented. Includes discussion of special challenges and home care considerations. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 1.5 lab

Prerequisite: Minimum C- in EMS-659.

Corequisite: Take EMS-691. Take EMS-693. Take EMS-696.

EMS-693 Gynecology/OB/Neonatology (2.5)
Provides the didactic and lab components of medical emergencies related to gynecology, obstetrics, and neonatology. Includes pertinent A&P, pathophysiology, and pharmacology for each body system presented. Includes Neonatal Resuscitation Program. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 1.0 lab

Prerequisite: Minimum C- in EMS-659.

Corequisite: Take EMS-691. Take EMS-692. Take EMS-696.

EMS-696 Paramedic Clinical II (4)
Provides the opportunity to observe and participate in skills performance and patient assessments in both a prehospital and hospital/clinic environment. Arts & Sciences Elective Code: B
Hours per week: 12.0 clinical

Prerequisite: Minimum C- in EMS-659.

Corequisite: Take EMS-691. Take EMS-692. Take EMS-693.

EMS-697 Trauma Emergencies (3.5)
Provides the didactic and psychomotor components of trauma emergencies. Includes pertinent A&P, pathophysiology, and pharmacology. Arts & Sciences Elective Code: B
Hours per week: 2.7 lecture, 1.6 lab

Prerequisite: Minimum C- in EMS-696.

Corequisite: Take EMS-822. Take EMS-701. Take EMS-698. Take EMS-699.

EMS-698 Paramedic Clinical III (3)
Provides the opportunity to observe and participate in skills performance and patient assessments in both the prehospital and hospital/clinic environment, with a focus on transitioning into the role of Team Leader. Arts & Sciences Elective Code: B
Hours per week: 9.0 clinical

Prerequisite: Minimum C- in EMS-696.

Corequisite: Take EMS-697. Take EMS-822. Take EMS-701. Take EMS-699.

EMS-699 Paramedic Capstone (3)
Provides the opportunity to apply skills and knowledge learned throughout the Paramedic curriculum in the role as Team Leader. Arts & Sciences Elective Code: B
Hours per week: 9.0 clinical

Prerequisite: Minimum C- in EMS-696.

Corequisite: Take EMS-697. Take EMS-822. Take EMS-701. Take EMS-698.

EMS-701 Paramedic Test Prep (1.5)
Provides a review of knowledge and test-taking skills to prepare for the NREMT Paramedic exams. Includes Pediatric Education for the Prehospital Provider. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture

Prerequisite: Minimum C- in EMS-696.

Corequisite: Take EMS-697. Take EMS-822. Take EMS-698. Take EMS-699.

EMS-813 ACLS & PALS (1.5)

Includes both the didactic and psychomotor components of the American Heart Association's Advanced Cardiac Life Support and Pediatric Advanced Life Support courses. Arts & Sciences Elective Code: B
Hours per week: 1.2 lecture, 0.6 lab

Corequisite: Take EMS-658. Take EMS-659.

EMS-822 PHTLS & AMLS (1.5)

Includes both the didactic and psychomotor components of the NAEMT Prehospital Trauma Life Support and Advanced Medical Life Support courses. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 1.0 lab

Prerequisite: Minimum C- in EMS-696.

Corequisite: Take EMS-697. Take EMS-701. Take EMS-698. Take EMS-699.

Electroneurodiagnostic (END)

END-100 Introduction to Electroneurodiagnostics (2.5)

Provides an introduction to basic electroencephalographic concepts and techniques. Demonstrates instrumentation in the classroom and hands-on experience in the laboratory. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 3.0 lab

Pre/corequisite: Take BIO-168.

END-310 Electroneurodiagnostic Technical Science (7)

Provides theory and application of electrical concepts, recording techniques, data analysis and description. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 6.0 lab, 6.0 clinical

Prerequisite: Take BIO-168. Take END-100.

END-330 Electroneurodiagnostic Clinical Science (2)

Introduces students to electroneurodiagnosis, neurophysiology, functional neuroanatomy, normal and abnormal conditions, and correlates. Includes electroencephalographic signs of cerebral disorders. Studies specific neurological disease entities; integrates EEG patterns for cerebral disorders and diagnosis. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Take BIO-168. Take END-100.

END-405 Neurodiagnostic Procedures (2)

Introduces other neurodiagnostic procedures performed in the EEG laboratory setting. Provides practical application and evaluation of neurodiagnostic procedures. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take END-810.

END-810 Electroneurodiagnostic Clinic I (6)

Focuses on clinical application of basic EEG techniques according to lab protocol under direct supervision of staff. Includes record review with physicians and correlative seminars. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 15.0 clinical

Prerequisite: Take END-310 Take END-330

END-830 Electroneurodiagnostic Clinic II (7.5)

Provides continued clinical recording techniques including a broad patient population and procedure range. Includes record review with physicians and correlative seminars. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 19.5 clinical

Prerequisite: Take END-810.

END-850 Electroneurodiagnostic Clinic III (5.5)

Provides clinical practice in performing electroencephalograms, evoked potentials, intraoperative monitoring and epilepsy. Record and review with physicians and correlative seminars are included. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 1.0 lab, 12.0 clinical

Prerequisite: Take END-405. Take END-830.

END-870 Sleep Technology (6.5)

Provides clinical practice in polysomnography using appropriate techniques according to protocol. Record and review with physicians and correlative seminars are included. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 1.0 lab, 15.0 clinical

Prerequisite: Take END-405. Take END-830.

END-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

English Composition (ENG)

ENG-011 Core Writing (1)

Supports success in ENG-101 through group and individualized instruction. Develops college-level reading and writing skills. Arts & Sciences Elective Code: D
Hours per week: 2.0 lab

ENG-013 Basic Writing (3)

Provides group instruction in basic writing skills: writing to communicate with the reader, sentence and paragraph structure, proofreading for spelling, grammar and punctuation errors. Students in this course should not have previous or concurrent enrollment in Elements of Writing, Composition I and II, College Writing or Workplace Communication. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

ENG-070 Personal Achievement Writing (1-2)

Designed to assess a student's writing strengths and weaknesses. The student receives instruction on an individualized basis in the areas of skill needs while building on skills already mastered. The course is divided into two parts: knowledge about language and experience using the language. The course helps prepare the student to take Elements of Writing and may also be supplemental support for students enrolled in Composition I, Composition II, Workplace Communication or other writing courses. Arts & Sciences Elective Code: D
Hours per week: 2.0 lab

ENG-101 Elements of Writing (3)

Develops students' fluency in communication and clarity in thinking through writers' notebooks, expository writing, analytical reading and listening. Students use structured assignments to explore personal goals and values, exercising skills needed for reasoning and writing across the curriculum. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ENG-105 Composition I (3)

Develops expository writing with emphasis on organization, supporting details, style, vocabulary and library research skills. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-101 or meet qualifying placement score.

ENG-106 Composition II (3)

Teaches precise and responsible use of research tools. Requires critical analysis of reading materials, audience and self when communicating content material. Develops the ability to use effective and ethical arguments. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-105.

ENG-108 Composition II: Technical Writing (3)

Provides concepts, principles and practice of writing and analyzing documents in business, science (including health occupations) and industry. Research emphasized. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-105 or ENG-120.

ENG-109 Integrated Composition (1-3)

Supports success in ENG-105 through group and individualized instruction. Develops college-level reading and writing skills. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Prerequisite: Take ENG-013.

ENG-120 College Writing (5)

Develops expository writing with emphasis on substance, organization, supporting details, style and vocabulary. Teaches precise and responsible use of research tools. Requires critical analysis of reading materials in curriculum content areas, current issues and literature. Develops the ability to use ethical and logical argument. Arts & Sciences Elective Code: A
Hours per week: 5.0 lecture

Prerequisite: Take ENG-101.

ENG-221 Creative Writing (3)

Offers an opportunity to do advanced work in writing short story, poetry, literary nonfiction or play writing. Emphasizes regular workshops with attention to content issues, structures, forms and styles of particular genres. Includes reading and commenting on other students' works as well as published material. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

ENG-225 Creative Writing: Poetry (3)

Offers a writing workshop devoted to students' poetry. Class time devoted to responding to and revising work, reading and discussing published poetry, and exploring various forms of the poem. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

ENG-233 Creative Writing: Short Fiction (3)

Offers a writing workshop focused on students' attempts and successes in writing 500- to 3,500-word short stories. Seventy-five percent of class time devoted to drafting, reading and responding to peers' drafts; 25 percent devoted to reading and discussing published short stories and the elements of fiction as they apply to crafting stories. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

ENG-235 Playwriting/Screenwriting (3)

Offers a writing workshop for students' playwriting or screenwriting. Class time devoted to reading and responding to students' work, and discussing published and produced plays and screenplays. Homework devoted to drafting and revising and to reading and responding to published and produced plays and screenplays. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

ENG-238 Creative Writing: Nonfiction (3)

Offers a writing workshop for students' nonfiction: personal essays, memoir, nature writing, literary journalism, or other subgenre of the craft. Class time devoted to reading and responding to classmates' work, discussing published nonfiction and the writing craft. Homework devoted to drafting and revising, and to reading and responding to published nonfiction in a variety of subgenres. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

ENG-240 Advanced Creative Writing (3)

Offers students an opportunity to do advanced work in fiction, poetry and literary nonfiction, with an eye toward getting something published. Students respond to each other's writing and enlarge their knowledge of the publishing industry. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-221, ENG-225, ENG-233, ENG-235 or ENG-238.

ENG-245 Advanced Creative Writing: Short Fiction (3)

Provides a writing workshop approach to working on students' short fiction. Seventy-five percent of class time is devoted to reading and responding to other students' work and discussing the responses; 25 percent of class time is devoted to discussing already published work. All critiquing based in either New Critical/Elements of Fiction discourse or Reader Response. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-233 or ENG-221.

ENG-275 Editing a Literary Magazine (3)

Provides practical experience in reading and editing literary manuscripts (nonfiction, fiction and poetry). Students design and edit hypothetical magazines using actual student manuscripts and work on preparing an issue of Cedar Valley Divide, Kirkwood's student art and literary magazine. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

ENG-290 Literary Magazine Layout and Production (3)

Provides practical experience working on an editorial team to produce a student art and literary magazine, Kirkwood's Cedar Valley Divide (CVD). Focuses on designing and editing the magazine using Adobe InDesign and Photoshop software; coordinating with submitters, independent publishers and printers; and establishing and meeting deadlines to successfully publish the CVD by semester's end. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take ENG-275.

ENG-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of an honors faculty member. Requires that student meets honors eligibility criteria. Requires completion of an honors project contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

ENG-928 Independent Study (1-3)

Provides opportunity for independent writing projects under the guidance of a faculty member. Arts & Sciences Elective Code: A; Comments: Permission of instructor.
Hours per week: 1.0 lecture

Prerequisite: Take ENG-105. Take ENG-221.

Environmental Science (ENV)

ENV-115 Environmental Science (3)

Explores major environmental issues including biotechnology, climate change, fossil fuel use, human population growth, land utilization, pollution, resource management, soil degradation, and toxicology. Teaches concepts from a variety of the sciences. Practices synthesizing environmental concepts, analyzing facts, and forming hypotheses. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

ENV-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

ENV-928 Independent Study (1)

Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 2.0 lab

Intensive English Second Language (ESI)

ESI-002 L1 ELA Reading and Writing Skills (6)

Begins English reading and vocabulary development for beginner English learners. Builds writing skills at the sentence and short paragraph level, using foundational English grammar constructs. Arts & Sciences Elective Code: D
Hours per week: 6.0 lecture

ESI-003 L1 ELA Listening and Speaking (6)

Builds a strong foundation of oral proficiency for beginner English learners. Develops basic listening comprehension, fluency, accuracy, and strategies for negotiating meaning through spontaneous communication. Arts & Sciences Elective Code: D
Hours per week: 6.0 lecture

ESI-006 L1 ELA Reading & Vocabulary (3)

Begins the study of English reading and vocabulary development for non-native speakers who have few English skills. Emphasizes reading skills in informal settings. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

ESI-007 L1 ELA Listening and Conversation (3)

Begins the study of conversation and listening skills in English for non-native speakers who have little to no English. Emphasizes communicative speaking and negotiative listening in informal language settings. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

ESI-010 L1 Phonetics and Pronunciation (3)

Begins the study of English segmentals and intonation for non-native speakers who have few English skills. Emphasizes the use of phonetic alphabet. Focuses on using segmentals and intonation, in informal language settings. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

ESI-011 L1 ELA Grammar (4)

Begins the study of the basics of English grammar for non-native speakers of English with few English skills. Focuses on using English grammar fluently in writing, reading and speaking. Arts & Sciences Elective Code: D
Hours per week: 4.0 lecture

ESI-014 L1 ELA Writing (2)

Provides practice in the basic formation of the English alphabet. Focuses on writing at the sentential level for non-native speakers who have little to no English. Increases the use of vocabulary in writing. Familiarizes the student with keyboarding. Arts & Sciences Elective Code: D
Hours per week: 2.0 lecture

ESI-016 L2 ELA Writing (2)

Provides practice in the basic formation of English sentences, paragraphs and reports for non-native speakers of English at the beginning level. Provides practice in structure, and in using English vocabulary in writing. Arts & Sciences Elective Code: D
Hours per week: 2.0 lecture

Prerequisite: Take ESI-014 or qualifying placement score.

ESI-018 L2 ELA Grammar (4)
Provides beginning level practice in the basics of English grammar for non-native speakers of English. Focuses on using English grammar fluently in writing, reading and speaking. Arts & Sciences Elective Code: D
Hours per week: 4.0 lecture

Prerequisite: Take ESI-011 or qualifying placement score.

ESI-019 L2 ELA Listening Skills and Culture (3)
Provides beginning-level practice in conversation and listening skills in English for non-native speakers of English. Emphasizes speaking and listening in formal and informal language settings. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-007 or qualifying placement score.

ESI-021 L2 ELA Phonetics and Pronunciation (3)
Provides practice in English segmentals and intonation of the English language for non-native speakers at the beginning level. Focuses on using segmentals and intonation, in formal and informal language settings. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-010 or qualifying placement score.

ESI-023 L2 ELA Reading and Vocabulary (3)
Provides practice in reading and vocabulary development at the beginning level for non-native speakers of English. Emphasizes reading skills in academic settings. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-006 or qualifying placement score.

ESI-024 L2 ELA Reading and Writing Skills (6)
Builds English reading and vocabulary development for emerging English learners. Builds writing skills at the paragraph level, using clear and accurate basic grammar constructs. Arts & Sciences Elective Code: D
Hours per week: 6.0 lecture

Prerequisite: Take ESI-002, or both ESI-006 and ESI-014.

ESI-027 L2 ELA Listening and Speaking (6)
Builds a strong foundation of oral proficiency for emerging English learners. Develops listening comprehension, fluency, accuracy, and strategies for negotiating meaning through spontaneous communication. Arts & Sciences Elective Code: D
Hours per week: 6.0 lecture

Prerequisite: Take ESI-003, or both ESI-007 and ESI-010.

ESI-034 L3 ELA Listening, Conversation, and Culture (4)
Continues practice in conversation and listening skills in English for non-native speakers of English at the beginning intermediate level. Emphasizes speaking and listening in formal and informal language settings. Exposes students to English culture and cultural expectations. Focuses on creating intelligible speech. Arts & Sciences Elective Code: D
Hours per week: 4.0 lecture

Prerequisite: Take ESI-027, ESI-021, ESI-015 or ESI-019.

ESI-037 L3 ELA Writing (2)
Continues practice in the formation of English sentences, paragraphs and reports for non-native speakers of English at a beginning intermediate level. Builds students' writing structure skills, and use of English vocabulary in writing. Arts & Sciences Elective Code: D
Hours per week: 2.0 lecture

Prerequisite: Take ESI-016, ESI-017 or ESI-024.

ESI-038 L3 ELA Grammar (4)
Continues practice in English grammar for non-native speakers of English at the beginning intermediate level. Focuses on using English grammar fluently in writing, reading and speaking. Arts & Sciences Elective Code: D
Hours per week: 4.0 lecture

Prerequisite: Take ESI-018, ESI-022, ESI-024 or ESI-027.

ESI-042 L3 ELA Reading and Vocabulary (3)
Continues practice in reading and vocabulary development at the beginning intermediate level for non-native speakers of English. Emphasizes reading skills in academic settings. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-023, ESI-024 or ESI-029.

ESI-062 L4 ELA Culture and Conversation (3)
Continues practice in conversation in English for non-native speakers of English at the advanced intermediate level. Focuses on speaking, in formal and informal language settings. Exposes students to English culture and cultural expectations in conversation and oral interaction. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-034, ESI-039, or qualifying placement score.

ESI-063 L4 ELA Writing (3)
Continues practice in the formation of English sentences, paragraphs, and reports for non-native speakers of English at an advanced intermediate level. Provides practice in writing structure, and using English vocabulary in writing. Emphasizes academic report structure and conventions. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-037 or qualifying placement score.

ESI-064 L4 ELA Grammar and Usage (3)
Continues practice in English grammar for non-native speakers of English at the advanced intermediate level. Provides practice in using English grammar fluently in writing, reading and speaking. Emphasizes grammar in applications. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-038 or qualifying placement score.

ESI-068 L4 ELA Reading and Vocabulary (3)
Practice in reading and vocabulary development at the advanced intermediate level for non-native speakers of English. Emphasizes more subtle vocabulary and comprehension for academic settings. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-042 or qualifying placement score.

ESI-069 L4 ELA Presentations (3)

Prepares non-native speakers of English for academic communication skills, including presentations. Provides opportunity to practice academic skills, emphasizing presentation and other skills, at the advanced intermediate level. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-034, ESI-040, or qualifying placement score.

ESI-072 Fundamentals of English Grammar (3)

Reviews English grammatical structure and examines advanced grammatical patterns for non-native speakers of English. Provides practice in using English grammar fluently in writing, reading, and speaking. Emphasizes grammar in application and linguistic analysis of grammar. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-064.

ESI-090 L5 ELA Culture and Conversation (3)

Continues practice in conversation in English for non-native speakers of English at the beginning advanced level. Provides practice in speaking in formal and informal language settings. Exposes students to English culture and cultural expectations in conversation and oral interaction. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take ESI-062 or qualifying placement score.

ESI-093 English Language Acquisition Special Topics (1-12)

Develops English language skills for non-native speakers of English in a classroom setting, in reading, writing, communication, grammar and/or for special purposes. Arts & Sciences Elective Code: D
Hours per week: 1.0 lecture

Exercise Science (EXS)

EXS-120 Human Anatomy and Physiology for Exercise Science (3)

Covers structure and function of the human body as each pertains to the skeletal, muscular, cardiovascular and respiratory systems. Stresses cellular metabolism and neuromuscular function as each applies to human movement. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

EXS-180 Fitness Programming and Design (3)

Provides students with a basic understanding of laboratory and field assessment techniques used in exercise physiology, fitness/wellness facilities, and to a minor extent, clinical situations. Emphasizes fitness assessment and exercise program design principles for cardiovascular fitness, muscular strength and endurance, body composition, balance and flexibility. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in EXS-120 or BIO-168.

EXS-280 Exercise Physiology (4)

Defines exercise through the study of neuromuscular physiology, metabolism, exercise endocrinology, cardiometabolic response, environmental adaptation and optimized physical performance. Examines physiological response to various modes of exercise through laboratory activities. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C- in either EXS-120, or both BIO-168 and BIO-173. Minimum C- in EXS-180. Minimum C- in PEH-170.

EXS-285 Personal Trainer Capstone (3)

Solidifies in-depth knowledge and preparation for nationally certified personal trainers. Focuses on the components of personal training including behavior modification, client screening and the business of personal training. Successful completion of this course provides the necessary knowledge to apply for the NASM personal trainer, NSCA personal trainer and ACSM personal trainer certification exams. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in BIO-151 or PEH-191. Minimum C- in PEH-170. Minimum C- in EXS-180. Minimum C- in EXS-280. Minimum C- in EXS-120, or in both BIO-168 and BIO-173.

Finance (FIN)

FIN-110 Money and Banking (3)

Presents a fundamental treatment of how money functions in the U.S. and world economies. Topics include the concept of money supply and the role the bank plays as a money creator and participant in the nation's payment mechanism. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

FIN-121 Personal Finance (3)

Provides a comprehensive examination of the concepts and principles of personal finance and offers solid strategies for successful management and planning. Teaches planning, analyzing and controlling financial resources, and develop the knowledge and skills necessary to take advantage of favorable financial opportunities, resolve personal financial problems, achieve self-satisfaction and strive towards financial security. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

FIN-130 Principles of Finance (3)

Examines the tools and techniques used in the world of finance. Introduces basic financial concepts including time value of money, asset valuation, risk analysis and return on investment. Emphasizes evaluation and decision-making techniques pertaining to financial management in various business situations. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ACC-152. Take ADM-133.

FIN-300 Topics in Financial Services (3)
Covers topics as it pertains to the financial services industry including: sales, marketing, customer service, professionalism, and leadership. Instructional methods include case study analysis, scenarios, interviews and individual project work. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in FIN-110. Minimum C- in FIN-121. Take MKT-140. Take ADM-133, MAT-102 or MAT-708.

FIN-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

FIN-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Fire Science (FIR)

FIR-110 History and Philosophy of the Fire Service (2)
Provides an understanding of where the fire service has come from to better help steer fire service into the future. Instructional units are facilitated through a guided self-study format. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

FIR-124 Building Construction (3)
Examines structural reactions to fire. Studies building codes and their relationship to the architectural strength of various designs. Covers how construction and design are key factors when inspecting buildings, preplanning fire operations and functioning at emergencies. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

FIR-127 Fire Behavior and Combustion (3)
Studies how the chemical and physical aspects of fuels, the combustion process and the products of combustion affect how fire is caused, spread and extinguished. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

FIR-130 Fire Prevention (3)
Covers the techniques, procedures, regulations and enforcement of codes (fire, building, life safety) in various occupancies. Communication with the property owner on changes to meet code requirements are presented. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

FIR-146 Firefighting Tactics and Strategy (3)
Studies methods of coordinating personnel, equipment and deploying apparatus on the fire ground. Practical methods of controlling and extinguishing structural and other types of fires are discussed. Includes simulation exercises. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

FIR-150 Fire Detection and Suppression Systems (3)
Covers the identification of system elements, the proper type for the occupancy as per code, fire department operations at premises, and inspection practices to ensure the system is operating and installed as required. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take FIR-124. Take FIR-127.

FIR-183 Hazardous Materials Management (3)
Prepares for the state administered Hazardous Materials Operations and Awareness certification exam. Discusses the properties of chemically active substances related to hazardous materials. Identifies and demonstrates techniques, methods and strategies to mitigate haz-mat incidents. Covers state and federal laws as they relate to management of hazardous materials. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

FIR-199 Firefighter I (8)
Prepares students for the state administered Firefighter I certification exam. Includes basic firefighting tactics, fire behavior, safety, forcible entry, hose handling, ladders, protective clothing, SCBA rescue, ventilation, PPE and additional topics. Requires passing the Firefighter I exam through the Iowa Fire Service Training Bureau to become certified. Arts & Sciences Elective Code: B
Hours per week: 6.0 lecture, 4.0 lab

Prerequisite: Take FIR-150.

FIR-201 Firefighter II (3)
Continues as the second level of standards-based certification. Focuses on the basic principles of firefighting as they relate to Fire Fighter Professional Qualifications. Covers topics included in the Firefighter I program, and offers certification testing to obtain Firefighter II certification based on NFPA 1001, 2002 edition. Arts & Sciences Elective Code: B
Hours per week: 2.5 lecture, 1.0 lab

Prerequisite: Take FIR-199.

FIR-213 Principles of Emergency Services (3)
Studies fire service nomenclature, career opportunities in fire protection, organization and function of fire protection services, laws and regulations affecting the fire service, and fire departments as part of local government. Includes job shadowing with career firefighters. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

FIR-250 Fire Apparatus Driver/Operator Pumper (3)
Prepares for certification as an Apparatus Driver Operator-Pumper. Covers the requirements of the NFPA 1002, for driving and maneuvering a fire apparatus in a confined space, restricted/diminished clearance, serpentine and non-emergency and emergency vehicle operations. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take FIR-199. Take FIR-201.

FIR-280 Instructional Techniques for Fire Service Training (3)

Covers concepts and techniques for conducting periodic company-level or small-unit training. Emphasizes teaching principles applicable to in-service fire and rescue service skills training. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

FIR-330 Fire Service Company Officer (3)

Studies the company officer's role in the fire department. Examines topics including effective communications, organization and management, resource management, leadership, safety, fire prevention and investigation, and pre-planning. Meets NFPA 1021, Fire Officer I, 2003 edition. Includes lecture with activities and exercises designed to reinforce the topic. Requires completion of written assignments that are designed to meet the requirements of Fire Officer I. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take FIR-199.

FIR-400 Emergency Safety and Survival (3)

Introduces the basic principles and history related to national firefighter life safety initiatives. Focuses on the need for cultural and behavioral change across the emergency services. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

FIR-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

FIR-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

Foreign Language-French (FLF)

FLF-141 Elementary French I (4)

Introduces the 5 Cs of second language acquisition (communication, cultures, connections, comparisons and communities) by developing the fundamental communicative skills of listening, speaking, reading and writing, and providing the opportunity to examine the practices and products of various francophone cultures. Making comparisons and connections between the French and English language, practices, products and people is an important course component. Open to students with little or no previous study of French. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

FLF-142 Elementary French II (4)

Continues to develop the 5 Cs of second language acquisition (communication, cultures, connections, comparisons, and communities) by improving the fundamental communicative skills of listening, speaking, reading and writing acquired in Elementary French I. Examines the practices and products of francophone cultures. Includes discussion of the comparisons and connections that exist between various francophone cultures and language and our own. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take FLF-141.

FLF-241 Intermediate French I (4)

Develops the 5 Cs (communication, cultures, connections, comparisons and communities) by providing intensive practice in the fundamental communicative skills of listening, speaking, reading and writing, with a methodic study of different cultural contexts and a review of the basic grammar. Examines the cultural practices and products of francophone countries. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take FLF-142.

FLF-242 Intermediate French II (4)

Continues to develop the 5 Cs (communication, cultures, connections, comparisons and communities) by expanding the repertoire of realia (movies, readings, Internet explorations) and class activities. Provides continuous practice in developing the communicative skills and encourages group discussion about everyday subjects as well as the practices and products of francophone cultures. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take FLF-241

FLF-924 Honors Project (1)

Allows a qualified student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

FLF-928 Independent Study (1-3)

Provides for individualized learning beyond courses offered on a regular basis. Students work directly with a faculty member on furthering proficiency in several different areas of the student's own choosing, e.g., reading comprehension, aural/oral proficiency, understanding of civilization and culture, etc. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

Foreign Language-Spanish (FLS)

FLS-118 Spanish for Professionals (3)

Introduces and develops elemental conversational skills in the Spanish language. The emphasis is in acquiring fundamental oral proficiency in Spanish in work situations. Includes activities that promote essential Spanish grammar tailored for the industry, and basic understanding of Latin American culture. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

FLS-141 Elementary Spanish I (4)
Develops fundamental skills in the Spanish language. Emphasis is on acquiring the proficiency to communicate with the native speaker in everyday situations. Includes activities that promote an understanding and knowledge of the Spanish-speaking peoples and their culture. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

FLS-142 Elementary Spanish II (4)
Allows the student to communicate with others on subjects of daily common experience in most informal and a limited number of formal conversations on activities related to family, work, health, friends, leisure activities, social life, environment, etc. The vocabulary used in this course is non-specialized, containing everyday words as well as frequently used expressions, all within a cultural context. Cultural facts from Hispanic and Latin American cultures will also be presented in the classroom. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take FLS-141.

FLS-241 Intermediate Spanish I (4)
Provides practice of language beyond the controlled situations of the elementary course. Develops fundamental skills in Spanish through activities aimed at expressing original ideas and conveying messages in correct Spanish with the aid of authentic resources. Class activities offer advanced training in listening, speaking, reading, writing, and understanding the cultures of Spanish-speaking countries. Grammar study includes a review of previously introduced topics as well as new ones. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take FLS-142.

FLS-242 Intermediate Spanish II (4)
Enables students to continue to develop all communication skills, using primarily materials from literature, contemporary newspapers and magazines aimed at providing a better understanding of the Hispanic and Latin cultures and pertinent current issues. Class activities include pronunciation exercises, some grammar review and class discussion that promotes spontaneous conversation. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take FLS-241.

FLS-266 Advanced Spanish: Latin American and Spanish Culture (3)
Develops communication skills through the study of the history, literature and cultures of the Spanish-speaking countries of the world. May emphasize a specific area (Spain, Mexico, Central America, South America) or explore common aspects of all or several areas. Conducted in Spanish. May be repeated (elective credit second time). Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take FLS-242.

FLS-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

FLS-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Global Studies (GLS)

GLS-110 Global Leadership (1-3)
Develops global perspectives and valuable skills necessary to effectively work in a global environment. Focuses on comparing and contrasting cultures specifically as they relate to organizations, social justice issues and ethics. Develops leadership, personal responsibility, communication, conflict resolution and negotiation skills. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

GLS-120 Education Experience Abroad (1-3)
Provides a structured cross-cultural experience, including pre-departure cultural orientation, in-country immersion experience and culminating project. Includes history, religion, geography, philosophy, literature, anthropology, culture, fine arts, food, language and other relevant topics. Includes a short-term study abroad experience with additional fees for travel. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

GLS-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of an honors faculty member. Requires that student meets honors eligibility criteria. Requires completion of an honors project contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

Graphic Communications (GRA)

GRA-101 Survey of Graphic Communications (3)
Introduces the graphic communication industry, including graphic design and typography principles, traditional layout and design techniques, electronic/traditional publishing, and Internet design basics. Introduces the fundamental processes used in the graphic communication industry. Covers two-dimensional design concepts and production preparation. Explores current graphic design computer applications, as well as the Apple OS and its interaction with printers, servers and design support. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

GRA-127 Illustrator I (3)

Introduces current vector program and its application in graphic communication. Includes vector exclusive tools as they apply to object-based files, filters and layers. Teaches basic drawing and tracing techniques, and creating line art and identity (logo). Addresses how to simplify art work through stylizing. Explores creative use of typography. Incorporates how to set up color reproduction, how to save and manage files, and how these files interact with page layout and raster programs. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

GRA-128 Illustrator II (3)

Explores vector drawing tools as they apply to object-based files. Includes advanced drawing techniques, creation of medium to high quality art, and how to simplify artwork through stylizing. Teaches color set up for reproduction, saving and management of files, and how files interact with page layout and raster programs. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take GRA-127. Take GRA-101.

GRA-131 Digital Layout (3)

Provides working knowledge of page layout program and its use in creating effective page layouts combining graphics and type. Includes toolbox and tool usage, importing and editing typography and graphics, parent pages, use of styles, text and paragraph formatting, general layout and design concepts, printing operations, importing graphics, and setting up text styles, columns and grids. Covers color management for a variety of design applications. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

GRA-132 Digital Layout II (3)

Expands knowledge of page layout program including page setup, text and graphic frames, links management, expansion of color management operations within publications, more advanced layout and design concepts, and printing and digital posting operations. Continues use of parent pages, use of styles, text and paragraph formatting and effective use of typography and graphics. Book and magazine building for digital and print applications as well as explore vertical page development / interactive design. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take GRA-101. Take GRA-131.

GRA-140 Digital Imaging (3)

Introduces raster editing program. Covers current image capturing techniques for color, grayscale and graphic based images; proper manipulation procedures required for various output sources including input and output resolutions, file size, multiple file-saving formats, image enhancements and creating raster imagery for use in graphic design applications. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

GRA-141 Digital Imaging II (3)

Continues color correction theory and practices, image enhancements with effective use of layers, paths, adjustment layers and adding typography to images, to create visually effective images. Emphasizes properly preparing images for publishing, online and motion use. Explores use of raster program as storytelling management tool. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take GRA-101. Take GRA-140.

GRA-151 Web Design (3)

Provides realistic hands-on experience about pre- and post-production project issues for both print and web. Emphasizes project management application and managing multiple projects and deadlines. Gives an opportunity to develop and practice professional skills with others in design process, both client and design team, partly through a design agency scenario. Packaging design and production will also be explored. Includes developing and presenting both analog and online portfolios that represent current graphic design and production skills. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in GRA-127 or GRA-182. Minimum C- in GRA-140 or GRA-181.

Corequisite: Take CIS-207.

Pre/corequisite: Take GRA-184 or GRA-131.

GRA-153 Web Media II (3)

Continues web content development and interactivity using motion, vector and raster programs as the primary tools. Explores intermediate video editing and enhancement using motion and video editing applications. Works through web content application scenarios as well as animations and multimedia applications. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in GRA-128 or GRA-182. Minimum C- in GRA-132 or GRA-184. Minimum C- in GRA-141 or GRA-181. Minimum C- in GRA-151. Minimum C- in GRA-195.

GRA-157 Web Design II (3)

Provides creative website UX design through resources that include prototyping applications, and other code in browser systems. Introduces, explores, and expands web design solutions based on current web standards. Incorporates design solutions via social and business models based on client need. Focuses on prototyping, layout, wire framing, graphics selection, and fonts using core graphic design principles. Includes the development of interactive content and design using available open-source solutions and meeting usability and accessibility guidelines. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CIS-207. Minimum C- in GRA-151. Minimum C- in GRA-195. Minimum C- in GRA-127 or GRA-182. Minimum C- in GRA-132 or GRA-184. Minimum C- in GRA-140 or GRA-181.

GRA-181 Image Design (4)

Introduces raster editing program. Covers current image capturing techniques for color, grayscale and graphic based images. Addresses proper manipulation procedures required for various output sources including input and output resolutions, file size, multiple file-saving formats, and image enhancements for creating raster imagery for use in graphic design applications, and for adding typography to images, to create visually effective images. Emphasizes properly preparing images for publishing, online and motion use. Explores use of raster program as storytelling management tool. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Minimum C- in GRA-101.

GRA-182 Illustration Design (4)

Introduces current vector program and its application in graphic communication. Includes vector exclusive tools as they apply to object-based files, filters and layers. Teaches basic drawing and tracing techniques, as well as creating line art and identity (logo). Includes advanced drawing techniques, creation of medium to high quality art, and how to simplify artwork through stylizing. Explores creative use of typography. Incorporates how to set up color reproduction, how to save and manage files, and how these files interact with page layout and raster programs. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Minimum C- in GRA-101.

GRA-184 Layout Design (4)

Provides working knowledge of page layout program and its use in creating effective page layouts combining graphics and type. Includes toolbox and tool usage, importing and editing typography and graphics, parent pages, use of styles, text and paragraph formatting, general layout and design concepts, printing operations, importing graphics, and setting up text styles, columns and grids. Addresses book and magazine building for digital and print applications as well as explores vertical page development / interactive design. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Minimum C- in GRA-101.

GRA-191 Graphic Communication Applications (3)

Provides realistic hands-on experience about pre- and post-production project issues for both print and web. Emphasizes project management application and managing multiple projects and deadlines. Gives an opportunity to develop and practice professional skills with others in design process both client and design team, partly through a design agency scenario. Packaging design and production will also be explored. Includes developing and presenting both analog and online portfolios that represent current graphic design and production skills. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take CIS-207. Minimum C- in GRA-195. Minimum C- in GRA-128 or GRA-182. Minimum C- in GRA-132 or GRA-184. Minimum C- in GRA-141 or GRA-181.

GRA-195 Introduction to Web Media (3)

Provides introductory skills in web content development and interactivity using motion, vector and raster base apps as the primary tools. Includes working through textbook-based web content scenarios to develop web design concepts, layouts, navigation and interactivity, as well as vector and raster-based motion. Teaches the development of interactive content and design to be used in a variety of graphic design applications. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in GRA-182 or GRA-127.

Pre/corequisite: Take GRA-131 or GRA-184.

GRA-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

GRA-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Hospitality, Culinary, Management (HCM)

HCM-100 Sanitation and Safety (2)

Studies basic principles of bacteriology, food borne illness, sanitation, workplace safety, personal hygiene, food security, health regulations and inspections. Emphasizes the importance of sanitary equipment and facilities, and pest control. Students must complete the National Restaurant Association Educational Foundation certification exam to pass this course. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

HCM-109 Kitchen Essentials (1.5)

Familiarizes students with standard operating procedures, employee practices and the tools and equipment used in a commercial food service operation. Students practice skills in work simplification, equipment operation and cleaning, recipe writing and standardization. Emphasizes food sanitation, personal hygiene and safety in the kitchen. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 2.0 lab

Corequisite: Take HCM-100. Take HCM-260.

HCM-117 Bakery Basics (3)

Provides theory on basic baking methods and lab experience in preparing bakery products. Emphasizes yeast products, quick breads, pies, cakes, pastry doughs, custards, puddings and cookies. Stresses bakery procedures, scaling techniques, weighing, measuring, use and care of equipment, sanitation and safety, work simplification, costing and the production of high quality baked products. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take HCM-109.

Pre/corequisite: Take HCM-100. Take HCM-260.

HCM-122 International Breads (3)

Provides expanded theory on bread baking, and additional lab experience in preparing yeast and quick bread products. Includes identification of special ingredients, traditional shaping techniques, costing and selection of ingredients, preparation procedures, use and care of bakery equipment, sanitation and work simplification. Introduces the history and traditional uses of breads. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take HCM-117. Take HCM-125. Take HCM-126.

HCM-123 International Pastries (3)

Provides additional theory and lab experience in preparing pastries representative of cultural traditions of the world. Stresses bakery procedures, use and care of equipment of bakery equipment, sanitation, safety, work simplification, costing and production of high quality pastry items. Includes research into cuisines of the world and associated pastries. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take HCM-117. Take HCM-126.

Corequisite: Take HCM-125.

HCM-125 Basic Cake Decorating (1)

Provides instruction for the beginning cake decorator. Emphasizes practical border work, cake writing, figure piping, flowers, wedding cake assembly and airbrushing. Students utilize decorator's tools, practice basic decorating design, techniques and develop artistic creativity. Equipment required. Arts & Sciences Elective Code: B

Hours per week: 2.0 lab

Prerequisite: Take HCM-100.

HCM-126 Science of Baking (2)

Introduces food science principles as applied to baking and pastry arts. Explores the functions of bakery ingredients using scientific methods. Students create, compare and revise recipes with an emphasis on quality, nutrient content and cost. Introduces sensory evaluation of food. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take HCM-100.

HCM-138 Food Fundamentals (3)

Studies the composition of foods and the scientific principles involved in food preparation. Emphasizes basic food handling competencies and cookery techniques. Students work with herbs, spices, dairy, eggs, fruits, vegetables, starches, stocks, sauces and soups, learning to produce quality products. Focuses on the development of proper kitchen procedures, use and care of equipment, sanitation, safety, cost control and efficient work methods. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take HCM-147.

Corequisite: Take HCM-100. Take HCM-260.

HCM-140 Fabrication (3)

Studies the fabrication of meats including beef, pork, poultry, lamb, fish and seafood in a lab setting. Stresses proper cooking methods for various items and cuts, and the importance of cooking and yield tests. Emphasizes proper kitchen procedures, use and care of equipment, sanitation, safety, cost control and efficient work methods. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take HCM-161.

HCM-147 Culinary Techniques (1.5)

Introduces fundamental cookery methods in a blended lab and theory environment. Explores the theory behind cookery methods before applying that theory when producing various dishes. Introduces moist heat, dry-heat and combination cookery methods. Emphasizes knife skills and the use and care of kitchen equipment, sanitation, safety, kitchen procedures, cost control and efficient work methods. Arts & Sciences Elective Code: B

Hours per week: 0.5 lecture, 2.0 lab

Pre/corequisite: Take HCM-100. Take HCM-260.

HCM-161 Stocks and Sauces (1.5)

Develops student understanding of and practical skills in the production of stocks, sauces and a variety of condiments. Emphasizes modern and classical sauce techniques. Develops general kitchen production skills through repeated performance. Reinforces proper use and care of equipment, sanitation, safety, cost control and efficient work methods. Arts & Sciences Elective Code: B

Hours per week: 0.5 lecture, 2.0 lab

Prerequisite: Take HCM-100. Take HCM-138.

HCM-190 Bakery Essentials (1)

Familiarizes students with standard operating procedures, and the tools and equipment used in a commercial bakery. Students practice skills in: work simplification, mixing techniques, ingredient identification, equipment operation and cleaning, recipe writing and standardization. Emphasizes food sanitation, personal hygiene and safety in the bakery. Arts & Sciences Elective Code: B

Hours per week: 2.0 lab

Corequisite: Take HCM-100.

HCM-207 Menu Planning (1.5)
Studies the principles of menu marketing and management. Focuses on writing and analyzing menus for various population groups, types of food service facilities and service styles. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture

Prerequisite: Take HCM-138.

HCM-213 Service Management (Lab) (4)
Allows students to perform as supervisors and managers in the dining areas. Requires management techniques and theories in working with others to create a successful restaurant environment, under the direction of professional staff. Emphasizes computer application in analyzing food and beverage costs, labor costs and other operating costs as applied to The Class Act restaurant. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 6.0 clinical

Prerequisite: Take HCM-100. Take HCM-260. Take HCM-279. Take HCM-354.

HCM-231 Nutrition (2)
Reviews basic nutritional concepts in relation to current health concerns and the food service industry. Practices recipe and menu modification to improve nutrition. Prepares for the national certification test by the National Restaurant Association Educational Foundation. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

HCM-251 Purchasing, Receiving and Inventory (2)
Studies principles in purchasing, receiving, issuing and inventory management. Emphasizes cost management techniques. Practices skills in a clinical lab experience supervised by the purchasing manager of The Hotel at Kirkwood Center. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 1.5 clinical

Prerequisite: Take HCM-100. Take HCM-260.

HCM-256 Cost Control and Merchandising (3)
Defines and describes the cost control process in a foodservice operation. Emphasizes cost control methods in the purchasing, receiving, storage, production and service stages. Practices specification writing, recipe costing, menu pricing and product yield tests. Offers basic instruction in bakery merchandising, and opportunities to create bakery product displays. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take HCM-260.

HCM-260 Hospitality Math (3)
Reviews the fundamentals of mathematics, including calculating percent, ratios, decimals, fractions, weights and measures, and introductory algebra concepts. Emphasizes application of mathematical fundamentals to a variety of culinary and hospitality uses. Provides instruction in equivalencies, recipe costing and conversion, calculating food and labor cost percentages, baker's percentages, yield conversions, and selling prices. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

HCM-268 Baking for Dietary Restrictions (2)
Provides fundamental knowledge necessary to accommodate baking for customers with restrictive dietary needs, including diabetes, celiac intolerance, heart conditions and common allergies. Focuses on comparing, revising and producing recipes in a lab environment, with an emphasis on evaluating product quality and ingredients relative to special needs baking. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take HCM-100. Take HCM-117. Take HCM-122. Take HCM-123. Take HCM-126. Take HCM-260.

HCM-269 Garde Manger (lab/lec) (1.5)
Introduces basic cold food preparation and presentation, including sandwiches, salads, salad dressings and simple cold appetizers. Emphasizes proper kitchen procedures, use and care of equipment, sanitation, safety, cost control and efficient work methods. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 2.0 lab

Prerequisite: Take HCM-100. Take HCM-138.

HCM-279 Hospitality Accounting (3)
Provides an understanding of basic accounting concepts and procedures relevant to hotel and food service operations. Instructs in recording transactions, understanding financial statements, managing inventory, payroll problems, occupancy issues and other special topics. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take HCM-260.

HCM-288 Introduction to Hospitality II (1)
Explores the hospitality / foodservice industry with emphasis on a variety of industry segments and influences including fine dining, independent operations, health services, institutional operations. Provides career planning, career development and goal setting, and portfolio development. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take HCM-321.

HCM-289 Wedding Cake Decorating (2)
Provides theory and experience in designing and preparing traditional and contemporary multi-layered wedding cakes. Studies current trends related to wedding cake production. Arts & Sciences Elective Code: B
Hours per week: 4.0 lab

Prerequisite: Take HCM-125.

HCM-310 Hospitality Law (3)
Reviews legal subjects relevant to the hospitality industry. Emphasizes government regulations, food and liquor liability, patron rights and safety, employer/employee rights and responsibilities, the court system, and business management. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

HCM-321 Introduction to Hospitality Industry (1)
Develops an understanding of the hospitality industry and career opportunities in close cooperation with the college's Career Services department. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

HCM-329 Advanced Garde Manger (3)

Studies advanced techniques in cold food preparation and presentation techniques. Emphasizes chaudfroid, aspics, pates, galantines, ballotines, terrines, hors d'oeuvre, charcuterie and food decorating. Focuses on proper kitchen procedures, use and care of equipment, sanitation, safety, cost control and efficient work methods. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take HCM-140. Take HCM-269. Take HCM-381.

HCM-330 Hospitality Personnel Management (3)

Introduces the functions of human resource management, including, planning, communicating, recruiting, hiring, training, coaching, counseling, discipline, performance evaluation, termination and labor relations. Emphasizes the legal issues related to managerial decisions, motivation and managing diversity. Students are certified by the National Restaurant Association Educational Foundation upon successful performance on the national test. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

HCM-342 Hospitality Events and Catering (BOH) (3)

Applies and refines, in a rigorous practical setting, competencies mastered in previous coursework within the Culinary Arts program. Explores back-of the-house management skills through demonstration to plan, produce and successfully execute catering events of The Hotel at Kirkwood Center. Emphasizes quality product and service, financial performance, teamwork and customer satisfaction, along with demonstrated mastery of refined competencies. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 clinical

Prerequisite: Take HCM-117. Take HCM-207. Take HCM-358. Take HCM-932.

HCM-349 Advanced Baking and Pastry (2)

Provides expanded theory and extended application of baking and pastry skills fundamental to industry. Includes further identification and use of specialized ingredients, exposure to traditional and contemporary preparation and production techniques, and critical evaluation of high quality baked, pastry, sugar, and chocolate items. Arts & Sciences Elective Code: B
Hours per week: 4.0 lab

Prerequisite: Take HCM-117.

HCM-351 Advanced Cake Decorating (2)

Provides advanced skills in the art of cake decorating, including fondant icing and its use in the baking industry; designing tiered and multi-leveled cakes; and making decorations and floral arrangements with gum paste. Arts & Sciences Elective Code: B; Comments: Equipment needed.
Hours per week: 4.0 lab

Prerequisite: Take HCM-125.

HCM-354 Service Techniques (2)

Identifies restaurant and banquet service techniques, food and beverage service standards, and essential tablescape elements related to refined service of food and beverages. Includes fundamental production and service techniques related to a variety of beverages, the role and function of banquet event orders, and manipulation of restaurant point of sale systems. Includes hands-on experiences in a full-service restaurant and in banquet operations within The Hotel at Kirkwood. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 3.0 clinical

Prerequisite: Take HCM-100.

HCM-356 Beverage Fundamentals (3)

Identifies characteristics of alcoholic beverage classifications including wine, beer and spirits, and also non-alcoholic beverages including distilled spirit-free alternatives, alcohol-free products, tea and coffee. Introduces essentials of food and beverage pairing techniques based on identifying taste characteristics of beverages and food. Examines fermentation, brewing, distillation, mocktails, and flavor trait profiling of coffee and tea. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

HCM-358 Applied Culinary Skills (1)

Synthesizes existing culinary skills through application of cooking techniques using a diverse range of ingredients. Provides the opportunity to integrate theoretical knowledge with practical application to plan, produce, and critically evaluate dishes in accordance with industry standards. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

Prerequisite: Take HCM-381.

HCM-359 Applied Culinary Skills (4)

Synthesizes existing culinary skills through application of cooking techniques using a diverse range of ingredients. Provides the opportunity to integrate theoretical knowledge with practical application to plan, produce, and critically evaluate dishes in accordance with industry standards. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take HCM-381.

HCM-381 International Cuisine (4.5)

Introduces various international cuisines and their ingredients, preparation methods and cultural influences. Provides further practical experience in preparing quality food, and practice in following standard recipes to prepare a variety of dishes with varying degrees of difficulty. Requires work produced individually, independent of others in class. Emphasizes critical thinking skills as students evaluate their completed dishes. Reinforces proper kitchen procedures, care and use of equipment, sanitation, safety, cost control and efficient work methods. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 6.0 lab

Prerequisite: Take HCM-140.

HCM-405 Culinary Competition (3)
Provides skills and techniques for food preparation in culinary competitions based on American Culinary Federation competencies. Focuses on food production time management, protein fabrication, plate presentation and knife skills. Offers preparation for participation in culinary competitions to demonstrate refined practical skills. Arts & Sciences Elective Code: B
Hours per week: 6.0 lab

Prerequisite: Take HCM-381.

HCM-530 Culinary Capstone (1)
Integrates the skills, knowledge, professional qualities and attributes required by the industry. Integrates creation of a multi-course menu to demonstrate proficiency in crucial functions including ingredient preparation, fabrication, sauce production, application of classical cooking methods, mathematical decision-making, cost control, sanitation and nutritional analysis. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Take HCM-329. Take HCM-207 or HCM-227.

Pre/corequisite: Take HCM-342.

HCM-597 Front Office and Revenue Management (4)
Presents a systematic approach to front office procedures and revenue management by detailing the flow of business through the entire guest cycle. Examines the various elements of effective front office management including forecasting and revenue management, front office planning and operation, and management of human resources. Requires students to perform various guest services duties throughout the front office. Revenue management and guest services content prepares the student for an internship experience. Arts & Sciences Elective Code: B
Hours per week: 2.5 lecture, 4.5 clinical

Prerequisite: Take HCM-600. Take HCM-601.

HCM-599 Engineering and Risk Management (1)
Provides exposure to various mechanical systems within a hotel, including fire suppression, heating and cooling, geothermal, kitchen and laundry equipment, surveillance systems, communication systems, alarm systems and guestroom security equipment, such as locks. Discusses guest protection and internal security for asset protection. Explores risk management and loss prevention issues and outlines OSHA regulations that apply to lodging properties. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take HCM-934. Take HCM-935.

HCM-600 Introduction to Lodging Operations (2)
Provides students with an overview of the lodging industry and how its functions are organized and operated. Introduces each of the seven traditional disciplines: general management, hotel sales, financial control, rooms operations, food and beverage operations, human resources, and physical plant maintenance. Emphasizes business ethics and effective communication. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

HCM-601 Housekeeping and Environmental Services (3)
Provides principles and practical experiences of housekeeping management and its related functions of property-wide environmental services and laundry operations. Emphasizes direct day-to-day operations, from big-picture management issues such as inventory and human resources, to technical details for cleaning and maintenance of hospitality operational areas. Learn first-hand the duties of these various housekeeping functions. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 4.5 clinical

Pre/corequisite: Take HCM-600.

HCM-603 Hotel Sales, Catering and Event Management (3)
Examines sales department activities related to group and transient business. Includes developing leads, building relationships, closing the sale, servicing groups and account follow-up/maintenance. Discusses group meeting trends and practices. Reviews event management and further explores the discipline of revenue management to determine the applicability of revenue maximization strategies and their operational aspects. Experiences a professional sales, catering and event management department first-hand by working with The Hotel at Kirkwood Center's Sales and Catering staff. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 3.0 clinical

Prerequisite: Take MKT-110 or HCM-615. Take HCM-934. Take HCM-935.

HCM-614 Leadership in Hospitality (3)
Examines the profound difference between management and leadership in the hotel industry. Utilizes case studies to explore power and empowerment, quality management, high-performance teams, ethics and various management philosophies. Requires utilization of competencies mastered in previous course work within the Hotel Management program as students participate in The Hotel at Kirkwood Center's Manager on Duty (MOD) program. Performs MOD shifts during evenings, weekends and overnights. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 3.0 clinical

Prerequisite: Take HCM-934. Take HCM-935.

HCM-616 Hospitality Professionalism (1)
Develops and recognizes leadership and teamwork utilizing a student professional organization, American Hotel and Lodging Association (AHLA). Involves students in club leadership and officer positions, industry trade shows and field trips. Offers community service projects to demonstrate social responsibility. Emphasizes experiential learning activities. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

HCM-618 Food and Beverage Operations (3)
Focuses on the management of food and beverage operations in hospitality establishments. Includes restaurant, banquets, room service, and beverage operations, menu planning, and stewarding. Facilitates internships in hospitality operations. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take HCM-600. Take HCM-601.

HCM-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

HCM-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

HCM-930 Internship Seminar (3)

Gains valuable hospitality industry experience through application and theory pertaining to personal and cohort experiences from within the student internship process. Focuses on creating student/mentor internship goals, cohort collaboration with other Hospitality Management interns, and reflective learning and assessment of student internship experience. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take HCM-597. Take HCM-618.

Corequisite: Take HCM-933.

HCM-932 Internship (1-4)

Provides an opportunity to receive on-the-job training within the hospitality industry. Maximizes exposure and training depth through learning experiences structured by the program coordinator and internship host. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

Prerequisite: Take HCM-381. Take HCM-269.

HCM-933 Internship (1-4)

Provides an opportunity to receive experience through on-the-job-training within the hospitality industry. Maximizes industry exposure and training depth through learning experiences structured by the program coordinator and training sponsor. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

Prerequisite: Take HCM-597. Take HCM-618.

Corequisite: Take HCM-930.

HCM-934 Internship Seminar II (2)

Builds practical internship supervisory experiences through exposure to operational management theory pertaining to personnel, guest services, and financial management from an operational perspective. Includes cohort collaboration with other Hospitality Management interns, and reflective learning and assessment of student internship experience. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

Prerequisite: Take HCM-930. Take HCM-933.

Corequisite: Take HCM-935.

HCM-935 Internship II (1)

Provides an opportunity to receive supervisory experience through on-the-job-supervisor training at The Hotel at Kirkwood Center. Maximizes exposure and training depth through learning experiences structured with hospitality operations. Internship opportunities include such operational areas as Front Office, Housekeeping and Laundry, and Food and Beverage operations. Additional arrangements may be made to encompass other areas within The Hotel at Kirkwood Center. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

Corequisite: Take HCM-934.

Heating & Air Conditioning (HCR)

HCR-410 Electrical Applications I (3)

Covers general knowledge of basic electrical applications used by industry. Use of basic electrical equipment including multimeters is stressed. Topics include current, voltage, resistance, symbols and basic AC and DC circuits. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

HCR-450 Electrical Apps for HVAC II (3)

Continues the coverage of electrical applications used by HVAC installers. Students learn a more thorough explanation of voltage and current, including basic measuring techniques and safety concerns. Motors and transformers in their typical applications are also included. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take HCR-410.

HCR-600 Pipe Joining Methods (3)

Includes proper techniques for joining pipes. Covers proper techniques for making a solder joint, brazed joint and threaded joint. Alternative techniques include flare, crimp and compression. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take HCR-605.

HCR-605 HVAC Installation I (5)

Provides a comprehensive introduction to designing and installing HVAC systems. Students learn sheet metal fabrication and installation, basic principles of heat transfer, and the basic refrigeration cycle applied to air conditioning. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 6.0 lab

HCR-610 HVAC Installation II (7)

Provides a comprehensive introduction to designing and installing HVAC systems. Other topics covered include refrigerant handling procedures, gas piping and sizing, chimney and vent calculations, and the uniform mechanical code. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture, 8.0 lab

Prerequisite: Take HCR-605.

HCR-710 Fundamentals of Plan and Print Reading (2)

Covers the fundamentals of blueprints and floor plans used for common layouts. Includes dimensions, specifications and interpretation of details found on typical sets of plans. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

HCR-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

HCR-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

HCR-932 Internship (1-3)

Focuses on providing the student practical experience in an HVAC related work environment. Includes employer/supervisor evaluations and instructor visits/interview. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

History (HIS)

HIS-126 West and the World I: Ancient to Medieval (3)

Surveys the social, cultural, religious, intellectual, economic and political foundations of Western Civilization in the ancient Near East, including pre-historic societies, Mesopotamians, Egyptians, Hebrews, Greeks and Romans. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-127 West and the World II: Medieval to Enlightenment (3)

Surveys the social, cultural, religious, intellectual, economic and political foundations of Western Civilization from the Middle Ages to the Renaissance, the Reformation, Absolutism, Constitutionalism, the Scientific Revolution and the Trans-Atlantic World. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-128 West and the World III: Enlightenment to Modern (3)

Surveys the social, cultural, religious, intellectual, economic and political world of modern Western Civilization from the French Revolution to the Industrial Revolution, the Rise of Nationalism, Communism and Fascism, Colonization, World Wars and the European Union. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-151 U.S. History to 1877 (3)

Studies the colonial experience, the revolutionary period and 19th century history to the Civil War and Reconstruction. Includes political, economic and social history of this period as well as the development of American thought. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-152 U.S. History Since 1877 (3)

Studies the period from Reconstruction to the present. Emphasis is upon industrialization and its impact; the development of a strong federal government; an aggressive foreign policy; and a growing involvement in an international economy. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-221 Holocaust and Genocide in Memory and Literature (3)

Explores the reasons for the Holocaust and the nature and history of anti-Semitism. Analyzes why the Holocaust/Final Solution occurred in Germany. Studies resistance and both collaboration and resistance between Nazism and foreign countries. Compares the Holocaust aimed at the extermination of the Jews with genocide and extermination of other groups in history. Uses a comparative framework. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-254 American Indian History (3)

Examines American Indian history from the pre-European contact period to the present with a focus on North America, primarily within the geographical area of the modern United States. Highlights American Indian cultures and adaptations over time. Explores themes of cross-cultural interactions, Indigenous borderlands, settler colonialism, assimilation, U.S. policies, resistance, and modern social and political movements. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-257 African American History (3)

Surveys the experiences of African Americans in the history of the United States, with emphasis on the role of individuals, institutions and ideas. Topics include an introduction to African heritage, the slave trade and slavery throughout early American history, the Civil War and Reconstruction, the Jim Crow era, the creation of racial advancement organizations, twentieth-century urbanization and nationalism, and the struggle for civil rights, political power and cultural expression from mid-century to the present. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-291 History of Science (3)

Covers major aspects of the history of science from the early modern period into the 20th century. As this is a history course, not a science or technology course, the emphasis is on the historical backgrounds of various scientific ideas. The course focuses on some of the major figures in the development of modern Western science including Newton, Darwin, Faraday and Einstein. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

HIS-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contact. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

HIS-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A

Hours per week: 1.0 lecture

Health Sciences (HSC)

HSC-103 Studies in Health Sciences (1-3)

Provides individual guidance to students returning to the program who need to update specific knowledge or skill through assignments, readings, papers, seminars, lab competencies or clinic experiences. This course is not intended for those who were previously unsuccessful in a particular course. Arts & Sciences Elective Code: B; Comments: Permission of instructor or coordinator

Hours per week: 1.0 lecture

HSC-107 Professionals in Health (2)

Presents skills and characteristics expected for professional preparation and employability. Provides an overview of the health industry as it relates to health and safety regulations. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

HSC-115 Medical Terminology (4)

A comprehensive study of medical terminology as the language of medicine. Analyzes words by dividing them into component parts. Relates the medical terms to the structure and functional pathology of diseases and current medical procedures. Emphasizes word usage, abbreviations, pronunciation and spelling. Arts & Sciences Elective Code: B

Hours per week: 4.0 lecture

HSC-117 Basic Medical Terminology (2.5)

Introduces basic word structure and terminology pertaining to body systems. Includes spelling, pronunciation and word usage. Provides a basic overview of disease process, symptoms, anatomy, special procedures, pharmacology and abbreviations. Arts & Sciences Elective Code: B

Hours per week: 2.5 lecture

HSC-118 Academic Success in Healthcare (1)

Helps students interested in health services fields identify and pursue a major that will lead to employment in the healthcare industry. Identifies students' strengths and interests while exploring options in health-related professions. Defines the pathways to a certificate, diploma, or degree based on identified strengths and interests. Discusses barriers to personal plan completion. Reinforces academic skills leading to success. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

HSC-160 Healthcare Communication and Comprehension (3)

Simulates clinical and workplace situations for non-native English speakers in health programs. Teaches basic health vocabulary and procedures, and introduces the culture of the health workplace. Improves non-native speakers' comprehension and comprehensibility during clinical experiences. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

HSC-162 Health Support Professional (3.5)

Provides an introduction to key skills needed to be a direct care worker. Includes core, personal activities of daily living, and health monitoring and maintenance. Requires passage of CORE by 70 percent or better to proceed into the HMM (Health Monitoring & Maintenance) and PADL (Personal Activities of Daily Living) modules. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 3.0 lab

HSC-168 Nurse Aide (3.5)

Required to meet the training requirements for nurse aides in long-term care facilities. Emphasizes achievement of a basic level of knowledge and demonstration of skills to provide safe and effective resident care. The course includes 30 hours of clinical experience in a long term care facility, supervised by an RN. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 1.5 lab, 2.25 clinical

HSC-189 Introduction to Nursing (4)

Focuses on professional role development of the student nurse. Emphasizes five modules: the nursing profession, health care competencies, health care delivery, skills and care planning. Reviews the nursing profession, history, current trends and future of nursing, influences on the profession, educational tracks, professional nursing organizations, and legal/ethical concerns. Develops basic understanding of health care competencies through implementation of the Institute of Medicine (IOM) and Quality and Safety in Nursing Education (QSEN) competencies. Introduces health care delivery concepts including systems, policy and finance, reform, health care disparities, global health, health promotion, informatics and patient education. Introduces skills including medical terminology, professional writing skills, therapeutic communication and care planning. Arts & Sciences Elective Code: B; Comments: CNA or HSP required. HSC-189 must be taken within two semesters of admission to PN technical.

Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C in ENG-105, ENG-106 or ENG-120. Minimum C in MAT-052, MAT-076, MAT-107, or higher math course, score 30 on ALEKS, or score 19 on ACT. Minimum B- in BIO-168. Minimum B- in BIO-168 within the last 5 years. CNA, LPN or HSP. Program GPA 2.5 or higher. Program conference attended within 2 years from date of attempt to register. Less than 15 remaining prereq credits including in-progress classes. If not a native English speaker, TOEFL score 86 or higher.

HSC-205 Exploration of Healthcare Careers (3)

Explores multiple aspects of health care and careers in the health field. Covers the past, present and future of health care. Introduces key career cluster terms and career pathways within each career cluster. Provides career information, including education required for each area, educational costs to attain a degree versus expected career earnings, job descriptions, case studies and skills needed for specific career areas. Results in BLS CPR certification upon successful completion. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

HSC-210 Health Skills I (1)

Introduces basic patient care skills: infection control techniques, measuring and recording vital signs, and body mechanics. Laboratory practice and skill achievement is required. Arts & Sciences Elective Code: B

Hours per week: 0.5 lecture, 1.0 lab

HSC-224 Geriatric Specialist (3)

Focuses on development of competencies needed to care for geriatric residents in nursing homes or other medical facilities under the direction of nursing and medical staff. Incorporates expanded knowledge of age related changes in maximizing functional status related to mobility and nutritional well-being while demonstrating respect and maintaining resident dignity in all aspects of care. Incorporates basic knowledge related to medications and effects on the aging adult while monitoring status and implementing strategies to prevent decline and maximize well-being. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Must have taken the certified nurse assistant (CNA) course with clinical and attained CNA certification, be listed in the Iowa Direct Care Worker Registry, and meet a minimum CNA work hour requirement.

Human Services (HSV)

HSV-109 Introduction to Human Services (3)

Introduces the value base of human services and evaluates problems that can be encountered in working with people when these values conflict with client needs. Introduces the framework of human services approach, specifically information of individual values, systems analysis, problem solving and conflict resolution. Concepts of systems analysis are accompanied by application of these concepts to problems. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HSV-110 Human Service Policy and Programs (3)

Investigates the relationship between social service programs and related social issues in the context of cultural conditions. Introduces historical trends in human services and acquaints students with current human services available to various client groups. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take HSV-101 or HSV-109.

HSV-120 Observation Skills (3)

Focuses on learning the distinction between inference and behavior, and recording behaviors in a systematic way. Course also includes learning the importance of environment as an influence on human behavior. Closely related competencies to be addressed are writing behavioral objectives and contracts. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take HSV-101 or HSV-109.

HSV-130 Interviewing/Interper Relation (3)

Includes an overview of various intervention techniques. Teaches principles of communication, interviewing and conflict resolution. Practices these principles and techniques in role-played, recorded situations. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take HSV-109 or CRJ-100.

HSV-200 Adaptation Strategies (3)

Examines the values, skills and issues of working with people with disabilities in vocational, residential, social/recreational and other community settings. Focuses on exploring, researching and understanding the relationships between consumers, families, support staff, community-based agencies and other community systems. Encourages students to develop the skills to utilize adaptation strategies necessary to promote independence, participation and success among all age groups. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HSV-201 Loss, Trauma and Resilience (3)

Examines loss as a part of life and the impact of trauma on individuals, families, and communities. Studies processes of resilience including grieving and growth. Discusses cultural influences and ethical issues. Explores social services and theories of helping as resources for survivors. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HSV-282 Health and Psychosocial Rehabilitation (3)

Focuses on an overview of health, substance abuse and mental health issues of individuals. Develops skills in identification, planning, assessment, treatment/interventions, and the development of social support systems and community resources. Applies learned knowledge of integrated practice in a discipline-specific project. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take HSV-109, or CRJ-100 and SOC-110, or CRJ-110 and SOC-115.

HSV-287 Counseling Theories and Techniques (3)

Provides further reinforcement and expands topics introduced in Basic Problem Solving. Includes goals of psychosocial rehabilitation, mental health disorders and their diagnosis, and categories and classification of the Diagnostic and Statistical Manual-5. Describes the process of making appropriate client referrals, locating community human service resources and agencies, and creating and implementing service plans for health care issues. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take HSV-109 or HSV-101.

HSV-292 Substance Abuse and Treatment (3)

Examines alcohol and drug issues and the implications of having an addiction. Includes theories of the addictive process, prevention and treatment options, and specific counseling and therapeutic skills used with individuals in inpatient and outpatient settings. Focuses on the impact of the family unit, social systems and the greater community. Students apply their knowledge of integrated practice in a discipline-specific project. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HSV-800 Human Services Field Experience and Seminar (6)

Provides practical experience in a human services agency for 220 hours. Encourages gaining deeper insight through a field experience seminar. Objectifies experience through peer and instructor discussion. Arts & Sciences Elective Code: A; Comments: Completion of Human Service classes. Minimum GPA of 2.5 required to take this course.
Hours per week: 1.0 lecture, 4.0 lab, 9.0 clinical

Prerequisite: Minimum C+ in either HSV-101 or HSV-109. Minimum C+ in HSV-110. Minimum C+ in HSV-120. Minimum C+ in HSV-282.

HSV-801 Human Services Field Experience (3)

Provides 110 hours of practical experience in a human services agency. Incorporates a field experience seminar. Objectifies experiences through classroom discussion. Arts & Sciences Elective Code: A
Hours per week: 0.75 lecture, 6.75 clinical

Prerequisite: Minimum C+ in HSV-109.

HSV-813 Alcohol and Drug Counselor Field Experience and Seminar I (6)

Provides 250 hours of practical experience in a substance abuse treatment facility. Encourages deeper insight through a field experience seminar. Objectifies experiences through classroom discussion. Arts & Sciences Elective Code: A; Comments: Meets part of the practicum requirement for the Iowa Board of Certification. Minimum GPA of 2.5 required to take this course.
Hours per week: 1.0 lecture, 15.0 clinical

Prerequisite: Minimum C+ in either HSV-101 or HSV-109. Minimum C+ in HSV-110. Minimum C+ in HSV-120. Minimum C+ in HSV-131 or HSV-130. Minimum C+ in HSV-282.

HSV-814 Alcohol and Drug Counselor Field Experience & Seminar II (6)

Provides practical experience in a substance abuse treatment facility for a total of 250 hours. Follows and builds on Alcohol and Drug Counselor Field Experience and Seminar I. Encourages students through weekly seminars to maximize their experience through insight from other students and the instructor. Objectifies student experience through discussion with other students and the instructor via the weekly seminars. Arts & Sciences Elective Code: A; Comments: Meets part of the practicum requirement for the Iowa Board of Certification. Minimum GPA of 2.5 required to take this course.
Hours per week: 1.0 lecture, 15.0 clinical

Prerequisite: Minimum C+ in either HSV-101 or HSV-109. Minimum C+ in HSV-110. Minimum C+ in HSV-120. Minimum C+ in HSV-131 or HSV-130. Minimum C+ in HSV-282.

HSV-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

HSV-928 Independent Study (1-3)

Allows the student to pursue a special concentration of study under the guidance of a faculty member. Requires an independent study contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising faculty member and dean
Hours per week: 2.0 lab

Humanities (HUM)

HUM-105 Working in America (3)

Introduces students to the humanities through an interdisciplinary study of work. By examining works of art, literature, music, philosophy, religion, history and anthropology, this course explores human labor in the past, present and future in an attempt to understand how work shapes human nature and culture. Focus will be on the meanings and values of students' work experiences. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HUM-116 Encounters in Humanities (3)

By asking a series of questions about various examples of human activity (literature, philosophy, history, visual arts and music), teaches a method of inquiry for use in understanding and appreciating the humanities. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HUM-123 U.S. Film History (3)

Tracks the development of film art in the United States from its earliest silent years to the modern era. Explores the evolution of film technology and practices, the growth of the American studio system, pertinent filmmakers, stars and genres of American film history, and the relationship between the medium and American culture. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HUM-124 World Film History (3)

Tracks the development of film art in countries other than the United States from the earliest silent years to the modern era. Identifies and explores the contributions of major world filmmakers and the influences of the various international film industries and cultures as reflected in the films of these countries. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HUM-142 Popular Culture (3)

Introduces the study of American popular culture. Analyzes the way in which we interact with popular culture, both as individuals and as part of a society. Examines a wide variety of popular media and objects to illustrate the ways they reflect and influence cultural values. Develops skills for critical analysis of areas of popular culture, such as advertising, television, digital technology, fashion, sports, games, and others. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HUM-190 Culture and Technology (3)

Introduces students to the relationships between technology and culture through an interdisciplinary study of the humanities. The course examines these relationships through works in the humanities, for example art, literature, music, philosophy, religion, history, film and anthropology. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HUM-200 International Study in Humanities (3)
Provides the opportunity to pursue studies in such areas as history, art, politics, music, literature, and foreign language. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

HUM-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

HUM-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Industrial Technology (IND)

IND-156 Microcomputers for the Trades (2)
Introduces personal computer concepts and basic computer applications. Covers basic concepts of MS Windows, Office, CAD, Angel, Amatrol and other software used in the IMT, EPDT and AIT programs. This course is intended for students with no knowledge or experience using personal computers. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Interior Design (INT)

INT-126 Introduction to Interior Design (3)
Introduces the field of interior design, design elements, systems, principles and theories. Applies principles of design and concept development to two- and three- dimensional design projects. Focuses on the process of design regarding space planning and furniture layout projects. Develops design vocabulary relative to interior design. Studies teamwork structures and dynamics. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

INT-128 Historical Interiors and Architecture (3)
Provides a complete survey and evaluation of interiors and architecture throughout history, as well as furnishings, art and decorative arts. Focuses on identifying, recognizing and evaluating significant historical periods, design, architecture, and art relating to interior design. Covers use of correct terminology and vocabulary associated with the history of interior design. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Pre/corequisite: Take INT-126.

INT-129 SketchUp for Interior Design (3)
Introduces the basic concepts of Interior design illustration and digital model building. Explores artistic expression using a variety of techniques through computer software. Emphasizes development of artistic graphics and models necessary for representing interiors as well as locating them in context. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

INT-132 Theories and Visual Applications (3)
Addresses the application of design and color theories through sketching, manual drawing and rendering, and use of technology. Covers various types of project delivery methods and media to produce presentation drawings and documents. Focuses on creation of visual and verbal presentation techniques. Demonstrates creative thinking and problem solving. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in INT-126. Minimum C- in INT-129.

Corequisite: Take INT-201.

INT-185 Architectural Photoshop Techniques (1)
Uses the capabilities of Photoshop to create architectural renderings. Focuses on understanding processes and developing techniques to enhance presentations. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Minimum C- in INT-126.

INT-200 Interior Design Studio (3)
Addresses the principles and elements of design, the design process, design documentation and construction documents. Develops creative problem solving skills individually and in teams, utilizing design software through the creation of analytical interior design projects. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in INT-201. Minimum C- in INT-132. Minimum C- in INT-300. Minimum C- in INT-185.

INT-201 CAD REVIT for Interior Design I (3)
Introduces the basic skills, information and concepts, using Revit and AutoCAD, necessary for the interior design field related to computer aided drafting (CAD), and building information modeling (BIM). Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in CON-101. Minimum C- in INT-126. Minimum C- in INT-128. Minimum C- in INT-129.

INT-206 Residential Design I (4)
Introduces residential design and specialties, such as kitchen, bath and lighting design. Applies NKBA guidelines and principles of lighting design to small/medium scale projects. Focuses on identifying and selecting appropriate FFE items specific to kitchen, bath and lighting design projects. Covers use of appropriate terminology to describe kitchen, bath, and lighting design projects, as well as human factors and ergonomics. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Minimum C- in INT-185. Minimum C- in INT-132. Minimum C- in INT-200. Minimum C- in INT-201.

INT-207 Commercial Design I (4)
Introduces commercial space planning, with an emphasis on restaurant, retail, hotel and entertainment design. Explores sustainable and acoustic design solutions. Demonstrates industry specific guidelines and sustainability guidelines. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Minimum C- in INT-185. Minimum C- in INT-132. Minimum C- in INT-200. Minimum C- in INT-201.

INT-208 Costing and Estimating Interior Materials and Finishes (3)
Teaches basic principles and techniques for estimating residential and commercial projects, materials, finishes, and surfaces. Incorporates relevant mathematical processes to interior design businesses and practices. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

INT-211 CAD REVIT for Interior Design II (3)
Emphasizes basic skills of 3D, BIM (Building Information Modeling) as applied to interior design projects through simulated, real-work exercises. Focuses on CAD-related information, attention to detail, and converting existing (non-Revit) drawings to full Revit computer models. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in INT-201.

INT-216 Residential Design II (4)
Focuses on refinement of creative and theoretical problem solving skills with respect to large scale residential design, with an emphasis on whole home design and different styles of homes. Explores aging in place, accessibility, universal design, and furniture design and construction. Emphasizes selection, interpretation and application of anthropometric data and universal design principles. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Minimum C- in INT-206.

INT-217 Commercial Design II (4)
Refines creative and theoretical problem solving skills with respect to large scale commercial design, with an emphasis on office design and systems furniture, as well as educational and health care environments through medium scale projects. Emphasizes factors relating to health, safety and welfare of users. Focuses on concepts, theories, materials, systems and occupants. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Minimum C- in INT-207.

INT-218 Professional Practice and Development (3)
Examines the business of interior design, documents, ethics and project management. Explores interior design job opportunities, with a focus on creating professional goals, portfolios, resumes and professional documents. Includes an internship search. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Minimum C- in INT-206. Minimum C- in INT-207.

INT-262 Interior Codes and Building Structures (3)
Teaches current international and local building codes, as well as ADA, barrier-free, and life-safety codes as they relate to interior design and interior environments. Focuses on codes and applications to meet overall health, safety, and welfare standards through design. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

INT-300 Textiles for Interior Design (3)
Studies fibers, yarns, fabrics, finishes and regulations used in commercial and residential interior textile products. Evaluates fabric properties according to variables of end-use serviceability and product categories. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

INT-311 Global Perspectives in Interior Design (3)
Focuses on hands-on national and global design issues. Explores human factors through exposure to contemporary issues, historical architecture and design, dynamics, and various cultures and economic groups. Requires field study and travel. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

INT-312 Interior Design Topics (1-3)
Examines current topics related to interior design. Includes, but not limited to, interior photography, sustainability, furniture construction and other contemporary topics. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

INT-315 Regional Perspectives in Interior Design (1)
Focuses on regional design issues and human factors through exposure to contemporary issues, historical architecture and design, varying dynamics, other cultures, and different economic groups. Encourages collaboration and hands-on teamwork. Field study and travel component required. May be taken up to three times for a total of 3 credits. Arts & Sciences Elective Code: B
Hours per week: 0.25 lecture, 1.5 lab

INT-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

INT-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

INT-932 Internship (1-4)
Provides an opportunity to receive interior design work experience through on-the-job training in an approved work setting. This internship will be approved by the Interior Design coordinator and will be evaluated with a letter grade. Arts & Sciences Elective Code: A
Hours per week: 4.0 internship

Literature (LIT)

LIT-105 Children's Literature (3)
Provides a broad overview of children's literature, with emphasis upon work done by American writers and illustrators. Students use standard techniques of literary analysis to critique the works explored in the course. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-130 African American Literature (3)
Introduces the study of African American literature, emphasizing analytical writing, interpretation, and basic critical approaches. Includes reading a wide range of African American authors, encompassing works of fiction, poetry, drama, film, and song. Readings span cultural, gender, socio-economic, and ethnic groups across history and appraise issues inherent to racial identification. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-105 or ENG-120.

LIT-180 Mythology (3)
Introduces literary versions of diverse cultural traditions from around the globe as expressed in myth, including but not limited to regions of the Middle East, Africa, India, China, the Americas, and Northern Europe. Considers myth in its literary, social, geographical, political, historical, religious, moral and personal contexts. Examines theories of the evolution and analysis of myth, and applies these theories to diverse traditions, including contemporary ones. Compares unique qualities of individual myths and focuses on the enduring human issues present in most mythologies. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-105 or ENG-120.

LIT-203 Forms of Literature: Story Cycle (3)
Explores, through story cycles and critical theory, the questions: What is a story cycle? How are they crafted, read and interpreted? How are they different from or similar to other forms of literary expression? How does form affect interpretation? Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-204 Forms of Literature: Nonfiction (3)
Focuses on literary nonfiction - essays, memoirs, profiles or criticism - that aspires not only to inform, but also to employ language aesthetically and prompt reflection on experience. Students will explore, through literature and critical theory, the following questions: What is literary nonfiction? How are works of literary nonfiction crafted, read and interpreted? How are they different from and similar to other forms of literary expression? How does form affect interpretation? Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-205 Forms of Literature: Drama (3)
Focuses on the study of dramatic literature. Students will practice a method of reading and interpreting plays, exploring the following questions: What is drama? How are works of drama crafted, read and interpreted? How are they different from and similar to other forms of literary expression? How does form affect interpretation? Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-206 Forms of Literature: Fiction (3)
Explores, through short stories, novels, films and critical theory, the following questions: What is fiction? What are its common elements? How does understanding these elements and the ways they interconnect affect our understanding of how fiction is crafted, read and interpreted? How is fiction different from or similar to other forms of literary expression? Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-207 Forms of Literature: Poetry (3)
Focuses on the study of poetry. Students will practice reading and interpreting poems, exploring the following questions: What is poetry? How are poems crafted, read and interpreted? How are they different from and similar to other forms of literary expression? How does form affect interpretation?Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-208 Forms of Literature: New Media (3)
Explores online and computer-based literature. Employing relevant literary theory, students study traditional literature (poetry, fiction, nonfiction, drama) and compare those forms to new media literary forms like hyperfiction and hyperpoetry. Questions include the following: What is new media literature? How does it compare with traditional genres? What makes it qualify as literature? How does literary form affect interpretation? Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-209 Forms of Literature: Film Adaptation (3)
Focuses on the relationship between literary works (fiction, drama, nonfiction, poetry or graphic literature) and their adaptations to film. Students explore the adaptation of literature to film; how the elements of plot, character, setting, point of view, symbol and theme are adapted or altered from literature to film; and how film adaptations influence our understanding of both literature and film. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-105 or ENG-120.

LIT-222 Literature and Culture: American Dreams (3)
Explores a variety of expressions of self and society in America through established fiction, autobiography, journals, letters, photographs and other cultural artifacts. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-224 Literature and Culture: Women and Work (3)

Through reading literature along with social documents by women and men, the course explores gender identity and work issues for women in traditional and nontraditional gender roles - as domestic angels, factory workers or professionals. Materials may include autobiographies, letters, films, short fiction, poetry, drama, novels and other artifacts. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-226 Literary Themes: Literature and the Search for Identity (3)

Explores the theme of identity in literature - short stories, novels, poems, plays and nonfiction. May use ideas and approaches from literary criticism, psychology, philosophy and religion to illuminate the importance of stories in structuring human experience and establishing a sense of our own identities. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-227 Literature and Culture: World Poetry (3)

Explores non-Western traditional and contemporary poetry of Asia, Africa, the Middle East, Latin America and the Caribbean. Studies the forces that shape the creation as well as the experience of poetry in these cultures, such as politics, gender, religion, technology, etc. Students learn to compare literary expression across cultures and to place the Western tradition in a larger context. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

LIT-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of an honors faculty member. Requires that students meet honors eligibility criteria. Requires completion of an honors project contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

LIT-928 Independent Study (1-3)

Provides readings, papers and/or research projects in literature under the guidance of a staff member. Arts & Sciences Elective Code: A

Hours per week: 1.0 lecture

LIT-945 Selected Topics (1-3)

Offers specialized study in interest areas. Areas may include special courses in mythology, American culture, adolescent literature or other concentrations. Arts & Sciences Elective Code: A

Hours per week: 1.0 lecture

Prerequisite: Take ENG-120 or ENG-105.

Medical Assistant (MAP)

MAP-123 Administrative Medical Office Procedures (3)

Presents the principles of administration for the medical office including facility and supply management, telephone and appointment techniques, managing records, and medical bookkeeping. Arts & Sciences Elective Code: B

Hours per week: 2.5 lecture, 1.0 lab

Corequisite: Take MAP-502 or MAP-501.

MAP-125 Introduction to Clinical Procedures (2)

Introduces basic patient care skills including infection control techniques, measuring and recording vital signs, and body mechanics. Provides instruction in electrocardiography including psychological and physical preparation of a patient for an ECG, introducing paper set-up and operation of equipment, mounting of tracings and troubleshooting to obtain acceptable tracings. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

MAP-214 Medical Lab (3)

Provides basic principles and skills in hematology, urinalysis, venipuncture, blood chemical exams, and quality control as applied to the medical office. Arts & Sciences Elective Code: B

Hours per week: 1.5 lecture, 3.0 lab

Prerequisite: Take MAP-123. Take MAP-125. Take HSC-107. Take HSC-115.

MAP-312 Medical Assistant Clinical Procedures (3)

Includes basic clinical skills used in a medical office: preparing for the patient's visit; assisting the physician and patient during examination and treatment, including minor surgery; positioning, microbiology and sterilization; X-rays; physical therapy; nutrition; and administration of injected medications as applied to the medical office. Arts & Sciences Elective Code: B

Hours per week: 1.5 lecture, 3.0 lab

Prerequisite: Take HSC-107. Take HSC-115. Take MAP-123. Take MAP-125.

MAP-402 Medical Law and Ethics (2)

Focuses on the legal and ethical implications of practice in a medical setting. Includes scope of practice, confidentiality, HIPAA privacy and security requirements, legal terms and elements in the delivery of care, ethical guidelines of practice, and legal documentation requirements. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

Prerequisite: Minimum C- in BIO-161.

MAP-403 Basic Medical Office Insurance (2)

Provides a working knowledge of basic medical insurance programs, forms utilized and recordkeeping involved in insurance claims. Applies the principles of diagnostic and procedure coding, and an understanding of a variety of insurance plans, including but not limited to Medicare, group, workers compensation and Tricare. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

Pre/corequisite: Take HSC-115.

MAP-502 Math for Medical Assistants (2)
Provides a basic mathematical background for an understanding of measurement systems and the calculation of dosages of oral and parenteral medications for medical assisting. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Corequisite: Take MAP-123.

MAP-513 Medical Assisting Pharmacology (3)
Provides a basic background in the classification of drugs, their sources, uses and legal implications. Discusses characteristics of typical drugs, side effects, precautions, interactions and patient education. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MAP-618 Medical Assisting Externship (7)
Offers supervised practical experience in medical offices, clinics and other medical care settings. Arts & Sciences Elective Code: B; Comments: All Medical Assisting technical courses.
Hours per week: 2.0 lecture, 15.0 clinical

Prerequisite: Take MAP-123. Take MAP-312. Take MAP-125. Take MAP-214. Take MAP-502 or MAP-501. Take MAP-513. Take MAP-402. Take MAP-403.

MAP-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

Mathematics (MAT)

MAT-024 ELA Mathematics Vocabulary and Usage (1)
Prepares non-native English speakers for mathematics coursework. Emphasizes student interaction and discussions regarding terminology typically encountered in math courses. Arts & Sciences Elective Code: D
Hours per week: 1.0 lecture

MAT-052 Pre-Algebra (3)
Covers mathematical concepts including whole and signed numbers, fractions, decimals, proportions and percent. Introduces algebraic ideas including exponents, one- and two-step equations, and applications. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

MAT-076 Preparation for College Mathematics (3)
Emphasizes active computer-based learning supported by instructor guidance and small group lectures. Includes signed numbers, fractions, decimals and percents, geometry and measurement, and algebraic expressions and equations. May include linear equations and inequalities, polynomials and factoring. Arts & Sciences Elective Code: D
Hours per week: 3.0 lecture

Prerequisite: Take MAT-052

MAT-102 Intermediate Algebra (4)
Covers algebraic concepts including equations, inequalities, systems of equations, functions, graphs, and polynomials. Includes quadratic, rational, radical, exponential and logarithmic expressions, equations, and applications. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: MAT-707, MAT-076 through Module 8, or a qualifying placement test score

MAT-115 Mathematics and Society (3)
Explores practical applications in statistics, probability, social choice theory, graph theory, and financial mathematics. Other topics may be included. A mathematics course for Liberal Arts majors in quantitative reasoning and problem solving. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MAT-607, MAT-707, or MAT-102, or a qualifying placement test score.

MAT-117 Math for Elementary Teachers (3)
Deepens understanding of the mathematics taught to elementary school children. Emphasizes problem-solving, communication, connections, and reasoning. Includes whole numbers, rational numbers, numeration systems, arithmetic operations, percent, sets, probability, and algebraic reasoning. Primarily for those planning to transfer into an education major at a 4-year institution. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MAT-607, MAT-707, or MAT-102, or a qualifying placement test score.

MAT-136 Trigonometry and Analytic Geometry (5)
Examines trigonometric functions, graphs, trigonometric identities, applications and equations. Includes polar form of complex numbers, conic sections, polar coordinates, parametric equations, vectors, and three-dimensional geometry. Arts & Sciences Elective Code: A
Hours per week: 5.0 lecture

Prerequisite: Take MAT-138 or a qualifying placement test score.

MAT-138 College Algebra with Limits (4)
Examines polynomial, rational, radical, exponential and logarithmic functions, and solutions to equations for those functions. Includes matrices, sequences, series and introduces limits. Intended as a calculus-track course. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture

Prerequisite: Take MAT-102, MAT-708 or a qualifying placement test score.

MAT-149 Linear Algebra (3)
Includes matrix and vector arithmetic, using matrices to solve systems of linear equations, eigenvalues and eigenvectors, diagonalization of matrices, and an introduction to subspaces of Euclidean space. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MAT-210.

MAT-150 Discrete Math (3)

Introduces concepts in discrete mathematics as applied to computer science. Includes logic, methods of proof, sets, counting techniques, discrete probability, permutations and combinations, graphs and trees, mathematical induction, and recursion. Emphasizes connections between discrete math and programming concepts. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

Prerequisite: Take MAT-102 or MAT-708, or a qualifying placement test score.

MAT-156 Statistics (3)

Focuses on descriptive statistics (mean, median, mode, standard deviation and variance) and introduces correlation and linear regression. Emphasizes inferential statistics and probability distributions as applied to confidence intervals, hypothesis testing of means and proportions, and applications to business and other fields. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

Prerequisite: Take MAT-607, MAT-102, or MAT-115, or a qualifying placement score. Students who place one level below Statistics can contact advisor about registering for MAT-156 Statistics and MAT-656 Support for Statistics concurrently.

MAT-162 Business Statistics (4)

Introduces statistics, primarily for business majors. Investigates methods of collection, organization, presentation, analysis and interpretation of data in the context of effective business decision-making. Utilizes computer applications to visualize and analyze data. Covers descriptive statistics, probability, inferential procedures including confidence intervals and hypothesis testing for one and two samples, regression, correlation and chi-square. Covers ANOVA if time allows. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take MAT-138, MAT-140, MAT-156 or MAT-163, or a qualifying placement test score.

MAT-163 Quantitative Reasoning for Business (4)

Covers algebra techniques, functions (including exponential and logarithmic), modeling, limits, and a thorough introduction to differential calculus. Focuses on applying quantitative methods to solve problems that arise in management and economic sciences and other related areas. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take MAT-102 or MAT-708, or have a qualifying placement test score.

MAT-165 Business Calculus (3)

Emphasizes techniques and applications of differential and integral calculus to business economics. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

Prerequisite: Take MAT-138 or a qualifying placement test score.

MAT-210 Calculus I (4)

Introduction to limits, differentiation, applications of the derivative, the definite and indefinite integral including The Fundamental Theorem of Calculus, and an introduction to differential equations. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take MAT-136 or a qualifying placement test score.

MAT-216 Calculus II (4)

Continues Calculus I. Includes integration, applications of integration used in applied disciplines, differential equations, Taylor series, and calculus in polar coordinates. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take MAT-210.

MAT-219 Calculus III (4)

Continues Calculus II. Includes study of vector functions, function of several variables, multiple integrals and vector fields. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take MAT-216.

MAT-227 Differential Equations With Laplace (4)

Studies exact equations, separable equations, linear equations, physical applications, series solutions, systems of linear differential equations, and methods of approximating the solutions to first-order equations. Introduces Laplace transforms that are used to solve differential equations. Arts & Sciences Elective Code: A

Hours per week: 4.0 lecture

Prerequisite: Take MAT-216.

MAT-232 Applied Industrial Math for Technicians (3)

Reviews mathematical principles and fundamentals that enable students to understand and apply course material throughout the Industrial Maintenance, Energy Production and Automation programs. Covers metric prefixes, conversions, exponents, scientific notation, engineering notation, ratios, proportions binary, geometry, dimensional analysis and algebraic expressions. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

MAT-607 Survey of Data (3)

Introduces algebraic and statistical content intended to prepare students for a college-level statistics or liberal arts math course. Includes sampling methods, graphical, tabular, and numerical summaries of data, scatterplots and linear associations, linear models and slope, functions, and working with formulas. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take MAT-052 or MAT-772.

MAT-615 Support for Math and Society (2)

Develops algebra, proportional thinking, and quantitative reasoning skills to support success in college-level mathematics. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

Prerequisite: Take MAT-052 or equivalent placement test score.

Corequisite: Take MAT-115.

MAT-656 Support for Statistics (1)
Provides supports for students in MAT-156 by reviewing needed algebraic concepts and skills, introducing technology, and reinforcing statistical concepts introduced in MAT-156. Critical thinking and problem-solving techniques are also covered. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

Prerequisite: Take MAT-052, MAT-772, or equivalent placement test score.

Corequisite: Take MAT-156.

MAT-707 Algebra Mastery 1 (3)
Continues modules from MAT-076, including linear equations and inequalities, polynomials, factoring, and systems of linear equations and inequalities. Emphasizes active, computer-based, individually-paced learning supported by instructor guidance and small-group lectures. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take MAT-076.

MAT-708 Algebra Mastery 2 (3)
Continues modules from MAT-707, including rational and radical expressions and equations, exponential and logarithmic functions, and quadratic equations. Emphasizes active, computer-based, individually-paced learning supported by instructor guidance and small-group lectures. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take MAT-707.

MAT-715 Industrial Math I (3)
Covers basic math skills such as addition, subtraction, multiplication and division of whole numbers, decimals and fractions. Covers specifically dimensional analysis and significant digit concepts. Also gives practice and solving stated problems and covers introductory algebra concepts. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MAT-716 Industrial Math II (3)
Covers basic algebra as it relates to fundamental equations, ratios and proportion, and percentages. Covers applied geometry as it relates to finding length, area, volume, etc. Incorporates basic right angle trigonometry and provides practice in solving stated problems. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take MAT-052.

MAT-719 Applied HVAC Math (3)
Provides instruction in basic math skills such as addition, subtraction, multiplication, and division of whole numbers and fractions. Includes ratio and proportion, percent and percentage, computed measure, and heat load calculations. Covers specific math concepts related to HVAC and terminology technicians will encounter in the field. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MAT-735 Machinist Mathematics I (2)
Begins with a review of fractions and decimals as they are used to solve shop problems. Students are introduced to the problems involving powers and roots, tapers and angles. Use of the calculator is introduced, along with handbook tables and formulas. Introduces the student to metric conversion and more advanced applied math involving calculations of area, volume and weight of material. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

MAT-736 Machinist Mathematics II (1)
Continues Machinist Mathematics I. Introduces students to more advanced practical mathematics. Includes metric conversion, area and volume calculation, temperature conversion and expansion of metals. Right angle trigonometry is introduced along with calculations that relate to numerical control programming. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take MAT-735.

MAT-737 Applied Plumbing Math (3)
Provides instruction on the applied mathematics used in the plumbing and pipefitting industries. Reviews addition, subtraction, multiplication, division of whole numbers and fractions, and measurement conversions. Includes pipefitting dimensions and diameters, fitting allowances or make-up dimensions, 90, 60, 45 and 22 1/2 degree piping offsets, parallel offsets and rolling offsets. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MAT-738 Applied Plumbing Math II (1)
Provides instruction on plumbing trade calculations including British Thermal Units (BTUs), heat transfer, heat loss and heat gain, latent and sensible heat, volume, weight and surface area calculations, percentage calculations, water and head pressure calculations, Boyle's Law, and the applications of Boyle's Law. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take MAT-737.

MAT-745 Technical Mathematics I (4)
Studies applied math with emphasis on high-skilled calculations. Includes concepts of basic algebra, functions and graphs, trig functions, geometry, quadratic equations, exponents and radicals, systems of equations, and determinants. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: CAD/Mechanical Engineering students take MAT-076, MAT-607 or appropriate math placement score. Electronics Engineering students take MAT-052 or 22 on ALEKS placement test.

MAT-746 Technical Mathematics II (4)
Includes logarithms and exponentials, solving nonlinear equations, variation, sequences, binomial theorem, trig identities, analytic geometry and statistics. Introduces the fundamental concepts of calculus, including limits, the derivative, definite and indefinite integrals and applications of each. Emphasizes solving problems relevant to the mechanical engineering field. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Take MAT-745.

MAT-765 Welding Mathematics (3)

Covers basic algebra as it relates to fundamental equations, ratios and proportions, and percentages. Incorporates basic right angle trigonometry and provides for additional practice in solving stated problems. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MAT-772 Applied Math (3)

Covers basic mathematical skills for students in career and technical fields. Focuses on computing with whole numbers, fractions, decimals, and signed numbers; percents; evaluating formulas; ratio and proportion as a problem-solving tool; the metric system; measurement; basic algebra; and reading tables and graphs. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MAT-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

MAT-928 Independent Study (1)

Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 2.0 lab

Mobile Development Technology (MDT)

MDT-350 Android App Development (3)

Building on a foundation of Java programming, this course introduces students to Android development for phone and tablet devices. The course takes a project approach after exploring Android fundamentals including activities, services, providers, receivers, notifications and intents. Development tools include the Android SDK, emulators and the Eclipse IDE. Projects involve graphical user interfaces, touch screen interactions, data storage and sensors using standard libraries and APIs. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in CIS-171, CIS-172 or CSC-142.

Manufacturing (MFG)

MFG-103 Applied Metallurgy (3)

Covers the different structures of metals and alloys and the resulting mechanical, electrical and magnetic properties; phase diagrams; kinetics of phase transformation; materials failure; thermal process; materials in engineering design/safety, applications and processing of metal alloys. Aligns with SENSE II, Units 1 through 3. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

MFG-120 Machine Trade Printreading I (1)

Introduces students to the importance of prints in industry. Covers the alphabet of lines and principles of sketching. Continues with an introduction to orthographic projection, auxiliary views, detail and assembly drawings, dimensions and tolerances, and sectional views. Title block information is covered along with materials lists, drawing notes and drawing change systems. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

MFG-128 Measurement, Materials, and Safety (NIMS) (2)

Explores basics of machining, raw materials, use of hand tools, safety, and maintenance. Includes measurement techniques, materials, safety, machine tool math, quality control, and maintenance. Emphasizes teamwork, critical thinking, and problem-solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

MFG-129 Job Planning, Benchwork, and Layout (NIMS) (2)

Introduces the basics of hand tools, understanding drawings, manual machines, and layout. Focuses on interpretation of drawing information, description of basic symbols, and notation, and interpretation of basic GD&T feature control frames. Emphasizes teamwork, critical thinking, and problem-solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

MFG-130 Machine Trade Printreading II (1)

Continues Machinist Trade Printreading I. Covers geometric dimensioning and tolerancing and the interpretation of advanced prints, including numerical control programming and documents. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take MFG-120.

MFG-145 Light Machining for Maintenance Trades (4)

Provides an introduction to industrial maintenance-specific machining and metal-working technologies and processes. Concepts including basic part design, layout, replication, and repair are emphasized through lecture, reading and hands-on labs. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

MFG-173 CNC Mill Operator (NIMS) (2)

Introduces basic milling operations. Covers manual and CNC milling practices, tooling, machining practices and applied mathematics. Emphasizes teamwork, critical thinking and problem-solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

MFG-174 CNC Lathe Operator (NIMS) (2)

Introduces basic lathe operations. Covers manual and CNC lathe turning practices, tooling, machining practices and applied mathematics. Emphasizes teamwork, critical thinking and problem-solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

MFG-202 Manufacturing Processes (2)

Focuses on producing a part on a CNC mill and lathe. Covers engineering parts to be cost effective as well as well-produced. Arts & Sciences Elective Code: B

Hours per week: 4.0 lab

Prerequisite: Take DRF-142. Take DRF-143.

MFG-297 Milling Machine Operations (NIMS) (3)

Introduces basic and advanced manual milling operations. Covers manual milling machine practices, tooling, machining principles and applied mathematics. Emphasizes teamwork, critical thinking and problem solving through hands-on experience and practical applications. This course aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

MFG-298 Surface Grinding Operations (NIMS) (2)

Introduces basic surface grinding operations. Covers precision surface grinding practices, grinding wheel identification, proper grinding techniques and grinding safety. Emphasizes teamwork, critical thinking and problem solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take MFG-128. Take MFG-129.

MFG-332 CNC Mill Program and Setup (NIMS) (3)

Introduces basic CNC vertical milling operations. Focuses on setup and operation practices pertaining to CNC milling and programming language using G&M codes. Emphasizes teamwork, critical thinking and problem solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take MFG-297.

Pre/corequisite: Take MFG-173.

MFG-334 CNC Lathe Program & Setup (NIMS) (3)

Introduces basic CNC horizontal lathe turning operations. Covers setup and operation practices pertaining to CNC turning and programming language using G&M codes. Emphasizes teamwork, critical thinking and problem solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take MFG-385.

Pre/corequisite: Take MFG-174.

MFG-367 Advanced CNC Programming (3)

Introduces advanced concepts in CNC programming as it relates to milling and turning operations. Utilizes G&M codes for machine operation and demonstrates an applied knowledge of geometric dimensioning and tolerancing (GD&T), quality control and basic machining practices. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take MFG-173. Take MFG-174. Take MFG-332. Take MFG-334.

MFG-373 Computer Aided Manufacturing I (4)

Introduces concepts in Computer Aided Manufacturing (CAM). Emphasizes CAM as applied to Turning and Milling centers, and teaches concepts in model generation, applied toolpaths, and tooling selection along with calculation of proper RPM and feedrates. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 6.0 lab

MFG-374 Computer Aided Manufacturing II (4)

Introduces advanced concepts in Computer Aided Manufacturing (CAM). Emphasizes CAM as applied to horizontal and vertical milling centers, 3 and 4 axis turning centers and other types of manufacturing equipment. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take MFG-373.

MFG-378 Manufacturing Production Methods (3)

Introduces a simulated manufacturing production environment where a product's design, production, and evaluation will occur. Will demonstrate an understanding of how modern manufacturing facilities work to produce functional products used by consumers. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take CAD-300. Take MFG-173. Take MFG-174. Take MFG-332. Take MFG-334.

Pre/corequisite: Take MFG-374.

MFG-385 Engine Lathe Operations (NIMS) (5)

Introduces basic and advanced lathe operations dealing with turning parts in various workholding devices. Focuses on general lathe practices, lathe tool grinding, lathe nomenclature, proper use of lathe tooling and lathe safety. Emphasizes teamwork, critical thinking and problem-solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 6.0 lab

MFG-388 Manufacturing Sheetmetal Practices (5)

Introduces basic setup and operation of press brakes and other manufacturing equipment related to precision sheetmetal fabrication. Covers basic concepts in tooling, bending principles and applied mathematics dealing with various forms of sheetmetal press brake and punch technology. Emphasizes teamwork, critical thinking and problem solving through hands-on experience and practical applications. Aligns with NIMS (National Institute of Metalworking Skills) standards. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 6.0 lab

MFG-396 Alternative Manufacturing Processes (3)

Introduces basic theories and practices of machine operation, shop procedures, material properties and material handling. Covers programming, editing and adjusting parameters. Incorporates hands-on inspections and routine machine maintenance. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 4.0 lab

MFG-420 Jig and Fixture Design (2)

Covers theory of design and machining practices as they relate to jigs and fixtures used in manufacturing facilities. Introduces students to the importance of jig and fixture classification and to their uses in modern machine tools. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

MFG-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

MFG-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean

Hours per week: 1.0 lecture

Management (MGT)

MGT-101 Principles of Management (3)

Applies current techniques and methods to the management functions of planning, organizing, leading and controlling. Focuses on critical analysis, development and effectiveness of organizational processes. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

MGT-112 Business Innovation (3)

Applies creativity and innovation to manage projects in conjunction with STEM mentors from local businesses. Provides an experiential learning environment designed to foster development of entrepreneurial leadership skills through strategic development and execution. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

MGT-121 Project Management Basics (3)

Defines project management and examines the role of the project manager. Emphasizes on-the-job project management knowledge areas and processes. Practical applications and case studies are used to reinforce and apply concepts to real life situations. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

MGT-124 Project Management Tools (3)

Continues MGT-121, focusing on traditional project management tools and emerging project management technologies. Students develop a project plan, define and sequence tasks, identify critical path, allocate resources, estimate risks and maintain a budget. Uses popular project management software, such as MS Project and MS Excel. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take MGT-121.

MGT-130 Principles of Supervision (3)

Focuses on the knowledge, skills and tasks required of supervisors in the workplace. Topics include the supervisor's role in the hiring process, orientation and training, performance appraisals, conflict resolution, and termination along with measures of performance/productivity, motivation techniques, team leadership and workplace safety. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

MGT-137 Developing Leadership Skills (1)

Designed to give valuable suggestions on communicating effectively using coaching, counseling, delegating and performance reviews to develop subordinates. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

MGT-139 Effective Team Building for Managers (1)

Participants learn the basics of team management, how to motivate team members, how to improve the communication process and understand the principles of leadership. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

MGT-140 Time Management in the Workplace (1)

Focuses on high performance work times, being effective vs. being efficient, time wasters and solutions to them. Students also learn organizational skills, how to set goals, plan and prioritize. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

MGT-145 Human Relations in Management (3)

Emphasizes the importance of proper attitudes towards self, others and organization values. Stresses the development of a good self-concept and the relationship this has to energy levels, emotions, verbal and nonverbal communication. Prepares students to understand how to deal with conflict and how to be a productive member of a work group. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

MGT-155 Integrated Project Management (3)

Actively reviews project management processes and studies the Project Management Book of Knowledge (PMBOK) in order to complete the certification for the Project Management Institute's Certified Associate Project Management Exam. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take MGT-121.

MGT-161 Agile Project Management With Scrum (3)
Introduces agile project management processes to improve efficiency and flexibility while decreasing time to market. Explores Scrum, an agile practice that develops cross-functional and self-managed teams to produce a viable product that reacts to rapidly changing markets and climates. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MGT-170 Human Resource Management (3)
Includes managerial philosophy of human resource administration, emphasizing the study of the personnel functions of recruiting, interviewing, selecting, placement, training and evaluating. Also addresses the issues of diversity in a dynamic environment. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MGT-171 Human Resource Strategies - Talent Management and Employee Relations (3)
Focuses on development of hands-on skills and critical thinking abilities necessary in the field of Human Resource Management. Includes the application of tools and techniques in the following HR functions: talent acquisition, total rewards, employee and labor relations, training /and development, and performance management. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in MGT-170. Minimum C- in CSC-116. Take MGT-101.

MGT-179 Human Resource Strategies - Total Rewards, Safety and Labor (3)
Develops hands-on skills and critical thinking abilities necessary in the field of Human Resource Management. Introduces the application of tools and techniques in compensation, benefits, employee safety and workers compensation, and labor relations. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take MGT-101. Minimum C- in CSC-116. Minimum C- in MGT-170.

MGT-206 Global Business Skills (3)
Focuses on fundamental global business skills needed in today's global business environment. Includes a basic understanding of globalization as it impacts the business environment, close examination of culture as it relates to business, ethical decision making in the cross-cultural environment, and culturally appropriate techniques for international business settings. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MGT-300 Introduction to Entrepreneurship (3)
Examines the feasibility of a new business concept and the fundamentals of organizing a small business. Students measure their potential as an entrepreneur, identify business opportunities, examine entry strategies, understand the advantages and disadvantages of buying a business and evaluate the value of that business. Focuses on realizing business strengths, weaknesses, opportunities and threats. Implements the planning process through feasibility and business plans. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MGT-301 Management Capstone (3)
Emphasizes current trends in management and upper-level management concepts such as planning, organizing, leading and controlling. Provides a career component that focuses on employment tools, tips, preparation and industry exploration. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take MGT-101. Take MGT-170. Take MGT-300.

MGT-305 Business Plans for Entrepreneurs (3)
Focuses on small business strategies by developing a business plan and studying successful small businesses. Incorporates finance, marketing, sales, organizational structure, and strategic management and decision making. Addresses the unique entrepreneurial experience of conceiving, evaluating, creating, managing and potentially starting a business. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take MGT-300.

MGT-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

MGT-928 Independent Study (1-4)
Taken concurrently with a standard course in the student's area of specialty. Special projects and/or individual readings are assigned by the program coordinator or an individual staff member. Projects must be approved before the beginning of the semester in which the work is to be done. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Military and ROTC (MIL)

MIL-104 Army ROTC Leadership & Personal Development (1)
This course introduces cadets to the military personal challenges and competencies critical for effective leadership. Cadets learn how the personal development of life skills such as critical thinking, goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student. No military obligation is associated with participation in the course. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-105 Army ROTC Introduction to Tactical Leadership (1)

This course introduces students to leadership fundamentals such as setting direction, problem solving, listening, presenting briefs, providing feedback, and using effective writing skills. Students explore dimensions of leadership values, attributes, and competencies in the context of practical, hands-on, and interactive exercises. Instructor mentorship and building relationship among the students through common experience and practical interaction are a critical aspect of the course experience. No military obligation is associated with participation in the course. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-106 Air Force Heritage and Values I (1)

Introduces students to the United States Air Force (USAF) and Air Force Reserve Officer Training Corps (AFROTC). Reviews structure of the U.S. Air Force, the Air Force's capabilities, career opportunities, benefits, Air Force installations, core values, leadership, team building, and communication skills. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-111 AFROTC Leadership Lab I (1)

Develops knowledge of what is required to be an Air Force officer by honing leadership skills through hands-on experience and performing various tasks at the University of Iowa AFROTC Detachment. Faculty supervise all labs, but students plan and conduct all events. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-112 AFROTC Leadership Lab II (1)

Develops knowledge of what is required to be an Air Force officer by honing leadership skills through hands-on experience and performing various tasks at the University of Iowa AFROTC Detachment. Faculty supervise all labs, but students plan and conduct all events. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-113 Air Force Heritage and Values II (1)

Introduces students to the United States Air Force (USAF) and Air Force Reserve Officer Training Corps (AFROTC). Features the evolution of the U.S. Air Force/Air Force history, principles of war/tenets of air power, what the Air Force brings to the joint fight, and a look at the Department of the Air Force and Air Force major commands. Covers leadership concepts regarding ethical decision-making, communication, and professional speaking opportunities. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-203 Team and Leadership Fundamentals I (1)

Teaches the foundations of leadership and team building. Uses team-building activities and class discussion to demonstrate the importance of basic verbal and written communication. Emphasizes skills of listening, followership, and effective problem-solving. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-204 Army ROTC Innovative Team Leadership (2)

The course explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories forming the basis of the Army leadership framework (trait and behavior theories). Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs. Focus is on continued development of the knowledge of leadership values and attributes through an understanding of Army rank, structure, and duties, and basic aspects of land navigation and squad tactics. No military obligation is associated with participation in the course. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MIL-205 Army ROTC Tactical Leadership (2)

The course examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations. Cadets develop greater self-awareness as they assess their own leadership styles and practice communication and team building skills. No military obligation is associated with participation in the course. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MIL-206 Team and Leadership Fundamentals II (1)

Teaches leadership and team building concepts. Offers team-building activities and discusses the importance of basic verbal and written communication. Features conflict management, comprehensive airman fitness, and a leadership capstone. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-211 AFROTC Leadership Lab III (1)

Develops knowledge of what is required to be an Air Force officer by honing leadership skills through hands-on experience and performing various tasks at the University of Iowa AFROTC Detachment. Faculty supervise all labs, but students plan and conduct all events. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

MIL-212 AFROTC Leadership Lab IV (1)

Develops knowledge of what is required to be an Air Force officer by honing leadership skills through hands-on experience and performing various tasks at the University of Iowa AFROTC Detachment. Faculty supervise all labs, but students plan and conduct all events. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

Marketing (MKT)

MKT-110 Principles of Marketing (3)

Studies the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create the exchanges that satisfy individual and organizational goals. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MKT-130 Social Media in Business (3)
Outlines the fundamentals of social media marketing in business. Addresses strategies for integrating a solid social media plan with traditional marketing plans and/or organizational goals for utilizing social media, and determining the best social media platforms. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Pre/corequisite: Take MKT-110.

MKT-135 Content Marketing (3)
Outlines the fundamentals of creating online marketing content that support social media marketing strategies. Addresses strategies for customizing creative content that meets ROI objectives, developing and maintaining online professional presence through optimization of content and appropriate business communications for various platforms. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take MKT-110.

Pre/corequisite: Take MKT-130.

MKT-140 Principles of Selling (3)
Provides basic skills needed to sell goods and services in a marketing economic system. Teaches about careers in selling, buyer behavior, product knowledge and selling concepts. Emphasis is on problem solving. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MKT-150 Principles of Advertising (3)
Acquaints students with philosophy of advertising, communication, including digital, historical concepts, and practical applications of advertising at the local and national levels. Includes media and media selection, copy-writing, and layout, with an emphasis on product selection for advertising. Utilizes a simulation project, developing a comprehensive advertising and communication plan. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MKT-160 Principles of Retailing (3)
Studies retailing and its functions in a free enterprise system. All facets of retail operation are considered including planning, organization, buyer or user experience, human resources, facilities, control, pricing, buying, selling and promotion, centered around a retail simulation project. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MKT-180 Customer Service Strategies (1)
Designed to help students target their customers and develop appropriate services. Discusses the use of effective customer services as a competition tool. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

MKT-195 Marketing Management (3)
Examines the marketing process from product conception to production and delivery. Emphasizes marketing plan development, situation analysis, marketing strategies and product management for both new and current products. Utilizes a capstone project to develop and enhance marketing and management skills. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take MKT-110.

MKT-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

MKT-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Med Lab Tech (MLT)

MLT-105 Pathophysiology for the Laboratorian (3)
Presents clinical disorders and diseases commonly tested for in the field of laboratory medicine. Covers pathology, etiology, diagnosis, interactions and interferences, symptoms and prognosis. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

MLT-106 Introduction to Biosafety (1)
Introduces the basic principles and practices of biological safety in the laboratory workplace. Provides understanding of risks present in the laboratory and how to protect oneself from risks. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

MLT-109 Principles of Phlebotomy (3)
Develops advanced skills to perform phlebotomy. Includes demonstrations of and practice collecting blood specimens by venipuncture and capillary methods. Teaches anatomy and physiology of the circulatory system, medical terminology, customer service, methods to facilitate the collection and transportation of other laboratory specimens as well as how to obtain blood specimens. Arts & Sciences Elective Code: B
Hours per week: 1.5 lecture, 1.0 lab, 3.0 clinical

MLT-115 Clinical Lab Fundamentals (3)
Addresses the field of laboratory medicine. Teaches basic laboratory mathematics, testing methods, and quality control. Introduces blood collection and the study of common blood cells and blood cell disorders. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

MLT-120 Urinalysis (3)
Introduces urinalysis and laboratory analysis of miscellaneous body fluids. Includes the theory of urine formation and the methodology to determine the physical, chemical, and microscopic properties of urine in normal and abnormal states. Theory and test profiles are also presented for miscellaneous body fluids with correlation to diseased states. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C in either BIO-161, or both BIO-168 and BIO-173. Minimum C in COM-222, ENG-105, ENG-108 or ENG-120. Minimum C in MLT-105. Minimum C in MLT-106. Minimum C in MLT-109. Minimum C in MLT-115.

MLT-130 Hematology (3)

Studies the function of blood, morphology, and maturation of normal cells, blood cell counts, differentials of white blood cells, hematology test procedures, and blood collection and handling. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C in BIO-161, or in both BIO-168 and BIO-173. Minimum C in COM-222, ENG-105, ENG-108 or ENG-120. Minimum C in MLT-105. Minimum C in MLT-106. Minimum C in MLT-109. Minimum C in MLT-115.

MLT-230 Advanced Hematology (3)

Studies abnormal cell morphology and diseases involving blood cells and test procedures used in the laboratory diagnosis of hematological disease. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C in BIO-186. Minimum C in MLT-120. Minimum C in MLT-130. Minimum C in COM-222, ENG-105, ENG-108 or ENG-120.

MLT-233 Hemostasis and Thrombosis (2)

Emphasizes the mechanism by which the body prevents loss of blood from the vascular system. Focuses on chemical responses of blood vessels, platelet activation and biochemical reactions that lead to clot formation and dissolution. Includes tests used to detect coagulation deficiencies and abnormalities. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Minimum C in BIO-186. Minimum C in MLT-120. Minimum C in MLT-130. Minimum C in COM-222, ENG-105, ENG-108 or ENG-120.

MLT-245 Clinical Chemistry (5)

Introduces various aspects of clinical chemistry including primary blood and body fluid constituents, their significance in health and disease, and methods utilized in their determinations. Emphasizes competence in general procedures for clinical analysis and the development of pertinent skills of troubleshooting, evaluating data, and interpreting for presence/absence of disease. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 4.0 lab

Prerequisite: Minimum C in MLT-230. Minimum C in MLT-233. Minimum C in MLT-270. Minimum C in both CHM-110 and CHM-111, or in CHM-132.

MLT-255 Clinical Microbiology (5)

Examines the essential principles of bacteriology relative to human disease with emphasis on knowledge regarding the pathogenicity of the microorganisms presented. Emphasizes competence in general procedures such as cultivation, isolation, and identification of organisms. Discusses evaluation/interpretation of laboratory data. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 4.0 lab

Prerequisite: Minimum C in both CHM-110 and CHM-111, or in CHM-132. Minimum C in MLT-230. Minimum C in MLT-233. Minimum C in MLT-270.

MLT-260 Immunohematology (4)

Covers blood grouping, typing, antibody screening and identification, and compatibility testing with an overview of hemolytic disease of the newborn, processing of donor blood, and blood component therapy. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 4.0 lab

Prerequisite: Minimum C in both CHM-110 and CHM-111, or in CHM-132. Minimum C in MLT-230. Minimum C in MLT-233. Minimum C in MLT-270. Minimum C in BIO-186. Minimum C in CHM-110 or CHM-132.

MLT-270 Immunology and Serology (2)

Focuses on the reactions of the body's immune system to foreign substances. Included are basic antigen-antibody reactions, complement action, cellular response, humoral immune response, and the serological test procedures used to aid in the detection of certain diseases. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Minimum C in BIO-186. Minimum C in MLT-120. Minimum C in MLT-130. Minimum C in COM-222, ENG-105, ENG-108 or ENG-120.

MLT-271 Lab Survey and Preparation (1)

Reviews all departments of the laboratory toward the end of the clinical practicum. Provides review of didactic materials in preparation for the comprehensive examination. Includes clinic time for review or additional experience in any or all departments of the laboratory. Arts & Sciences Elective Code: B
Hours per week: 3.0 clinical

Prerequisite: Minimum C in MLT-283. Minimum C in MLT-286. Minimum C in MLT-287. Minimum C in MLT-293. Minimum C in MLT-297.

MLT-283 Clinical Practicum: Urinalysis (1)

Continues Urinalysis. Provides clinical experience in the performance of routine urinalysis. Stresses comparison of methodology covered in Urinalysis. Arts & Sciences Elective Code: B
Hours per week: 3.0 clinical

Prerequisite: Minimum C in MLT-245. Minimum C in MLT-255. Minimum C in MLT-260. Minimum C in MLT-290.

MLT-286 Clinical Practicum: Immunology and Serology (1)

Continues Immunology and Serology. Provides clinical experience in the performance of serologic testing. Emphasizes the comparison and contrast of methodology with Immunology and Serology. Arts & Sciences Elective Code: B
Hours per week: 3.0 clinical

Prerequisite: Minimum C in MLT-245. Minimum C in MLT-255. Minimum C in MLT-260. Minimum C in MLT-290.

MLT-287 Clinical Practicum: Hematology (4)

Continues Hematology and Advanced Hematology. Provides clinical experience in specimen collection and performance of routine hematology and coagulation tests. Stresses comparison and contrast with methodologies of Hematology and Advanced Hematology. Provides experience with automation. Arts & Sciences Elective Code: B
Hours per week: 12.0 clinical

Prerequisite: Minimum C in MLT-245. Minimum C in MLT-255. Minimum C in MLT-260. Minimum C in MLT-290.

MLT-288 Clinical Practicum: Microbiology (4)
Continues Clinical Microbiology. Provides experience in bacteriologic, mycotic and parasitologic studies in a clinical setting. Examines practices and procedure of Clinical Microbiology as compared and contrasted with clinical practice. Arts & Sciences Elective Code: B
Hours per week: 12.0 clinical

Prerequisite: Minimum C in MLT-283. Minimum C in MLT-286. Minimum C in MLT-287. Minimum C in MLT-293. Minimum C in MLT-297.

MLT-290 Clinical Seminar and Review (2)
Reviews all MLT subjects. Presents case studies and provides class time for interactive review of didactic materials and preparation for the comprehensive examination. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Minimum C in both CHM-110 and CHM-111, or in CHM-132. Minimum C in MLT-230. Minimum C in MLT-233. Minimum C in MLT-270.

MLT-293 Clinical Practicum: Immunohematology (3)
Continues Immunohematology. Provides clinical experience in specimen collection and performance of immunohematologic tests. Stresses comparison and contrast with methodology of Immunohematology. Arts & Sciences Elective Code: B
Hours per week: 9.0 clinical

Prerequisite: Minimum C in MLT-245. Minimum C in MLT-255. Minimum C in MLT-260. Minimum C in MLT-290.

MLT-297 Clinical Practicum: Chemistry (3)
Continues Clinical Chemistry. Provides clinical experience in specimen collection and performance of clinical chemistry tests. Compares and contrasts with methodology of Clinical Chemistry. Emphasizes the use of automatic equipment. Arts & Sciences Elective Code: B
Hours per week: 9.0 clinical

Prerequisite: Minimum C in MLT-245. Minimum C in MLT-255. Minimum C in MLT-260. Minimum C in MLT-290.

Mass Media Studies (MMS)

MMS-101 Mass Media (3)
Surveys the field of mass communications. Takes the theoretical position that mass communication is a social system, considering the functions, structure and performance of the individual medium, as well as the auxiliaries. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MMS-105 Audio Production (3)
Introduces audio production in the broadcast and file industry. Presents basic, intermediate, and advanced audio production principles and techniques. Learn how to operate the audio console, microphones, speakers, and sound recording devices. Add prerecorded music and sound effects utilizing audio editing software. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MMS-111 Video Production I (3)
Introduces basic principles and techniques used in video and film production. Focuses on producing, scriptwriting, directing, shooting, and editing through in-class demonstrations, lectures, and hands-on projects. Completes digital medial projects individually and in groups with an emphasis on storytelling. Enhances the critique process by screening videos in class. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MMS-131 News Reporting (3)
Involves an in-depth study of objective news reporting and advocacy journalism as well as training in writing leads, the news story, interviewing, copyright and editing. Arts & Sciences Elective Code: A; Comments: Ability to type 30 wpm required
Hours per week: 3.0 lecture

MMS-133 News Media Convergence (3)
Introduces skills required for print, broadcast and Web journalism. Students develop skills that include identifying news, interviewing and event coverage, researching, reporting, writing print and broadcast material and converting it to the Web. Final versions of stories will be evaluated for publication in the Communique, broadcast on KSP News and posted to the Kirkwood Student Media Web site. Arts & Sciences Elective Code: A; Comments: Permission of program coordinator
Hours per week: 3.0 lecture

MMS-165 Media History (3)
Teaches the historical development of media in the United States from the earliest forms to the digital age. Explores the role of global media and its effect on culture and diverse audiences. Evaluates media messages using media literacy skills. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MMS-209 Video Production II (3)
Focuses on advanced directing, shooting, and editing techniques used in video and film production. Evaluates a college or community need for a video, plans a script and shooting schedule, maintains a shot sheet, and edits the final product. Reviews styles of digital media professionals. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MMS-111.

MMS-215 Broadcast Writing and Performance (3)
Emphasizes scripts and commercial writing skills. Students will announce and perform before microphones and cameras. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MMS-220 Advanced Television (2)
Covers proper operation of remote video and audio equipment. Emphasizes script writing and videotape editing. Provides opportunity for final projects to be televised on the campus cable channel. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take MMS-104.

MMS-241 Public Relations and Marketing (3)

Examines the history and structure of the public relations industry. Analyzes the First Amendment and explores ethical issues. Students prepare a promotional campaign. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

MMS-242 Media Ethics (3)

Examines various media codes of ethics, theories, and ethical dilemmas faced by media professionals. Introduces ethical decision-making and discusses both past and current examples of journalists who have been confronted with tough decisions. Discusses differences in how diverse audiences may interpret and interact with media. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

MMS-243 Freedom of Expression (3)

Examines the historical, societal, political, and cultural aspects of the First Amendment in the United States. Analyzes major topics related to the meaning of freedom of expression. Arts & Sciences Elective Code: A

Hours per week: 3.0 lecture

MMS-920 Field Experience (3)

Provides on-the-job training in the media field. Arts & Sciences Elective Code: A; Comments: Permission of instructor/coordinator

Hours per week: 9.0 clinical

MMS-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

MMS-928 Independent Study (1-3)

Allows the student to pursue a special concentration of study under the guidance of a faculty member. Requires an independent study contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising faculty member and dean

Hours per week: 2.0 lab

MMS-948 Special Projects (1)

Provides opportunity to carry out a media project under professional direction. Arts & Sciences Elective Code: A

Hours per week: 2.0 lab

Music - Applied (MUA)

MUA-101 Applied Voice (1-2)

Provides weekly applied lessons and guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons and regular practice of fundamental techniques, repertoire and performance. This course is not intended for students who wish to pursue transfer study in music. One weekly 30-minute lesson is one credit. One weekly 60-minute lesson is 2 credits. May be repeated for credit. Arts & Sciences Elective Code: A

Hours per week: 1.0 lecture

MUA-119 Class Piano (1)

Introduces a wide range of basic functional performance skills enabling students to utilize the piano/keyboard for enjoyment and as a stepping stone for further piano studies. Includes sight-reading, harmonization, repertoire, accompanying, transposition, improvisation and other creative activities. Students with a transfer interest in music, and no prior piano skills should enroll in this course. Arts & Sciences Elective Code: A

Hours per week: 2.0 lab

MUA-147 Applied Instrumental (1-2)

Provides weekly applied lessons and guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons and regular practice of fundamental techniques, repertoire and performance. This course is not intended for students who wish to pursue transfer study in music. One weekly 30-minute lesson is one credit. One weekly 60-minute lesson is 2 credits. May be repeated for credit. Arts & Sciences Elective Code: A

Hours per week: 1.0 lecture

MUA-300 Applied Euphonium (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture

MUA-301 Applied Bassoon (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture

MUA-302 Applied Cello (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture

MUA-303 Applied Clarinet (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit. Arts & Sciences Elective Code: A

Hours per week: 2.0 lecture

MUA-304 Applied Percussion (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-305 Applied Flute (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-306 Applied French Horn (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-307 Applied Guitar (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-308 Applied Oboe (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-310 Applied Piano (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-311 Applied Saxophone (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-312 Applied String Bass (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-314 Applied Trombone (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-315 Applied Trumpet (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-316 Applied Tuba (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-317 Applied Viola (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit.
Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-318 Applied Violin (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

MUA-319 Applied Voice (2)

Instruction intended for advanced students and those with a transfer interest in music. Provides weekly one hour applied lessons, and a weekly performance seminar. Includes guided instruction in tone production, technique, musicianship and performance practice. Students advance their skills through weekly lessons, seminar, and regular practice of fundamental techniques and solo repertory. May be repeated for credit. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

Music - General (MUS)

MUS-100 Music Appreciation (3)

Includes study of elements and forms of music with attention to major historical periods and composers of historical significance and survey of indigenous music. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MUS-102 Music Fundamentals (3)

Introduces the notation of pitch, rhythm, meter, scales, key signatures, intervals, and chords. Intended for students with strong interest in music but with limited or no music reading skills. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MUS-120 Music Theory I (3)

Studies the notation of pitch and rhythm, meter, major and minor key relationships, melodic structure, intervals, triads, two-part counterpoint, the basics of four-part harmony and instrument transposition. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Corequisite: Take MUS-135.

MUS-121 Music Theory II (3)

Studies seventh chords (spelling, quality, inversions, Roman numerals and figures) and the use of all inversions of diatonic seventh chords in four-part harmony, melodic phrase structures and the harmonization of melody, the concepts of modulation and tonicization (secondary-dominant function chords), and binary and ternary forms. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MUS-120.

Corequisite: Take MUS-136.

MUS-135 Music Theory Lab I (1)

Supports the objectives in MUS-120 by developing skills in ear training (aural identification of scales, intervals and chords), dictation (rhythmic, melodic and harmonic), and sight singing. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Corequisite: Take MUS-120.

MUS-136 Music Theory Lab II (1)

Continuation of Music Theory Lab I. Supports the objectives in MUS-121 by developing skills in ear training (aural identification of scales, intervals and chords), dictation (rhythmic, melodic and harmonic) and sight singing. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Prerequisite: Take MUS-135.

Corequisite: Take MUS-121.

MUS-138 Jazz Improvisation (3)

Introduces theoretical principles and techniques used in the jazz idiom. Provides opportunity for application of music theory at the performance level to include scales, chord progressions, melodic patterns, rhythmic elements and small combo performance. Recommended for both instrumentalists and vocalists. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

MUS-139 Jazz Improvisation II (3)

Builds on skills learned in Jazz Improvisation with emphasis placed on applying advanced improvisation techniques in small combo performance practice. Once passed, this course may be repeated two times. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take MUS-138 or MUS-191.

MUS-140 Concert Choir (1)

Serves students with ability and desire to sing in a mixed-voice group. May be repeated for credit. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

MUS-144 Symphony Orchestra (1)

Introduces new literature each semester to extend the experience of the student's learning to read and play different styles and tempos. This group is open to community members and does not require an audition. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

MUS-145 Concert Band (1)

Introduces new literature each semester to extend the experience of the student's learning to read and play different styles and tempos. This group is open to community members and does not require an audition. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

MUS-152 Vocal Ensemble (1)

Provides auditioned members an opportunity to sing a variety of choral styles from traditional to contemporary arrangements. May be repeated for credit. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

MUS-157 Vocal Jazz Ensemble (1)
Provides auditioned members an opportunity to sing a variety of jazz styles from traditional to contemporary arrangements. May be repeated for credit. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

MUS-162 Instrumental Ensembles (1)
Study, rehearse, and perform music in a variety of styles and settings including cover band, music theater pit orchestra, jazz combo, steel band, or other small ensemble configuration as determined by enrollment and student interest. Cover band styles may include rock, pop, hip hop, country, folk, or world beat. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

MUS-163 Instrumental Jazz Ensemble (1)
Explores various styles of jazz from traditional to contemporary through a performance-oriented class. May be repeated for credit. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

MUS-207 Introduction to Film Music (3)
Introduces the major genres of film and notable film composers from the early twentieth century to the present. Analyzes movie soundtracks to discover how film composers influence the mood of the film, affect the development of characters and propel the narrative. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MUS-208 American Popular Music & Jazz (3)
Examines the evolution of American popular music styles and jazz genres from their early stages to the present. Emphasizes important individual works, composers and performers of jazz, rock, folk, blues and others. Enlarges the use of basic music vocabulary, improves aural perception of style and genre, and encourages a fuller understanding of how popular music and jazz enrich life, function in society and reflect cultural diversity. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

MUS-220 Music Theory III (3)
Studies plainchant and modal theory; early polyphony in 2, 3 and 4 voices; inventions and fugues; borrowed, Neapolitan and augmented sixth harmonies; harmonic and melodic variations; sonata form and rondo form. Examines and analyzes music from the medieval period through the early Romantic era. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MUS-121.

Corequisite: Take MUS-235.

MUS-221 Music Theory IV (3)
Studies enriched and chromatically altered harmonies and enharmonic modulation; instrument transposition and the orchestral score; the materials of Impressionism; tonality in the 20th century; and atonality, set theory and twelve-tone structures. Examines and analyzes music from the 1820s to the present. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take MUS-220.

Corequisite: Take MUS-236.

MUS-235 Music Theory Lab III (1)
Supports the objectives in MUS-220 by developing advanced skills in ear training (aural identification of scales, intervals and chords), dictation (rhythmic, melodic and harmonic) and sight singing. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Prerequisite: Take MUS-136.

Corequisite: Take MUS-220.

MUS-236 Music Theory Lab IV (1)
Continuation of Music Theory Lab III. Supports the objectives in MUS-221 by developing advanced skills in ear training (aural identification of scales, intervals and chords), dictation (rhythmic, melodic and harmonic) and sight singing. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Prerequisite: Take MUS-235.

Corequisite: Take MUS-221.

MUS-409 Integrated Music Theory (1-3)
Supports success in music theory through group and individualized instruction. Develops foundational music theory and aural skills. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

MUS-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

MUS-928 Independent Study (1-2)
Allows the student to pursue a special concentration of music study under the guidance of a faculty member. Requires an independent study contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising faculty member and dean
Hours per week: 2.0 lab

MUS-933 Music Internship (1-4)
Provides an opportunity to receive experience through on-the-job training in an approved business establishment. Focuses on providing valuable learning experiences structured by the program coordinator and the training sponsor. Arts & Sciences Elective Code: B
Hours per week: 4.0 internship

MUS-945 Music Capstone (3)
Facilitates the development of a creative performance project (Capstone Project) during the final semester of study. Requires performance of 20 minutes of repertoire and written program notes; all repertoire must be approved by the student's applied music instructor. Creates an online portfolio that showcases the work they've completed during the AAA degree. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Computer Networking (NET)

NET-119 Virtualization and Cloud Concepts (2)
Introduces learners to the topics of cloud and virtualization. Teaches the components, types, benefits, and uses of virtualization. Explores the role virtualization plays in the cloud, software-defined datacenter, and the imaging/deployment of computers. Enhances and reinforces understanding of the material covered through low-level laboratory exercises. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-130.

NET-130 Computer Concepts (3)
Introduces the operation of computers from a hardware and software perspective. Teaches the basic elements of a computer system and develops troubleshooting skills for advanced courses. Covers system boards, storage drives, memory, power supplies, and software considerations (such as BIOS, drivers and operating systems) necessary to understanding how computers work. Enhances and reinforces understanding of the material covered through low-level laboratory exercises. Offers A+ certification topics for the benefit of those who plan to take the CompTIA exam. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

NET-165 Network Plus (3)
Prepares users for a basic introduction to networking, and can also be used to prepare for CompTIA's Network+ certification exam. Presents current networking hardware and software along with the skills necessary to succeed in the field of networking. Covers protocols, network design and implementation, and troubleshooting and support. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

NET-168 Administering Windows Server (3)
Focuses on implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server environment. Includes the administration tasks necessary to maintain a Windows Server infrastructure such as configuring and troubleshooting name resolution, user and group management with Active Directory Domain Services (AD DS) and Group Policy, implementing Remote Access solutions such as DirectAccess, VPNs and Web Application Proxy, implementing Network Policies and Network Access Protection, PowerShell scripting, Data Security, deployment and maintenance of server images, as well as update management and monitoring of Windows Server environments. Covers the current objectives for the Microsoft Certification Exam. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-130.

NET-174 LAN Administration (3)
Focuses on the hardware and software requirements of a client-server network, the installation process, workstation configuration and configuration of the user environment using a current network operating system. Includes workstation and server configuration, network printing setup, creation and management of network user accounts, security, scripting, directory structures, and file server management and monitoring. Introduces network administrator duties, such as network configuration and system support. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-130.

NET-176 Administering Red Hat Server (3)
Develops Linux administration skills while administering Red Hat Server operating system. Focuses on foundational Linux concepts and core tasks. Teaches how to apply command-line concepts and enterprise-level tools. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-168. Minimum C- in NET-235. Minimum C- in NET-650.

NET-192 Network Cabling (3)
Introduces students to the advanced concepts of network infrastructure. Students learn what types of media are used and the concepts about the manufacture and installation of that media. Additionally, students work with copper media in installation, trim-out and finishing. Other topics include infrastructure standards, request for proposals and basic electrical theory. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take NET-236.

NET-235 CCNA Cisco 1 (3)
Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. Focuses on the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media and operations to provide a foundation for the curriculum. Covers building simple LANs, performing basic configurations for routers and switches, and implementing IP addressing schemes. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-165.

NET-236 CCNA Cisco 2 (3)
Describes the architecture, components, and operations of routers and switches in a small network. Covers configuring a router and a switch for basic functionality, troubleshooting routers and switches, and resolving common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-235.

NET-237 CCNA Cisco 3 (3)

Describes the architecture, components, and operations of routers and switches in a larger and more complex network. Covers configuring routers and switches for advanced functionality, troubleshooting routers and switches, and resolving common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Develops knowledge and skills needed to implement DHCP and DNS operations in a network. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-236.

NET-252 Healthcare IT Technician (3)

Introduces the field of healthcare information systems. Includes a comprehensive view of HIT by examining healthcare regulatory requirements and the functions of a healthcare organization, including its medical business operations, IT hardware, software, networking and security. Follows CompTIA Healthcare IT Technician (HIT-001) exam objectives. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-174. Minimum C- in NET-235.

NET-323 Windows Network Management (3)

Explains administrative duties for Windows Server 2012. Includes installing, configuring and maintaining client and server operating systems, monitoring performance and supporting users, evaluating different versions of Server 2012, exploring services such as DHCP, Clustering, Remote Access, DNS, Virtual Private Networking, and learning to implement security using permissions, encryption and policies. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take NET-561.

NET-348 System Automation and Scripting (3)

Explores system automation through the use of scripts. Focuses on designing and implementing scripts that parse event logs, configure hardware, software and networking components. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take MAT-102 or MAT-708. Minimum C- in NET-561.

NET-400 Linux Networking (3)

Introduces Linux installation, navigating the Linux GUI, creating Linux users and groups, setting up Linux file and directory permissions, managing the Linux file system, using the Linux control panel to customize the system, configuring the Linux network, and developing basic command shells and configurations. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

NET-401 Ethical Hacking Practices in Cybersecurity (3)

Provides a fundamental understanding of ethical hacking and its role in safeguarding digital systems and malicious computer systems and networks. Teaches the methodologies and tools used by ethical hackers to identify and proactively address vulnerabilities within computer systems and networks. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in NET-600.

NET-460 Computer Forensic Practices in Cybersecurity (3)

Provides a comprehensive understanding of digital forensics and its critical role in Cybersecurity. Focuses on the knowledge and practical skills required to investigate, analyze, and secure computer systems effectively. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in NET-130.

NET-561 Directory Administration (3)

Continues Directory Concepts. Focuses on implementation of Active Directory using Windows Server, and eDirectory using NetWare 6.x. Includes configuration and management of organizations, users, groups, printers, file systems, and many other directory service objects. Introduces virtualization concepts and students deploy software in a virtual environment. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-174.

NET-571 Server Configuration (3)

Emphasizes managing Linux in a multi-server enterprise environment. Introduces enterprise-level skills in integrating Linux servers in a multiple server environment, configuring advanced network services such as FTP, VPNs, remote management, Web services, DNS, DHCP, LDAP Directory Services, logical volume management, scripting and advanced software installation. Other services may include e-mail and LAMP package management. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-400. Take MAT-102 or MAT-708.

NET-600 Network Security Basics (3)

Introduces basic network security concepts. The non-vendor specific course includes general security concepts, authentication, attacks, secure communications and Internet security. Additional topics include perimeter defense and intruder detection. Begins preparation for the Security+ exam. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-630. Minimum C- in NET-650.

NET-616 VMware VCP (3)

Emphasizes virtual network design and implementation, in an enterprise environment. Includes basic storage area networks, high availability design, virtual system management, virtual switching and virtualization security. Covers the vSphere VMware Certified professional (VCP) exam domains. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-235. Minimum C- in NET-168. Minimum C- in NET-650.

NET-618 Network Defense & Remote Access Configuration (3)

Focuses on network defenses and defensible networks. Includes basic network defense topologies, basic DMZ configuration, basic intrusion detection configuration and logical security management (proper address assignment, software configuration). Examines identity management systems, such as directory services, to provide authentication, authorization and auditing for sound security management. Includes basic remote access configuration. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Corequisite: Take NET-600.

NET-619 Network Attacks: Detection, Analysis & Countermeasures (3)

Provides the opportunity to attack computer networks to test defenses and teaches how to analyze attacks. Explores attacks and attack analysis, intrusion detection and analysis, and advanced defense countermeasure configuration using firewalls, routers, and intrusion detection systems. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-168. Minimum C- in NET-176 or NET-400. Minimum C- in NET-600. Minimum C- in NET-650.

NET-620 VMWare Optimize and Scale (3)

Emphasizes virtual network design and implementation, in an enterprise environment. Includes basic storage area networks, high availability design, virtual system management, virtual switching and virtualization security. Covers the vSphere VMware Certified professional (VCP) exam domains. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-616.

NET-630 Ethics in Information Technology (3)

Covers basic laws and ethical behavior associated with network security. Topics include discussions about current common practices used to secure networks as well as test them, and the potential these methods can have in creating a secure network environment. Also included are discussions about HIPAA and Sarbanes-Oxley laws, and the impact they have on information technology practices. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

NET-650 Cloud Infrastructure (3)

Emphasizes building cloud infrastructure based on a cloud computing reference model that includes five fundamental layers (physical, virtual, control, orchestration and service) and three cross-layer functions (business continuity, security, and service management). Covers technologies, components, processes and mechanisms for each layer and cross-layer function. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

NET-680 TCP/IP for Networking (3)

Introduces students to the concepts of the TCP/IP suite of protocol. Students learn IP addressing, dynamic host configuration protocol, domain name services, universal naming conventions and how this protocol is used to connect to the Internet. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take NET-236.

NET-785 Fundamentals of Desktop Support (3)

Focuses on hands-on projects related to the computer support specialist role. Improves proficiency in providing personal computer support by troubleshooting real-life scenarios including specification/management considerations while using customer service skills. Includes lab projects with local organizations. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-130.

NET-844 Network/Systems Capstone (3)

Covers the analysis, configuration, and implementation of a computer network system. Teaches how to properly configure complete network systems, including but not limited to, configuring routers or switches, installing server software for domain management and configuring user accounts. An emphasis may be placed on configuring security at all levels. Uses Microsoft Visio and other tools to properly document the system. Provides an opportunity to present, demonstrate and explain the design process and network layout. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-176. Minimum C- in NET-236. Minimum C- in NET-600. Minimum C- in NET-616.

Corequisite: Take NET-237. Take NET-619.

NET-850 Special Topics in Technology (3)

Focuses on the history/future of computer technology and the social implications of that technology. Utilizes projects, expert speakers and field trips to explore ethical computing, computer career trends, encryption and security, the wireless world and the human face of computing. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-785.

NET-860 Information Technology Specialist Capstone (3)

Teaches project-oriented skills necessary to provide front-end technical support to end-users using networking, computer support, and customer support skills. Uses a teamwork approach to write policies and procedures pertinent to a help desk operation. Reviews how to document a problem and develop a solution when selecting and using ticketing systems. Focuses on how to troubleshoot and solve problems. Culminates in a presentation of this work to local industry members. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in NET-600. Minimum C- in NET-785.

NET-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

NET-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Occupational Therapy Assistant (OTA)

OTA-101 Foundations of Occupational Therapy (2)

Introduces the philosophical, ethical and theoretical concepts of the current practice of occupational therapy. Provides an overview of the role of the OTR and COTA in the processes of patient evaluation, treatment planning, implementation and discharge. Presents note writing and goal development. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

OTA-205 Occupational Therapy Assistant Management (2)

Includes the basic principles of management for the OTA. Topics include levels of authority and responsibility, supervisory process, performance appraisals, and policies and procedures. Discusses state and professional association regulations and legal/ethical issues. Explores reimbursement systems and their impacts on health care, as well as public policy and professional advocacy. Covers resume writing, interviewing and employability skills. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Take OTA-850. Take OTA-851.

OTA-206 Community Health and Special Populations (3)

Provides knowledge and instruction for the intervention, prevention, and maintenance for optimal occupational performance in individuals and populations. Includes clinical observations. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take OTA-851.

OTA-207 OT Methods I (3)

Introduces methods and techniques used in OT. Provides knowledge and skill in the use of activity analysis, task analysis, occupational performance, and grading and adapting. Presents information on safety in the clinic with basic health skills performance. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

OTA-211 Pathophysiology for the OTA (4)

Presents clinical disorders and diseases commonly treated in the field of occupational therapy. Covers pathology, etiology, diagnosis, signs, symptoms and prognosis. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Take OTA-101. Take OTA-207. Take either BIO-168 and BIO-173, or take BIO-177 and BIO-180.

OTA-212 Functional Kinesiology (3)

Provides a basic understanding of normal body movement as related to skeletal, muscular and neurological systems. Focuses on muscle origin, insertion and action, joint structure, anatomical palpation, human gait, and movement analysis during functional activities and daily life skills. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take BIO-161. Take OTA-101. Take OTA-207.

OTA-213 Occupational Development (2)

Presents normal physical and psychosocial development processes which affect an individual throughout the lifespan. Emphasis on integration of physical, psychosocial, cognitive, social and cultural aspects of occupational development. Clinic observation experience is included. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Pre/corequisite: Take OTA-101. Take OTA-207. Take PSY-111.

OTA-306 OT Methods II (3)

Presents evaluations and treatment methods for individuals used in occupational therapy. Emphasis on the instruction of compensatory techniques for activities of daily living and independent activities of daily living. Presents treatment-planning skills necessary for clinical reasoning in patient care. Documentation of the treatment process is presented. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take OTA-207.

OTA-308 Physical Dysfunction I (4)

Presents theory, evaluation and treatment technique for physical and cognitive occupational dysfunction. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take OTA-101. Take OTA-212. Take OTA-211.

OTA-309 Physical Dysfunction II (4)

Presents application of intervention approaches for individuals and groups with physical and cognitive occupational dysfunction. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Corequisite: Take OTA-308.

OTA-405 Psychosocial Dysfunction (4)

Presents diagnosis, symptomology and etiology of psychosocial dysfunction. Discusses theory, evaluation, and treatment techniques for individuals and groups with psychosocial impairments. Provides knowledge of OTR and COTA role delineation in psychiatric settings. Arts & Sciences Elective Code: B

Hours per week: 4.0 lecture

Prerequisite: Take OTA-213.

Corequisite: Take OTA-211.

OTA-406 OT Methods III (3)

Presents information for clinical skills in the areas of wheelchair selection and positioning. Presents the fabrication of splints, use of orthotics and kinesio-taping. Assisted technology, low vision treatment and physical agent modalities are discussed. Presents treatment options for various pathology groups and specialty treatment programs. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take OTA-306.

OTA-409 Professional Development (2)

Explores state and professional association regulations and requirements, licensure and certification exam preparation, OT/OTA role delineation, and job search and references. Seminars focus on best practices and professional preparation. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

Prerequisite: Take OTA-850.

Corequisite: Take OTA-852. Take OTA-854.

OTA-411 Geriatric Interventions for the OTA (1.5)

Provides knowledge and skills for assessment and treatment of the geriatric population. Arts & Sciences Elective Code: B

Hours per week: 1.5 lecture

Prerequisite: Take OTA-213. Take OTA-306. Take OTA-309.

OTA-412 Pediatric Interventions for the OTA (3)

Provides knowledge and skills for the assessment, intervention planning and treatment for the unique needs of the pediatric population. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take OTA-213. Take OTA-306.

OTA-850 Occupational Therapy Assistant Fieldwork I-A (1)

Provides fieldwork and seminar experiences to develop observational, interpersonal, and communication abilities. Includes involvement with disabled and non-disabled individuals. Arts & Sciences Elective Code: B; Comments: Requires all first semester courses be completed

Hours per week: 0.5 lecture, 1.5 clinical

Prerequisite: Take OTA-213.

Corequisite: Take OTA-306.

Pre/corequisite: Take OTA-211. Take OTA-212.

OTA-851 Occupational Therapy Assistant Fieldwork I-B (1)

Fieldwork and seminar experiences provide opportunities to develop observational, interpersonal and communication abilities. Experience includes evaluation and intervention of physical and cognitive occupational dysfunction. Arts & Sciences Elective Code: B

Hours per week: 0.5 lecture, 1.5 clinical

Prerequisite: Take OTA-213. Take OTA-211. Take OTA-212. Take OTA-306.

OTA-852 Occupational Therapy Assistant Fieldwork II-A (6)

Provides a supervised Level II fieldwork experience emphasizing physical dysfunction, psychosocial or specialty practices in occupational therapy. Offers experience to develop expectations of an entry-level occupational therapy assistant. Arts & Sciences Elective Code: B

Hours per week: 18.0 clinical

Prerequisite: Take OTA-851.

Corequisite: Take OTA-409. Take OTA-854.

OTA-853 OTA Fieldwork I-C (2.5)

Fieldwork and seminar experiences provide opportunities to develop observational, interpersonal and communication skills. Arts & Sciences Elective Code: B

Hours per week: 1.5 lecture, 3.0 clinical

Prerequisite: Take OTA-850.

OTA-854 Occupational Therapy Assistant Fieldwork II-B (6)

Provides a supervised Level II fieldwork experience emphasizing physical dysfunction, dysfunction, psychosocial or specialty practices in occupational therapy. Offers experience to develop expectations of an entry-level occupational therapy assistant. Arts & Sciences Elective Code: B

Hours per week: 18.0 clinical

Corequisite: Take OTA-852. Take OTA-409.

OTA-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

Physical Education Activity (PEA)

PEA-102 Aerobic Fitness I (1)

Focuses on the development of cardiovascular fitness through structured individual and group exercise activities. Arts & Sciences Elective Code: A

Hours per week: 2.0 lab

PEA-162 Speed and Conditioning I (1)

Focuses on the coordination of muscular movements for improved motor skill through structured individual and group exercise activities. Arts & Sciences Elective Code: A

Hours per week: 2.0 lab

PEA-187 Weight Training I (1)
Provides the basics of weight conditioning along with general workout opportunity. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

PEA-287 Weight Training II (1)
Provides further experiences in weight conditioning, such as circuit training and variation in the training regime. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

PEA-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

PEA-928 Independent Study (1-3)
Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 2.0 lab

Coaching Officiating (PEC)

PEC-111 Techniques and Theory of Coaching (2)
Introduces the philosophical and ethical issues in athletic coaching. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

PEC-116 Athletic Development and Human Growth (2)
Explains basic concepts of sports psychology. Focuses on improving human skill, enhancing group effort and understanding the reduction of stress. Encompasses some of the diverse topic areas important to both psychologists in general and those focused on athletic feats. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

PEC-126 Athletic Injury Prevention (2)
Introduces conditioning programs and training methods that tend to prevent athletic injuries. Provides basic skills in injury evaluation, treatment procedures and practical experience in taping techniques. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

PEC-148 Theory of Coaching Basketball (2)
Introduces the coaching profession with specific emphasis on basketball fundamentals, strategy, organization, public relations and coaching psychology. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture

PEC-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

PEC-928 Independent Study (1-3)
Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 2.0 lab

General Physical Education & Health (PEH)

PEH-111 Personal Wellness (3)
Emphasizes the importance of personal responsibility in health and wellness. Focuses on personal decision making in cardiovascular fitness, muscular fitness, nutrition and weight control, as well as aging and health. Reinforces improvement and maintaining quality of life through health and healthy decisions. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PEH-155 Exercise Psychology (3)
Provides an overview of the theories and practices related to engagement in physical activity. Emphasizes motivational theories of behavior and behavioral changes as they relate to exercise and health. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PEH-160 Fundamentals of Health Coaching (3)
Reviews health coaching and its relevance in today's health care industry. Includes information on coaching psychology, insight on weight management psychology, the physiology of obesity, techniques for lifestyle coaching, and the relationship between exercise and nutrition for weight control. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PEH-165 Introduction to Complementary and Alternative Medicine (3)
Discusses the most commonly used complementary and alternative medicine modalities in the U.S. Focuses on the five domains of complementary and alternative medicine: alternative medical systems (traditional Chinese medicine, ayurveda, homeopathy, naturopathy), mind-body medicine (techniques designed to facilitate the mind's capacity to affect the physical body's functions in health and illness, such as meditation and yoga), manual therapies (massage, chiropractic), energy-based therapies (biofeedback, acupuncture), and biologically-based therapies (herbal medicine, dietary supplements). Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PEH-170 Principles of Weight Training (3)
Reviews the anatomical and physiological processes of muscle growth and development, and the effects of strength training on those processes. Introduces fundamental principles and techniques of strength training, and applies those principles toward personal fitness development and development of programs for health and performance. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Minimum C- in EXS-120 or BIO-168.

PEH-191 Sports Nutrition (3)
Examines nutrition's effect on health and human performance, including the study of supplementation and specific diets. Focuses on the role of nutrition in disease prevention, special population activity and general performance enhancement. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PEH-255 Principles of Sports Management (3)
Provides an overview of the theories and practices related to management and leadership in the fitness and sports industries. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PEH-270 Exercise Prescription for Special Populations (3)
Provides practical information on exercise for people with special diseases and disabilities. Discusses each unique condition, effects of the condition on the exercise response, effects of exercise training on the condition, and recommendations for exercise testing and programming. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PEH-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

PEH-928 Independent Study (1-3)
Allows the student to pursue a special concentration of study under the guidance of a faculty member. Requires an independent study contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising faculty member and dean
Hours per week: 2.0 lab

Intercollegiate Physical Education (PEV)

PEV-115 Varsity Baseball (1)
Designed to give credit for knowledge and skills gained through varsity sports baseball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

PEV-121 Varsity Basketball, Men (1)
Designed to give credit for knowledge and skills gained through varsity sports basketball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

PEV-122 Varsity Basketball, Women (1)
Designed to give credit for knowledge and skills gained through varsity sports basketball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

PEV-140 Varsity Golf (1)
Designed to give credit for knowledge and skills gained through varsity sports golf participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

PEV-160 Varsity Softball (1)
Designed to give credit for knowledge and skills gained through varsity sports softball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

PEV-170 Varsity Volleyball (1)
Designed to give credit for knowledge and skills gained through varsity sports volleyball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

PEV-215 Varsity Baseball II (1)
Designed to give credit for knowledge and skills gained through varsity sports baseball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Take PEV-115

PEV-221 Varsity Basketball II, Men (1)
Designed to give credit for knowledge and skills gained through varsity sports basketball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Take PEV-121

PEV-222 Varsity Basketball II, Women (1)
Designed to give credit for knowledge and skills gained through varsity sports basketball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Take PEV-122

PEV-240 Varsity Golf II (1)
Designed to give credit for knowledge and skills gained through varsity sports golf participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Take PEV-140

PEV-260 Varsity Softball II (1)
Designed to give credit for knowledge and skills gained through varsity sports softball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Take PEV-160

PEV-270 Varsity Volleyball II (1)
Designed to give credit for knowledge and skills gained through varsity sports volleyball participation during an academic year. Arts & Sciences Elective Code: A; Comments: Students may earn one credit per year for each varsity sport in which they participate. Students in multiple varsity sports may earn four credits total in Varsity sports participation courses.
Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Take PEV-170

Philosophy (PHI)

PHI-101 Introduction to Philosophy (3)
Explores fundamental issues such as the meaning of life, whether God exists, what is ultimately real, who we are as human beings, whether we have free will, what is the nature of justice and the good life, and if it is possible to have knowledge about such issues. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PHI-105 Introduction to Ethics (3)
Explores ethical theories including utilitarian ethics, duty-based ethics, and virtue ethics. Considers how to apply ethical thinking to everyday situations, political issues, and workplace dilemmas. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PHI-111 Basic Reasoning (3)
Explores the two basic kinds of arguments (deductive and non-deductive) and basic techniques for analyzing and evaluating them. Possible course units include truth tables, logical proofs, fallacies, and conspiracy theories. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PHI-126 Chinese Philosophies (3)
Introduces some of the main philosophies of the Chinese tradition. Includes study of the history and culture of China, especially the Classical Period, with a focus on philosophical perspectives. The majority of time will be spent studying classical Chinese Confucianism, Taoism, Mohism and Legalism, with some emphasis on Chinese Buddhism and Neo-Confucianism. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PHI-135 Multicultural Ethics (3)
Explores issues related to diversity, such as war, immigration, refugee crises, differences of race, class, gender and sexual orientation, human rights, and moral relativism. Introduces core aspects of non-Western views of morality, such as Confucian, Hindu, Buddhist, Islamic, and African ethics. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PHI-160 Environmental Ethics (3)
Examines contemporary environmental issues in light of traditional and contemporary ethical thought. Explores concerns such as species extinction, global climate change, ecosystemic degradation, animal rights, and unequal effects of environmental harm on humans. Ethical perspectives include duty ethics, utilitarianism, ethics of care, virtue ethics, deep ecology, ecological feminism, the land ethic, and social ecology. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PHI-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

PHI-928 Independent Study (1-3)
Provides readings, papers, study and/or research under the guidance of a faculty member. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Pharmacy Tech (PHR)

PHR-154 Pharmacology for Pharmacy Technician I (2)
Provides an understanding of pharmacology terms as well as working knowledge of pharmacologic therapies used to treat common diseases. Teaches the side effects of prescription and non-prescription medications required by a pharmacy technician. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

PHR-156 Pharmacology for Pharmacy Technician II (2)
Builds upon the concepts of PHR-154. Provides understanding and knowledge base of pharmacologic therapies used to treat complex diseases. Teaches the unique knowledge base needed by pharmacy technicians. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Take PHR-154.

PHR-165 Pharmacy Technician Calculations and Compounding With Lab (4)
Introduces calculations and conversions necessary to prepare doses and medication products. Teaches common sterile and non-sterile compounding techniques. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take PHR-175.

PHR-173 Pharmacy Technician Clinical (1.5)

Provides the learner with opportunities for observation and supervised participation in hospital, retail pharmacy, and simulation settings. Arts & Sciences Elective Code: B
Hours per week: 4.5 clinical

Prerequisite: Minimum C in PHR-154. Take PHR-175.

Corequisite: Take PHR-165.

PHR-175 Pharmacy Technician Operations and Regulations (4)

Provides operational responsibilities required of the pharmacy technician. Integrates hands-on day-to-day tasks performed in common pharmacy practice settings. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Physical Science (PHS)

PHS-151 Introduction to Astronomy (3)

Centers around a variety of topics including the universe and the earth in space, properties of stars, nuclear energy sources, the solar system, quasars, black holes and life in the universe. Incorporates laboratories and observations. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

PHS-170 Physical Geology (3)

Explores how natural forces shape our planet and how geology is tied together through the theory of plate tectonics. Covers common earth materials, history of the Earth, geological resources and geologic hazards. Arts & Sciences Elective Code: A; Comments: Either Physical Geology (PHS-170) or Environmental Geology (PHS-175) will satisfy three hours of science core requirements. However, both cannot be counted toward meeting core. If both courses are taken, the second will count as an elective.
Hours per week: 3.0 lecture

PHS-171 Physical Geology Lab (1)

Designed to be taken with PHS-170. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Pre/corequisite: Take PHS-170.

PHS-175 Environmental Geology (3)

Examines the effects of geological processes and geohazards on human life and activities. Explores common earth materials, volcanoes, earthquakes, flooding, water pollution, mining, and climate change. Arts & Sciences Elective Code: A; Comments: Either Physical Geology (PHS-170) or Environmental Geology (PHS-175) will satisfy three hours of science core requirements. However, both cannot be counted toward meeting core. If both courses are taken, the second will count as an elective.
Hours per week: 3.0 lecture

PHS-176 Environmental Geology Laboratory (1)

Designed to be taken with PHS-175. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Pre/corequisite: Take PHS-175.

PHS-180 Evolution of the Earth (3)

Considers interdisciplinary principles, techniques and methods essential to the interpretation of the geological history of the earth. Examines the development of plate tectonics, changes in the Earth's climate, and the progression and evolution of life from 4.5 billion years ago to present time. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PHS-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

PHS-928 Independent Study (1)

Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 2.0 lab

Physics (PHY)

PHY-120 Introductory Physics (3)

Provides basic work with scientific reasoning and fundamental concepts in classical and modern physics. Provides opportunities for measurements and application of concepts in a lab setting. Arts & Sciences Elective Code: A
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take MAT-102, MAT-707, MAT-716, or a qualifying placement test score.

PHY-162 College Physics I (4)

Emphasizes introductory physics concepts and methods of scientific reasoning. Introduces the structure and properties of matter, descriptions of motion, Newton's Laws, conservation laws, rotational motion, fluid statics, fluid dynamics and thermodynamics. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take MAT-102, MAT-708, or a qualifying placement test score.

PHY-172 College Physics II (4)

Continues College Physics I. Includes static and current electricity, electromagnetism, wave motion, optics, atomic and nuclear physics. Integrates applications to the life sciences with material throughout the semester. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Take PHY-162.

PHY-180 Applied Physics I (2)

Introduces the basic science of applied physics for industrial settings. Teaches Newton's law, physics of matter, temperature and heat, fluids and pressures, thermodynamics, and psychometrics. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take MAT-232.

PHY-190 Physics I (3)

Covers physical concepts needed to understand and practice mechanical engineering technology. Includes measurement and vectors, static equilibrium, torque, uniformly accelerated motion, Newton's laws, friction, work, energy and power, and simple machines. Emphasizes problem solving, teamwork and data collection using PC-based data acquisition equipment. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take MAT-076 or MAT-607, or qualifying placement test score.

PHY-192 Physics II (3)

Continues Physics I with topics useful to mechanical engineering technology. Includes impulse/momentum, rotational motion, dynamics of rotation, fluids, properties of materials and simple harmonic motion, temperature, matter and heat energy, and introductory thermodynamics. Emphasizes problem solving, teamwork and data collection using PC-based data acquisition equipment. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take PHY-190. Take MAT-745.

PHY-212 Classical Physics I (5)

Introduces physics using calculus-level mathematics. Covers vectors, linear and rotational kinematics, statics, dynamics, and oscillatory and wave motion. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture, 2.0 lab

Prerequisite: Take MAT-210.

PHY-222 Classical Physics II (5)

Continues Classical Physics I. Includes thermodynamics, static and current electricity, electromagnetism, geometric and wave optics, and a brief introduction to modern physics. Arts & Sciences Elective Code: A
Hours per week: 4.0 lecture, 2.0 lab

Prerequisite: Take MAT-216. Take PHY-212

PHY-230 Technical Physics I (3)

Studies the technical applications of motion, force, momentum, statics, work, rotation and simple machines. Emphasizes concepts through laboratory and lecture. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take MAT-746.

PHY-232 Technical Physics II (3)

Subjects studied include matter, fluids, temperature and heat transfer, properties of gases, wave motion and sound, light, reflection and refraction, color, and modern physics. Concepts are emphasized through laboratory and lecture. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take PHY-230.

PHY-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean
Hours per week: 1.0 lecture

Plumbing (PLU)

PLU-130 Plumbing Theory I (6)

Provides instruction on the basic principles of plumbing system installations. At the conclusion of the course, the student will be able to complete a variety of plumbing-related tasks such as identify and describe safe work practices; identify and explain the materials, fittings and supports used in a plumbing installation; identify the Uniform Plumbing Code; identify the content covered in each chapter of the UPC and perform basic pipe sizing; create plan and elevation plumbing drawings and sketches; and identify and describe potable water systems, water wells and basic water treatment. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture, 4.0 lab

PLU-132 Plumbing Theory II (8)

Provides instruction in all aspects of plumbing installations in a residential setting. Students learn to plan, design and install a plumbing drain, a waste and vent system, plumbing fixtures, water distribution systems, natural gas supply piping, venting, and chimney systems in accordance with the Uniform Plumbing Code, state and local amendments. Arts & Sciences Elective Code: B
Hours per week: 6.0 lecture, 4.0 lab

Prerequisite: Take PLU-130.

PLU-140 Plumbing Practices I (4)

Provides instruction on common pipe joining techniques and common pipe fitting procedures for pressure and drainage weight pipe and fittings. At the completion of the course, the student will be able to identify the common materials used in plumbing and gas piping systems, identify and perform common joining methods used on piping materials, and maintain a job log of time spent and materials used for each of the piping assignments. Arts & Sciences Elective Code: B
Hours per week: 8.0 lab

PLU-142 Plumbing Practices II (4)

Provides instruction for installation of plumbing systems. At the completion of the course, the student will be able to plan, design and install a plumbing drain, a waste and vent system, plumbing fixtures, water distribution systems, natural gas supply piping, venting, and chimney systems in accordance with the Uniform Plumbing Code, state and local amendments. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 6.0 lab

Prerequisite: Take PLU-140.

PLU-148 Plan and Print Reading for Plumbing (2)

Provides instruction in plan and print reading for plumbing system installations. Combines plan and print reading assignments together with drawing assignments. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

PLU-150 Plumbing Plan and Print Reading II (2)
Provides instruction on reading, interpreting and understanding standard construction drawings. From a given construction drawing, students develop piping sketches including plan, elevation and isometric views, size drain waste and vent piping by use of the Uniform Plumbing Code and the City of Cedar Rapids amendments, prepare a materials list from a given piping sketch and download and print a variety of manufacturers' product information sheets for fixtures, faucets, fittings and other related items. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take PLU-148.

PLU-932 Internship (1-2)
Focuses on providing the student practical experience in a plumbing related work environment. Includes employer/supervisor evaluations and instructor visits/interview. Arts & Sciences Elective Code: B
Hours per week: 4.0 internship

Practical Nursing (PNN)

PNN-228 Foundations of Nursing I (6)
Focuses on the care of older adults with health alterations that require medical interventions. Emphasizes knowledge, competencies and skills needed to provide safe and evidence-based care for the patient with health alterations. Encourages students to apply the nursing process as a decision-making framework to assist in developing effective clinical judgment skills. Integrates pathophysiology, pharmacology and nutrition in the selected disease states. Integrates evidence-based practice, patient-centered care, safety, cultural sensitivity, interdisciplinary collaboration and professionalism throughout the course. Provides students with the opportunity to apply course concepts, demonstrate skills, and care for older adult patients in supervised laboratory and/or simulation experiences. Emphasizes patient safety, application of the nursing process, and development of communication skills within the scope of practice of the PN. Arts & Sciences Elective Code: B
Hours per week: 5.0 lecture, 2.0 lab

Prerequisite: Take BIO-151. Minimum B- in BIO-168. Minimum B- in BIO-173. Minimum B- in HSC-189.

PNN-229 Foundations of Nursing II (4)
Focuses on the care of adult patients with health alterations that require medical and/or surgical intervention. Provides a decision-making framework, through the nursing process, to assist students in developing effective clinical judgment skills. Integrates pathophysiology, pharmacology and nutrition in the selected disease states, with concepts of evidenced-based practice, patient-centered care, safety and professionalism. Arts & Sciences Elective Code: B
Hours per week: 3.25 lecture, 1.5 lab

Prerequisite: Take PNN-228. Take PNN-721 Take PNN-280 Take PNN-293

PNN-280 Pharmacology I (2)
Provides first semester nursing students enrolled in the Associate Degree and Practical Nursing programs a foundation for pharmacological nursing. Utilizes the nursing process as the framework for presenting concepts and principles of pharmacology and drug administration. Focuses on basic pharmacological calculation concepts for safe medication administration. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Minimum B- in HSC-189, or both HSC-191 and HSC-195.

PNN-282 Pharmacology II (2)
Provides second semester nursing students enrolled in the Practical and Associate Degree Nursing programs with additional pharmacological tools. Builds on pharmacological nursing using the nursing process as the framework introduced in Pharmacology I. Discusses actions, interactions, adverse effects, nursing implications for drugs for multiple body systems and differences across the lifespan. Progresses with dosage calculation through advanced pharmacological calculations for safe medication administration. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Minimum B- in PNN-293. Minimum B- in PNN-280.

PNN-293 Health Assessment (3)
Introduces health history taking, physical assessment and documentation required for professional nursing practice. Integrates focused and comprehensive health assessments, utilizing professional behavior, communication and collaborative teamwork, with collection and analysis of data, which is essential in planning safe and effective care. Emphasizes critical thinking and clinical reasoning skills, health assessment as a systematic and organized examination that provides accurate data in which to form evidenced-based health promotion, education and priority patient centered nursing plans of care. Arts & Sciences Elective Code: B
Hours per week: 2.5 lecture, 1.0 lab

Prerequisite: Minimum B- in HSC-189.

PNN-446 Nursing Care of the Growing Family (4)
Builds on the concepts of previous nursing courses with an emphasis on nursing care with men's and women's health during the reproductive years, including antepartum, intrapartum, postpartum and newborn periods. Focuses on health promotion, disease prevention and common alterations in health. Discusses care of the well and hospitalized child and family. Includes lab experiences with simulation and in a community based setting. Arts & Sciences Elective Code: B
Hours per week: 3.75 lecture, 0.5 lab

Prerequisite: Take PNN-228. Take PNN-721.

PNN-721 Foundations of Nursing Clinical I (2)
Introduces the application of nursing care concepts in a clinical setting. Provides a decision-making framework in developing effective clinical judgment skills. Applies basic assessment and patient care concepts, including patient centered care, cultural sensitivity, informatics, safe practice and professionalism. Arts & Sciences Elective Code: B
Hours per week: 6.0 clinical

Prerequisite: Minimum B- in HSC-189. Take PNN-293. Pass the pass/fail lab component of PNN-228 Foundations of Nursing I. Earn a 78% total course point percentage in PNN-228 by midterm.

PNN-723 Foundations of Nursing Clinical II (2)
Provides the opportunity to advance knowledge in the application of the patient care concepts in the clinical setting. Includes integration of pathophysiology, nutrition and pharmacology, as well as the application of the nursing process, refining basic assessment skills, patient-centered care, cultural sensitivity, informatics, safe practice and professionalism. Arts & Sciences Elective Code: B
Hours per week: 6.0 clinical

Prerequisite: Take PNN-228. Take PNN-721.

PNN-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

Political Science (POL)

POL-110 Introduction to Political Science (3)
Studies selected concepts, processes, behaviors, institutions and ideologies central to the study of politics. Introduces related topics such as political culture, terrorism and doctrines, including authoritarianism, conservatism, liberalism and totalitarianism, among others. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

POL-111 American National Government (3)
Studies American policy based on a close examination of the processes of decision making. Emphasis is placed on voting behavior and citizen interaction within the system. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

POL-121 International Relations (3)
Analyzes governments in the more developed countries (MDCs) and in the less developed countries (LDCs) and the interaction of these governments in their political, economic and security dimensions. Also analyzes the sources of policy and their theoretical foundations. Problems are examined through current world concerns. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

POL-125 Comparative Government and Politics (3)
Studies the systems of government of several countries taking into consideration citizen participation and policy-making processes. Includes basic theories, methods and concepts of comparative study. Examines similarities and differences of political structures including political parties and executive and legislative institutions. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

POL-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of an honors faculty member. Requires completion of an Honors Project Learning Contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

POL-928 Independent Study (1-3)
Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Paralegal (PRL)

PRL-103 Introduction to Law (3)
Provides an overview of the American legal system and the practice of law. Introduces students to legal processes, court systems, courses of law, basic legal research methods, and to the nature of ethics and regulations of legal professions. Introduces the substantive law and skill areas students will encounter in subsequent legal courses. Examines the relationship between different kinds of legal systems and between social sciences and law. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PRL-116 Fundamentals of Legal Research and Writing (3)
Focuses on using a law library and internet-based legal resources to solve legal problems including research strategies, analysis and application of law, and communication of research results orally and in written legal memoranda. Presents legal document preparation software, and the ethical duty of honesty and candor. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-117 Advanced Legal Research and Writing (3)
Provides instruction in internet-based legal resources and explores multiple methods to address complex legal research problems. Explores utilizing research results in appellate briefs and other advocacy legal documents. Instructs students in the use of legal document preparation software and the ethical duty of honesty and candor. Provides instruction on navigating Iowa's judicial website including the electronic filing system (EDMS). Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take PRL-116 or PRL-110.

PRL-121 Investigation for Paralegals (3)
Presents an overview of the fact-gathering process for paralegals including principles and techniques of investigation, sources of public and private information, methods for preserving information, and analyzing the probativeness, sufficiency and admissibility of facts for trial. Explores the Rules of Evidence and their application to the investigation process. Teaches the ethical duty of confidentiality and attorney-client privilege as it relates to investigations. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-133 Torts (3)
Provides instruction on the principles of tort law. Explores differences between intentional torts, negligence, and strict liability. Emphasizes the use and interpretation of primary and secondary sources of law to understand similarities and differences of torts. Explores and discusses the common use of the contingency fee agreement in tort law. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-143 Business Organization Law (3)

Provides instruction in the law of legal entities used in conducting business. Explores the similarities and differences between sole proprietorships, partnerships, corporations, limited liability companies, and other types of business organizations. Examines the process necessary for the creation and existence of various business organizations. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-151 Real Estate Law (3)

Studies the law of real property. Examines common types of real estate transactions and conveyances. Explores the history of the real property system used in the United States. Offers available methods to finance real estate transactions. Explores title examination and title insurance. Teaches the ethical duty of competence. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-161 Family Law (3)

Introduces the laws of marriage and divorce. Explores the historical context of divorce in the United States. Addresses the divorce process including child custody, child support, spousal support, property division, and jurisdiction. Explores paternity, adoption, and juvenile matters, and the ethical duty of conflict of interest. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-166 Estate Planning/Administration (3)

Provides instruction in the methods available for lifetime and testamentary estate planning. Provides instruction in the estate probate process. Examines the role of the Probate Court in the administration of estates. Examines the tax benefits and consequences associated with estate planning. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-171 Administrative Law (3)

Explores concepts of administration law and procedure at the federal and state levels. Students will learn the paralegal's role in the administrative process. Topics include agency discretion, delegation, agency rule making, agency investigations, formal adjudications and agency accountability. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-174 Contracts (3)

Teaches the principles of contract law. Explores the required elements necessary for the creation of enforceable contracts and remedies available for breach of contract. Integrates the preparation and interpretation of contracts. Examines provisions of the Uniform Commercial Code relevant to contract law. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-176 Civil Litigation (3)

Teaches the rules, processes and paralegal skills for preparing cases for civil trials, including the preparation of complaints, discovery and motions. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-186 Employment Law Topics (3)

Studies the legal aspects of the employer-employee relationship. Examines federal labor laws, civil rights laws, privacy and harassment laws, and the Americans With Disabilities Act. Examines human resource management issues related to employment. Addresses the role of various administrative agencies in their regulation of employment. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-192 Criminal Law and Procedure for the Paralegal (3)

Introduces the basic principles of criminal law and criminal procedure. Examines common law and statutory law. Covers the Iowa Rules of Criminal Procedure and examines differences between Iowa and other jurisdictions. Identifies the processes required to prepare a criminal case for trial. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-193 Constitutional Law (3)

Introduces the underlying political structure of the American judiciary. Explores the political and legal foundations for civil rights and civil liberties. Develops an appreciation for interpreting and applying the Constitution as an expression of our deepest democratic values. Discusses the development of civil rights and liberties under the Bill of Rights, the Fourteenth Amendment, and legislative enactments. Examines the political and legal foundations of privacy and equality in the American political system. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PRL-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

PRL-928 Independent Study (1)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

PRL-932 Internship (3)

Provides an opportunity to use and refine paralegal skills in a work setting with the guidance of legal professionals. Integrates monthly seminars throughout the internship semester to share and gain perspective on experiences. Arts & Sciences Elective Code: B
Hours per week: 12.0 internship

Prerequisite: Take PRL-101.

Psychology (PSY)

PSY-111 Introduction to Psychology (3)
Introduces the scientific study of mental processes and behavior with emphasis on the nervous system, learning and memory, cognition, sensation and perception, motivation and emotion, personality, intelligence, stress, psychological disorders and therapy, and social influence. Stresses roles of both theory and empirical evidence in describing, explaining and predicting behavior. Encourages critical thinking about research methods and ethics. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

PSY-121 Developmental Psychology (3)
Introduces physical, cognitive and psychosocial development from a lifespan perspective covering conception until death. Provides an introduction to major theories and classic and contemporary research, and examines normative development as impacted by genes, maturation, experience, cohort, gender, race, social class and culture. Discusses topics including developmental research methods; genetics; prenatal development; infancy; childhood; adolescence; early, middle and late adulthood; and death and bereavement. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take PSY-111.

PSY-251 Social Psychology (3)
Explores how an individual's thinking, feelings and behavior are affected by others. Covers research methods, ethics, and classic as well as contemporary research on topics including social beliefs and judgments, self and person perception, attitude formation and change, prejudice, aggression and conflict, helping and prosocial behavior, interpersonal attraction, gender-related behavior, conformity and deviation, persuasion, and group influence. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

Prerequisite: Take PSY-111.

PSY-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contact. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

Physical Therapist Assistant (PTA)

PTA-101 Introduction to PTA (2)
Provides an overview of the physical therapy profession and the national organization, APTA. Discusses the role of the PTA including legal and ethical practice, as well as evidence-based practice. Explores reaction to disability and considers communication strategies. Discusses the patient care process and the treatment of diverse populations. Includes concepts of learning self and peer assessments and goal setting. Requires three mandatory face-to-face sessions with the remainder of the course work completed online. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

PTA-103 PTA Patient Assessment (2)
Explores the concept of patient assessment, beginning with the patient interview and including a variety of tests and measures that are performed by the physical therapist assistant. Addresses infection control and documentation. Includes discussion, laboratory practice and performance testing for selected tests and measures. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

PTA-110 Fundamentals for PTA (3)
Introduces patient care activities for the PTA, including positioning and draping, posture and body mechanics. Covers pre-ambulation activities, including exercise and functional activities, fitting of assistive devices, gait training, and negotiation of architectural barriers. Includes a 32-hour off-campus clinical experience. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take PTA-103. Take PTA-120. Take PTA-140.

PTA-120 Kinesiology (3)
Provides a basic understanding of normal human body movement as related to skeletal, articular, neurological and muscular systems. Addresses movement of arm, levers, torque, center of gravity and base of support as they relate to balance. Covers anatomical palpation, normal posture and gait. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

PTA-140 Functional Motor Development (3)
Presents normal human development as it relates to movement and functional independence. Covers lifetime development of each body system, and the functional implications of changes in these body systems. Discusses the psychosocial issues typical at each stage of the lifespan and useful teaching strategies for physical therapy interventions. Includes a 15-hour off-campus service learning experience. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

PTA-150 Pathophysiology (3)
Presents clinical disorders and diseases commonly treated in physical therapy. Covers pathology, etiology, diagnosis, signs, symptoms and prognosis. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take PTA-120. Take BIO-168. Take BIO-173.

PTA-160 PTA Procedures I (3)
Introduces assessment skills and exercise procedures performed by the PTA. Covers theory and application of goniometry, manual muscle testing, and palpation. Introduces basic exercise choices as they relate to results of assessment procedures. Includes laboratory demonstration and practice of each skill. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take BIO-168. Take BIO-173. Take PTA-103. Take PTA-110. Take PTA-120. Take PTA-150. Take PTA-196.

PTA-161 PTA Procedures II (3)

Introduces additional assessment skills performed by the PTA. Provides an introduction to therapeutic exercise principles. Covers theory and application of exercise techniques including range of motion, strengthening, flexibility, and aerobic exercise. Includes laboratory demonstration and practice of each skill. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take BIO-168. Take BIO-173. Take PTA-103. Take PTA-110. Take PTA-120. Take PTA-150. Take PTA-196.

Corequisite: Take PTA-160.

PTA-196 PTA Modalities (4)

Prepares the student to use modalities for patient/client management. Presents the science of modalities along with mechanisms of action, physiological processes, indications and contraindications for each modality. Discusses mechanisms of pain management and incorporates them into patient interventions. Covers patient preparation and assessment, the healing process, pain assessment, superficial and deep heat, cold, intermittent compression pumps/edema management strategies, therapeutic massage, spinal traction, ultrasound, diathermy, biofeedback, electrical stimulation (pain, edema, wound care and muscle dysfunction), wound care techniques and hydrotherapy. Includes physiological mechanisms, indications, contraindications, precautions as well as application techniques for each modality. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Pre/corequisite: Take PTA-120.

PTA-203 PTA Therapeutic Exercise (2)

Introduces therapeutic exercise with a focus on flexibility and strengthening. Reviews muscle function at each joint. Introduces concepts related to exercise choice and progression. Lab will include clinical reasoning, therapeutic exercise instruction and patient/client education using role playing and simulated patient cases. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Prerequisite: Take PTA-120.

PTA-215 Orthopedic Issues (4)

Provides application of clinical problem solving for patients with a variety of orthopedic conditions. Covers therapeutic interventions directed to specific impairments, activity limitations, and participation restrictions as well as precautions, contraindications, and special considerations based on diagnosis. Introduces the concept of following a physician protocol while working within the plan of care developed by the PT. Includes application of course concepts to patient assessment, interventions, progression, and patient and family education. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C in PTA-301.

PTA-232 Rehab for Medical Conditions (4)

Provides application of clinical problem solving for patients with a variety of general medical conditions. Covers therapeutic exercise directed to specific impairments, activity limitations, and participation restrictions as well as special considerations for a variety of medical diagnoses. Includes application of course concepts to patient assessment and interventions, patient progression, and patient and family education. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C in PTA-301.

PTA-241 Neurology for PTA (4)

Provides application of clinical problem solving for patients with a variety of neurological conditions, including pediatric and adult populations. Covers therapeutic interventions directed to specific impairments, activity limitations, and participation restrictions as well as precautions and special considerations based on diagnosis. Includes application of course concepts to patient assessment, interventions, progression, and patient and family education. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C in PTA-301.

PTA-250 PTA Career Essentials (2)

Discusses basic career principles, including levels of authority and responsibility, supervision, performance appraisals, policies and procedures and ethical and legal guidelines. Reviews rules and regulations governing PTA practice in Iowa, and the licensure application and preparation process. Discusses quality assurance, chart audits, varieties of reimbursement systems and their impact on health care delivery. Covers resume writing, interviewing and employment skills, as well as self and peer assessment as a tool for career development and lifelong learning. Integrates two mandatory face-to-face sessions with the remainder of the course material covered online. Arts & Sciences Elective Code: B; Comments: Involves a component of independent study as well as classroom activities
Hours per week: 2.0 lecture

Prerequisite: Take PTA-215. Take PTA-232. Take PTA-241. Take PTA-301. Take PTA-302.

Corequisite: Take PTA-432.

PTA-301 PTA Clinic I (2)

Prepares the student for clinical experiences and practice. Covers clinical reasoning, communication, ethical and legal guidelines, risk management, professionalism, supervision requirements, reimbursement and documentation as they relate to clinical practice. Explores the concepts of the PT/PTA and CI/student teams within a clinical setting and the process for student evaluation of clinical performance. Includes application of new concepts and skills learned in previous PTA course work to case studies and simulated patient care in selected clinical settings. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 4.5 clinical

Prerequisite: Take BIO-168. Take BIO-173. Take PTA-103. Take PTA-110. Take PTA-120. Take PTA-150. Take PTA-196.

Corequisite: Take PTA-160. Take PTA-161.

PTA-302 PTA Clinic II (2)

Includes application of new concepts and skills learned in previous PTA coursework to direct patient care in selected clinical settings. Includes classroom component reviewing concepts of clinical reasoning, communication, ethical and legal guidelines, risk management, professionalism, supervision requirements, evidence based practice, reimbursement, documentation and career development. Arts & Sciences Elective Code: B

Hours per week: 0.5 lecture, 4.5 clinical

Prerequisite: Take PTA-301.

PTA-432 PTA Clinic III (6)

Provides a full-time, off-site clinical experience in which students care for patients under the supervision of a licensed PT or PTA. Develops proficiency in students who apply previously learned concepts and skills to patient interactions and interventions. Expands clinical problem solving and critical thinking skills related to patient care. Arts & Sciences Elective Code: B

Hours per week: 18.0 clinical

Prerequisite: Minimum C in PTA-215. Minimum C in PTA-232. Minimum C in PTA-241. Minimum C in PTA-301. Minimum C in PTA-302.

Corequisite: Take PTA-250.

PTA-433 PTA Clinic IV (6)

Provides a full-time, off-site clinical experience for students to care for patients under the supervision of a licensed PT or PTA. Develops student proficiency in patient treatment interventions and interactions through continued application of previously learned concepts and skills. Prepares students for entry-level practice through advanced clinical problem solving and critical thinking related to patient care. Arts & Sciences Elective Code: B

Hours per week: 18.0 clinical

Prerequisite: Minimum C in PTA-432. Minimum C in PTA-215. Minimum C in PTA-232. Minimum C in PTA-241. Minimum C in PTA-301. Minimum C in PTA-302.

Corequisite: Take PTA-250.

PTA-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean

Hours per week: 1.0 lecture

Powerline (PWL)

PWL-326 Electrical Distribution Systems (2)

Encourages understanding and application of overhead and underground three-phase electrical distribution system principles, applications and components. Covers selection of proper conductors, cables and transformers and the importance of distribution system protection, insulation, coordination and overvoltage protection. Provides a comprehensive understanding of the emerging Smart Grid "Intelligent Power System" integration to wind, sun and steam power generation. Covers energy storage, advanced power electronics at the T&D distribution levels, networked control systems, automation, system optimization and real-time control. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 2.0 lab

Respiratory Therapy (RCP)

RCP-101 Respiratory Anatomy and Physiology Enrichment (1)

Provides entry level A&P knowledge of the cardiopulmonary system. Emphasizes concepts and systems introduced in BIO-161, to better recognize, assess, and identify those systems vital to Respiratory Therapy. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

Prerequisite: Minimum C- in BIO-161, or in both BIO-168 and BIO-173

RCP-120 Cardiopulmonary Assessment (1)

Provides the student with the necessary competencies to conduct a general head-to-toe integumentary assessment as well as a more detailed cardiovascular and chest/pulmonary assessment, enabling the student to identify and document any abnormalities. Arts & Sciences Elective Code: B

Hours per week: 0.5 lecture, 1.0 lab

Prerequisite: Minimum C- in BIO-161, or in both BIO-168 and BIO-173.

RCP-212 Introduction to Respiratory Care (3.5)

Provides the theory, equipment operation and application with laboratory exercises in airway management techniques, humidity therapy and physiologic changes associated with patient needs. Arts & Sciences Elective Code: B

Hours per week: 2.5 lecture, 2.0 lab

Prerequisite: Minimum C- in BIO-186. Minimum C- in CHM-110 or CHM-165.

RCP-220 Respiratory Care I (3)

Provides the theory, equipment operation and application with laboratory exercises in oxygen and other gas therapy; and aerosol drug therapy, with an introduction to respiratory pharmacology and airway clearance modalities. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Minimum C- in HSC-115. Take ENG-105, ENG-106, ENG-108 or ENG-120. Take HSC-107. Take RCP-212.

RCP-300 Respiratory Physiology (4)

Provides the essential concepts of cardiopulmonary anatomy and physiology with an emphasis on pulmonary homeostasis. Arts & Sciences Elective Code: B

Hours per week: 4.0 lecture

Prerequisite: Minimum C- in BIO-161, or in both BIO-168 and BIO-173. Minimum C- in MAT-102. Minimum C- in HSC-115. Minimum C- in RCP-101

RCP-370 Respiratory Pathology I (2)

Provides an introduction to the study of disease with an emphasis on terminology and basic disease processes. Examines common infectious diseases, acute and chronic respiratory diseases, and cardiovascular disorders. Concentrates on etiology, pathophysiology, signs and symptoms. Provides an overview of respiratory care for the surgical patient, as well as specific management of traumatic chest injury and head trauma. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture

Prerequisite: Minimum C- in RCP-300. Minimum C- in BIO-186.

RCP-380 Respiratory Pathology II (2.5)

Offers an in-depth study of pulmonary disorders relating the respiratory therapist's role in diagnosis, treatment, pharmacologic management and support; provides practice in gathering appropriate information and making prompt and correct patient care decisions. Arts & Sciences Elective Code: B

Hours per week: 2.5 lecture

Prerequisite: Minimum C- in RCP-370. Minimum C- in RCP-420. Take SPC-101, SPC-112 or COM-222.

RCP-420 Pulmonary Function Testing (2)

Provides theory and operation of equipment in pulmonary function testing with interpretation of test results. Laboratory exercises include gathering data from bedside spirometry, measuring weaning parameters, as well as standard pulmonary function laboratory testing. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture, 1.0 lab, 1.5 clinical

Prerequisite: Minimum C- in RCP-220. Minimum C- in RCP-300.

RCP-470 Cardiac Monitoring (1.5)

Surveys the theory and application of specialized diagnostic procedures, equipment and monitoring techniques in cardiac medicine. Includes ECG and monitoring leads, basic interpretation and dysrhythmia recognition, thermodilution cardiac output and oxymetrix-mixed venous oxygen measurements, pulmonary artery catheters, hemodynamics and clinical application. Arts & Sciences Elective Code: B

Hours per week: 1.5 lecture

Prerequisite: Minimum C- in RCP-220. Minimum C- in RCP-300. Minimum C- in RCP-420. Minimum C- in RCP-511. Minimum C- in RCP-512.

RCP-480 Advanced Cardiac Care (2.5)

Provides theory and laboratory practice in managing specific life-threatening cardiac dysrhythmias resulting from myocardial infarction. Includes review of basic life support, use of mechanical aids to establish an airway and maintain ventilation, ECG monitoring and recognition of life-threatening dysrhythmias, cardiac defibrillation, establishing an intravenous drug access, and initiating appropriate cardiac drug therapy. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 1.0 lab

Prerequisite: Minimum C- in RCP-470. Minimum C- in RCP-736.

RCP-511 Respiratory Care II-A (4)

Explores the theory, equipment operation and application with laboratory exercises in adult and pediatric/neonatal mechanical ventilation, IPPB and arterial blood gas analysis. Examines the effect of mechanical ventilation on acid base balance. Laboratory emphasis on the operation and application of adult and pediatric/neonatal ventilators. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C- in RCP-220. Minimum C- in RCP-300.

RCP-512 Respiratory Care II-B (4)

Builds upon concepts introduced in Respiratory Care II-A. Explores the theory, equipment operation and application with laboratory exercises in adult and pediatric/neonatal mechanical ventilation, IPPB and arterial blood gas analysis. Examines the effect of mechanical ventilation on acid base balance. Laboratory emphasis on the operation and application of adult and pediatric/neonatal ventilators. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture, 2.0 lab

Prerequisite: Minimum C- in RCP-220. Minimum C- in RCP-300. Minimum C- in RCP-511.

RCP-610 Perinatology (2.5)

Explores fetal growth and development, assessment of the high-risk newborn and respiratory care of the perinatal/pediatric patient. Reviews specific medical/surgical pathology in the newborn and pediatric patient. Arts & Sciences Elective Code: B

Hours per week: 2.0 lecture, 1.0 lab

Prerequisite: Minimum C- in RCP-370. Minimum C- in RCP-511. Minimum C- in RCP-512.

RCP-730 Respiratory Care Clinic I (2.5)

Provides students with clinical practice in order to demonstrate proficiency in physical assessment, oxygen therapy, airway care and IPPB skills. Students observe and practice mechanical ventilation and arterial blood gas analysis skills. Arts & Sciences Elective Code: B

Hours per week: 1.0 lab, 6.0 clinical

Prerequisite: Minimum C- in RCP-212.

RCP-736 Respiratory Care Clinic II (6)
Demonstrates proficiency in RC Clinic I skills and ventilation and arterial blood gas analysis. Provides practice in pediatric respiratory care, hemodynamic monitoring and proficiency in pulmonary function testing. Integrates observation of diagnostic techniques in ECG, cardiac catheterization lab and bronchoscopy lab. Arts & Sciences Elective Code: B
Hours per week: 0.5 lecture, 16.5 clinical

Prerequisite: Minimum C- in RCP-420. Minimum C- in RCP-511. Minimum C- in RCP-512. Minimum C- in RCP-730.

RCP-740 Respiratory Care Clinic III (6.5)
Provides students an opportunity to maintain proficiency in RC Clinics I and II skills, demonstrate proficiency in pediatric/perinatal respiratory care, practice clinical education techniques and observe management skills. Arts & Sciences Elective Code: B
Hours per week: 1.0 lab, 18.0 clinical

Prerequisite: Minimum C- in RCP-736.

RCP-850 Respiratory Care III (2.5)
Surveys the theory and application of specialized diagnostic procedures, equipment and monitoring techniques in pulmonary medicine and critical care. Includes bronchoscopy, oximetry, capnography and transcutaneous monitoring. Explores the elements of pulmonary rehabilitation with laboratory exercises in breathing retraining. Examines the theory and operation of pleural drainage systems. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 1.0 lab

Prerequisite: Minimum C- in RCP-370. Minimum C- in RCP-511. Minimum C- in RCP-512.

RCP-891 Respiratory Care Applications (2.5)
Culminates the learning activities of the previous five semesters of study in respiratory care. Integrates the theory and application of respiratory care to focus on case management, clinical problem solving, clinical simulation, and boards testing. Case discussions, activities, and understanding of case study managements, will selectively cover the spectrum of cardiopulmonary disorders for neonatal, pediatric, adult, and geriatric, along with outpatient protocols and application for all patients. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 1.0 lab

Prerequisite: Minimum C- in RCP-380. Minimum C- in RCP-470. Minimum C- in RCP-610. Minimum C- in RCP-736.

RCP-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

Reading (RDG)

RDG-130 Effective Reading Strategies (3)
Provides instruction in study skills and reading improvement for college readers. Develops flexibility in students' reading rates and strategies for improving comprehension of standard college texts. Provides practice with library, test taking, time management and vocabulary skills. Recommended to be taken in conjunction with another college-level course. Also recommend: Also recommended: an ACCUPLACER score of 45 or above, or ACT score of 16 or above. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

RDG-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

RDG-928 Independent Study (1-3)
Allows the student to pursue a special concentration of study under the guidance of a faculty member. Requires an independent study contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 2.0 lab

Religion (REL)

REL-101 Survey of World Religions (3)
Introduces the beliefs, values, and practices of several world religions. Explores the historical development of the traditions from their beginnings to today. Includes a study of some of the following: Native American traditions, Hinduism, Buddhism, Confucianism, Daoism, Shinto, Judaism, Christianity, and Islam. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

REL-120 Judaism, Christianity and Islam (3)
Introduces the beliefs, values, and practices of Judaism, Christianity and Islam. Explores the historical development of the traditions from their beginnings to today. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

REL-125 Introduction to Islam (3)
Introduces the beliefs, values, and practices of Islam. Explores the historical development of the tradition from its beginnings to today. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

REL-130 Introduction to Religions of the East (3)
Introduces the beliefs, values, and practices of several religious traditions that originated in South and East Asia. Explores the historical development of the traditions from their beginnings to today. Includes a study of some of the following: Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Daoism, and Shinto. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

REL-140 Religion in the United States (3)

Examines the impact of social, political, and cultural change on American religion since the 1960s, including debates over issues like race, sex, gender, moral and religious diversity, public education, climate change, religious freedom, American identity, and the future of pluralistic democracy. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

REL-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

REL-928 Independent Study (1-3)

Provides readings, papers, study and research under the guidance of a faculty member. Arts & Sciences Elective Code: A; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

Science (SCI)

SCI-120 Forensic Science (3)

Explores forensic science and its impact on science, society and the criminal justice system. Focuses on basic concepts in selected areas of chemistry, biochemistry, cell and molecular biology, and anatomy and physiology. Includes basic science and the realities and limitations of scientific methods when applied specifically to criminal investigation. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SCI-136 Field Experiences in Environmental and Natural Sciences (1-3)

Focuses on skills associated with performing fieldwork in Environmental and Natural Sciences. Teaches how to prepare for fieldwork, capture and use field notes, collect and analyze data, and prepare summary reports. Varies in field experience location. Can be taken more than once for credit. Arts & Sciences Elective Code: A
Hours per week: 2.0 lab

Student Development (SDV)

SDV-077 Supported Education - VITAL (3)

Provides academic support, accommodations and strategies VITAL students need to successfully complete the Kirkwood course of study. Develops an individualized education plan and accommodations plan designed to develop effective study skills and self-advocacy skills. Monitors students' progress in Kirkwood courses. Format is primarily individualized instruction. Arts & Sciences Elective Code: D; Comments: Concurrent enrollment in VITAL.
Hours per week: 6.0 lab

SDV-105 How College Works (3)

Self assessment of skills, interests, values and personality types to match natural abilities with best fit majors or careers. Discussion of success in college and life with an emphasis on communication skills, interpersonal skills, characteristics for personal growth, and wellness. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SDV-109 College 101 (3)

Directs students' attention to the college academic culture and connects them to resources that will aid in their success. Focuses on developing academic success skills. Includes study and classroom performance strategies, personal development, academic and career planning, and participation in the college culture. This course is designed for incoming freshmen. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SDV-928 Independent Study (1-3)

Broadens students' knowledge of personal skills, talents, interests and strengths. Focuses on researching career information and individually exploring a variety of career options, with assistance from the instructor. Students develop action plans for the future. Arts & Sciences Elective Code: A; Comments: Permission of instructor
Hours per week: 1.0 lecture

Sociology (SOC)

SOC-110 Introduction to Sociology (3)

Surveys the basic principles, concepts, research strategies and empirical findings representative of the field today. The course examines the range of sociological thought, identifies areas of specialization within the discipline and establishes a basis for further study in the field. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SOC-115 Social Problems (3)

Examines social problems as consequences of given types of social organization. Students examine research and theory to build an understanding of the definition, existence and persistence of social problems, as well as collective efforts to resolve those problems. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SOC-120 Marriage and Family (3)

Explores contemporary family institutions by studying the family as an ideological, demographic, historic, economic and legal entity. The marital life cycle is documented through current research. Marital dissolution and remarriage are also examined. The course emphasizes the continuities and discontinuities in the family experience of individuals and the society as a whole. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SOC-200 Minority Group Relations (3)

Examines majority-minority group relations from a sociological perspective with a focus on race, ethnicity, sexuality, gender, social class, disability, and other social categories. Addresses the historical, cultural, social, economic, and institutional development of these marginalized populations primarily within U.S. society. Concepts explored include privilege, oppression, stereotypes, prejudice, discrimination, exploitation, and other elements of social inequality. Teaches how to apply basic concepts central to intergroup relations, explore their implications in society, recognize individual standpoints in relation to those investigated, and integrate this knowledge into daily life. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SOC-220 Sociology of Aging (3)

Examines the trends of an aging society including demographic, economic and social trends that can meet with far-reaching social consequences affecting the present and future. Acquaints students with the typical aging process, including the social and psychological challenges related to that process. Offers study on national and global issues regarding late life development. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SOC-265 Introduction to Lesbian, Gay, Bisexual, Transgender, and Queer+ Studies (3)

Introduces Lesbian, Gay, Bisexual, Transgender, and Queer+ (LGBTQ+) studies. Explores the impact of social, cultural, historical and political factors on LGBTQ+ individuals and communities. Studies the social construction of LGBTQ+ persons and cultures across time and place, theoretical debates regarding sexual orientation, identity formation, LGBTQ+ people of color, gender roles and gender identity, homophobia, and HIV/AIDS. Includes contemporary LGBTQ+ issues in families, education, religion, media, healthcare, the military, and the law. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SOC-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires that student meet honors eligibility criteria. Requires completion for an honors project contract. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

SOC-928 Independent Study (1)

Provides readings, papers, basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

Speech (SPC)

SPC-101 Fundamentals of Oral Communication (3)

Studies basic communication theory and practice including communication process, interpersonal relationships, small group interaction and public speaking. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SPC-112 Public Speaking (3)

Studies the fundamentals of public speaking, emphasizing the process of speech preparation and delivery. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SPC-122 Interpersonal Communication (3)

Highlights the role of communication and focuses on becoming effective communicators in personal and professional relationships. Examines how the concepts of self and human behavior influence both interpersonal and intrapersonal communication. Introduces activities and techniques to improve one-on-one and small group communication skills, especially listening, nonverbal communication and conflict resolution. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SPC-132 Group Communication (3)

Examines the theory and techniques used in discussion and group processes. Develops leadership and group skills through frequent practical application in varying group sizes and opportunities. Arts & Sciences Elective Code: A
Hours per week: 3.0 lecture

SPC-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of an honors faculty member. Requires completion of an honors project learning contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

SPC-928 Independent Study (1-3)

Provides readings and research opportunities under the guidance of a faculty member. Arts & Sciences Elective Code: A; Comments: Permission of instructor
Hours per week: 1.0 lecture

Surgical Technology (SUR)

SUR-108 Introduction to Surgical Technology (2)

Provides an introduction to the profession of surgical technology. Explores the history and professional associations while emphasizing the roles and responsibilities of the surgical technologist and surgical team members. Introduces the biopsychosocial needs of the surgical patient and respecting diverse populations. Ethical, moral and legal issues are explored. Provides information about employability skills, regulatory agencies, healthcare facilities, as well as departmental organization and management within the facilities. Introduces the operating room environment. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

SUR-126 Surgical Technology I (4.5)

Provides an orientation to the surgical technology profession and operating room theories. Introduces surgical technology, standards of conduct, laws and ethics, hospital administration, teamwork, physical environment, safety standards, principles of asepsis, microbiology, cleaning, disinfection, sterilization, emergencies, instrumentation, wound healing, sutures and perioperative management duties. Arts & Sciences Elective Code: B
Hours per week: 4.5 lecture

SUR-128 Surgical Technology I Lab (2)

Applies principles learned in Surgical Technology I in a hands-on laboratory setting. Focuses on basic competencies surgical technologists need to proficiently perform in the operating room setting. Demonstrates basic concepts of aseptic technique, scrubbing, gowning, gloving, transporting, transferring and positioning the surgical patient, surgical preparation and draping. Studies creating and maintaining a sterile field, providing optimal patient care in the surgical setting and basic instrumentation. Arts & Sciences Elective Code: B
Hours per week: 4.0 lab

SUR-182 Microbiology for Surgical Technologists (1)
Includes the structures and function of microorganisms, characteristics of pathogenic and nonpathogenic bacteria, infection processes, specifics of the immune response, and principles and applications of asepsis for the Surgical Technologist. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Pre/corequisite: Take SUR-126. Take SUR-128.

SUR-230 Fundamentals of Surgical Technology (4)
Provides an in-depth exploration of the perioperative duties of the surgical technologist including principles of setting up and maintaining a sterile field. Principles of patient identification, transportation, positioning, skin preparation, draping techniques, time-outs, disinfection of the OR, and second circulator duties are examined. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Minimum B in HSC-115. Minimum B in BIO-161 or both BIO-168 and BIO-173.

Corequisite: Take SUR-232. Take SUR-342.

Pre/corequisite: Take SUR-108.

SUR-232 Fundamentals of Surgical Technology Lab (3)
Provides the opportunity to apply concepts and demonstrate skills related to the principles and techniques regarding preoperative case management for the surgical technologist in the scrub, second scrub and second circulating roles. Emphasizes basic concepts of aseptic technique, scrubbing, gowning, gloving, transporting, transferring, positioning, skin preparation and draping. Focuses on creating and maintaining a sterile field in order to provide optimal patient care in the surgical setting. Arts & Sciences Elective Code: B
Hours per week: 6.0 lab

Prerequisite: Minimum B in HSC-115. Minimum B in BIO-161 or both BIO-168 and BIO-173.

Corequisite: Take SUR-230. Take SUR-342.

Pre/corequisite: Take SUR-108.

SUR-235 Sciences of Surgical Technology (3)
Focuses on the principles of asepsis, microbiology, disinfection and sterile processing. Principles of hemostasis, wound healing and sutures are explored. Biomedical sciences, anesthesia, pharmacology and all-hazards preparation are introduced. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Minimum B in HSC-115. Minimum B in BIO-161 or both BIO-168 and BIO-173.

Corequisite: Take SUR-230. Take SUR-232. Take SUR-342.

Pre/corequisite: Take SUR-108.

SUR-322 Surgical Technology II (3)
Builds on knowledge of basic surgical techniques. Studies the role of the surgical technologist in basic surgical procedures. Presents surgical applications in diagnostic, general and OB/GYN procedures, with emphasis on anatomy, physiology, pathophysiology, instrumentation, equipment, procedural steps and patient safety. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take SUR-126. Take SUR-128.

SUR-323 Surgical Technology II Lab (1)
Applies principles learned in Surgical Technology II in a hands-on laboratory setting. Focuses on simulating the three phases of case management and applying them to each surgical specialty. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

Prerequisite: Take SUR-126. Take SUR-128.

SUR-335 Surgical Specialties Lab (3)
Provides the opportunity to practice preoperative and intraoperative surgical case management in general, OB/GYN, minimally invasive/laparoscopic, genitourinary and plastic, oral, maxillofacial, ophthalmic, ENT, neurosurgery, cardiovascular, and orthopedic surgical procedures. Focuses on maintaining sterile technique and setting up instrumentation and supplies for surgical procedures. Arts & Sciences Elective Code: B
Hours per week: 6.0 lab

Prerequisite: Minimum B in SUR-230. Minimum B in SUR-232. Minimum B in SUR-342.

Corequisite: Take SUR-343.

SUR-340 Surgical Specialties I (1)
Builds on the knowledge of basic surgical techniques. Developes the role of the surgical technologist in basic surgical procedures. Presents oral, maxillofacial, plastic, reconstructive, and ophthalmic surgical applications, emphasizing anatomy, physiology, pathophysiology, instrumentation, equipment, procedural steps and patient safety. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take SUR-126. Take SUR-128.

SUR-341 Surgical Specialties II (3)
Completes the basic surgical procedures learning with applications in orthopedics, ENT, urology, neurosurgery, cardiovascular and peripheral vascular. Emphasizes anatomy, physiology, pathophysiology, instrumentation, equipment, procedural steps and patient safety. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

Prerequisite: Take SUR-126. Take SUR-128.

Corequisite: Take SUR-520.

SUR-342 Surgical Specialties I (6)

Emphasizes the perioperative role of the surgical technologist in general, OB/GYN, and genitourinary surgical procedures with an emphasis on anatomy, physiology, pathophysiology, pharmacology, diagnostic interventions, instrumentation, equipment, procedural steps and patient safety. Arts & Sciences Elective Code: B
Hours per week: 6.0 lecture

Prerequisite: Minimum B in HSC-115. Minimum B in BIO-161 or both BIO-168 and BIO-173.

Corequisite: Take SUR-230. Take SUR-232.

Pre/corequisite: Take SUR-108.

SUR-343 Surgical Specialties II (6)

Builds on the basic knowledge of surgical specialties. Emphasizes the role of the surgical technologist in ophthalmic, oral and maxillofacial, plastic and reconstructive, and ENT surgical procedures with emphasis on anatomy, physiology, pathophysiology, pharmacology, diagnostic interventions, instrumentation, equipment, procedural steps and patient safety. Arts & Sciences Elective Code: B
Hours per week: 6.0 lecture

Prerequisite: Minimum B in SUR-230. Minimum B in SUR-232. Minimum B in SUR-342.

Corequisite: Take SUR-335.

SUR-344 Surgical Specialties III (6)

Builds on the basic knowledge of surgical specialties. Emphasizes the role of the surgical technologist in orthopedic, neurosurgery, cardiothoracic, peripheral vascular and robotic surgical procedures with emphasis on anatomy, physiology, pathophysiology, pharmacology, diagnostic interventions, instrumentation, equipment, procedural steps and patient safety. Arts & Sciences Elective Code: B
Hours per week: 6.0 lecture

Pre/corequisite: Take SUR-343. Take SUR-335. Take SUR-500.

SUR-420 Pharmacology for the Surgical Technologist (2)

Enhances fundamental math skills and provides a summary of basic pharmacology, terminology, drug regulation and drug administration. Examines drugs frequently used in the surgical setting, along with an overview of anesthesia administration and general practice. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Take SUR-126. Take SUR-128.

Corequisite: Take SUR-322. Take SUR-323.

SUR-440 Biomedical Sciences for Surgical Technology (2)

Provides a broad base of knowledge for entry-level surgical technologists. Focuses on computers, electricity, lasers, robotics and other fundamental technologies essential to the profession. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

Prerequisite: Take SUR-126. Take SUR-128.

Corequisite: Take SUR-322. Take SUR-323.

SUR-500 Surgical Technology Clinic I (3)

Provides exposure to community-based practice in order to develop competence as an entry-level surgical technologist. Includes being assigned to a surgical site to practice all skills related to the surgical technologist within the perioperative setting under the supervision of a facility-designated preceptor. Emphasis will be placed on the surgical technologist in the scrub role. Arts & Sciences Elective Code: B
Hours per week: 9.0 clinical

Pre/corequisite: Take SUR-343. Take SUR-335. Take SUR-344.

SUR-501 Surgical Technology Clinic II (7)

Builds on prior clinic experience and continues the practice of the surgical scrub role under the supervision of a facility-designated preceptor. Includes demonstrating progression towards autonomous performance of surgical technology functions, as well as increased competency in more complex surgical cases. Requires the submitting of documentation to fulfill accreditation standards, including records of participation in a specified number of cases across various specialties, in addition to sitting for the national certification examination. Arts & Sciences Elective Code: B; Comments: Students must participate in the national certification exam as part of the course completion requirement.
Hours per week: 1.0 lecture, 18.0 clinical

Pre/corequisite: Take SUR-344. Take SUR-343. Take SUR-335. Take SUR-500.

SUR-520 Surgical Technology Practicum I (2)

Provides hands-on, first-level clinical experience in the operating room. Arts & Sciences Elective Code: B
Hours per week: 6.0 clinical

Prerequisite: Take SUR-126. Take SUR-128.

Corequisite: Take SUR-341.

SUR-523 Surgical Technology Practicum II (9)

Provides an extensive hands-on clinical experience in all entry-level skills for Surgical Technologists. Arts & Sciences Elective Code: B
Hours per week: 27.0 clinical

Pre/corequisite: Take SUR-520. Take SUR-341.

SUR-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

Utilities (UTL)

UTL-260 High Pressure Boilers (2)

Covers the principles of high pressure boiler operation. Includes steam boiler types, package and field erected boilers, steam systems, feed water systems, fuel systems, pumps, regulators, traps, superheating, de-superheating and pressure reducing systems. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

UTL-270 Boiler and Chiller Inspection and Maintenance (1)

Covers the techniques, procedures and practices for boiler and chiller inspection and maintenance. Includes preventive and predictive maintenance procedures; maintenance of boiler room and heating equipment; water quality maintenance; fire protection and structure; and maintenance of centrifugal, reciprocating, OPAC and modular chillers. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Viticulture (VIN)

VIN-105 Introduction to Wine Science (3)

Introduces students to grape varieties grown in the Midwest and used in wine production. Explores the process used to make wine from start to finish through a combination of lecture and lab experiences. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

VIN-106 Introduction to Viticulture (3)

Introduces the common Midwestern grapes used in wine production. Covers establishing and properly managing a producing vineyard through a combination of lecture and lab experience. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Water Environmental Technology (WAT)

WAT-210 Wastewater Treatment: Industrial (4)

Describes common methods and systems used to treat wastes generated by industrial processes. Learning activities include a review of applicable federal and state regulations and pretreatment requirements. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Take WAT-307.

WAT-300 Water Analysis (3)

Introduces basic laboratory safety and gravimetric, spectrophotometric electrochemical, titrimetric and microbiological methods. Students learn the procedures for regulatory sampling and safety, and specific analytical procedures for total residue, fluoride, pH, ammonia, acidity, alkalinity, calcium, chloride, hardness and coliform analysis. Along with reading assignments from the text, the course is enhanced with up-to-date photographs, interactive exercises and online links. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

WAT-301 Basic Mechanical Maintenance and Pumps (3)

Covers maintenance and repair procedures for pumps typically found in water/wastewater treatment facilities. Students learn basic concepts of hydraulics, pump curves and energy consumption. General safety concerns are also emphasized. Arts & Sciences Elective Code: B
Hours per week: 3.0 lecture

WAT-304 Water Treatment I (4)

Explores the rudiments of water treatment. Students learn regulatory monitoring, iron manganese removal, filtration, coagulation, flocculation, fluoridation and disinfection. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises and online links. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

WAT-305 Water Distribution Systems (4)

Provides a working knowledge of potable water distribution systems. Students learn about water storage facilities, operation and maintenance of water mains, water quality issues, disinfection and safety. Along with reading assignments from the text, the course is enhanced with audio, up-to-date photographs, interactive exercises and online links. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

WAT-306 Wastewater Collection Systems (4)

Provides a working knowledge of wastewater collection systems. Students learn wastewater collection systems safety procedures, sewer inspection and testing, pipeline and maintenance, underground repair, lift stations, equipment maintenance and sewer rehabilitation. Along with reading assignments, the course is enhanced with up-to-date photographs, audio, interactive exercises and links. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

WAT-307 Wastewater Treatment I (4)

Explores the rudiments of wastewater treatment. Students learn water pollution control, preliminary and primary treatment, fixed film processes and suspended growth systems. Along with reading assignments from the text, the course is enhanced with up-to-date photographs, audio, interactive exercises and online links. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

WAT-308 Wastewater Analysis (3)

Using the Internet, students obtain the skills and knowledge to properly monitor the treatment process to conform to compliance regulations. Topics include BOD, COD, ammonia, grease and oil, chlorine and solids analysis. The academic portion of the course, self-study exercises and quizzes are all done over the Internet. The course includes hands-on labs at Kirkwood or proficiencies that an operator can complete on the job. Students are able to enroll at any time, set their own schedule for online studies and interact with the instructor outside of the classroom. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

WAT-311 Wastewater Treatment II (4)

Describes wastewater treatment methods and concepts that are found in more advanced wastewater treatment facilities such as activated sludge, anaerobic digestion, effluent disposal and reclamation, and nitrogen and phosphorous removal methods. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Take WAT-307.

WAT-312 Water Treatment II (4)
Describes treatment methods and concepts that are found at advanced water treatment facilities such as softening, demineralization, trihalo methanes, taste and odor control, corrosion control and disposal of process wastes. Arts & Sciences Elective Code: B
Hours per week: 4.0 lecture

Prerequisite: Take WAT-304.

WAT-400 Permits and Administration (1)
Examines many of the supervisory and managerial issues faced by a water/wastewater professional. Students focus on operations management and permit procedures, as well as people skills. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

WAT-401 Water and Wastewater Management (2)
Uses the ABC Water Treatment, Water Distribution, Wastewater Treatment, and Wastewater Collection Need-to-Know Criteria. Includes the core competencies used by the Iowa DNR Operator Certification Program for their Water Treatment, Water Distribution, and Wastewater Treatment certification exams and by the Iowa Water Environment Association Certification Program for their Wastewater Collection certification exams. Covers performance, security, safety, and administrative procedures. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture

WAT-924 Honors Project (1)
Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

WAT-932 Internship (3)
Offers a supervised training period in a water or wastewater treatment plant. The student participates in the routine daily operation and maintenance of the host water or wastewater treatment facility. Arts & Sciences Elective Code: B
Hours per week: 6.0 lab

Work-Based Learning (WBL)

WBL-100 Exploring Careers (1-3)
Provides guidance in choosing a career goal and preparing for employment. Emphasis will be placed on identifying interests, abilities, personality traits, and values, and exploring options for careers. Teaches how to access labor market information and employment trends. Develops the skills and aptitudes necessary to obtain employment, emphasizing the development of characteristics associated with job success. Arts & Sciences Elective Code: A
Hours per week: 1.0 lecture

WBL-109 Exploring Careers: Government and Criminal (1-3)
Explores vocational choices in the fields of government and criminal justice including unique requirements for employment and application processes for careers in these fields. Relies partly on experiential learning activities including guest speakers and field trips. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Prerequisite: Take CRJ-100.

WBL-110 Employability Skills (1-3)
This course is designed to assist students in developing the skills necessary to obtain employment (part-time, full-time and internships), and to learn and practice the skills and attitudes required for job success. Students will research the job market and companies, practice resume writing, job application completion, and interviewing techniques. Additionally, students will practice work-place problem solving strategies, and demonstrate skills required to work in a diverse environment. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

WBL-145 Workplace Project Based Learning: Business, Finance, Marketing, and Management (1-3)
Teaches the concept of project based learning in the workplace by developing and implementing projects in cooperation with local businesses, community organizations, or non-profit agencies in the Business, Finance, Marketing, and Management employment sector. Arts & Sciences Elective Code: B
Hours per week: 0.7 lecture, 0.6 lab

WBL-146 Workplace Project Based Learning: Information Solutions (2-3)
Focuses on the concept of project-based learning in the workplace through the incorporation of basic project management, team building, and soft skills. Develops and implements projects in cooperation with local businesses, community organizations, or non-profit agencies in the Information Technology employment sector. Students will construct projects under the supervision of a college faculty member. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

WBL-148 Workplace Project Based Learning Industrial Technology (2-3)
Explains the concept of project-based learning in the workplace. Develops and implements projects in cooperation with local businesses, community organizations, or non-profit agencies in the Industrial Technology employment sector. Constructs projects under the supervision of a college faculty member. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

WBL-157 Job Shadowing: Applied Digital, Visual, and Communication Arts (1-2)
Students in this course will explore the field of Applied Digital, Visual, and Communication Arts while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization's structure and values. Arts & Sciences Elective Code: B
Hours per week: 0.75 lecture, 1.0 internship

WBL-200 Practicum/Field Experience: CTE (1-4)

Offered under the guidance of an instructor and employer mentor/supervisor. Provides an opportunity to learn in a work setting while obtaining practical experience in a chosen field of study. Includes job training and assignments designed to develop workplace communication skills, an understanding of industry and organizational structures, and problem solving skills in a work environment. Arts & Sciences Elective Code: B

Hours per week: 0.5 lecture, 2.0 internship

WBL-301 Internship: Agriculture, Food, and Natural Resources (1-5)

Offered under the supervision and mentoring of practicing professionals, this course provides students an opportunity to learn in a professional work setting related to their major or career goal in Agriculture, Food, and Natural Resources. Students will participate in job training, and will gain experience in problem solving, decision making, and specific job duties within a business or organization. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

WBL-302 Internship: Science, Technology, Engineering, and Mathematics (1-5)

Offered under the supervision and mentoring of practicing professionals, this course provides students an opportunity to learn in a professional work setting related to their major or career goal in Applied Sciences, Technology, Engineering, and Mathematics. Students will participate in job training, and will gain experience in problem solving, decision making, and specific job duties within a business or organization. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

WBL-305 Internship: Business, Finance, Marketing, and Management (1-5)

Offered under the supervision and mentoring of practicing professionals, this course provides students an opportunity to learn in a professional work setting related to their major or career goal in Business, Finance, Marketing, and Management. Students will participate in job training, and will gain experience in problem solving, decision making, and specific job duties within a business or organization. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

WBL-306 Internship: Information Solutions (1-5)

Offered under the supervision and mentoring of practicing professionals, this course provides students an opportunity to learn in a professional work setting related to their major or career goal in Information Solutions. Students will participate in job training, and will gain experience in problem solving, decision making, and specific job duties within a business or organization. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

WBL-307 Internship: Applied Digital, Visual, and Communication Arts (1-5)

Offered under the supervision and mentoring of practicing professionals, this course provides students an opportunity to learn in a professional work setting related to their major or career goal in Applied Digital, Visual, and Communication Arts. Students will participate in job training, and will gain experience in problem solving, decision making, and specific job duties within a business or organization. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

WBL-309 Internship: Government and Criminal Justice (1-5)

Offered under the supervision and mentoring of a practicing professional, this course provides students an opportunity to learn in a professional work setting related to their Government and Criminal Justice career goals. Students will participate in job training, and will gain experience in problem solving, decision making, and performing specific job duties within a business or organization. Arts & Sciences Elective Code: B

Hours per week: 4.0 internship

Prerequisite: Take CRJ-100 or PRL-103.

Welding (WEL)

WEL-208 Introduction to Fabrication (2)

Introduces hands-on fabrication basics used by welding industries. Covers layout, reading blueprints, applied math, cost estimation, jigs and fixtures, and introduction to shearing, bending, drilling, sawing and other manufacturing process associated with welding fabrication. Arts & Sciences Elective Code: B

Hours per week: 4.0 lab

Prerequisite: Take WEL-267.

WEL-228 Introduction to Welding, Safety & Health of Welders: SENSE1 (1)

Provides an orientation to the welding profession, including basic safety and health within the welding profession. Aligns to SENSE Level 1, Module 1 and Module 2 - Key Indicators 1-6. Arts & Sciences Elective Code: B

Hours per week: 1.0 lecture

WEL-233 Print Reading and Welding Symbol Interpretation: SENSE1 (3)

Provides instruction in interpreting elements of welding prints (drawings or sketches), focusing on measurement, American Welding Society welding symbols, and fabrication requirements. Focuses on preparing, assembling and tacking welding parts according to drawings or sketches, using proper materials and tools. Aligns to SENSE Level 1 Module 3: Drawing and Welding Symbol Interpretation, Key Indicators 1 and 2. Arts & Sciences Elective Code: B

Hours per week: 3.0 lecture

Prerequisite: Take MAT-765.

WEL-244 Gas Metal Arc Welding Short Circuit Transfer: SENSE1 (2)

Focuses on proper weld safety, machine setup and welding techniques of Gas Metal Arc Welding Short-Circuiting Transfer. Students perform American Welding Society compliant welds on carbon steel, in flat, horizontal, vertical and overhead positions. Prepares students to take an AWS welder certification test, which is recommended for its successful completion. Aligns with SENSE Level 1 Module 5 - Key Indicators 1-7, as well as Module 2 - Indicator 7, Module 3- Key Indicator 3, and Module 9 - Key Indicator 2. Arts & Sciences Elective Code: B

Hours per week: 4.0 lab

Corequisite: Take WEL-228.

WEL-245 Gas Metal Arc Welding Spray Transfer: SENSE1 (2)

Focuses on proper weld safety, machine setup and welding techniques of Gas Metal Arc Welding Spray Transfer. Students perform American Welding Society compliant welds on carbon steel in flat and horizontal positions. Prepares students to take an AWS welder certification test, which is recommended for its successful completion. Aligns with SENSE Level 1 Module 5 Key Indicators 1, 2 and 8-12, as well as Module 2 - Indicator 7, Module 3- Key Indicator 3, and Module 9 - Key Indicator 2. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Corequisite: Take WEL-228.

WEL-251 Gas Tungsten Arc Welding for Carbon Steel: SENSE1 (2)

Focuses on proper weld safety, machine setup and welding techniques for Gas Tungsten Arc Welding. Prepares students to perform American Welding Society compliant welds on carbon steel in flat, horizontal, vertical and overhead positions. Qualifies students to take an AWS welder certification test, which is recommended for successful completion of this course. Aligns to SENSE Level 1, Module 7 - Key Indicators 1-7, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 - Key Indicator 2. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

Corequisite: Take WEL-228.

WEL-254 Welding Inspection and Testing Principles: SENSE1 (1)

Provides preparation to visually examine test welds and thermally cut surfaces per multiple welding codes, standards and specifications. Aligns to SENSE Level I, Module 9: Welding Inspection and Testing Principles. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture

Pre/corequisite: Take WEL-233.

WEL-267 Welding for Maintenance Trades (3)

Focuses on safety, setup and layout of measurements and weldments. Requires demonstration of proper techniques for repair/maintenance welds. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

WEL-268 Flux Cored Arc Welding Self-Shielded/Gas-Shielded (3)

Focuses on proper weld safety, machine setup, and welding techniques for flux cored arc welding self-shielded and gas-shielded. Students perform American Welding Society compliant welds on carbon steel in flat, horizontal, vertical and overhead positions. Prepares students to take an AWS welder qualification test, which is recommended for its successful completion. Aligns to SENSE Level 1 Module 6 Key Indicators 1, 2 and 8-12; Module 2 Key Indicator 7; Module 3 Key Indicator 3; Module 9 Key Indicator 2. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take WEL-228. Take WEL-244. Take WEL-245.

WEL-269 Thermal Cutting Processes (3)

Focuses on proper safety, equipment setup, and cutting techniques for oxy-fuel, plasma, and carbon steel arc cutting on carbon steel, austenitic stainless steel, and aluminum. Students perform American Welding Society compliant cutting operations in the flat position as well as scarfing and gouging operations to remove base and weld metal in flat and horizontal positions. Aligns to SENSE Level 1 Module 8 Units 3 and 4; Module 2 Key Indicator 7; Module 9 Key Indicator 1. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Corequisite: Take WEL-228.

WEL-271 Documents Governing Welding and Weld Inspection (3)

Teaches essential welding procedure and performance qualification variables found within a code or other standard. Students utilize AWS code specifics to create, inspect, and document various welding tests. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

WEL-272 Advanced Gas Tungsten Arc Welding - Pipe (6)

Focuses on safety, amperage settings, polarity, and the proper selection of electrodes for the gas tungsten arc welding process. Students perform American Welding Society compliant welds on carbon steel pipe and stainless steel pipe. Students utilize visual and destructive methods for determining weld quality from prior SENSE I curriculum. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 10.0 lab

WEL-273 Gas Tungsten Arc Welding Stainless Steel And Aluminum (3)

Introduces various technical programs being integrated into or associated with the welding profession. Focuses on proper weld safety, machine setup, and welding techniques for gas tungsten arc welding. Students perform American Welding Society compliant welds on stainless steel and aluminum in flat, horizontal, vertical, and overhead positions. Aligns to SENSE Level 1 Module 7 Key Indicators 1-7; Module 2 Key Indicator 7; Module 3 Key Indicator 3; Module 9 Key Indicator 2. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take WEL-228.

WEL-274 Shielded Metal Arc Welding I: SENSE1 (3)

Focuses on safety, amperage settings, polarity and the proper selection of electrodes for the shielded metal arc welding process. Prepares students to perform American Welding Society compliant welds on carbon steel, using visual and destructive methods for determining weld quality. Aligns to SENSE Level 1 Module 4 - Key Indicators 1-7 for the flat and horizontal positions, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 - Key Indicator 2. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Corequisite: Take WEL-228.

WEL-275 Shielded Metal Arc Welding II: SENSE1 (3)

Focuses on safety, amperage settings, polarity and the proper selection of electrodes for the Shielded Metal Arc Welding (informally known as stick welding) process. Prepares students to perform American Welding Society complaint welds on carbon steel, in vertical up and overhead configurations, using visual and destructive methods for determining weld quality. Aligns to SENSE Level 1 Module 4: Shielded Metal Arc Welding Key Indicators 1-7 for the flat and horizontal positions, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 - Key Indicator 2. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Take WEL-228. Take WEL-274.

WEL-286 Advanced Shielded Metal Arc Welding Principles and Practices (6)

Prepares students to utilize the SMAW process to weld all position fillet and groove welds on carbon steel plate using stainless steel electrodes. Examines production of SMAW pipe welds in the 2G, 5G and 6G positions. Aligns with SENSE 2, Units 1 through 11. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 10.0 lab

Prerequisite: Minimum C in WEL-275.

WEL-287 Layout and Fitup (3)

Introduces layout and fit-up tools and techniques. Focuses on the utilization of metal forming, cutting and machining tools. Reinforces safety and measurement tools. Aligns with SENSE 2, Units 1 through 6. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

WEL-290 Advanced Flux Cored Arc Welding Principles and Practices (3)

Prepares students to produce FCAW-S/FCAW-G welds on carbon steel in the 2G and 5G pipe positions. Aligns with SENSE 2, Units 1 through 10. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

WEL-291 Advanced Gas Metal Arc Welding Pipe Principles and Practices (3)

Prepares students to use the GMAW-S process to produce all position fillet and groove welds on aluminum plate. Includes GMAW 2F, 2G and 5G welds on carbon steel pipe. Aligns with SENSE 2, Units 1 through 12. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 4.0 lab

Prerequisite: Minimum C in WEL-244.

WEL-331 Welding Fundamentals (2)

Covers basic welding techniques with oxyacetylene and electric welders. Designed for the general tradesperson working in the areas of mechanics and automotive technology. Students are introduced to a variety of welding situations including cutting, brazing and various welding positions on lighter gauges of metal and basic fabrication. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

WEL-333 Auto Collision Welding (2)

Introduces basic welding techniques that can be applied to auto collision repair. Students learn to weld light gauge sheet metal with the GMAW process. Instruction emphasizes the requirements needed to pass the I-CAR Automotive GMA (MIG) Welding Steel Qualification Test. Students also receive instruction in the use of an oxyacetylene torch and a plasma cutter. Arts & Sciences Elective Code: B
Hours per week: 1.0 lecture, 2.0 lab

WEL-800 Welding Capstone (4)

Serves as the capstone course for the welding program. Requires the design and construction of projects using several approved welding processes to demonstrate the ability to analyze welding problems and to make decisions that use the most economical and practical welding processes. Concentrates on the advanced study of materials and methods, including joint work, adhering to specifications, fabrication of equipment, and completion of special projects. Arts & Sciences Elective Code: B
Hours per week: 8.0 lab

Prerequisite: Take WEL-287. Take WEL-291.

Pre/corequisite: Take WEL-286. Take WEL-290.

WEL-924 Honors Project (1)

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: B; Comments: Requires approval of supervising professor and dean
Hours per week: 1.0 lecture

WEL-928 Independent Study (1-3)

Provides readings, papers and basic research or other projects under the individual guidance of a staff member. Arts & Sciences Elective Code: B; Comments: Permission of instructor, dean
Hours per week: 1.0 lecture

WEL-932 Internship (3-4)

Provides employment in an approved welding-related position. Includes instructor visits/evaluations and employer performance evaluations. arts & Sciences Elective Code: B
Hours per week: 12.0 internship

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