Credit Course Catalog
2012-2013

Southeastern
COMMUNITY COLLEGE

Southeastern Community College
2012-2013 Course Catalog

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SCC Campus Information

West Burlington Campus
1500 West Agency Road
P.O. Box 180
West Burlington, IA 52655-0180
319-752-2731
Toll-free 866-722-4692
Fax 319-752-4957

SCC Fort Madison Center
1602 Avenue F
Fort Madison, IA 52627
319-376-2286

Keokuk Campus
335 Messenger Road
P.O. Box 6007
Keokuk, IA 52632-6007
319-524-3221
Toll-free 866-722-4692
Fax 319-524-8621

SCC Mount Pleasant Center
200 North Main Street
Mount Pleasant, IA 52641
319-385-8012

Center for Business
RiverPark Place
610 North 4th Street, Suite 220
Burlington, IA 52601
319-752-2731
Toll-free 866-722-4692
Fax 319-752-3407

RECYCLED PAPER

MISSION:

Southeastern Community College provides accessible, quality programs and services which promote student success and economic vitality.

VISION:

Southeastern Community College, a visionary leader in lifelong learning, embraces diversity, transforms lives, strengthens communities, and inspires individuals to excellence.

VALUES:

Excellence:
we are committed to the highest standards in all aspects of teaching and learning.

Integrity:
we encourage honesty, respect and personal accountability among and between students, staff, and stakeholders.

Stewardship:
we are effective and vigilant stewards of our financial, physical, and human resources.

Continuous Improvement:
we promote evidence-based decisions and systems within a culture of empowerment and teamwork.

Southeastern Community College is accredited by the Iowa State Department of Education.

Southeastern Community College is a member of:
- The American Association of Community Colleges
- Association of Community College Trustees
- Iowa Association of Community College Trustees
- Iowa Association of Community College Presidents
- League for Innovation in Community Colleges

The chief administrative officer of the college is the President. The President is responsible for the operation of the community college with respect to its educational program, its faculty and student personnel programs, and the use of its facility. The following are members of the president's cabinet: Vice President for Administrative Services, Vice President for Teaching & Learning, Vice President for Student Services, Director of Workforce Development, Director of Marketing and Communication, Executive Director of Institutional Advancement, Executive Director for Technology Services, Director of Human Resources, Director of Institutional Grants, Teaching and Learning Director/Dean, President of SCCHEA, President of SCCESA, Enrollment Coordinator, Keokuk Campus Faculty Representative, Keokuk Campus Support Staff Representative and Executive Assistant to the President/Board Secretary.

Southeastern Community College is accredited by The Higher Learning Commission and a member of the North Central Association of Colleges and Schools. 30 North LaSalle Street, Suite 2400, Chicago, IL 60602-2504. Phone: 312.263.0456.
Web: www.ncahigherlearningcommission.org Southeastern

ACCREDITED
The Higher Learning Commission
MEMBER
The Higher Learning Commission NCA North Central Association
For more information: www.ncahlc.org

Academic
Quality Improvement
Program
The Higher Learning Commission NCA

Southeastern Community College is an Affirmative Action/Equal Opportunity Employer. Southeastern Community College is a publicly supported community college serving the Iowa counties of Merged Area XVI.

The college makes every effort to ensure the accuracy of the content of this catalog, but reserves the right to make changes at any time without prior notice. This catalog is for informational purposes and does not constitute a contract. Published through the Office of Educational Services.

2012-2013 Academic Calendar

▪ Fall 2012

8/6	Fall 7x7 classes begin. *(Aug 6-9 & 13-15, unless otherwise noted).*
8/16-17	Faculty Workshops.
8/20	Fall Semester classes begin.
8/31	Last day for 16 week Fall Semester 100% tuition and Bookstore refund.*
9/3	Labor Day - No classes, offices closed.
10/15	Mid Term.
10/19	Workshop/In-service - No classes.
11/7	Last day to withdraw from 16 week Fall Semester with a grade of "W".*
11/21-23	Thanksgiving vacation - No classes.
11/22-23	Offices closed.
12/14	Fall Semester ends.
12/17-18	Faculty Workshop. Final grades due.
12/19-21	Faculty and Students Off - No classes.
12/24-1/1/2013	College Offices closed.

▪ Spring 2013

1/2	College Offices reopen.
1/2-9	Faculty and Students off - No classes.
1/10-11	Faculty workshops.
1/14	Spring classes begin.
1/25	Last day for 16 week Spring Semester 100% tuition and Bookstore refund.*
3/8	Mid Term.
3/11-15	Spring Break - No classes, offices closed.
4/4	Last day to withdraw from 16 week Spring Semester with a grade of "W".*
4/5	Professional Development Day - No classes, offices closed.
5/13	Spring Semester ends.
5/14	GED Graduation.
5/15	Keokuk Campus Commencement.
5/14-5/15	Faculty Workshop. Final grades due.
5/16	West Burlington Campus Commencement.

▪ Summer 2013

5/27	Memorial Day - No classes, offices closed.
5/30	Summer Session classes begin (four and eight weeks in length).
6/26	End early four-week classes.
6/27	Late Summer Session classes begin (four-week length only).
7/4	Independence Day - No classes, offices closed.
7/25	Early Summer Session (eight-week) and Late Summer Session classes end.

A similar prorated refund schedule and last day to drop will be applied to registrations occurring at times other than the regular registration dates. The complete refund schedule and last day to drop is available on SCC website (Current Students/Student Services and Resources/Academic Calendar/Click here to see Refund drop schedule).

Admissions Information

The rules, policies, and charges described herein may be changed by the authorities of this institution without advance notice and without commitment to such original rules, policies, and fees deemed necessary to change.

■ General Admissions Policy

The basic expectation of students entering the college credit program is a desire to learn. The college provides educational opportunities for a wide variety of achievement levels and, therefore, must establish realistic entrance standards for each such level, which may include mandatory placement. No student shall be excluded from any program at this institution on the basis of age, disability (except when a bona fide qualification exists on the basis of a physical or mental disability), ethnicity, gender, marital status, national origin, race, religious creed, or sexual orientation.

■ Mandatory Placement

Southeastern Community College has adopted mandatory placement standards for English, reading, and mathematics. All full-time and all part-time degree-seeking students must take the ASSET, COMPASS, or ACT before enrolling in classes. Assessment scores are valid for two years provided the student has been continuously enrolled. Students with scores older than two years will need to test again. Students with scores below an established level will be required to enroll in developmental course(s) in their first term of enrollment. Several career education programs also have minimum standards for admission.

Program and course admission standards are available in the Enrollment Services Office.

■ Specific Admissions Requirements

Arts and Sciences/Career Education Curricula

The minimum requirements for admission as a regular student to either the arts and sciences division or to a career education program shall be graduation from an approved secondary school, its equivalent (determining equivalency of a secondary school diploma shall be consistent with the practice employed by the three state institutions for higher education in Iowa) or demonstrated interest, aptitude, and the ability to profit from coursework offered by the curricula.

Health Career Programs

Students entering health career programs are expected to maintain a high standard of ethical and professional behavior throughout the curriculum. Characteristics of honesty, integrity, commitment, safety and confidentiality are essential for program success. It is also expected that students will maintain regular attendance in classroom and clinical assignments. Students must maintain a high degree of professional behavior with patients and families during clinical assignments. All students will be required to pass a mandatory background check.

In addition to meeting the admissions requirements for the college, students entering health career programs must meet additional program admissions requirements. All health career programs require students to earn a grade of "C" (2.0) or above in all coursework within the program for which they are applying. In addition, students must have standardized placement scores completed within 24 months prior to the date of enrollment.

■ Admissions/Enrollment Prior to High School Graduation

Students who are still in secondary schools generally enroll at Southeastern Community College through PSEO, PACE, or Career Academies and joint enrollment arts & sciences courses. Enrollment in college courses outside of these programs is permitted in certain circumstances. Contact Enrollment Services, West Burlington Campus at extension 5017 and Keokuk Campus at extension 1928, for specific requirements.

Postsecondary Accelerated Credit Experience (PACE) and Postsecondary Enrollment Options Act (PSEO)

Through PACE agreements with area high schools and PSEO guidelines, juniors and seniors and talented/gifted freshmen and sophomores have the opportunity to take college courses prior to high school graduation. PACE eligible courses are outlined in agreements between each area high school and SCC.

Upon successful completion of the enrolled course(s), students will earn both high school and college credit for courses taken. Postsecondary credits earned are transferable to other colleges and universities depending on degree requirements at that institution. Contact a high school counselor for further information on the PACE and PSEO opportunities.

Career Academies and Joint Enrollment Arts & Sciences

SCC, in cooperation with area high schools, can help juniors and seniors get a jump start on college and career and increase skill levels for employment. These programs are taught by SCC instructors and offered at various locations around the area. Both high school and college credit are awarded for every class. Career Academies are available in the following programs: Health, Auto Collision Repair, Automotive Technology, Agriculture, Construction Technology, Graphics and Media Communication, Electronics and Welding. High school counselors have complete listings of these offerings through their district.

Application Procedures - Credit Courses

College credit may also be earned through articulation agreements between local school districts and the college.

Articulation

High school students may receive college credits from Southeastern via articulation agreements. Articulation is a process whereby the high school and SCC instructors identify courses taught at both levels that cover the same competencies. College credit is recorded on the student's college transcript after the student has applied for admission and earned twelve credits at SCC. Contact a high school counselor to obtain a list of high school courses that articulate to a career program at SCC.

Educational Curricula for the Disabled or Disadvantaged

The admissions requirements for persons who are disabled or disadvantaged to an extent which prevents them from succeeding in regular programs shall be based on analysis, evaluation and screening. Each individual's needs, abilities, and interests are evaluated in accordance with procedures established by appropriate divisions of the State Department of Education and this institution's program of affirmative action.

■ Procedures for Students Applying for Admission

Applications for Admission are accepted at any time. Application forms will be distributed or mailed from the Enrollment Services Office. Applications may also be submitted on-line at our website (www.scciowa.edu). Enrollment is limited in certain courses and programs. In order to receive full consideration, students are encouraged to have all entrance requirements completed and available to the Enrollment Services Office at the earliest possible date.

Submit an Application for Admission to the Enrollment Services Office, as well as transcripts of all previously earned academic credit, i.e., high school, GED or college.

An admissions committee may evaluate an application to determine admission to particular programs. Students are required to complete a new student orientation, which is available online, prior to enrollment. Career and technical programs require participation in a program orientation prior to enrollment.

Students must have a current (within the last two years) ACT, COMPASS, or ASSET score report on file with the Enrollment Services Office. The COMPASS may be taken according to a published schedule. The ACT, COMPASS, or ASSET is used for advising, mandatory course placement, and for admission into certain career education programs.

■ Transfer Students

Students who wish to transfer from another college are eligible to apply for admission. Students transferring to Southeastern Community College from other institutions will have their credits evaluated on an individual basis. All transfer students are advised to consult with the Registrar's Office well in advance of the beginning of each term so that transfer status may be established.

■ International Students (F-1 Status)

International students who apply from abroad or those who would like to transfer from institutions in the United States to Southeastern Community College must have a high school diploma or the equivalent. Students must submit an Application for Admission, TOEFL or COMPASS-ESL score, and high school/college transcripts. Students must also provide financial documentation showing proof of funds available to cover the cost of tuition, books, room, board, etc. SCC is authorized under Federal law to enroll nonimmigrant students. For more information, please contact the Enrollment Services Office at 319.752.2731, ext. 5017.

■ Non-Native Speakers

All applicants to Southeastern Community College whose native language is not English are required to submit scores from the Test of English as a Foreign Language (TOEFL) or COMPASS-ESL with their Application for Admission and supporting academic documents. Students must demonstrate proficiency in the English language by obtaining a satisfactory score on the TOEFL/COMPASS ESL. For more information, please contact the Enrollment Services Office at 319.752.2731, ext. 5017.

Graduation Requirements

General Information

A student who intends to graduate from Southeastern Community College must file a Request to Graduate petition. This petition should be completed when registering for the last anticipated semester of classes. Petition forms are available in the Registrar's Office.

Degree, diploma, and certificate requirements stated in the Southeastern Community College catalog at the time of a student's initial enrollment will remain in effect for that student until graduation. If changes occur in graduation requirements subsequent to initial enrollment the student may elect to graduate under the most recent degree or diploma requirements. The ability to graduate under the requirements of an older catalog is subject to a five-year limitation. The final determination of graduation requirements rests with the registrar.

It is the responsibility of the student to know and to observe the requirements of his/her curriculum and the rules governing academic work. Although an enrollment specialist will attempt to help the student make wise decisions, the final responsibility for meeting the requirements for graduation rests with the student.

Graduation from Southeastern Community College shall be certified by the issuance of a degree, diploma, or certificate. No student shall be issued an award who has not earned a cumulative grade point average of at least 2.00 at SCC.

Students attending Southeastern Community College through Carl Sandburg College and who expect to graduate with an associate of arts or an associate of science degree must meet the appropriate Carl Sandburg College graduation requirements. Any career education graduates through Carl Sandburg College must meet Southeastern Community College graduation requirements.

In those instances where a student receives information from an enrollment specialist which may have an impact upon the graduation requirements or application of credits toward graduation, the student is advised to secure such commitment in writing. It is further advised that such commitment be retained by the student until the sequence of events is such that it would be no longer necessary to demonstrate the establishment of such a commitment.

Commencement

An integral part of the student's experience in college is commencement. The commencement is held at the conclusion of the spring semester. Any student of the college who has completed all the necessary requirements for a degree, diploma, or a certificate requiring 15 or more semester hours is eligible to participate. Additionally, any student of Southeastern Community College is eligible to participate in commencement if there is a clear indication made to the registrar by the student at the beginning of the spring semester that necessary requirements will be completed prior to the beginning of the next fall semester.

Graduation with Honors

Qualifying students are recognized as meeting the requirements of Graduation with Honors at commencement ceremonies. To qualify for this recognition, the student's cumulative grade point average must be 3.75 or above as of the end of the fall semester. A minimum of 15 semester hours must have been completed at Southeastern Community College. A student with a GPA below 3.75, but above a 3.50, may qualify at the end of the spring semester if he/she receives spring grades which are high enough to raise his/her GPA to 3.75 or above at the end of the spring semester. It is the responsibility of the student to notify the registrar of this possible last-minute designation.

Assessment Philosophy

Assessing student academic achievement at Southeastern Community College is a process of documenting student learning within the domain of general education requirements and within career education programs that go beyond traditional course grades. The purpose of assessment is to promote and document continuous educational improvement throughout the institution.

The data gathered will be used to make adjustments within courses and/or programs when deemed necessary. Assessment data will also provide valuable information for use in the college's strategic planning and program review processes. The assessment of students' knowledge of course content and general education and career education objectives will also allow the college to become more articulate in its communication efforts with internal and external constituents regarding how well the college is accomplishing its mission and goals/objectives.

General Education Statement

The goal of Southeastern Community College is to instill within its degree graduates a body of knowledge, skills, and attitudes upon which they can build to be contributing members of society. To accomplish this, associate degree requirements are established which meet a diversity of interests associated with comprehensive community college students. Southeastern Community College requires that the associate of arts (AA) degree contain a minimum of 41 semester hours and the associate of science (AS) degree contain a minimum of 27 semester hours of general education which includes courses in the following areas:

1. Communication
2. Social Science
3. Humanities
4. Mathematics
5. Science

Students graduating with an associate of applied science (AAS) degree shall complete a minimum of 15 semester hours of credit from courses outside of their area of specialization. Out of this 15 semester hours, 12 semester hours of general education requirements must be taken with at least one course from each of three areas:

1. Communication
2. Social Sciences and/or Humanities
3. Mathematics and/or Science

Students graduating with an associate degree from Southeastern Community College will have the opportunity to:

A. Develop and use effective communication and interpersonal skills.
B. Locate, analyze and use information.
C. Develop an understanding of self, especially as a lifelong learner.
D. Exercise critical thinking, explore moral issues and make ethical decisions.
E. Recognize the dignity and worth of each individual and understand various cultures and their interrelationships.
F. Understand and apply fundamental principles of mathematics.
G. Understand and apply fundamental principles of science.
H. Use modern technology.
I. Explore the richness that literature, history and the arts have contributed to human life.

■ General Education Group Requirements

Communication

ENG English; SPC Speech

Humanities

ART Art; LIT Literature; Foreign Language — FLF French, FLG German, FLS Spanish; HIS History; HUM Humanities; MUS, MUA Music; PHI Philosophy; DRA Drama

Social Sciences

ECN Economics; GEO Geography; HIS History; POL Political Science; PSY Psychology; SOC Sociology

Math and Science

MAT Mathematics; BIO Biology; CHM Chemistry; ENV Environmental Science; PHY Physics

Credit earned toward satisfaction of one group requirement may not be applied toward satisfaction of a second group requirement.

■ Academic Awards

Requirements for each of the college's curriculums must be satisfactorily completed prior to an individual being eligible to receive an award from Southeastern Community College. One of the following will be awarded to a student who completes the specified requirements:

- Associate of Arts degree
- Associate of Science degree
- Associate of Applied Science degree
- Diploma
- Certificate

■ Associate of Arts Degree

The associate of arts degree is primarily intended for those students who plan to transfer to a four-year college or university. All credits earned within this classification are considered transferable by this institution. However, the student should always consult with the four-year institution to ascertain application of particular courses for his/her degree objectives.

All candidates for the Associate of Arts Degree must meet the following requirements:

1. Earn a minimum of 15 of the last 20 semester hours of credit in resident classes at Southeastern Community College.
2. Earn a minimum cumulative grade point average (GPA) of 2.00 at SCC.
3a. All general education group requirements necessary for the associate of arts degree must be selected from transfer course offerings.
3b. Each of the following minimum general education group requirements must be met:

Communication (ENG-105, ENG-106, SPC-112)........9 sem. hrs.
Humanities.....................*8 sem. hrs.
Social Sciences................*8 sem. hrs.
Science and Mathematics.... *8 sem. hrs.
Distributed Requirements..**8 sem. hrs.
......................................41 sem. hrs.
Electives ....***21 sem. hrs.
Minimum Total..............62 sem. hrs.

Select courses from at least two different disciplines in this area. In the science and mathematics group, at least one lab science and one mathematics course must be taken.

*** Select courses from among the above three areas (humanities, social sciences, science and mathematics).*

*** These hours will be taken from arts and sciences electives designed and acceptable for transfer. However, up to 16 semester hours of career education courses with a grade of "C" (2.00 on a 4.00 scale) or better may be applied as part of the 21 semester hours of electives. (See Item 3a)*

4. Complete exit examination that measures progress in achieving general education foundational skills.

■ Associate of Science Degree

The associate of science degree is intended for those students who plan to graduate from Southeastern Community College in a prescribed area of specialization. All credits earned within this classification are considered transferable by the college. However, a transfer student should consult with the four-year institution to determine application of particular courses for his/her degree objectives.

All candidates for the Associate of Science Degree must meet the following requirements:

1. Earn a minimum of 15 of the last 20 semester hours of credit in resident classes at Southeastern Community College.
2. Earn a minimum cumulative grade point average (GPA) of 2.00 at SCC.
3a. All general education group requirements and specialty area requirements necessary for the associate of science degree must be selected from courses numbered above 100.
3b. Each of the following minimum general education group requirements must be met:

Communication (ENG-105, ENG-106, SPC-112)........9 sem. hrs.
Humanities.....................*6 sem. hrs.
Social Sciences................*6 sem. hrs.
Science and Mathematics .. *6 sem. hrs.
......................................27 sem. hrs.
Area of Specialization.. **35 sem. hrs.
Minimum Total..............62 sem. hrs.

Select courses from at least two different disciplines in this area. In the science and mathematics group, at least one science and one mathematics course must be taken.

** Areas of specialization are listed in the career education section of this catalog. However, up to 16 semester hours of career education courses with a grade of "C" (2.00 on a 4.00 scale) or better may be applied as part of this requirement.*

◼ Associate of Applied Science Degree

The associate of applied science degree is intended for those students who are enrolled in a two-year career education program.

All candidates for the Associate of Applied Science Degree must meet the following requirements:

1. Earn a minimum of 15 of the last 20 semester hours of credit in resident classes at Southeastern Community College.

2. Earn a minimum cumulative grade point average (GPA) of 2.00 in the AAS degree curriculum at SCC.

3. General education courses required for the associate of applied science degree must be selected from courses listed in the approved program curriculum. A minimum of fifteen (15) semester hours of credit needs to be taken from courses outside of the program area of specialization. Out of this 15 semester hours, 12 semester hours of general education requirements must be taken with at least one course from each of the three areas: Communication; Social Sciences and/or Humanities; Mathematics and/or Science.

4. Satisfactory completion of all core and general education requirements as specified for the curriculum selected. Said requirements are stated in the career education section of this catalog. Core and general education requirements of the individual career education curriculums vary in terms of the credit hour requirements. Therefore, requirements should be evaluated carefully by the student. Normally, the length of all career education curricula leading to an associate of applied science degree is a minimum of four semesters.

◼ Diploma

The diploma shall be issued to a person who has graduated from an approved vocational program which does not culminate in a degree or certificate.

All candidates for a Diploma must meet the following requirements:

1. Earn a minimum of ten of the last 13 semester hours of credit in resident classes at Southeastern Community College.

2. Earn a minimum cumulative grade point average (GPA) of 2.00 at SCC in the diploma curriculum.

3. General education courses and elective credit required for a diploma are listed in the approved curriculum for that diploma.

4. Satisfactory completion of all general education and core requirements as specified for the diploma program. Said requirements are stated in the career education section of this catalog. Requirements of diploma programs vary in terms of length and credit hours.

◼ Certificate

A certificate of completion may be issued to a student who has satisfactorily completed a course of study prescribed by the institution other than one that is intended to result in the awarding of a diploma or degree.

All candidates for a Certificate must meet the following requirements:

1. All requirements must be met through earned SCC credits or through approved action by the registrar.

2. Earn a minimum cumulative grade point average (GPA) of 2.00 in the certificate curriculum at SCC.

3. General education courses, if required, are listed in the approved curriculum for that certificate.

4. Satisfactory completion of all core, general education and/or elective requirements as specified for the certificate program. Said requirements are stated in the program section of the college catalog. Requirements of certificate programs vary in terms of length and credit hours.

Arts and Sciences (College Transfer)

The arts and sciences program provides courses of study which will readily transfer to most colleges and universities. Students planning to earn a baccalaureate degree may begin coursework at Southeastern Community College and complete the general education requirements for most majors with the completion of an SCC Associate of Arts degree.

Iowa community colleges and Iowa regent universities (University of Iowa, University of Northern Iowa, and Iowa State University) have developed an articulation agreement to assist in the transfer process. SCC also has articulation agreements with other colleges and universitites. Students should consult with an SCC enrollment specialist to determine the transfer of coursework since many majors require specific classes. Students may also be referred to faculty for questions regarding specific majors.

Students can start classes at SCC and transfer for a degree in any of the following majors:

> Accounting
> Agriculture
> Art
> Athletic Training/Exercise Science
> Biological Science
> Business
> Chemistry
> Chiropractic
> Communication
> Computer Science
> Criminal Justice/Law Enforcement
> Dentistry
> Early Childhood
> Elementary Education
> Engineering
> English
> Graphic Communication/Design
> Industrial/Engineering Technology
> Law
> Mathematics
> Medicine
> Mortuary Science
> Music
> Nursing Home Administration and Health Services Administration
> Nutrition/Dietetics
> Optometry
> Pharmacy
> Physical Education
> Physical Therapy
> Psychology
> Secondary Education
> Social Work
> Special Education
> Veterinary Medicine

If your intended major is not listed, contact Enrollment Services for suggested coursework.

■ Steps to Assist in the Transfer of Credit

Students who intend to transfer credits earned at SCC toward degree requirements at another college are urged to observe the following steps:

Students should:

1. THINK carefully about personal interests and abilities. Students will then be in a better position to make decisions regarding educational goals, and SCC will be able to better assist the student in accomplishing those goals.
2. MEET with an SCC enrollment specialist to discuss educational plans and select courses for each term.
3. CONTACT the transfer college to obtain information necessary for a successful transfer. Students should be aware that many majors require specific coursework at SCC.
4. DISCUSS any change in educational plans with an SCC enrollment specialist. Never rely on rumors about what will and will not transfer. Always visit with an enrollment specialist or the transfer institution and get the facts.

To be assured of an ideal transfer, it is very important for students to know both the chosen major and transfer college as soon as possible. Most transfer colleges provide information on their websites for transfer students. To see how an SCC class transfers go to the SCC website (www.scciowa.edu), click on "current students", then "after SCC", then "transferring to a 4-year college".

Educational Services Available at SCC

■ Degree and Certificate Services and Programs

AA Degree

College Transfer

AS Degree

Business Administration
Construction Management
Criminal Justice
Graphic Communications
    Graphic Design
    Journalism

AAS, Diploma, Certificate

Accounting
Agriculture Management
Agriculture
Animation for Television, Film, and New Media
Automobile Collision Repair
    Management Option
Automotive Technology
    Management Option
Biomedical Electronics Technician
Chemical Dependency Counselor
Child Development – Carl Sandburg College
Construction Technology
Dental Hygiene – Carl Sandburg College
Drafting Technology
Electronics Technology
Emergency Medical Services
Fire Science Technology
Industrial Maintenance Technology
    Electrical Maintenance Technician
    Mechanical Maintenance Technician
Information Technology
    Network Administration & Cyber Security
    Web Design & Administration
Medical Assistant
Medical Coding and Billing
Mortuary Science – Carl Sandburg College
Nursing
    Associate Degree
    Practical Nursing
Office Administration
    Accounting Assistant
    Administrative Assistant
    Legal Administrative Assistant
    Medical Administrative Assistant
Radiologic Technology – Carl Sandburg College
Respiratory Care
Skilled Trades
Technical Studies
Welding

■ Growth and Development Services and Programs

Continuing and Extended Education

Agriculture
Family and Consumer Sciences
Health Occupations
Computer Software/Hardware/Certifications
Environmental and Occupational Safety
Business/Management

Vocational Education Options

Truck Driving/CDL
Sales and Marketing
Office Occupational Skills
Professional Development/Re-Licensure
Mechanical/Technical
Center for Business
Workforce Skills Training
Contracted Training
Open Enrollment Professional Development
General Interest Personal Development
Workforce/Workplace Assessment
Work Skills Upgrading
Business Solutions Consulting
Business Meeting Facilities and Tools
Business Meeting Planning and Management
Small Business Consulting
    Business Start-up
    Business Growth and Expansion
    Business Transition and Valuation

Graduation Requirements for Associate of Arts Degree

In order to graduate, a student must have a 2.00 grade point average or above and have successfully completed sixty-two (62) semester hours of credit in courses designated for transfer. In addition to these requirements, every student must meet the following requirements:

Semester Hours

Communications		**9**
Composition:	**ENG-** 105, 106	6
Speech:	**SPC-** 112	3

Humanities - Select from at least 2 different departments — **8**

Art:	**ART-**	101, 109, 120, 123, 133, 134, 138, 143, 144, 154, 157, 173, 174, 184, 203, 204, 208, 295, 922, 928
Drama:	**DRA-**	101, 110, 130, 141, 142, 145
French:	**FLF-**	141, 142, 241, 242
German:	**FLG-**	141, 142, 231, 232, 922
History & World Civ:	**HIS-**	131, 132, 151, 152, 211, 231, 251, 257, 266, 268, 271
Humanities:	**HUM-**	114, 145, 287, 290; **JOU-** 120, 121
Literature:	**LIT-**	101, 105, 120, 121, 122, 125, 131, 150, 151, 184, 204; **ENG-** 221, 929; **JOU-** 120,121
Music:	**MUA-**	101, 104, 108, 109, 120 thru 127, 143, 146, 170, 173, 180, 183;
	MUS-	100, 102, 120, 121, 135, 136, 140, 150, 162, 204, 220, 221, 235, 236
Philosophy:	**PHI-**	101, 105, 110, 122
Religion:	**REL-**	101
Spanish:	**FLS-**	129, 141, 142, 231, 232, 922

Social Science - Select from at least 2 different departments — **8**

Economics:	**ECN-**	120, 130
Geography:	**GEO-**	121, 141, 161, 922
History & World Civ:	**HIS-**	131, 132, 151, 152, 211, 231, 251, 257, 266, 268, 271
Political Science:	**POL-**	110, 111, 112
Psychology:	**PSY-**	102, 111, 121, 211, 226, 227, 228, 241, 251
Sociology:	**SOC-**	110, 115, 120, 136, 160, 161, 207, 230, 240, 851, 922

Math & Science - Must include one math and one laboratory science course — **8**

Mathematics:	**MAT-**	110, 112, 113, 127, 128, 140, 149, 156, 165, 170, 210, 216, 219, 227
Lab Science:	**BIO-**	108, 109, 112, 113, 138, 163, 177, 180, 186, 248, 252; **CHM-** 122, 165, 175, 263, 273;
	ENV-	111; **PHS-** 120, 151; **PHY-** 106, 160, 161, 212, 222; **SCI-** 142
Non-Lab Science:	**PHS-**	165, 185; **SCI-** 922, 928

Distributed Requirement - Select from the above three disciplines: (Humanities, Social Science, Math/Science) — **8**

Electives — **21**

All transfer courses may be used here including courses listed above (if additional are taken beyond requirements). Students should plan their elective courses according to their college major if they are planning to transfer on for a four year degree. Information on suggested course-work is available in the Enrollment Services office. 16 semester hours of career education courses with a grade of "C" (2.00 on a 4.00 scale) or better may be applied as part of the 21 semester hours of electives.

Total — **62**

Associate of Arts Degree Worksheet

Student Name: _____   Date: _____

I. COURSE REQUIREMENTS

Course Name / #	Hrs.

A. Communications (9 semester hours)

ENG-105 Composition I (C- or better) _____

ENG-106 Composition II _____

SPC-112 Public Speaking _____

Total _____

B. Humanities (minimum of 8 semester hours)*

Select from at least 2 of the following subject areas: art, music, philosophy, literature, foreign language, history**, and theatre.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Total _____

C. Social Science (minimum of 8 semester hours)*

Select from at least 2 of the following subject areas: History**, political science, geography, sociology, psychology, and economics.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Total _____

D. Science/Math (minimum of 8 semester hours)*

Must include both science and math. Must include 1 lab science.

Science

_____ _____

_____ _____

_____ _____

Total _____

Math

_____ _____

_____ _____

_____ _____

Total _____

E. Distributed Requirements

Eight (8) additional hours from one or more of the following areas: Humanities, Social Science, Science, Math.

_____ _____

_____ _____

_____ _____

Total _____

F. Electives (maximum of 21 semester hours)

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Total _____

■ **Total Hours**

• *62 hours are required to graduate* •

Communications.................................... _____

Humanities.. _____

Social Science .... _____

Science/Math.. _____

Electives.. _____

Total _____

II. OTHER REQUIREMENTS

Residency Requirement
(15 of last 20 hours must be completed at SCC)

Requirement Met _____

GPA Requirement
(2.0 required for graduation)

Requirement Met _____

*Excess hours in these categories will be counted either in category E (distributed requirement) **or** category F (elective hours).*

History courses may count as either Social Science **or Humanities credit.*

Graduation Requirements for Associate of Science Degree

In order to graduate, a student must have a 2.00 grade point average or above and have successfully completed sixty-two (62) semester hours of credit in courses designated for transfer. In addition to these requirements, every student must meet the following requirements:

Semester Hours

Communications — 9

Composition:	**ENG-**	105, 106	6
Speech:	**SPC-**	112	3

Humanities - Select from at least 2 different departments — 6

Art:	**ART-**	101, 109, 120, 123, 133, 134, 138, 143, 144, 154, 157, 173, 174, 184, 203, 204, 208, 295, 922, 928
Drama:	**DRA-**	101, 110, 130, 141, 142, 145
French:	**FLF-**	141, 142, 241, 242
German:	**FLG-**	141, 142, 231, 232, 922
History & World Civ:	**HIS-**	131, 132, 151, 152, 211, 231, 251, 257, 266, 268, 271
Humanities:	**HUM-**	114, 145, 287, 290; **JOU-** 120, 121
Literature:	**LIT-**	101, 105, 120, 121, 122, 125, 131, 150, 151, 184, 204; **ENG-** 221, 929; **JOU-** 120,121
Music:	**MUA-**	101, 104, 108, 109, 120 thru 127, 143, 146, 170, 173, 180, 183;
	MUS-	100, 102, 120, 121, 135, 136, 140, 150, 162, 204, 220, 221, 235, 236
Philosophy:	**PHI-**	101, 105, 110, 122
Religion:	**REL-**	101
Spanish:	**FLS-**	129, 141, 142, 231, 232, 922

Social Science - Select from at least 2 different departments — 6

Economics:	**ECN-**	120, 130
Geography:	**GEO-**	121, 141, 161, 922
History & World Civ:	**HIS-**	131, 132, 151, 152, 211, 231, 251, 257, 266, 268, 271
Political Science:	**POL-**	110, 111, 112
Psychology:	**PSY-**	102, 111, 121, 211, 226, 227, 228, 241, 251
Sociology:	**SOC-**	110, 115, 120, 136, 160, 161, 207, 230, 240, 851, 922

Math & Science - Must include one math and one laboratory science course — 24

Mathematics:	**MAT-**	110, 112, 113, 127, 128, 140, 149, 156, 165, 170, 210, 216, 219, 227
Lab Science:	**BIO-**	108, 109, 112, 113, 138, 163, 177, 180, 186, 248, 252; **CHM-** 122, 165, 175, 263, 273;
	ENV-	111; **PHS-** 120, 151; **PHY-** 106, 160, 161, 212, 222; **SCI-** 142
Non-Lab Science:	**PHS-**	165, 185; **SCI-** 922, 928

Electives — 17

All transfer level courses may be used here including courses listed above (if additional are taken beyond requirements). Students should plan their elective courses according to their college major if they are planning to transfer on for a four year degree. Information on suggested coursework is available in the Enrollment Services office. Up to 16 semester hours of vocational courses may also be applied as part of the 17 semester hours of electives.

Total — 62

Associate of Science Degree Worksheet

Student Name: _____   Date: _____

I. COURSE REQUIREMENTS

Course Name / #	Hrs.

A. Communications (9 semester hours)

ENG-105 Composition I (C- or better)   _____

ENG-106 Composition II   _____

SPC-112 Public Speaking   _____

Total   _____

B. Humanities (minimum of 6 semester hours)*

Select from at least 2 of the following subject areas: art, music, philosophy, literature, English, foreign language, history**, and theatre.

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

Total   _____

C. Social Science (minimum of 6 semester hours)*
Select from at least 2 of the following subject areas: History**, political science, geography, sociology, psychology, and economics.

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

Total   _____

D. Science/Math (minimum of 24 semester hours)*
Must include both science and math. Must include 1 lab science.
Science

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

Total   _____

Math

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

Total   _____

E. Electives (17 semester hours)

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

Total   _____

▪ Total Hours

• *62 hours are required to graduate* •

Communications .... _____

Humanities .... _____

Social Science .... _____

Science/Math .... _____

Electives .... _____

Total _____

II. OTHER REQUIREMENTS

Residency Requirement
(15 of last 20 hours must be completed at SCC)

Requirement Met _____

GPA Requirement
(2.0 required for graduation)

Requirement Met _____

Excess hours in these categories will be counted either in category E (elective hours).

History courses may count as either Social Science **or Humanities credit.*

West Burlington Campus, Keokuk Campus and Online

Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
ACC-131	Principles of Accounting I *(WB, ICCOC)*	4	0	4
ACC-805	Accounting Problems I *(WB, ICCOC)*	0	4	2
BUS-185	Business Law I	3	0	3
CSC-110	Introduction to Computers	3	0	3
Elective	Accounting Math	3	0	3
Elective	Accounting Program	3	0	3
		16	4	18

Spring Semester I				
ACC-132	Principles of Accounting II *(WB, ICCOC)*	4	0	4
ACC-161	Payroll Accounting *(WB, ICCOC)*	3	0	3
ACC-806	Accounting Problems II *(WB, ICCOC)*	0	4	2
ADM-114	Keyboarding Applications	2	2	3
BCA-152	Comprehensive Spreadsheets *(ICCOC)* **or**	2	2	3
BCA-157	Intermediate Spreadsheets *(WB)*	2	2	3
Elective	Accounting English	3	0	3
		14	8	18

Program Total 36

Accounting Assistant Diploma awarded

Fall Semester II				
ACC-231	Intermediate Accounting I *(WB, ICCOC)*	3	2	4
ACC-261	Income Tax Accounting *(WB, ICCOC)*	3	0	3
ACC-310	Computer Accounting **or**	2	0	2
ACC-311	Computer Accounting *(ICCOC)*	3	0	3
ECN-130	Principles of Micro-Economics	3	0	3
Elective	Accounting Communications	3	0	3
Elective	Accounting Math	3	0	3
		17/18	2	18/19

Spring Semester II				
ACC-221	Cost Accounting *(WB, ICCOC)*	3	0	3
ACC-232	Intermediate Accounting II *(WB, ICCOC)*	3	2	4
BUS-180	Business Ethics	3	0	3
BUS-936	Business Capstone *(ICCOC only)*	1	0	1
MAT-156	Statistics	3	0	3
Elective	Accounting Program	3	0	3
		16	2	17

Program Total 71/72

This program is designed to provide students with the necessary knowledge and skills for entry-level accounting positions. The program will also take the student through balance sheets, financial statements, income tax, analysis and cost accounting.

This Associate of Applied Science Degree Program is four semesters in length. The second year is comprised of advanced level courses to increase the skill level of the student and thus contribute to potentially more rapid advancement upon employment.

Where will this take me?

Accounting Clerk

Accounts Payable Clerk

Bookkeeper

Inventory Clerk

Payroll Clerk

Tax Accountant Clerk

Transfer plans exist between the accounting program and:

Hannibal LaGrange College - BAS in Organization Management

Northwest Missouri State University - BS in Accounting

Upper Iowa University - BS in Accounting

Instructor and Staff

Kevin Rosenberg - Instructor, ext. 5199
   Email: krosenberg@scciowa.edu
   BBA, University of Iowa
   MA, University of Iowa

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_for_college/financial_aid/gainfulemployment.html

Accounting Electives:

Though students may choose any combination of courses to complete each of the elective requirements, students should focus upon their future objectives regarding career and/or transfer to a 4-year college as they make their selections.

Accounting Program Electives:

Students must complete at least 6 semester hours of approved Program Elective courses. Approved Program Elective courses include:

Career Focus —
ACC-932 Accounting Internship
BUS-102 Introduction to Business
BUS-186 Business Law II

FIN-130 Principles of Finance
HUM-287 Leadership Development Studies
MGT-101 Principles of Management
MGT-170 Human Resources Management
MKT-110 Principles of Marketing
Transfer Focus —
BUS-121 Business Communications
ECN-120 Principles of macro-Economics
ENG-106 Composition II
PSY-111 Introduction to Psychology
SOC-110 Introduction to Sociology

Accounting Communications Electives:
Students must complete at least 3 semester hours of approved Communications Elective courses. Approved Communications Elective courses include:

Career Focus —

BUS-121 Business Communication
Transfer Focus —SPC-112 Public Speaking

Accounting English Electives:
Students must complete at least 3 semester hours of approved English Elective courses. Approved English Elective courses include:

Career Focus —ENG-131 Business English
Transfer Focus —ENG-105 Composition I

Accounting Math Electives:
Students must complete at least 6 semester hours of approved Math Elective courses, and the Statistics course. Approved Math Elective courses include:

Career Focus —
ADM-133 Business Math/Calculators
MAT-102 Intermediate Algebra
Transfer Focus —
MAT-140 Finite Math
MAT-165 Business Calculus

Agriculture Management

Students in SCC's Agriculture Programs have opportunities to prepare for a lifetime of learning through classroom and internship positions limited only by students' initiative and imagination. This program prepares students to serve the food production and processing industries through operation of feed mills, fertilizer plants, elevators, retail farm supply stores and farm equipment dealers. The program is also designed to provide improved skills I the areas of crop and livestock production, agriculture equipment and farm business management.

This program offers a diploma and degree in Agriculture Management.

The Agriculture Specialization Certificate is designed to meet the needs of students who are presently fully employed and only have limited time to attend class.

Students wanting to incorporate economics classes into livestock or crop areas would also benefit greatly from the certificate. Students will be expected to complete four courses: one each from the areas of Agronomy, Animal Science and Economics AND another Agriculture elective.

Many of the courses found in the Associate of Applied Science Agriculture degree programs may transfer to meet requirements for a B.S. degree in agriculture at several state universities.

Where will this take me?

- Animal Science Technician
- Farm and/or Feedlot Owner/Operator
- Fruit and Vegetable Grower
- Grain and/or Livestock Farmer
- Livestock Breeding Manager
- Specialty Animal Producer

Instructor and Staff

Chuck Albright - Instructor, ext. 5104
  Email: calbright@scciowa.edu
  BS, University of Nebraska-Lincoln
  MS, University of Nebraska-Lincoln
  Additional study: Iowa State University, Iowa Wesleyan College, and the University of Northern Iowa

Adam Raub - Instructor, ext. 5103
  Email: araub@scciowa.edu
  BS, Western Illinois University

West Burlington Campus

Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
AGA-114	Principles of Agronomy	2	2	3
AGM-100	Commercial Driver's License	0	1	0.5
AGM-200	Farm Welding	0.5	2.5	1.7
AGP-340	Foundations of GIS and GPS	2	2	3
AGS-113	Survey of Animal Industry	3	0	3
CSC-110	Introduction to Computers	3	0	3
		10.5	7.5	14.2

Spring Semester I				
AGA-154	Fundamentals of Soil Science	2	2	3
AGA-376	Integrated Pest Management	2	2	3
AGM-157	Machinery Management	0	4	2
*COM-102	Communication Skills	3	0	3
*ELE-130	Home and Farm Electricity	1	2	2
*MAT-702	Introduction to Math Applications	2	2	3
*PSY-102	Human and Work Relations	3	0	3
		13	12	19

Program Total *33.2*

Agriculture Diploma Awarded

Summer Session				
AGB-816	Student Internship I	0	15	3.7
AGB-930	Agriculture Seminar	1	0	1
		1	15	4.7

Fall Semester II				
AGA-158	Soil Fertility	2	2	3
AGB-470	Farm Records, Accounts and Analysis	2	2	3
AGB-826	Student Internship II	0	15	3.7
AGM-151	Farm Equipment Adjustment	0	4	2
AGP-421	Applications of GIS	1	2	2
AGS-225	Swine Science	2	2	3
AGS-319	Animal Nutrition	2	2	3
		9	29	19.7

Spring Semester II				
AGB-210	Agricultural Law	2	0	2
AGB-235	Introduction to Agriculture Markets	2	2	3
AGB-330	Farm Business Management	2	2	3
AGB-336	Agricultural Selling	3	0	3
AGS-228	Beef Cattle Science	5	0	5
ECN-110	Introduction to Economics	3	0	3
		17	4	19

Program Total *76.6*

Approved higher level course may be substituted.

Online

Associate of Applied Science Degree Requirements

Fall Semester I | | Credit
AGA-114	Principles of Agronomy	3
AGA-154	Fundamentals of Soil Science	3
AGB-470	Farm Records, Accounts & Analysis	3
AGS-113	Survey of Animal Industry	3
*AGS-242	Animal Health	3
CSC-110	Introduction to Computers	3
		18

Spring Semester I
AGB-235	Introduction to Agriculture Markets	3
AGB-330	Farm Business Management	3
AGB-336	Agriculture Selling	3
ENG-105	Composition I	3
*MAT-772	Applied Math or Higher Math (4.0)	3
	Agriculture Elective	3
		18-19

Summer Session
| *AGC-936 | Occupational Experience | 3-6 |
| | | **3-6** |

Fall Semester II
*AGP-329	Introduction to GPS	3
*AGB-437	Commodity Marketing	3
	Agriculture Electives	6
	General Education Elective	3
		15

Spring Semester II
AGA-158	Soil Fertility	3
*AGH-284	Pesticide Application Certification	3
	Agriculture Electives	6
	General Education Elective (Humanities)	3
		15

Program Total 69-73

Elective courses:
AGA-376	Integrated Pest Management	3
AGB-210	Ag Law	2
*AGB-331	Entrepreneurship in Agriculture	3
*AGC-420	Issues in Agriculture	3
AGM-155	Farm Equipment Management	2
AGS-228	Beef Cattle Science	5
*AGS-270	Foods of Animal Origin	3
AGS-319	Animal Nutrition	3

*Via ICCOC only

The student will have the opportunity to prepare for a lifetime of learning through web-based studies, limited only by the student's initiative and imagination. This program prepares students to serve the food production and processing industries through operation of feed mills, fertilizer plants, elevators, retail farm supply stores and farm equipment dealers. The program is also designed to provide improved skills in the areas of crop and livestock production, agriculture equipment and farm business management. Students may transfer many of the agriculture courses found in the agriculture degrees to meet requirements for a B.S. degree in agriculture at several state universities.

Where will this take me?
- Agribusiness Manager
- Agriculture Sales
- Agronomist
- Farm Manager
- GPS/GIS Technician Owner/Operator
- IPM Crop Scout

Instructor and Staff

Chuck Albright - Instructor, ext. 5104
Email: calbright@scciowa.edu
BS, University of Nebraska-Lincoln
MS, University of Nebraska-Lincoln
Additional study: Iowa State University, Iowa Wesleyan College, and the University of Northern Iowa

Adam Raub - Instructor, ext. 5103
Email: araub@scciowa.edu
BS, Western Illinois University

Animation for Television, Film, and New Media

SCC's new Animation for Television, Film and New Media program will prepare students to enter into a wide variety of careers in computer generated and stop motion animation for Information, Entertainment, Gaming and New Media industries.

Students will use state-of-the-art technology in SCC's all-new Animation Computer Lab and Stop Motion Lab located on the West Burlington campus.

Course competencies will include understanding the fundamentals of film, art, computers and new media communications. Skills in storytelling, concept design, modeling, rigging, texturing, animation, rendering, lighting and motion graphics will be emphasized.

This broad-based instructional program will also feature training in a number of industry-specific software applications.

Where will this take me?

3-D Modeler

Character Animator

Effects Animator

Filmmaker

Lighting & Rendering Artist

Stop-Motion Animator

Storyboard & Concept Artist

Technical Artist-Rigging

Video Game Designer

Instructor and Staff

Benjamin Rosales - Instructor, ext. 5256
   Email: brosales@scciowa.edu

West Burlington Campus

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
ANI-101	Animation Software I	2	2	3
ANI-116	Exploring Human Movement	2	2	3
ANI-136	Stop Motion/Video Production	2	2	3
ART-133	Drawing	2	2	3
DRA-110	Introduction to Film	3	0	3
ENG-105	English Composition I	3	0	3
		14	8	18

Spring Semester I				
ANI-102	Animation Software II	2	2	3
ANI-109	Animation Principles & Techniques	2	6	5
ANI-111	Production Pipeline Studio - I	2	2	3
ENG-221	Creative Writing	3	0	3
Elective	*Specialty Topics	0-3	1-2	1-4
		9-12	11-12	15-18

Summer Semester				
ANI-112	Production Pipeline Studio II	2	2	3

Fall Semester II				
ANI-103	Animation Software III	2	2	3
ANI-113	Production Pipeline Studio III	2	6	5
ANI-952	Topics	1	2	2
MAT-110	Math for Liberal Arts	3	0	3
Elective	*Specialty Topics	0-3	1-2	1-4
		8-11	11-12	14-17

Spring Semester II				
ANI-104	Animation Software IV	2	2	3
ANI-114	Production Pipeline Studio IV	2	6	5
ANI-932	Animation Internship **_or_**	0	15	3.7
ANI-941	Animation Studio Practicum	2	2	3
Elective	*Specialty Topics	0-3	2	1-4
		6-9	12-25	12-15.7

Program Total 62-71.7

*Specialty Topics Electives

ART-120	2-D Design (2-2-3)
ART-123	3-D Design (2-2-3)
ART-138	Figure Drawing (2-2-3)
ART-143	Painting (2-2-3)
ART-184	Photography (2-2-3)
BIO-177	Human Anatomy (3-2-4)
DRA-141	Theater & Speech Participation (0-2-1)

West Burlington Campus

Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec	Lab.	Credit
CRR-300	Preparation	1	2	2
CRR-340	Metal Straightening	1	4	3
CRR-400	Panel Replacement and Adjustment	2	3	3.5
CRR-500	Damage Analysis	1	2	2
CRR-800	Introduction to Automotive Refinishing	1	3	2.5
**MAT-702	Introduction to Math Applications	2	2	3
SCI-115	Basic Electricity	1	2	2
		9	18	18

Spring Semester I				
COM-102	Communication Skills	3	0	3
CRR-120	MIG (GMAW) Welding	1	4	3
CRR-454	Glass Replacement	1	2	2
CRR-525	Straightening Structural Parts	2	7	5.5
CRR-610	Steering and Suspension	1	1	1.5
CRR-812	Surface Preparation	2	6	5
		10	20	20

Summer Session				
CRR-201	Plastic Repair	1	2	2
*Elective	Humanities	3	0	3
Elective	Social Science	3	0	3
		7	2	8

Total Hours *46*

Auto Body Diploma Awarded

Fall Semester II				
CRR-575	Advanced Structural Repair	2	8	6
CRR-580	Advanced Frame Straightening	2	8	6
CRR-765	Computer Diagnosis for Auto Collision	2	6	5
Elective	Computer	1-3	0	1-3
		7-9	22	18-20

Spring Semester II				
CRR-410	Full or Partial Body Panel Replacement	1	5	3.5
CRR-745	Computerized Damage Reports	2	0	2
CRR-845	Color Tinting and Matching	1	3	2.5
CRR-875	Advanced Refinishing Methods	2	8	6
CRR-932	Internship	0	16	4
		6	32	18

Total Hours *82-84*

AAS in Auto Collision Repair Awarded

* Required for AAS students; optional for Diploma students

**Approved higher level math course may be substituted

The Auto Collision Repair Program provides training in shop processes used to restore damaged vehicles to the original condition. This program is designed to use the latest techniques in the field of Auto Collision Repair.

SCC's Auto Collision Repair program combines state-of-the art equipment with an I-CAR curriculum, giving students the advanced knowledge required to keep up with the ever-changing automobile industry. I-CAR techniques and procedures are the industry standard for Auto Collision Professionals.

In addition to the auto industry, another growing industry that recruits automotive collision students, Is the renewable energy industry. Many of the same concepts and skills involved in auto collision repair are also involved in the assembly and maintenance of wind energy components, including windmill blades and towers. While there SCC offers no specific class dedicated to such specific technology, the concepts match closely.

A number of SCC graduates, specifically, have found employment with wind energy companies since 2008.

Where will this take me?

Auto Collision Estimator
Auto Collision Equipment Sales
Auto Collision Repair Technician
Auto Glass Installation Expert
Auto Wheel Alignment Technician
Frame Repair Specialist
Insurance Adjuster
Paint Product Rep/Sales
Paint Retailer

Instructor and Staff

Randy Wachter - Instructor, ext. 5110
    Email: rwachter@scciowa.edu
    Diploma, Southeastern Community College

Tim Weaver - Instructor, ext.5111
    Email: tweaver@scciowa.edu

Auto Collision Repair – Management Option

The Auto Collision Repair Program provides training in shop processes used to restore damaged vehicles to the original condition. This program is designed to use the latest techniques in the field of Auto Collision Repair.

SCC's Auto Collision Repair program combines state-of-the art equipment with an I-CAR curriculum, giving students the advanced knowledge required to keep up with the ever-changing automobile industry. I-CAR techniques and procedures are the industry standard for Auto Collision Professionals.

In addition to the auto industry, another growing industry that recruits automotive collision students, Is the renewable energy industry. Many of the same concepts and skills involved in auto collision repair are also involved in the assembly and maintenance of wind energy components, including windmill blades and towers. While there SCC offers no specific class dedicated to such specific technology, the concepts match closely.

A number of SCC graduates, specifically, have found employment with wind energy companies since 2008.

Where will this take me?

Auto Collision Estimator
Auto Collision Equipment Sales
Auto Collision Repair Technician
Frame Repair Specialist
Insurance Adjuster
Paint Retailer

Instructor and Staff

Randy Wachter - Instructor, ext. 5110
   Email: rwachter@scciowa.edu
   Diploma, Southeastern Community College

Tim Weaver - Instructor, ext.5111
   Email: tweaver@scciowa.edu

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_for_college/financial_aid/gainfulemployment.html

West Burlington Campus

Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
CRR-300	Preparation	1	2	2
CRR-340	Metal Straightening	1	4	3
CRR-400	Panel Replacement and Adjustment	2	3	3.5
CRR-500	Damage Analysis	1	2	2
CRR-800	Introduction to Automotive Refinishing	1	3	2.5
**MAT-702	Introduction to Math Applications	2	2	3
SCI-115	Basic Electricity	1	2	2
		9	18	18

Spring Semester I				
COM-102	Communication Skills	3	0	3
CRR-120	MIG (GMAW) Welding	1	4	3
CRR-454	Glass Replacement	1	2	2
CRR-525	Straightening Structural Parts	2	7	5.5
CRR-610	Steering and Suspension	1	1	1.5
CRR-812	Surface Preparation	2	6	5
		10	20	20

Summer Session				
CRR-201	Plastic Repair	1	2	2
*Elective	Humanities	3	0	3
Elective	Social Science	3	0	3
		7	2	8

Total Hours 46

Auto Body Diploma Awarded

Fall Semester II				
ACC-131	Principles of Accounting I	4	0	4
ADM-114	Keyboarding Applications	2	2	3
BUS-121	Business Communication	3	0	3
BUS-180	Business Ethics	3	0	3
MGT-101	Principles of Management	3	0	3
		15	2	16

Spring Semester II				
BUS-102	Introduction to Business	3	0	3
HUM-287	Leadership Development Studies	3	0	3
MGT-130	Principles of Supervision _or_	3	0	3
MGT-170	Human Resources Management	3	0	3
MKT-110	Principles of Marketing	3	0	3
Elective	Humanities _or_ Social Science	3	0	3
		15	0	15

Total Hours 77

AAS in Auto Collision Repair Management Awarded

*Required for AAS students; optional for Diploma students

**Approved higher level math course may be substituted

West Burlington Campus

Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
AUT-106	Intro to Automotive Technology	1	2	2
AUT-126	Fund. of Automotive Servicing	1	2	2
AUT-405	Automotive Suspension & Steering	2	6	5
AUT-505	Automotive Brake Systems	2	6	5
HSC-181	First Aid/CPR for Non-Health Care Workers	1	1	1.5
*MAT-702	Introduction to Math Applications	2	2	3
		9	19	18.5

Spring Semester I				
AUT-166	Automotive Engine Repair	3	6	6
AUT-244	Manual Drivetrains I	1	4	3
AUT-610	Automotive Electrical I	2	4	4
*COM-102	Communication Skills	3	0	3
SCI-115	Basic Electricity	1	2	2
Elective	Computer Science	1-3	0	1-3
		11-13	16	19-21

Summer Session				
AUT-700	Auto Heating & Air Conditioning	1	3	2.5
SDV-125	Workplace Readiness	1	0	1
**Elective	General Education	3	0	3
		5	3	6.5

Program Total 44-46

Auto Mechanics Diploma awarded

Fall Semester II				
AUT-625	Automotive Electrical II	4	8	8
AUT-800	Engine Performance	4	8	8
Elective	Humanities <u>or</u> Social Science	3	0	3
		11	16	19

Spring Semester II				
AUT-190	Hybrid Fundamentals	1	2	2
AUT-207	Auto Transmissions & Transaxles	2	8	6
AUT-246	Manual Drivetrains II	1	4	3
AUT-911	Cooperative/Internship	0	16	4
BUS-140	Small Business Start-Up	2	0	2
		6	30	17

Total Hours 80-82

AAS in Automotive Technology Awarded

*or higher
**Required for AAS students; optional for diploma students

The SCC Automotive Technology program is an ASE (Automotive Service Excellence) Certified program. This certification assures the student that the program meets the standards set by NATEF (National Automotive Technicians Education Foundation) regarding equipment, tools, scheduling, instructors and curriculum. .

In order for a technician to become ASE certified, he/she must have two years experience in addition to passing tests in the various areas of automotive repair. However, by attending the SCC Automotive Technology program, students may take these tests at any time during their education. If they pass these tests, they will become ASE Certified pro-tem upon graduation. After just one year of experience in the field, they become officially ASE Certified.

One benefit of this program is the on the job training (OJT) it provides. OJT gives the students hands-on experience in an actual work environment. In this two year program, students will not only receive an education, but they will also receive hands-on experience while being paid.

Where will this take me?

   Automotive Diagnostic Expert
   Automotive Parts Sales
   Automotive Repair Technician
   Automotive Service Advisor
   Insurance Adjuster
   Transmission Specialist

Instructor and Staff

Jayson Bethurem - Instructor, ext. 5108
   Email: jbetheurem@scciowa.edu
   AAS, Southeastern Community College
   ASE Certified Master Technician
   Toyota, Mazda, Nissan and GM Certified

Wes Carpenter - Instructor, ext. 5109
   Email: wcarpenter@scciowa.edu
   AAS, Lincoln Technical Institute
   BA, Western Illinois University
   ASE Certified Mastern Technician
   GM Certified

Kelly Kroll - Support Specialist, ext. 5107
   Email: kkroll@scciowa.edu

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_ for_college/financial_aid/gainfulemployment.html

Automotive Technology – Management Option

The SCC Automotive Technology program is an ASE (Automotive Service Excellence) Certified program. This certification assures the student that the program meets the standards set by NATEF (National Automotive Technicians Education Foundation) regarding equipment, tools, scheduling, instructors and curriculum.

In order for a technician to become ASE certified, he/she must have two years experience in addition to passing tests in the various areas of automotive repair. However, by attending the SCC Automotive Technology program, students may take these tests at any time during their education. If they pass these tests, they will become ASE Certified pro-tem upon graduation. After just one year of experience in the field, they become officially ASE Certified.

One benefit of this program is the on the job training (OJT) it provides. OJT gives the students hands-on experience in an actual work environment. In this two year program, students will not only receive an education, but they will also receive hands-on experience while being paid.

The Automotive Technology Program - Management Option allows students to pursue a management track in their second year.

Instructor and Staff

Jayson Bethurem - Instructor, ext. 5108
   Email: jbetheurem@scciowa.edu
   AAS, Southeastern Community College
   ASE Certified Master Technician
   Toyota, Mazda, Nissan and GM Certified

Wes Carpenter - Instructor, ext. 5109
   Email: wcarpenter@scciowa.edu
   AAS, Lincoln Technical Institute
   BA, Western Illinois University
   ASE Certified Mastern Technician
   GM Certified

Kelly Kroll - Support Specialist, ext. 5107
   Email: kkroll@scciowa.edu

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_ for_college/financial_aid/gainfulemployment.html

West Burlington Campus

Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
AUT-106	Intro to Automotive Technology	1	2	2
AUT-126	Fund. of Automotive Servicing	1	2	2
AUT-405	Automotive Suspension & Steering	2	6	5
AUT-505	Automotive Brake Systems	2	6	5
HSC-181	First Aid/CPR for Non-Health Care Workers	1	1	1.5
*MAT-702	Introduction to Math Applications	2	2	3
		9	19	18.5

Spring Semester I				
AUT-166	Automotive Engine Repair	3	6	6
AUT-244	Manual Drivetrains I	1	4	3
AUT-610	Automotive Electrical I	2	4	4
*COM-102	Communication Skills	3	0	3
SCI-115	Basic Electricity	1	2	2
Elective	Computer Science	1-3	0	1-3
		11-13	16	19-21

Summer Session				
AUT-700	Auto Heating & Air Conditioning	1	3	2.5
SDV-125	Workplace Readiness	1	0	1
**Elective	General Education	3	0	3
		5	3	6.5

Total Hours *44-46*

Auto Mechanics Diploma awarded

Fall Semester II				
ACC-131	Principles of Accounting I	4	0	4
ADM-114	Keyboarding Applications	2	2	3
BUS-121	Business Communication	3	0	3
BUS-180	Business Ethics	3	0	3
MGT-101	Principles of Management	3	0	3
		15	2	16

Spring Semester II				
BUS-102	Introduction to Business	3	0	3
HUM-287	Leadership Development Studies	3	0	3
MGT-130	Principles of Supervision *or*	3	0	3
MGT-170	Human Resources Management	3	0	3
MKT-110	Principles of Marketing	3	0	3
Elective	Humanities *or* Social Science	3	0	3
		15	0	15

Total Hours *75-77*

AAS in Auto Technology Management Awarded

* or higher

** Required for AAS students; optional for diploma students

West Burlington Campus

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
CAD-172	Introduction to CAD: AutoCAD	1	2	2
CSC-140	Computer Fundamentals	3	2	4
ELT-116	Principles of Electronics	3	4	5
*MAT-127	College Algebra & Trigonometry *or*	5	0	5
*MAT-704	Math Applications	5	0	5
		12	8	16

Spring Semester I				
BIO-252	Biomolecular Processes	2	2	3
ELT-119	Applied Human Biology/Biomedical Tech	3	0	3
ELT-329	Digital Electronics for ET	3	2	4
ELT-355	Electronic Circuits I	3	4	5
ENG-111	Technical Writing	3	0	3
		14	8	18

Fall Semester II				
ELT-357	Electronic Circuits II	3	4	5
ELT-630	Microprocessor/Interfacing	3	4	5
ELT-800	Biomedical Electronics Systems	3	2	4
Elective	Humanities *or* Social Science	3	0	3
		12	10	17

Spring Semester II				
ELT-435	Telecommunications	4	2	5
ELT-932	Internship	0	16	4
NET-118	Basic Computer Networking/Hardware	2	2	3
		6	20	12

Program Total *63*

* Or Higher

Electronics in the medical and health fields is as important and growing part of patient care. From the ambulance to the OR and in your physician's office, electronic biomedical equipment supports health care.

The Biomedical specialization combines electronics technology with health sciences courses. And, with its internship in the last semester, students will do a 16 hour per week clinical to bring together their electronics and health courses, further preparing them for entry into the field.

Admissions standards apply to this program. Please contact the Admissions office for details.

Where will this take me?

Biomedical Electronic Technician
Medical Equipment Service Technician
Medical Equipment Sales Representative
Instrumentation Technician

Instructor and Staff

Derek Schreiner - Instructor, ext. 5213
Email: dschreiner@scciowa.edu

Business Administration

The associate of science degree is intended for those students who wish to specialize in business. Most of the credits earned in this program are considered transferable by the college. However, a transfer student should consult with the bachelor degree-granting institution to determine application of particular courses for degree objectives.

The Business Professionals of America is an activity for students in the Business Program. This organization provides students with leadership training, field trips and competitive opportunities with other clubs throughout Iowa and the United States.

Transfer plans exist between the business programs and:

Hannibal-LaGrange College

Northwest Missouri State University

Upper Iowa University

Where will this take me?

Administrative Assistant

Business Manager

Human Resources Manager

Marketing, Advertising and Public Relations Manager

Merchandise Manager

Office Manager

Supervisor

Instructor and Staff

Myra Bruegger - Instructor, ext. 5198
Email: mbruegger@scciowa.edu

Tom Haas - Instructor, ext. 1982
Email: thaas@scciowa.edu

Deborah Hedger - Instructor, ext. 5226
Email: dhedger@scciowa.edu

Renee Lauer - Instructor, ext. 5194
Email: rlauer@scciowa.edu

Cindy Murphy - Program Coordinator and Instructor, ext. 5197
Email: cmurphy@scciowa.edu

Kevin Rosenberg - Instructor, ext. 5199
Email: krosenberg@scciowa.edu

West Burlington Campus, Keokuk Campus and Online

It is strongly recommended that students enrolled in any of the business curriculums have attained a keyboarding competency rate of 30 wpm.

Associate of Science Degree

Fall Semester I		Lec.	Lab.	Credit
ACC-142	Financial Accounting	3	0	3
BUS-185	Business Law I	3	0	3
ENG-105	Composition I	3	0	3
MGT-101	Principles of Management	3	0	3
PSY-111	Introduction to Psychology *or*	3	0	3
SOC-110	Introduction to Sociology			
		15	0	15

Spring Semester I				
ACC-146	Managerial Accounting	3	0	3
CSC-110	Introduction to Computers	3	0	3
ENG-106	Composition II	3	0	3
Elective	Business	3	0	3
Elective	Math	3	0	3
		15	0	15

Fall Semester II				
ECN-130	Principles of Micro-Economics	3	0	3
MKT-110	Principles of Marketing	3	0	3
SPC-112	Public Speaking	3	0	3
Elective	Business	3	0	3
Elective	Humanities	3	0	3
Elective	Science	3	0	3
		18	0	18

Spring Semester II				
BUS-936	Business Capstone	1	0	1
ECN-120	Principles of Macro-Economics	3	0	3
HUM-287	Leadership Development Studies	3	0	3
MGT-130	Principles of Supervision	3	0	3
Elective	Business	3	0	3
Elective	Humanities	3	0	3
		16	0	16

Program Total *64*

Business Electives:

BUS-102 Introduction to Business

BUS-121 Business Communication

BUS-180 Business Ethics

BUS-186 Business Law II

BUS-290 Employment Search & Workplace Success

BUS-932 Business Internship

FIN-121 Personal Finance

FIN-130 Principles of Finance

MGT-170 Human Resources Management

West Burlington and Keokuk Campuses (Keokuk requires some coursework to be completed at West Burlington Campus.)

Admission standards apply to this program.
- A. Reading Scores ASSET of 43; or ACT of 19; or COMPASS of 83
- B. ASSET writing score of 42; or ACT English score of 17; or COMPASS writing score of 62.
- C. Must successfully complete HSV-261 Introduction to Chemical Dependency Counseling with a grade of C (2.0) or above.
- D. Students will be required to pass a mandatory background check and drug screening.

All health career programs require students to earn a grade of "C" (2.0) or above in all coursework within the program. All other eligibility requirements must be met.

Please contact Enrollment Services for details.

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
*ENG-105	Composition I	3	0	3
*HSV-261	Intro to Chemical Dependency Counseling	3	0	3
HUM-114	Multicultural Perspectives	3	0	3
PSY-111	Introduction to Psychology	3	0	3
*SDV-141	Launch: A College Success Seminar	3	0	3
		15	0	15

Spring Semester I				
ENG-106	Composition II	3	0	3
**HSV-163	Helping Skills	3	0	3
**HSV-220	Intro to Counseling Theories	3	0	3
**HSV-228	Group Counseling Techniques	2	2	3
PSY-121	Developmental Psychology	3	0	3
Elective	Math	3	0	3
		17	2	18

Fall Semester II				
**HSV-262	Working with Families of Alcohol and Drug Abuse	3	0	3
**HSV-285	Case Management: Intake to Discharge	3	0	3
Elective	Humanities	3	0	3
Elective	Science	3	0	3
Elective	Sociology (**SOC-136 preferred)	3	0	3
***SPC-112	Public Speaking *or*	3	0	3
***SPC-122	Interpersonal Communications	3	0	3
		18	0	18

Spring Semester II				
**HSV-920	Counseling Practicum	0	40	11
**HSV-925	Counseling Practicum Seminar	1	0	1
		1	40	12

Program Total 63

These classes must be completed before taking the other HSV courses.

Only available at the West Burlington campus.

*** Students intending to transfer to a four-year institution should take SPC-112 and will need to talk with an academic advisor or program instructor for other requirements.*

The Chemical Dependency Counselor Program is designed to provide students with the knowledge and skills established by the Iowa Board of Substance Abuse to become a certified alcohol and drug counselor (CADC). In order to complete this program in two years (4 semesters), students should closely follow the established sequence of courses. During the last semester, students will serve a practicum in an alcohol and drug treatment center. During this practicum, students will be actively involved in applying the core functions of an alcohol and drug counselor under the direct supervision of a certified counselor. Students must be interviewed and accepted by the treatment agency in order to be eligible to enter the practicum.

Where will this take me?
- Alcohol and Drug Dependency Counselor
- Family Recovery Counselor
- Halfway House Counselor
- Residential Treatment Counselor

Instructor and Staff

Sandy Krell-Andre - Instructor, ext. 5218
Email: skrell-andre@scciowa.edu
BA, University of Iowa, MSW, George Williams College ,Additional study: National College of Education

Child Development

Graduates of this program are prepared to work with children in nursery schools, child care centers, Head Start, and in after-school child care programs. Satisfactory completion of the AAS curriculum provides the educational background required by the Illinois Department of Children and Family Services to serve as a director, teacher or group worker in a child care center. The program also prepares students with the hours needed to be an approved paraprofessional educator in Illinois. The program emphasizes opportunities for healthy, social, physical, emotional, and intellectual growth of the child. The pursuit of this program or selected parts of it can be generally beneficial to any individual who desires to develop a better understanding of young children. In addition to the AAS program described here, an AA or AS degree option with a concentration in Teacher Education, Early Childhood Education is also available. It is especially designed for students wishing to transfer to a four-year institution.

This program is offered as part of a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit www.sandburg.edu.

Galesburg and Carthage Campuses (Carl Sandburg College Reciprocal Agreement)

Associate of Applied Science Degree Requirements

Semester I		Credit
CHD-100	Observation & Guidance of the Young Child	3
CHD-101	Introduction to Early Childhood Education _or_	3.5
EDU-101	Introduction to Education	4
CHD-102	Child Growth & Development	3
ENG-101	Freshman Compoosition I	3
PSY-101	General Psychology I	3
		15.5-16

Semester II		
CHD-103	Curriculum for Early Childhood _or_	4
EDU-201	Educational Psychology	3
EDU-120	Introduction to Technology in Education	3
EDU-220	Foundations of Reading	3
PSY-221	Child Psychology	3
SOC-203	Introduction to Diversity	3
		15-16

Semester III		
CHD-204	Children with Exceptionalities	3
CHD-205	Child-Family-Community Relations	3
CIS-112	Computer Software Applications	3
HTH-130	First Aid/CPR	2
MAT-109	Concepts of Mathematics	3
		14

Semester IV		
CHD-131	Observation & Assessment	4
NUT-110	Nutrition	3
CHD-207	Supervision & Administration _or_	
*Elective	Elective	3
SPE-110	Interpersonal Communications _or_	
SPE-120	Introduction to Public Speaking	3
BOC-110	Small Business Principles _or_	
MAT-111	Mathematics/Elementary Teachers 1 _or_	
MAT-112	Mathematics/Elementary Teachers 2	3
		16

Program Total . . . . *60.5 - 62*

Elective credit must be in General Education course work.
Suggested electives:

ART-111	Art Appreciation
THE-110	Theatre Arts Appreciation
BIO-101	General Biology
BIO-120	Environment & Man
ENG-102	Freshman Comp 2
MUS-100	Music Appreciation
SOC-101	Introduction to Sociology

Construction Technology – Carpentry Emphasis

West Burlington Campus

Diploma and Associate of Applied Science Degree Requirements

Certificate will be awarded upon successful completion of CON-147, CON-148, CON-149 and CON-262.

Fall Semester I		Lec.	Lab.	Credit
CON-109	Construction Safety	2	0	2
**CON-147	Carpentry I	3	6	6
CON-332	Construction Materials & Resources	3	0	3
*MAT-127	College Algebra & Trigonometry *or*	5	0	5
MAT-702	Introduction to Math Applications	2	2	3
		10-13	6-8	14-16

Spring Semester I				
CAD-172	Introduction to CAD: AutoCAD	1	2	2
CON-113	Construction Printreading	1	2	2
**CON-148	Carpentry II	3	6	6
CON-252	Construction Electricity	1	4	3
CSC-110	Introduction to Computers *or*	3	0	3
CSC-140	Computer Fundamentals	3	2	4
		9	14-16	16-17

Summer Session				
CON-350	Construction Management Internship	0	20	5

Program Total *35-38*

Building Construction Diploma awarded

Fall Semester II				
ARC-113	Architectural Drafting I	2	4	4
**CON-149	Carpentry III	3	6	6
CON-270	Mechanical Systems	1	4	3
CON-340	Construction Surveying	2	2	3
ENG-105	Composition I *or*	3	0	3
ENG-111	Technical Writing	3	0	3
		11	16	19

Spring Semester II				
CON-128	Const. Management and Estimating	2	2	3
**CON-262	Commercial Carpentry II	3	6	6
CON-345	Soils & Concrete	3	0	3
Elective	Humanities *or* Social Science	3	0	3
***Elective	General Education	3	0	3
		14	8	18

Program Total *72-75*

* *MAT-127 is required for transfer to a four-year university.*

***Certificate will be awarded upon successful completion of CON-147, CON-148, CON-149, and CON-262. A completed apprenticeship program may be substituted for CON-147, -148, -149, and -262. Students who have completed an apprenticeship approved by the Bureau of Apprenticeship & Training and the Iowa Department of Education will be allowed to articulate up to 29 credits after 12 credits of "C" or better are earned in the approved Construction Technology degree program at SCC.*

****May be chosen from communication, humanities, social science, math or science.*

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_for_college/financial_aid/gainfulemployment.html

The SCC Construction Technology Program combines the Wheels of Learning Method with the Associate of Applied Science Degree requirements. Students will not only be taught an apprenticeship, but will also receive an Associate Degree upon completion of this program. Program curriculum is based on The Wheels of Learning Method which combines illustrated instructional material with structured classroom activities. This apprenticeship program is approved by the U.S. Department of Labor and is recognized and available nationwide.

This program emphasizes four levels of carpentry. Each level builds on the previous level, continuing the students' education and knowledge of carpentry. Agreements exist with local high schools that will allow students to take up to level 2 of carpentry while still in high school.

During the summer term, between the students' first and second year, a paid internship is required. This paid internship enables the student to experience an actual work environment provided by a local construction company.

Upon graduation, the student will receive an Associate of Applied Science Degree.

Where will this take me?
- Carpenter
- Concrete Finisher
- Construction Materials Sales Representative
- Estimator
- Construction Materials Supplies Coordinator
- Finish Carpenter
- Framer
- Roofer

Instructor and Staff

Douglas Riley - Instructor, ext. 5184
Email: driley@scciowa.edu

Construction Technology – Construction Management Option

The SCC Construction Technology Program combines the Wheels of Learning Method with the Associate of Applied Science Degree requirements. Students will not only be taught an apprenticeship, but will also receive an Associate of Applied Science Degree upon completion of this program. Program curriculum is based on The Wheels of Learning Method which combines illustrated instructional material with structured classroom activities. This apprenticeship program is approved by the U.S. Department of Labor and is recognized and available nationwide.

Construction Technology Management students will learn to plan, direct, coordinate, or budget activities concerned with the construction and maintenance of structures, facilities, and systems. They will participate in the conceptual development of a construction project and oversee its organization, scheduling, and implementation.

The SCC Construction Management option allows students the possibility of transferring to four-year institutions. This option includes a minimum of 30 credit hours of general education.

Where will this take me?

Job Site Superintendent
Supervisory Managing Positions

Instructor and Staff

Douglas Riley - Instructor, ext. 5184
    Email: driley@scciowa.edu

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_for_college/financial_aid/gainfulemployment.html

West Burlington Campus

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
CON-332	Construction Materials & Resources	3	0	3
DRF-113	Fundamentals of Technical Drafting	1	4	3
ECN-120	Principles of Macro-Economics	3	0	3
ENG-105	Composition I	3	0	3
MAT-127	College Algebra & Trigonometry	5	0	5
		15	4	17

Spring Semester I				
CAD-172	Intro to CAD: AutoCAD	1	2	2
CSC-110	Introduction to Computers	3	0	3
ENG-106	Composition II	3	0	3
SPC-112	Public Speaking	3	0	3
Elective	Humanities	3	0	3
		13	2	14

Fall Semester II				
ACC-142	Financial Accounting	3	0	3
ARC-113	Architectural Drafting I	2	4	4
CON-340	Construction Surveying	2	2	3
PHY-160	General Physics I	4	2	5
*MGT-101	Principles of Management	3	0	3
		14	8	18

Spring Semester II				
CON-128	Construction Management Estimating	2	2	3
CON-345	Soils & Concrete	3	0	3
PHY-161	General Physics II	4	2	5
Elective	Humanities	3	0	3
Elective	Social Science	3	0	3
		15	4	17

Program Total **66**

*MAT-140 Finite Math may be substituted for MGT-101 Principles of Management.

Criminal Justice – College Parallel/Career Option

West Burlington Campus, Keokuk Campus and Online

Associate of Science Degree Requirements

Fall Semester I		Lec.	Lab	Credit
CRJ-100	Introduction to Criminal Justice	3	0	3
CRJ-120	Introduction to Corrections	3	0	3
ENG-105	Composition I	3	0	3
SOC-110	Introduction to Sociology	3	0	3
Elective	Math	3	0	3
		15	0	15

Spring Semester I				
CRJ-130	Criminal Law	3	0	3
CSC-110	Introduction to Computers	3	0	3
ENG-106	Composition II	3	0	3
PSY-111	Introduction to Psychology	3	0	3
SOC-240	Criminology	3	0	3
		15	0	15

Fall Semester II				
CRJ-132	Constitutional Law	3	0	3
CRJ-141	Criminal Investigation	3	0	3
HUM-114	Multicultural Perspectives	3	0	3
PSY-241	Abnormal Psychology	3	0	3
SOC-115	Social Problems	3	0	3
SOC-230	Juvenile Delinquency	3	0	3
		18	0	18

Spring Semester II				
CRJ-222	Correctional Treatment Methods _or_	3	0	3
CRJ-932	Internship (0-12-3)			
POL-111	American National Government _or_	3	0	3
POL-112	American State and Local Government			
SPC-112	Public Speaking	3	0	3
Elective	Humanities	3	0	3
Elective	Science	2	2	3
		14	2	15

Program Total . . . . _63_

The Criminal Justice Program is designed to prepare students for careers in several areas of the administration of justice. Program graduates find jobs with local police departments, sheriff's offices, the state highway patrol, federal/state narcotics agencies, correctional institutions and the state and local probation & parole agencies.

This program is also designed tallow graduates to transfer to four-year institutions to earn a Bachelor's degree.

Students may begin the program in the fall or spring semesters. The Associate of Science Degree is awarded upon successful completion of program requirements.

Where will this take me?
   Baliff
   Corrections Officer
   Federal/State Law Enforcement Agent
   Police Officer
   Rehabilitation Counselor
   Sheriff's Deputy

Instructor and Staff

Cindy Shireman - Instructor,
   ext. 5232 or ext. 1998
   Email: cshireman@scciowa.edu

Dental Hygiene

The Dental Hygiene program prepares the student to work as a dental hygienist under the supervision of a licensed dentist in dental offices and other health agencies. The program is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of "approval without reporting requirements". Graduates from the Dental Hygiene program are eligible to take the National Dental Hygiene Board Examination, the respective clinical board examination, and the examination for registration as a dental hygienist in the respective state.

This program is offered through a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit www.sandburg.edu.

Galesburg Campus (Carl Sandburg College Reciprocal Agreement)

Associate of Applied Science Degree Requirements

Summer Session		Credit
*CHM-100	Concepts of Chemistry	3
ENG-101	Freshman Composition 1	3
PSY-101	General Psychology 1	3
		9

First Semester		
*BIO-211	Anatomy & Physiology 1	4
*DHG-109	Preclinic Lab †	1.5
*DHG-110	Fundamentals of Dental Hygiene	2
*DHG-112	Dental Radiology	3
*DHG-113	Preventive Dentistry	2
*DHG-114	Head, Neck and Oral Anatomy	3
*DHG-115	Dental Hygiene Practice I	2
		17.5

Second Semester		
*BIO-212	Anatomy & Physiology 2	4
*DHG-118	Oral Histology & Embryology	1
*DHG-119	Periodontology I	2
*DHG-120	Dental Hygiene II	2
*DHG-125	Dental Hygiene Practice II	4
SOC-101	Introduction to Sociology	3
		16

Summer Session		
*BIO-200	General Microbiology	4
*DHG-200	Dental Hygiene III	2
*DHG-205	Dental Hygiene Practice III	3
		9

Third Semester		
*DHG-210	Dental Hygiene IV	2
*DHG-211	Community Dental Health	2
*DHG-212	Pathology	2
*DHG-213	Pharmacology	2
*DHG-215	Dental Hygiene Practice IV	5
NUT-110	Nutrition	3
		16

Fourth Semester		
*DHG-217	Clinical Applications of Pain & Anxiety Control	1
*DHG-218	Dental Office Management & Jurisprudence	2
*DHG-219	Periodontology II	2
*DHG-220	Dental Hygiene V †	2
*DHG-225	Dental Hygiene Practice V	5
SPE-120	Intro to Public Speaking	3
		15

Program Total *82.5*

*Courses must be completed with a grade of "C" or better. In order to graduate, each student must complete all required courses with a grade of "C" or better.

West Burlington Campus

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
CAD-172	Introduction to CAD: AutoCAD	1	2	2
CSC-110	Introduction to Computers _or_	3	0	3
CSC-140	Computer Fundamentals	3	2	4
DRF-113	Fundamentals of Technical Drafting	1	4	3
ENG-105	Composition I _or_	3	0	3
ENG-111	Technical Writing	3	0	3
MAT-127	College Algebra & Trigonometry _or_	5	0	5
MAT-704	Math Applications	5	0	5
		13	6-8	16-17

Spring Semester I				
CAD-175	Advanced CAD: AutoCAD	1	2	2
DRF-161	Descriptive Geometry	0	6	3
MFG-212	Basic Machine Theory	1	4	3
PHY-106	Survey of Physics _or_	3	2	4
PHY-160	General Physics I	4	2	5
*Elective	Technical	2-4	0	2-4
		7-10	14	14-17

Summer Session				
SPC-112	Public Speaking	3	0	3
Elective	Humanities _or_ Social Science	3	0	3
		6	0	6

Fall Semester II				
ARC-113	Architectural Drafting I	2	4	4
CAD-180	Introduction to Solidworks _or_	1	2	2
EGR-400	Introduction to Engineering Design	1	4	3
DRF-121	Fundamentals of Technical Drafting II	1	4	3
SDV-153	Pre-Employment Strategies	2	0	2
*Elective	Technical	3	0	3
		9	10/12	14-15

Spring Semester II				
ARC-129	Residential/Light Commercial Drafting	2	4	4
CAD-230	Geometric Dimensioning and Tolerancing	1	2	2
CAD-248	Parametric CAD II	1	4	3
*Elective	Technical	4	0	4
Elective	General	3	0	3
		11	10	16

Program Total *66-71*

*Technical electives are to be selected from CON, ELT, MFG, WEL courses.

SCC's Drafting Technology Program AAS Degree is designed to provide the student with skills necessary to enter the industrial environment as a drafter and/or design technician. The program provides broad theoretical and hands-on education for those seeking careers in the drafting and design or related fields.

Students also have the option of choosing related courses in the mechanical or construction areas. Engineering graphics and architectural construction & design are covered in the program with emphasis on the current trends, including computer aided drafting and design.

Where will this take me?
Architectural Engineering Technician
CAD Operator
Drafter/Design Technician
Mechanical Engineering Technician
Project Manager

Program Administrative Contact
Jonathan Gaddis, ext. 5258
Email: jgaddis@scciowa.edu

Electronics Technology

SCC's Electronics Technology program is intended to provide a broad base of knowledge, through courses and laboratories, for a career as an electronic technologist. The first two semesters include a selection of core courses that result in an Electronics Technology Diploma upon completion. Technical elective(s) in the third and fourth semesters allow students to select an area of specialization.

Students learn the skills of an electronics technician and in addition, develop skills in mechanical design, construction, analysis and repair of various electronic circuits.

SCC's Electronics Technology diploma is a two semester selection of core courses intended to give a solid introduction to electronics technology.

The Electronics Technology Program is designed to provide students with the necessary skills and knowledge to begin working in industry at an entry-level position as an electronics technologist.

Transfer plans exist between the electronics technology programs and:

Iowa State University - BS Industrial Technology (manufacturing option)

University of Northern Iowa - BA Technology Management

Western Illinois University - BS Manufacturing Engineering Technology

Where will this take me?

Applications Engineer

Prototype Assembler

Electrical Test Engineer

Electronics Quality Control Technician

Engineering Manager

Field Service Technician

Instructor and Staff

Derek Schreiner - Instructor, ext. 5211
Email: dschreiner@scciowa.edu

West Burlington Campus

Diploma Requirements

Fall Semester		Lec.	Lab.	Credit
CAD-172	Introduction to CAD: AutoCAD	1	2	2
CSC-140	Computer Fundamentals	3	2	4
ELT-116	Principles of Electronics	3	4	5
*MAT-062	Elementary Algebra *or*	2	2	3
*MAT-702	Intro to Math Applications	2	2	3
		9	10	14

Spring Semester				
ELT-232	PLC Applications	2	4	4
ELT-329	Digital Electronics for ET	3	2	4
ELT-355	Electronic Circuits I	3	4	5
ENG-111	Technical Writing	3	0	3
		11	10	16

Program Total **30**

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
CAD-172	Introduction to CAD: AutoCAD	1	2	2
CSC-140	Computer Fundamentals	3	2	4
ELT-116	Principles of Electronics	3	4	5
*MAT-127	College Algebra & Trigonometry *or*	5	0	5
*MAT-704	Math Applications	5	0	5
		12	8	16

Spring Semester I				
ELT-232	PLC Applications	2	4	4
ELT-329	Digital Electronics for ET	3	2	4
ELT-355	Electronic Circuits I	3	4	5
ENG-111	Technical Writing	3	0	3
		11	10	16

Fall Semester II				
ELT-357	Electronic Circuits II	3	4	5
ELT-486	Electromechanical Technology	2	2	3
ELT-630	Microprocessor/Interfacing	3	4	5
Elective	Humanities *or* Social Science	3	0	3
		11	10	16

Spring Semester II				
ELT-435	Telecommunications	4	2	5
PHY-106	Survey of Physics	3	2	4
NET-118	Basic Computer Networking/Hardware	2	2	3
**Elective	Technical	3/5	0	3/5
		12/14	6	15/17

Program Total . . . . **63 - 65**

* Or Higher.

** Intended to be selections from "related" technical areas such as courses prefixed CAD, CIS, DRF, ELT, MFG, NET, & WEL. But, on a case by case basis, acceptance of ENG, MAT, and PHY courses as "technical electives" or substitutes may be taken to improve student articulation to four-year institutions.

West Burlington and Keokuk Campuses

Associate of Arts Degree Requirements and Suggested Sequence of Courses

Fall Semester I		Lec.	Lab.	Credit
BIO-108	The Living World _or_	3	2	4
BIO-109	Concepts of Life			
ENG-105	English Composition I	3	0	3
HIS-151	US History to 1877	3	0	3
MAT-112	Math for Elem Teachers I	3	0	3
MUS-100	Music Appreciation	3	0	3
		15	2	16

Spring Semester I				
CHM-122	Intro to General Chemistry _or_	3	2	4
PHY-106	Survey of Physics			
GEO-121	World Regional Geography	3	0	3
HUM-114	Multicultural Perspectives	3	0	3
MAT-113	Math for Elem Teachers II	3	0	3
PHI-105	Introduction to Ethics	3	0	3
		15	2	16

Fall Semester II				
ART-101	Art Appreciation	3	0	3
EDU-210	Foundations of Education	3	0	3
EDU-920	Field Experience	0	4	2
ENG-106	English Composition II	3	0	3
POL-111	American National Government	3	0	3
PSY-111	Introduction to Psychology	3	0	3
		15	4	17

Spring Semester II				
EDU-247	Teaching Exceptional Learners	3	1	3.5
LIT-105	Children's Literature	3	0	3
PEH-102	Health	3	0	3
PSY-121	Developmental Psychology	3	0	3
SOC-110	Intro to Sociology	3	0	3
SPC-112	Public Speaking	3	0	3
		18	1	18.5

Program Total 67.5

The course work on this page is designed for seamless transfer to Western Illinois University and Iowa Wesleyan College for the purpose of completing a Bachelor of Arts degree in Elementary Education. The sequence of courses are suggested in chronological order, so that prerequisites are met. If all work is completed at SCC in a timely fashion, the student can finish at the transfer institution in as little as two more years. Students who earn their bachelor degree in Elementary Education, and meet state certification requirements, will be eligible to teach up through the 8th grade level.

Program Contact:

Dr. Timothy Ahern -
    Dean of Arts & Sciences, ext. 5247
    Email: tahern@scciowa.edu

Emergency Medical Services

The Emergency Medical Services curriculum is designed to apply college credit earned from the certification courses toward an associate of applied science degree. Selected arts and sciences courses included as degree requirements are related to the emergency medical services field and will provide the student with a broad base upon which to make reasoned decisions when giving emergency care.

Where will this take me?

Certified EMT/Paramedic working:

Ambulance Service

Fire Station

Hospital

Industry

Air Medical Transport

Instructor and Staff

John Cockrell, NREMT-P, - Instructor, ext. 5253, Email: jcockrell@scciowa.edu BA Ashford University, AAS Southeastern Community College

Tina Young - Coordinator of Emergency Response Programs, ext. 5101 Email: tyoung@scciowa.edu

West Burlington Campus

Admission standards apply to this program.

A. COMPASS testing is required.
B. Proof of high school graduation is required for admission to the Paramedic program.
C. Students will be required to pass a mandatory background check and drug screening.

Please contact Enrollment Services for details.

All health career programs require students to earn a grade of "C" (2.0) or above in all coursework within the program. All other eligibility requirements must be met.

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Clin.	OJT.	Credit
BIO-163	Essentials of Anatomy & Physiology	3	2			4
CSC-110	Introduction to Computers	3	0			3
HSC-114	Medical Terminology	2	2			3
MAT-062	Elementary Algebra	2	2			3
PSY-111	Introduction to Psychology	3	0			3
		13	6			16

Spring Semester I		Lec.	Lab.	Clin.	OJT.	Credit
*EMS-201	Emergency Medical Technician	5	2	3		7
ENG-105	Composition I	3	0			3
HUM-114	Multicultural Perspectives	3	0			3
PHI-105	Introduction to Ethics	3	0			3
		14	2	3		16

Fall Semester II		Lec.	Lab.	Clin.	OJT.	Credit
EMS-663	Paramedic I	12	8			16

Spring Semester II		Lec.	Lab.	Clin.	OJT.	Credit
EMS-664	Paramedic II	9	8	3	4	15

Summer Semester		Lec.	Lab.	Clin.	OJT.	Credit
EMS-665	Paramedic III	3	2		12	7

Program Total 70

*Successful completion of EMT State Certification required prior to admission to the Paramedic Program.

**Optional Courses may not be available every term.
  **EMS-114, Emergency Medical Responder (1-2-2)
  **EMS-239, Adv. Emergency Medical Technician (5-2-3-7)

West Burlington Campus

Associate of Applied Science Degree Requirements

Fall Semester I

		Lec.	Lab.	Credit
FIR-127	Fire Behavior and Combustion	3	0	3
FIR-139	Fire Fighter I	3	2	4
FIR-213	Principles of Emergency Services	3	0	3
FIR-214	Legal Aspects of the Emergency Services	3	0	3
*FIR-949	Special Topics	3.5	1	4
MAT-702	Introduction to Math Applications	2	2	3
		17.5	5	20

Spring Semester I

ENG-105	Composition I	3	0	3
FIR-124	Building Construction	3	0	3
FIR-130	Fundamentals of Fire Prevention	3	0	3
**FIR-143	Fire Fighter II	2	2	3
FIR-152	Fire Protection Systems	3	0	3
FIR-200	Occupational Safety & Health in Emergency Services	3	0	3
		17	2	18

Fall Semester II

FIR-145	Fire Strategy and Tactics	3	0	3
FIR-149	Fire Protection Hydraulics and Water Supply	3	0	3
FIR-180	Chemistry of Hazardous Materials	3	0	3
FIR-226	Fire Administration I	3	0	3
PHY-106	Survey of Physics	3	2	4
PSY-102	Human and Work Relations _or_	3	0	3
PSY-111	Introduction to Psychology	3	0	3
		18	2	19

Spring Semester II

EMS-201	Emergency Medical Technician	5	2	7
***FIR-235	Fire Investigation	3	0	3
***FIR-236	Fire Investigation II	3	0	3
HUM-114	Multicultural Perspectives	3	0	3
PHI-105	Introduction to Ethics	3	0	3
		17	2	19

Program Total *76*

Includes NIMS/ICS-12, EVOC, FF Lodd, Confined Space, 24hr Introduction to FF Safety
**Prerequisite: Certification as Firefighter I*
***Courses scheduled sequentially within the semester*

The Fire Science curriculum is designed to prepare the student for employment in fire service at the entry level. Students study a variety of Fire and Emergency Services topics. The degree is based on the model curriculum from the Fire and Emergency Services Higher Education which is endorsed by the National Fire Academy.

Selected arts and sciences courses included as degree requirements are related to the firefighting field and will provide the student a broad base upon which to make rational decisions during emergency operations.

Where will this take me?

Certified Firefighter working:
Ambulance Services
Fire Stations
Industry
Property Protection Systems

Instructor and Staff

Tina Young - Coordinator of Emergency Response Programs, ext. 5101
Email: tyoung@scciowa.edu

Graphic Communications – Graphic Design Option

The Graphic Communications program is prepares students with the necessary skills and knowledge to begin working in various pre-press/premedia positions within the printing industry. Students also have the opportunity to transfer to a graphic communications program at a four-year institution.

The curriculum includes classroom and laboratory instruction, as well as internship experience. Students receive instruction in the following areas: design/layout, typography, graphics, and preflighting. Internships can be arranged in the printing, publishing, and marketing industries, or other businesses who utilize graphic designers.

The entire program consists of five semesters of instruction. An Associate of Science degree in Graphic Communications will be awarded upon successful completion of the program.

Where will this take me?

Graphic Designer
Marketing Assistant
Typographer
Pre-press/Graphic Design Specialist

Instructor and Staff

Carlene Woodside - Instructor, ext. 5201
   Email: cwoodside@scciowa.edu
   AAS, Carl Sandburg College
   BS, Western Illinois University
   MBA, Western Illinois University

West Burlington and Keokuk Campuses (Keokuk requires some coursework to be completed at West Burlington Campus.)

Associate of Science/Career Option Requirements

Fall Semester I		Lec	Lab.	Credit
ART-120	2-D Design	2	2	3
CSC-110	Introduction to Computers	3	0	3
ENG-105	Composition I	3	0	3
GRA-137	Digital Design	2	2	3
GRA-175	Graphic Design Principles	3	0	3
Elective	Math	3	0	3
		16	4	18

Spring Semester I				
*ART-101	Art Appreciation	3	0	3
CIS-256	Dreamweaver I	2	2	3
ENG-106	Composition II	3	0	3
GRA-131	Digital Layout	2	2	3
GRA-275	Advanced Graphic Design	2	2	3
MKT-110	Principles of Marketing	3	0	3
		15	6	18

Summer Session				
SPC-112	Public Speaking	3	0	3
Elective	**Social Science	3	0	3
		6	0	6

Fall Semester II				
ART-133	Drawing I	2	2	3
GRA-140	Digital Imaging	2	2	3
GRA-173	Typography	3	0	3
Elective	**Social Science	3	0	3
Elective	Science	3	0	3
		13	4	15

Spring Semester II				
GRA-116	Digital Preflight Production	2	2	3
GRA-127	Illustrator I	2	2	3
GRA-190	Electronic Media Projects	1	4	3
GRA-932	Internship	0	15	3.7
Elective	Humanities (not art)	3	0	3
		8	23	15.7

Program Total *72.7*

* ART-203 or ART-204 may be taken instead of ART-101.

**Must be from two different disciplines.

West Burlington and Keokuk Campuses (Keokuk requires some coursework to be completed at West Burlington Campus.)

Associate of Science/Career Option Requirements

Fall Semester I		Lec.	Lab.	Credit
CSC-110	Introduction to Computers	3	0	3
ENG-105	Composition I	3	0	3
GRA-137	Digital Design	2	2	3
GRA-175	Graphic Design Principles	3	0	3
Elective	**Social Science	3	0	3
Elective	Math	3	0	3
		17	2	18

Spring Semester I				
CIS-256	Dreamweaver I	2	2	3
ENG-106	Composition II	3	0	3
GRA-131	Digital Layout	2	2	3
GRA-275	Advanced Graphic Design	2	2	3
MKT-110	Principles of Marketing	3	0	3
Elective	Humanities (not English)	3	0	3
		15	6	18

Summer Session				
SPC-112	Public Speaking	3	0	3
Elective	**Social Science	3	0	3
		6	0	6

Fall Semester II				
GRA-140	Digital Imaging	2	2	3
GRA-173	Typography	3	0	3
JOU-120	Beginning Newswriting	3	0	3
MKT-150	Principles of Advertising	3	0	3
SPC-122	Interpersonal Communications	3	0	3
		14	2	15

Spring Semester II				
GRA-116	Digital Preflight Production	2	2	3
GRA-190	Electronic Media Projects	1	4	3
GRA-932	Internship	0	15	3.7
JOU-121	Newswriting & Reporting	3	0	3
Elective	Science	3	0	3
		9	21	15.7

Program Total *72.7*

**Must be from two different disciplines.

The Graphic Communications/Journalism Option offers introductory instruction in skills, practices, and theories to prepare students for work in pre-press or writing positions within the printing, marketing, or news-gathering industries or to transfer to graphic communications or journalism program at four-year institutions.

Where will this take me?
 Journalist
 Marketing Assistant
 Pre-press/Graphic Design Specialist
 Print or Electronic Media Copywriter
 Public Relations Assistant

Instructor and Staff

Carlene Woodside - Instructor, ext. 5201
 Email: cwoodside@scciowa.edu
 AAS, Carl Sandburg College
 BS, Western Illinois University
 MBA, Western Illinois University

Industrial Maintenance Technology

This program is developed to prepare individuals as plant maintenance technicians. Students will learn technical skills in maintaining and troubleshooting electrical and mechanical systems used in industry. Skills are developed in mechanical and electrical theory, troubleshooting and repair for today's industrial systems.

Electrical Maintenance Technician certificate awarded after completion of first semester.

Mechanical Maintenance Technician certificate awarded after completion of second semester.

Instruction is delivered in a module format designed for flexibility and customization for each student. Module delivery allows students to take as many or as few training sessions as they want. Students interested in earning a one-year diploma or a two-year Associate of Applied Science degree can do so by attending full-time. Those interested in learning a select set of skills can also take advantage of the program by taking only those modules relevant to their needs.

Instructor and Staff

Andy Snaadt - Instructor, ext. 1990
    Email: asnaadt@scciowa.edu

Jeron Lindsay - Instructor, ext. 1937
    Email: jlindsay@scciowa.edu

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_ for_college/financial_aid/gainfulemployment.html

Keokuk Campus

Certificates, Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
ELE-195	Motor Controls	1	4	3
ELE-310	Industrial Electricity	1	2	2
ELT-250	Programmable Logic Controllers	1	4	3
ELT-295	AC/DC Fundamentals	1	2	2
MAT-702	Intro to Math Applications	2	2	3
MFG-186	Plant Safety	1	0	1
SDV-153	Pre-Employment Strategies	2	0	2
		9	14	16

Electrical Maintenance Technology Certificate Awarded

Spring Semester I				
CSC-110	Intro to Computers	3	0	3
EGT-142	Fluid Power 1 (Hydraulics)	1	2	2
EGT-143	Fluid Power 2 (Pneumatics)	1	2	2
ELE-116	Blueprint Reading	1	0	1
IND-103	Machine Shop	1	2	2
IND-104	Industrial Pumps	.5	1	1
IND-141	Power Transmission	1	2	2
MFG-520	Predictive Maintenance	1	2	2
		9.5	11	15

Mechanical Maintenance Technology Certificate Awarded

Diploma Total **31**

Industrial Maintenance Technology Diploma Awarded

Fall Semester II				
EGT-147	Hydraulic Power Systems & Troubleshooting	.5	1	1
ELT-132	Motor Drives	.5	1	1
ENG-105	Composition I	3	0	3
IND-106	Machine Shop II	1	2	2
IND-107	Valves	1	0	1
IND-180	Industrial Heating and Cooling	1	2	2
Elective	Humanities or Social Science	3	0	3
Elective	Math or Science	3	0	3
		13	6	16

Spring Semester II				
BUS-121	Business Communications	3	0	3
CAD-114	AutoCad I (1-2-2) [ICCOC online] **or**			
CAD-172	Intro to CAD taught at WB Campus only	1	2	2
ELE-127	Troubleshooting	.5	1	1
ELT-176	Instrumentation	1	4	3
IND-179	Boiler Operations and Control	1	2	2
Elective	Humanities or Social Science	3	0	3
		9.5	9	14

Program Total **61**

Industrial Maintenance Technology Associate of Applied Science Degree Awarded

Information Technology – Network Administration & Cyber Security

West Burlington Campus

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
CSC-110	Introduction to Computers	3	0	3
NET-122	Computer Hardware Basics	2	2	3
NET-142	Network Essentials	3	0	3
NET-303	Windows Workstation	2	2	3
NET-442	Linux Operating System	2	2	3
Elective	Math	3	0	3
		15	6	18

Spring Semester I				
BCA-168	Intermediate Databases	2	2	3
CIS-125	Intro. to Programming Logic w/ Language	2	2	3
CIS-233	Web Server Administration	2	2	3
NET-309	Virtual Machines	1	2	2
NET-314	Windows Server	2	4	4
		9	12	15

Summer Session				
CIS-505	Structured Systems Analysis	2	4	4
ENG-105	Composition I	3	0	3
		5	4	7

Fall Semester II				
BUS-203	Professional Development	2	0	2
CFR-100	Introduction to Computer Forensics	2	2	3
NET-637	Network Intrusion Investigation	2	2	3
Elective	Accounting or Business	3	0	3
Elective	Humanities or Social Science	3	0	3
		12	4	14

Spring Semester II				
CIS-810	Emerging Technologies Seminar	1	0	1
NET-153	Advanced Networking	2	4	4
NET-656	Microsoft Server Applications	2	2	3
NET-820	Network Specialist Internship	0	15	3.7
SPC-112	Public Speaking	3	0	3
		8	21	14.7

Program Total 68.7

SCC's Information Technology Program uses the latest equipment and software and offers students the opportunity to specialize in one of two options: Network Administration & Cyber Security or Web Design & Administration.

The first semester of Information Technology is practically the same, regardless which option the student chooses. This enables students to experience a taste of each program option before choosing the degreed option.

SCC's Network Administration & Cyber Security Option provides experience with Microsoft network operation systems. It places emphasis on hands-on installation, maintenance, and administration of PC networks. This option also includes security principles, and router, switch and firewall configuration.

Where will this take me?

   Network Administrator

   Network Technician

   Network Installer

Instructor and Staff

Brenda Wamsley - Instructor, ext. 5195

   Email: bwamsley@scciowa.edu

Information Technology – Web Design & Administration

SCC's Information Technology Program uses the latest equipment and software and offers students the opportunity to specialize in one of two options: Network Administration & Cyber Security or Web Design & Administration.

The first semester of Information Technology is practically the same, regardless which option the student chooses. This enables students to experience a taste of each program option before choosing the degreed option.

The Web Design & Administration Option is designed to offer a broad spectrum of PC skills needed in small to medium-sized organizations. Students receive instruction on networking, graphic and web design, and small business management. .

Where will this take me?

Web Developer

Web Site Administrator

Webmaster

Instructor and Staff

Stewart Jack - Instructor, ext. 5196

Email: sjack@scciowa.edu

West Burlington Campus

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
ART-120	2-D Design	2	2	3
CSC-110	Introduction to Computers	3	0	3
GRA-175	Graphic Design Principles	3	0	3
NET-142	Network Essentials	3	0	3
NET-303	Windows Workstation	2	2	3
NET-442	Linux Operating System	2	2	3
		15	6	18

Spring Semester I				
BCA-168	Intermediate Databases	2	2	3
CIS-125	Intro. to Programming Logic w/ Language	2	2	3
CIS-256	Dreamweaver I	2	2	3
NET-309	Virtual Machines	1	2	2
Elective	Math or Science	3	0	3
		10	8	14

Summer Session				
CIS-505	Structured Systems Analysis	2	4	4
ENG-105	Composition I	3	0	3
		5	4	7

Fall Semester II				
BCA-765	Macromedia Flash	2	2	3
BUS-203	Professional Development	2	0	2
CIS-258	Dreamweaver II	2	2	3
GRA-140	Digital Imaging	2	2	3
MKT-110	Marketing	3	0	3
		11	6	14

Spring Semester II				
BUS-140	Small Business Start-Up	2	0	2
CIS-233	Web Server Administration	2	2	3
CIS-810	Emerging Technologies Seminar	1	0	1
NET-825	Internet/Web Internship	0	15	3.7
SPC-112	Public Speaking	3	0	3
		8	17	12.7

Program Total 65.7

West Burlington and Keokuk Campuses (Keokuk requires some coursework to be completed at West Burlington Campus.)

Admission standards apply to this program. Please contact Enrollment Services for more details.
A. ASSET reading score of 42, COMPASS reading score of 81, or ACT score of 19
B. ASSET numerical score of 42, COMPASS numerical score of 50, or ACT score of 19
C. 35 net words per minute on a typing test
D. Standardized placement scores must be current (completed within 24 months) at the time of enrollment.
E. Satisfy "Essential Functions" guidelines.
F. Students will be required to pass a mandatory background check and drug screening.
G. Students will be required to submit (at their own expense) a physical examination & may be required to obtain updated immunizations.

The program is three semesters in length conducted over a period of 11 months. Educational development of each student is directed toward the application of accurate knowledge in practical situations, making judgments, applying reason, thinking independently and engaging in problem solving.

The program normally begins in the fall and continues through the summer months when the student gains supervised clinical experience in a physician's office. Upon successful completion of the program, the graduate is eligible to write the national certification examination for certified medical assistants administered by the American Association of Medical Assistants.

Expectations of the Medical Assistant Program are to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skill), and affective (behavior) learning domains.

SCC's Medical Assistant Program is an accredited program by the Commission on Accreditation of Allied Health Education Program (CAAHEP) www.caahep.org upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Program (CAAHEP)

1361 Park Street, Clearwater, Florida 33756. Telephone: (727) 210-2350

All health career programs require students to earn a grade of "C" (2.0) or above in all coursework within the program. All other eligibility requirements must be met.

Requirements for Medical Assistant Diploma

Fall Semester		Lec.	Lab.	Credit
BIO-163	Essentials of Anatomy and Physiology	3	2	4
HSC-114	Medical Terminology	2	2	3
MAP-105	Keyboarding for Medical Professional	1	2	2
MAP-121	Administrative Procedures I: Med Office	2	4	4
MAP-364	Clinical Procedures for Medical Office I	3	8	7
MAP-431	Human Relations	1	0	1
		12	18	21

Spring Semester				
HIT-211	Basic Medical Insurance & Coding	2	2	3
HSC-180	BLS & Emergency Preparedness for Healthcare Workers	1	2	2
MAP-122	Administrative Procedures II: Med Office	2	2	3
MAP-369	Clinical Procedures for Medical Office II	4	6	7
MAP-370	Specialty Clinical Procedures	1	2	2
MAP-401	Medical Law and Ethics	1	0	1
MAP-532	Human Body: Health and Disease	3	0	3
		14	14	21

Summer Session				
MAP-602	Clinical Experience Seminar	1	0	1
MAP-615	Clinical Externship	0	20	5
		1	20	6

Program Total *48*

The Medical Assistant Program prepares students for employment in a private physician's office, clinic, hospital, and health related agencies.

Where will this take me?
Medical Assistant
Medical Records Manager
Medical Secretary

Instructor and Staff
Deb Shaffer - Instructor, ext. 5213
Email: dshaffer@scciowa.edu
AAS, Mt. St. Clare College
ADN, Southeastern Community College

Gayle Bagwell - Instructor, ext. 5203
Email: gbagwell@scciowa.edu
Diploma, Southeastern Community College

Carla Pilkington - Instructor, ext. 1986
Email: cpilkington@scciowa.edu
Medical Assistant Diploma, Southeastern CommunityCollege
AA, Southeastern Community College
BA, Buena Vista University

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_for_college/financial_aid/gainfulemployment.html

Medical Coding and Billing – Physician Emphasis

The Medical Coding and Billing-Physician Emphasis Diploma provides the latest information related to medical coding, chart auditing and insurance reimbursement.

The Medical Coding and Billing Diploma option prepares the student for employment in a private physician's office, clinic, and health-related agencies. The role includes specific knowledge and skills necessary for coding and billing of insurance claims for medical services provided. The student will be trained in current diagnostic coding, CPT and HCPCS coding languages which conforms with HIPAA transaction standards for billing and insurance. Medical coding and billing is a growing field; the demand for individuals with coding skills is increasing as new procedures and regulations are being implemented by government and insurance groups.

This course is affiliated with the American Academy of Professional Coders (CPC). Upon completion of the course students will be eligible to sit for certification as a Certified Professional Coder (CPC).

Where will this take me?

Billing Specialist– Clinic/Physician's office
Insurance Specialist– Clinic/Physician's office
Medical Auditor
Medical Coder–Clinic/Physician's office
Medical Insurance Claims Adjuster
Medical Insurance Salesperson
Medical Secretary

Instructor and Staff

Deb Shaffer - Program Coordinator/
Instructor, ext. 5213
Email: dshaffer@scciowa.edu
AAS, Mt. St. Clare College
ADN, Southeastern Community College

Gayle Bagwell - Instructor, ext. 5203
Email: gbagwell@scciowa.edu
Diploma, Southeastern Community College

Carla Pilkington - Instructor, ext. 1986
Email: cpilkington@scciowa.edu
Medical Assistant Diploma, Southeastern CommunityCollege
AA, Southeastern Community College
BA, Buena Vista University

West Burlington (Keokuk Campus *offers selected courses.*)

*Admission standards apply to this program.
   A.   ASSET reading score of 42, COMPASS reading score of 81, or ACT score of 19
   B.   ASSET numerical score of 39, COMPASS numerical score of 40, or ACT score of 17
   C.   Satisfy "Iowa Core Performance Standards".
   D.   Standardized placement scores must be current (completed within 24 months) at the time of enrollment.
   E.   Must successfully complete a course in Anatomy and Physiology Essentials with a grade of C (2.0) or above.
   F.   Students will be required to pass a mandatory background check and drug screening.
   G.   Students will be required to achieve a 35 wpm typing test.
   H.   Students will be required to submit (at their own expense) a physical examination & may be required to obtain updated immunizations.

Please contact Enrollment Services for more details.

All health career programs require students to earn a grade of "C" (2.0) or above in all coursework within the program. All other eligibility requirements must be met.

Requirements for Medical Coding and Billing Diploma

Prerequisite		Lec.	Lab.	Credit
BIO-163	Essentials of Anatomy & Physiology	3	2	4

Fall Semester		Lec.	Lab.	Credit
CPC-120	*Intro. to Medical Procedural Coding	3	3	4.5
CPC-125	*Diagnostic Coding	2	2	3
CPC-129	*Intro. to Medical Insurance & Billing	1	2	2
HSC-114	Medical Terminology	2	2	3
MAP-145	Medical Records Management	2	2	3
MAP-431	Human Relations	1	0	1
		11	11	16.5

Spring Semester				
CPC-131	*Medical Insurance & Billing II	2	2	3
CPC-150	*Medical Procedural Coding	3	0	3
CPC-160	*Applications of Procedural Coding	0	4	2
CSC-110	Introduction to Computers	3	0	3
ENG-131	Business English	3	0	3
MAP-401	Medical Law and Ethics	1	0	1
MAP-532	Human Body: Health and Disease	3	0	3
		15	6	18

Summer Session				
CPC-810	*Medical Coding and Billing Externship	0	10	2.5
CPC-945	*Medical Coding and Billing Seminar	1	0	1
		1	10	3.5

Program Total *42*

Courses considered program courses – no prepping allowed.
All courses must be passed with a grade of "C" (2.0)

Galesburg Campus (Carl Sandburg College Reciprocal Agreement)

Associate of Applied Science Degree Requirements

Summer Session		Credit
ENG-101	Freshman Composition I	3
PSY-101	General Psychology I	3
		6

Semester I		
BIO-111	Anatomy & Physiology Fundamentals	4
CHM-100	Concepts of Chemistry	3
MTS-110	History of Mortuary Science	3
MTS-120	Mortuary Law	3
MTS-150	Psychology of Grief & Death	3
		16

Semester II		
ACC-101	Principles of Accounting I	3
BLA-202	Business Law	3
BUS-201	Management Fundamentals	3
MTS-130	Introduction to Microbiology for Mortuary Science	2
MTS-131	Introduction to Pathology for Mortuary Science	2
MTS-210	Funeral Service Counseling	4
		17

Summer Session		
SOC-101	Introduction to Sociology	3
		3

Semester III		
MTS-140	Embalming I	4
MTS-160	Funeral Service Administration	5
MTS-170	Restorative Art	4
MTS-215	Introduction to Mass Fatalities Incidents	2
MTS-225	Thanatochemistry	3
		18

Semester IV

First 8-week session

MTS-220	Funeral Directing	4
MTS-230	Embalming II	4
MTS-240	Funeral Service Seminar	1
	First 8-Week Total	9

Second 8-week session

MTS-250	Funeral Service Practicum	3
MTS-260	Restorative Art/Embalming Practicum	3
MTS-270	Examination Review Seminar	1
	Second 8-Week Total	7
	Semester Total	16

Program Total *76*

Note: Students enrolled in the Mortuary Science program must complete all MTS courses with a grade of "C" or better in order to be eligible to register for subsequent courses. In order to graduate, students must complete all required courses with a grade of "C" or better.

(Students who do not expect to complete their degree within five years should refer to the "Graduation Requirments" section of the Carl Sandburg catalog.)

The Mortuary Science Program prepares students to work within the funeral service profession as funeral directors and embalmers. The Mortuary Science Program at Carl Sandburg College is accredited by The American Board of Funeral Service Education (ABFSE). The annual passage rate of first-time takers on the National Board Examination (NBE) for the most recent three-year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE web site (www.abfse.org). NOTE: In order to graduate from this program, the student must register and sit for the National Board Examination as administered by the International Conference of Funeral Service Examining Boards. Once the College has received confirmation of completion of the examination, the degree will be posted to the transcript. Upon successful completion of the National Board Examination, the student is eligible to apply for a state license. All department courses are taught by licensed funeral directors and embalmers.

The Mortuary Science program, as it prepares students to serve within the funeral service profession, adheres to the institutional commitment to student success in both human development and achievement of educational goals. This challenge is met by educating our students in all phases of funeral service with special attention being given to the high ethical standards within the funeral service profession. These goals are accomplished through a wide variety of educational experiences aimed at developing the many skills needed in order to successfully serve within the funeral service profession. This curriculum is based upon the American Board of Funeral Service Education curriculum outlines. Several of the Mortuary Science classes require some outside work as well as research about various aspects of the funeral service profession. Upon completion of the Mortuary Science program, each graduate will have attained those skills necessary to uphold and foster the dignity of the funeralservice profession.

This program is offered through a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit www.sandburg.edu.

Nursing – Practical Nursing Diploma

Nursing is one of the most trusted healthcare professions. Those interested in entering nursing should be caring and compassionate, responsible, detail- oriented and have the ability to manage stress in dealing with patients and families with acute and chronic diseases.

The majority of the nursing workforce today consists of LPN's (Licensed Practical Nurses) and RN's (Registered Nurses). SCC's nursing program offers an educational program for each of these options.

Licensed Practical Nurses work primarily in long-term care settings, physicians' offices, clinics and home health care. Nursing professionals work daytime, evening, night, and weekend hours.

Upon completion of the requirements of the nursing program for the practical nursing diploma option the student is eligible to take the National Council for Licensure Examination (NCLEX-PN)for practical nursing. Successful completion of the NCLEX-PN will allow the individual to practice as a Licensed Practical Nurse.

Upon successful completion of the Practical Nursing Diploma requirements the student may also advance to the Association Degree Nurse career option. Students receiving the PN Diploma and passing the licensure examination may work as an LPN while pursuing the Associate Degree in Nursing.

Preparatory Nursing

Many students prep for Nursing by completing the related courses before enrolling in the PNN courses. Before enrolling in any of the preparatory courses, please review the offerings with an Enrollment Specialist.

Developmental Psychology

English Composition I

Introduction to Psychology

Human Anatomy

Human Physiology

Introduction to Sociology

Microbiology

Instructor and Staff

Kristi Schroeder - Program Coordinator/
 Instructor, ext. 5100
 Email: kschroeder@scciowa.edu

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit SCC's financial aid website at http://www.scciowa.edu/currentstudents/paying_for_college/financial_aid/gainfulemployment.html

West Burlington Campus day and evening and Keokuk Campus

Admission standards and application deadlines dates apply to this program and on the subsequent page. Please contact Enrollment Services for details.

The nursing program is fully accredited by the Iowa Board of Nursing, the Iowa Department of Education and for Veteran's Educational Benefits. The program is also a participating member of the Iowa Plan for Educational Articulation in Iowa. The associate of applied science degree will articulate for advanced placement in all nursing programs at baccalaureate-degree granting institutions in the state of Iowa. Graduates of the practical nursing program are eligible for the NCLEX-PN examination for licensure.

Admission standards and application deadlines dates apply to this program.
 A. High school diploma or equivalency
 B. Reading Scores ASSET of 43; or ACT of 19; or COMPASS of 83
 C. ASSET numerical score of 42; or ACT mathematical score of 18; or COMPASS pre-algebra score of 50
 D. ASSET writing score of 42; or ACT English score of 17; or COMPASS writing score of 62.

Students are expected to complete and provide documentation of the following enrollment requirements prior to beginning the first nursing course:
 • Completed Physical Examination Form* and immunizations
 • Current Iowa Certification as a Certified Nursing Assistant**
 • Current certification in Basic Life Support—Healthcare Providers**
 • Current certification in Mandatory Reporter**—Adult & Child
 • Signed Confidentiality Agreement.

Students will be required to pass a mandatory background check and drug screening.

Students may be expected to have additional follow-up by a health care provider if there are indications that a student may be a safety or health hazard to clients during clinical assignments.

**Each of the certifications can be obtained at Southeastern Community College. Students should work with an enrollment specialist for the appropriate courses and dates to obtain these certifications.*

All health career programs require students to earn a grade of "C" (2.0) or above in all coursework within the program. All other eligibility requirements must be met.

Requirements for Practical Nursing Diploma

Prerequisite		Lec.	Lab.	Clinical	Credit
BIO-177	Human Anatomy	3	2	0	4
Session I		Lec.	Lab.	Clinical	Credit
ENG-105	Composition I	3	0	0	3
PNN-160	Intro to Nursing Practice	2	0	0	2
PNN-220	Pharmacology for Nursing I	2	0	0	2
		7	0	0	7
Semester I					
*BIO-180	Human Physiology *or*	3	2	0	4
BIO-186	Microbiology	3	2	0	4
PNN-534	Medical-Surgical Nursing I	8	1	12	12.5
PSY-121	Developmental Psychology	3	0	0	3
		14	3	12	19.5
Semester II					
*BIO-180	Human Physiology *or*	3	2	0	4
BIO-186	Microbiology	3	2	0	4
PNN-311	PN Issues and Trends	1	0	0	1
PNN-535	Medical-Surgical Nursing II	8	0	12	12
		12	2	12	17

Program Total 47.5

PN Diploma awarded

* Optional for PN Students; Required for ADN Students

Nursing – Associate Degree Nursing (ADN)

West Burlington Campus day and evening and Keokuk Campus

Admission standards and application deadlines dates apply to this program and on the previous page. Please contact Enrollment Services for details.

The nursing program is fully accredited by the Iowa Board of Nursing, the Iowa Department of Education and for Veteran's Educational Benefits. The program is also a participating member of the Iowa Plan for Educational Articulation in Iowa. The associate of applied science degree will articulate for advanced placement in all nursing programs at baccalaureate-degree granting institutions in the state of Iowa. Graduates of the nursing program are eligible for the NCLEX-RN examination for licensure.

Admission standards and application deadlines dates apply to this program.

- A. High school diploma or equivalency
- B. Reading Scores ASSET of 43; or ACT of 19; or COMPASS of 83
- C. ASSET numerical score of 42; or ACT mathematical score of 18; or COMPASS pre-algebra score of 50
- D. ASSET writing score of 42; or ACT English score of 17; or COMPASS writing score of 62.

Students are expected to complete and provide documentation of the following enrollment requirements prior to beginning the first nursing course:

- Completed Physical Examination Form* and immunizations
- Current Iowa Certification as a Certified Nursing Assistant** or LPN
- Current certification in Basic Life Support—Healthcare Providers**
- Current certification in Mandatory Reporter**—Adult & Child
- Signed Confidentiality Agreement.

Students will be required to pass a mandatory background check and drug screening.

Students may be expected to have additional follow-up by a health care provider if there are indications that a student may be a safety or health hazard to clients during clinical assignments.

**Each of the certifications can be obtained at Southeastern Community College. Students should work with an enrollment specialist for the appropriate courses and dates to obtain these certifications.*

Students who successfully completed the practical nursing coursework may be eligible for admission into the associate degree program.

All health career programs require students to earn a grade of "C" (2.0) or above in all coursework within the program. All other eligibility requirements must be met. Please contact Enrollment Services for details.

Associate of Applied Science Degree Requirements for ADN Nurse

Session II		Lec.	Lab.	Clinical	Credit
ADN-145	Role Transition	1	0	0	1
ADN-221	Pharmacology II	2	0	0	2
PSY-111	Introduction to Psychology	3	0	0	3
		6	0	0	6
Semester III					
ADN-641	Nursing III	8	1	18	14.5
SOC-110	Introduction to Sociology	3	0	0	3
		11	1	18	17.5
Semester IV					
ADN-311	RN Issues & Trends	1	0	0	1
ADN-642	Nursing IV	8	0	18	14
		9	0	18	15

Program Total 86

ADN Degree awarded

Nursing is one of the most trusted healthcare professions. Those interested in entering nursing should be caring and compassionate, responsible, detail- oriented and have the ability to manage stress in dealing with patients and families with acute and chronic diseases.

The majority of the nursing workforce today consists of LPN's (Licensed Practical Nurses) and RN's (Registered Nurses). SCC's nursing program offers an educational program for each of these options.

The Associate Degree in Nursing builds upon the foundations of practical nursing. The associate degree nurse is responsible for the management of patient and family nursing care in which the needs are more complex. The associate degree nurse also utilizes the nursing process, advanced clinical skills, and leadership to promote and facilitate health across the lifespan. The associate degree nurse works in a variety of healthcare settings such as hospitals, clinics, home health care, long-term care facilities, and community and public health settings.

Upon completion of the requirements of the nursing program for the associate of applied science degree the student is eligible to take the National Council for Licensure Examination (NCLEX-RN). Successful completion of the NCLEX-RN will allow the individual to practice as a Registered Nurse.

Instructor and Staff

Kristi Schroeder - Program Coordinator/
Instructor, ext. 5100
Email: kschroeder@scciowa.edu

Office Administration – Accounting Administrative Assistant

SCC's Office Administration program is designed to prepare students for employment in various office positions. Students in the Office Administration program earn an Associate of Applied Science degree.

An extra-curricular activity for students in the Office Administration program is the Business Professionals of America. This organization provides students with leadership training, field trips, and competitive opportunities with other clubs throughout the state and nation.

Students who desire a lighter academic load or who need preparatory work in English, mathematics or keyboarding may want to consider one or two semesters of preparatory work prior to entering the Associate of Applied Science program. Prospective or incoming students must be tested for placement before registering for Office Administration classes.

SCC offers four different specializations.

Accounting Administrative Assistant

Legal Administrative Assistant

Medical Administrative Assistant

The Accounting Administrative Assistant option is designed to prepare students for employment in various accounting office positions. Students pursuing the Accounting Administrative Assistant degree in the Office Administration program will earn an Associate of Applied Science degree.

Where will this take me?

Accounting Clerk

Clerk Bookkeeper

Data Entry

Inventory Clerk

Instructor and Staff

Trisha Hopper - Instructor, ext. 5212
   Email:thopper@scciowa.edu

Carla Pilkington - Instructor, ext. 1986
   Email: cpilkington@scciowa.edu

West Burlington and Keokuk Campuses

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
ADM-114	Keyboarding Applications	2	2	3
ADM-133	Business Math/Calculators	3	0	3
ADM-162	Office Procedures	3	0	3
CSC-110	Intro to Computers	3	0	3
ENG-131	Business English	3	0	3
		14	2	15

Spring Semester I		Lec.	Lab.	Credit
ACC-131	Principles of Accounting I	4	0	4
ADM-116	Keyboarding II	1	4	3
ADM-171	Records Management	1	2	2
BUS-121	Business Communications	3	0	3
MAT-062	Elementary Algebra	2	2	3
SPC-112	Public Speaking	3	0	3
		14	8	18

Fall Semester II		Lec.	Lab.	Credit
ACC-132	Principles of Accounting II *(WB, ICCOC)*	4	0	4
ACC-310	Computer Accounting	2	0	2
ADM-119	Keyboarding III	1	4	3
BUS-180	Business Ethics	3	0	3
ENG-105	Composition I	3	0	3
		13	4	15

Spring Semester II		Lec.	Lab.	Credit
ACC-161	Payroll Accounting *(WB, ICCOC)*	3	0	3
ADM-129	Keyboarding IV	1	4	3
BCA-157	Intermediate Spreadsheets *(WB, ICCOC)*	2	2	3
BUS-290	Employment Search & Workplace Success	1	0	1
BUS-932	Business Internship	0	15	3.7
Elective	Psychology *or* Sociology	3	0	3
		10	21	16.7

Program Total *64.7*

Optional Course Work

FIN-121	Personal Finance	3	0	3

Office Administration – Administrative Assistant

West Burlington and Keokuk Campuses

Associate of Applied Science Degree Requirements

Fall Semester I

		Lec.	Lab.	Credit
ADM-114	Keyboarding Applications	2	2	3
ADM-133	Business Math/Calculators	3	0	3
ADM-162	Office Procedures	3	0	3
BUS-102	Introduction to Business	3	0	3
CSC-110	Intro to Computers	3	0	3
ENG-131	Business English	3	0	3
		17	2	18

Spring Semester I

		Lec.	Lab.	Credit
ACC-131	Principles of Accounting I	4	0	4
ADM-116	Keyboarding II	1	4	3
ADM-171	Records Management	1	2	2
BUS-121	Business Communications	3	0	3
MAT-062	Elementary Algebra	2	2	3
SPC-112	Public Speaking	3	0	3
		14	8	18

Fall Semester II

		Lec.	Lab.	Credit
ACC-310	Computer Accounting	2	0	2
ADM-119	Keyboarding III	1	4	3
ADM-149	Transcription	2	2	3
BUS-180	Business Ethics	3	0	3
MGT-101	Principles of Management	3	0	3
Elective	*Business Elective	3	0	3
		14	6	17

Spring Semester II

		Lec.	Lab.	Credit
ADM-129	Keyboarding IV	1	4	3
BUS-290	Employment Search & Workplace Success	1	0	1
BUS-932	Business Internship	0	15	3.7
ENG-105	Composition I	3	0	3
Elective	*Business Elective	3	0	3
Elective	Psychology _or_ Sociology	3	0	3
		11	19	16.7

Program Total 69.7

* Select from:
 BUS-185 Business Law I
 FIN-121 Personal Finance
 MGT-130 Principles of Supervision
 MGT-170 Human Resources Management
 MKT-110 Principles of Marketing
 MKT-160 Principles of Retailing

SCC's Office Administration program is designed to prepare students for employment in various office positions. Students in the Office Administration program earn an Associate of Applied Science degree.

An extra-curricular activity for students in the Office Administration program is the Business Professionals of America. This organization provides students with leadership training, field trips, and competitive opportunities with other clubs throughout the state and nation.

Students who desire a lighter academic load or who need preparatory work in English, mathematics or keyboarding may want to consider one or two semesters of preparatory work prior to entering the Associate of Applied Science program. Prospective or incoming students must be tested for placement before registering for Office Administration classes.

SCC offers four different specializations.
 Accounting Administrative Assistant
  Legal Administrative Assistant
  Medical Administrative Assistant

SCC's Office Administration program prepares students to provide high-level administrative support by conducting research, preparing statistical reports, handling information requests, and performing clerical functions such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings.

Where will this take me?
 Administrative Assistant
 Executive Assistant
 Marketing Secretary
 Office Manager
 Office Planner
 Program Coordinator
 Records Clerk

Instructor and Staff
Trisha Hopper - Instructor, ext. 5212
 Email:thopper@scciowa.edu
Carla Pilkington - Instructor, ext. 1986
 Email: cpilkington@scciowa.edu

Office Administration – Legal Administrative Assistant

SCC's Office Administration program is designed to prepare students for employment in various office positions. Students in the Office Administration program earn an Associate of Applied Science degree.

An extra-curricular activity for students in the Office Administration program is the Business Professionals of America. This organization provides students with leadership training, field trips, and competitive opportunities with other clubs throughout the state and nation.

Students who desire a lighter academic load or who need preparatory work in English, mathematics or keyboarding may want to consider one or two semesters of preparatory work prior to entering the Associate of Applied Science program. Prospective or incoming students must be tested for placement before registering for Office Administration classes.

SCC offers four different specializations.

Accounting Administrative Assistant

Legal Administrative Assistant

Medical Administrative Assistant

The Legal Administrative Assistant option is designed to prepare students for employment in various legal office positions. Students pursuing the Legal Administrative Assistant Degree in the Office Administration program will earn an Associate of Applied Science.

Where will this take me?

Legal Secretary

Legal Transcriptionist

Instructor and Staff

Trisha Hopper - Instructor, ext. 5212
    Email:thopper@scciowa.edu

Carla Pilkington - Instructor, ext. 1986
    Email: cpilkington@scciowa.edu

West Burlington and Keokuk Campuses

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
ADM-114	Keyboarding Applications	2	2	3
ADM-133	Business Math/Calculators	3	0	3
ADM-162	Office Procedures	3	0	3
BUS-102	Introduction to Business	3	0	3
CSC-110	Intro to Computers	3	0	3
ENG-131	Business English	3	0	3
		17	2	18

Spring Semester I				
ACC-131	Principles of Accounting I	4	0	4
ADM-116	Keyboarding II	1	4	3
ADM-171	Records Management	1	2	2
BUS-121	Business Communications	3	0	3
MAT-062	Elementary Algebra	2	2	3
SPC-112	Public Speaking	3	0	3
		14	8	18

Fall Semester II				
ADM-119	Keyboarding III	1	4	3
ADM-149	Transcription	2	2	3
BUS-180	Business Ethics	3	0	3
BUS-185	Business Law I	3	0	3
Elective	Psychology _or_ Sociology	3	0	3
		12	6	15

Spring Semester II				
ADM-129	Keyboarding IV	1	4	3
ADM-186	Legal Documents	1	2	2
BUS-186	Business Law II	3	0	3
BUS-290	Employment Search & Workplace Success	1	0	1
BUS-932	Business Internship	0	15	3.7
ENG-105	Composition I	3	0	3
		9	21	15.7

Program Total *66.7*

Office Administration – Medical Administrative Assistant

West Burlington and Keokuk Campuses

Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
ADM-114	Keyboarding Applications	2	2	3
ADM-133	Business Math/Calculators	3	0	3
ADM-162	Office Procedures	3	0	3
CSC-110	Intro to Computers	3	0	3
ENG-131	Business English	3	0	3
		14	2	15

Spring Semester I		Lec.	Lab.	Credit
ACC-131	Principles of Accounting I	4	0	4
ADM-116	Keyboarding II	1	4	3
ADM-171	Records Management	1	2	2
BUS-121	Business Communication	3	0	3
MAT-062	Elementary Algebra	2	2	3
SPC-112	Public Speaking	3	0	3
		14	8	18

Fall Semester II		Lec.	Lab.	Credit
ADM-119	Keyboarding III	1	4	3
ADM-149	Transcription	2	2	3
BIO-163	Essentials of Anatomy and Physiology	3	2	4
BUS-180	Business Ethics	3	0	3
ENG-105	Composition I	3	0	3
HSC-114	Medical Terminology	2	2	3
		14	10	19

Spring Semester II		Lec.	Lab.	Credit
ADM-129	Keyboarding IV	1	4	3
ADM-212	Medical Documents	1	2	2
BUS-290	Employment Search & Workplace Success	1	0	1
BUS-932	Business Internship	0	15	3.7
HIT-211	Basic Medical Insurance & Coding	2	2	3
MAP-532	Human Body: Health and Disease	3	0	3
Elective	Psychology _or_ Sociology	3	0	3
		11	23	18.7

Program Total 70.7

SCC's Office Administration program is designed to prepare students for employment in various office positions. Students in the Office Administration program earn an Associate of Applied Science degree.

An extra-curricular activity for students in the Office Administration program is the Business Professionals of America. This organization provides students with leadership training, field trips, and competitive opportunities with other clubs throughout the state and nation.

Students who desire a lighter academic load or who need preparatory work in English, mathematics or keyboarding may want to consider one or two semesters of preparatory work prior to entering the Associate of Applied Science program. Prospective or incoming students must be tested for placement before registering for Office Administration classes.

SCC offers four different specializations.

- Accounting Administrative Assistant
- Legal Administrative Assistant
- Medical Administrative Assistant

The Medical Administrative Assistant option is designed to prepare students for employment in various medical office positions. Students pursuing the Medical Administrative Assistant Degree in the Office Administration program will earn an Associate of Applied Science.

Where will this take me?

- Medical Secretary
- Medical Records Manager
- Medical Claims Clerk
- Medical Administrative Assistant
- Medical Transcriptionist

Instructor and Staff

Trisha Hopper - Instructor, ext. 5212
   Email:thopper@scciowa.edu

Carla Pilkington - Instructor, ext. 1986
   Email: cpilkington@scciowa.edu

Radiologic Technology*

The Radiologic Technology program prepares students to perform diagnostic x-ray examinations on patients in hospitals, clinics, doctors' offices, and other health-related institutions. Graduates are eligible to apply to take the American Registry of Radiologic Technologists examination for certification as Registered Technologists in Radiograph - R.T.(R). This certification is nationally recognized and enables the student to pursue employment opportunities throughout the United States.

This program is made available through a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit www.sandburg.edu.

Galesburg Campus (Carl Sandburg College Reciprocal Agreement)
Pending ICCB Approval

Associate of Applied Science Degree Requirements

Summer Session		Credit
BIO-205	Human Biology	4
MAT-109	Concepts of Mathematics *or*	3
MAT-110	General Education Statistics	
MDT-100	Medical Terminology	2
		9

Semester I		
ALH-105	Introduction to Patient Care	1.5
ENG-101	Freshman Composition 1	3
RDT-100	Fundamentals of Radiologic Technology	3
RDT-101	Fundamentals of Radiologic Technology Practicum	6.5
RDT-110	Radiologic Technology & Physics I	3
RDT-115	Radiologic Technology Practicum I	3.5
		20.5

Semester II		
RDT-120	Radiologic Technology & Physics 2	4
RDT-122	Radiographic Procedures	4
RDT-125	Radiologic Technology Practicum 2	5
SOC-203	Introduction to Diversity	3
		16

Summer Session		
RDT-205	Radiologic Technology Practicum 3	6
		6

Semester III		
PHL-103	Biomedical Ethics	3
RDT-210	Radiologic Technology 3	4
RDT-215	Radiologic Technology Practicum 4	7
		14

Semester IV		
RDT-220	Radiologic Technology 4	4
RDT-222	Radiation Biology	2
RDT-225	Radiologic Technology Practicum 5	6
SPE-110	Interpersonal Communications *or*	
SPE-120	Introduction to Public Speaking	3
		15

Program Total *80.5*

NOTE: Students enrolled in the Radiologic Technology program must complete all RDT and BIO courses with a grade of "C" or better in order to register for subsequent courses. In order to graduate, each student must complete all required courses with a grade of "C" or better.

West Burlington Campus

Admission standards apply to this program.
  A. Reading Scores ASSET of 43; or ACT of 19; or COMPASS of 83
  B. Numerical Scores ASSET of 42; or ACT of 18; or COMPASS of 50
  C. 80% or higher on the interdepartmental math exam.
     Students who do not meet the 80% score should be referred to MAT-080, Math Skills I. After successful completion of the math course, the student will be expected to score 80% or above on the interdepartmental math exam in three attempts or less.
  D. Minimum GPA of C (2.0) for at least 12 semester hours of baccalaureate credit OR either an AA, AAS or Baccalaureate degree with a minimum of 2.0 GPA OR upper half of high school graduating class and ACT composite of 20.

Students are expected to complete and provide documentation of the following enrollment requirements prior to beginning the first respiratory course:

- Completed Physical Examination Form
- Copy of current certification in Basic Life Support—Healthcare Providers
- Copy of current certification in Mandatory Reporter
- Signed Confidentiality Agreement.
- Complete criminal background check.
- Pass drug screening.
- Proof of health insurance.

All health career programs require students to earn a grade of "C" (2.0) or above in all coursework within the program. All other eligibility requirements must be met.

Associate of Applied Science Degree Requirements

Prerequisities		Lec.	Lab.	Clinical	Credit
HSC-114	Medical Terminology	2	2	0	3
BIO-252	Biomolecular Processes	2	2	0	3
		4	4	0	6
Fall Semester I					
BIO-163*	Essentials of Anatomy & Physiology	3	2	0	4
BIO-186*	Microbiology	3	2	0	4
ENG-105*	Composition I	3	0	0	3
RCP-230	Intro to Respiratory Care	3	4	0	5
		12	8	0	16
Spring Semester I					
RCP-330	Respiratory Care II	4	2	0	5
RCP-350	Pulmonary Pathology	3	0	0	3
RCP-751	Respiratory Care Clinic I	0	0	15	5
SPC-112*	Public Speaking	3	0	0	3
		10	2	15	16
Summer Session					
PSY-111*	Introduction to Psychology	3	0	0	3
RCP-524	Respiratory Care III	4.5	1	0	5
RCP-757	Respiratory Care Clinic II	1	0	4.5	2.5
		8.5	1	4.5	10.5
Fall Semester II					
RCP-440	Cardio/Pulmonary Diagnostics	2	0	0	2
RCP-450	Respiratory Care IV	2.5	1	0	3
RCP-620	Neonatal/Pediatric Respiratory Care	3	4	0	5
RCP-761	Respiratory Care Clinic III	0	0	15	5
		7.5	5	15	15
Spring Semester II					
RCP-766	Respiratory Care Clinic IV	0	0	21	7
RCP-810	Respiratory Care Professional	2	0	0	2
RCP-880	Respiratory Care V	4	2	0	5
		6	2	21	14

Courses may be taken before beginning the program.

Program Total . . **71.5; 77.5 with Prereqs**

SCC's Respiratory Care program was created to meet the need for respiratory care professionals locally and in the surrounding communities.

Respiratory Care is a specialty field in the health occupation career field. Simply stated, "It deals with everything to do with the heart and lungs from babies through adulthood." This field is growing rapidly and has a great demand for graduates with an associate degree in respiratory care. Respiratory care ranks among the Top 20 fastest growing occupations for the 21st century.

This two-year program includes clinical studies. These clinical studies consist of hands-on training that will take place in rotating hospitals within a 75-mile radius. Graduates of this program will be able to initiate, conduct, or modify respiratory care techniques in emergency and non-emergency settings.

Upon successful graduation from the Advanced Respiratory Care Program, the student will be eligible to sit for the following credentialing exams offered by the National Board of Respiratory Care, NBRC: National Certification Exam and the National Registry. Upon satisfactory completion, students can obtain the Registered Respiratory Therapist credential.

The respiratory care program is a two-year advanced level therapist program and is accredited by the Commission on Accreditation for Respiratory Care (www.coarc.com). Commission on Accreditation for Respiratory Care 1248 Harwood Road Bedford, Texas 76021-4244, (817) 283-2835

Instructor and Staff

Stacy Lewis-Sells - Instructor, Program Coordinator , ext. 5204
   Email: ssells@scciowa.edu
   AAS, Kirkwood Community College
   BHS, University of Missouri-Columbia
   Ed.M., University of Illinois Champaign-Urbana

Suellen Carmody-Menzer - Instructor, ext. 5214
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   AAS, Kirkwood Community College
   BBA, American InterContinental University

For more information about our credentialing pass rates, graduation rates, and other important information, please visit the CoARC website at http://www.coarc.com/47.html

Skilled Trades Degree

The Skilled Trades degree starts with the completion of an apprenticeship training program for which the student will be granted the equivalent of 45 credits. The apprenticeship program must be approved by the U.S. Department of Labor Bureau of Apprenticeship and Training. The final 18 credits of this degree will round out the students' educational experience by providing general education background in areas such as communications, social sciences and humanities, mathematics and science, computers and business.

Where will this take me?

This program is designed to assist students who have completed a technical apprenticeship to obtain a college degree. They will then be eligible to advance into supervisory and management positions.

Program Administrative Contact

Laura Menke, ext. 5193
    Email: lmenke@scciowa.edu

West Burlington and Keokuk Campuses

Associate of Applied Science Degree Requirements

	Credit
Bureau of Apprenticeship and Training (BAT)- approved apprenticeship hours	30
BAT-approved on-the-job- training (OJT)	15
General Education Elective courses (100 level or above)	15

- Communications - 1 course
- Social Sciences and/or Humanities - 1 course
- Mathematics and/or Science - 1 course
- Additional course from the 3 areas above
- Computer course

Business Elective course	3
	63

Program Total *63*

The student must meet SCC's residency requirements (minimum of 15 of the last 20 semester credit hours earned in classes from SCC).

West Burlington and Keokuk Campuses

Associate of Applied Science Degree Requirements

Students would work with one or more faculty members in the chosen career area as well as the Dean of that area in coming up with meaningful coursework resulting in an Associate of Applied Science Degree

	Credit
General Education	15
(must include Communications, Math/Science and Humanities Science)	
*Technical Electives	45
(can come from any of the college's career education offerings)	
Internship	4
	64

Program Total *64*

*Technical Electives are to be chosen with an SCC faculty member and approved by appropriate SCC Dean prior to student having completed 30 semester hours. Student must meet SCC residency requirements as well.

The Technical Studies degree is a means for a student to customize a degree program to address a highly-specific set of career skills. These may be based on a personal interest or driven by a business need for a combination of skills not currently supported by any one degree program. The selection of a customized skill set will be advised by a faculty member and a dean to assure that the final program is appropriate for the stated needs.

Where will this take me?

This program will enable the student to proceed to a unique position of employment, an entrepreneurial enterprise, or to work in a predetermined position at a specific company.

Program Administrative Contact

Laura Menke, ext. 5193
    Email: lmenke@scciowa.edu

Welding

SCC's Welding Program is designed to give students a solid foundation in the principles, practices and usages of both gas and electric welding in the industrial setting. Additionally, ample practice is given in the welding skills, brazing and flame cutting. Students receive instruction on the latest types of equipment including oxyacetylene, shielded metal arc, gas tungsten arc, gas metal arc and thermoplastic welding. Instruction emphasizes production fabrication techniques, maintenance and repair procedures, blueprint reading, properties of metals, inspection methods, among other aspects of the welding trade.

Many welding courses are offered at times other than the traditional term dates, including nights.

Where will this take me?

Construction Welder
Industrial Welder
Maintenance Welder
Pipe Welder

Instructor and Staff

Bill White, Day Instructor, ext. 5181
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Mike Kaczinski, Evening Instructor, ext. 5207
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West Burlington and Keokuk Campuses
(West Burlington campus offers a diploma and AAS degree, day and evening. Keokuk campus offers an evening diploma program only.)

Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
MAT-702	Introduction to Math Applications	2	2	3
WEL-130	Oxyacetylene Welding	1	2	2
WEL-160	Arc Welding I (SMAW)	2	6	5
WEL-186	GMAW	2	4	4
WEL-192	Gas Tungsten Arc Welding	2	4	4
		9	18	18

Spring Semester I				
ENG-111	Technical Writing	3	0	3
WEL-111	Welding Blueprint Reading	2	2	3
WEL-164	Arc Welding II (SMAW)	1	6	4
WEL-172	Advanced Shielded Metal Arc Welding II	1	6	4
WEL-197	Gas Tungsten Arc Welding--Tube	1	4	3
		8	18	17

Program Total *35*

Diploma awarded

Fall Semester II				
DRF-113	Fundamentals of Technical Drafting	1	4	3
SDV-153	Pre-employment Strategies	2	0	2
WEL-182	FCAW	1	2	2
WEL-198	Adv. Gas Metal Arc Welding-Aluminum	1	2	2
WEL-292	Pipe Welding/SMAW-Uphill	1	6	4
Elective	General Education	3	0	3
		9	14	16

Spring Semester II				
MGT-130	Principles of Supervision	3	0	3
PSY-102	Human and Work Relations	3	0	3
WEL-235	Layout & Fabrication	0	8	4
WEL-720	Introduction to Robotic Arc Welding	1	2	2
		7	10	12

Program Total *63*

Course Descriptions

A brief narrative description of each course offered by Southeastern Community College is found in this section. Descriptions also contain the course number, course title, number of lecture and laboratory hours, and the number of semester hours of credit granted upon successful completion of each course.

The Iowa community colleges have developed a systematic numbering system for all the credit courses they offer. The goal of this common course numbering system is to facilitate transfer and articulation processes for community college students in Iowa.

ABC	Discipline prefix of program or subject
123	
000-099	developmental courses
100-899	courses intended to meet specific requirements for certificates, diplomas, and degrees in career and technical and transfer programs
900-999	generic focus courses such as special topics, OJT, internships

Course Prerequisites

The instructor of any course (other than health careers classes and ENG-105) may waive any stated prerequisite of the course when, in the judgment of the instructor, the student can demonstrate sufficient evidence to justify enrollment.

Course Offerings

If there is sufficient demand, courses may be offered more frequently than announced. Insufficient demand or unforeseen staffing problems may result in the cancellation of announced offerings. Southeastern Community College reserves the right to alter the course offerings and/or course content without further notice. Students are advised to consult the schedule of classes available in Enrollment Services.

Key to Course Prefixes

ACC	Accounting
ADM	Administrative Assistant
ADN	Associate Degree Nursing
AGA	Agriculture – Agronomy
AGB	Agriculture – Farm Management
AGC	Agriculture – Comprehensive – Misc.
AGM	Agriculture – Mechanics
AGP	Agriculture – Precision Ag
AGS	Agriculture – Animal Science
ANI	Animation
ARC	Architectural
ART	Art
AUT	Automotive Technology
BCA	Business Computer Applications
BIO	Biology
BUS	Business
CAD	Computer Aided Drafting
CHM	Chemisty
CFR	Computer Forensics
CIS	Computer Programming
COM	Communication
CON	Construction
CPC	Certified Professional Coder
CRJ	Criminal Justice
CRR	Collision Repair/Refinish
CSC	Computer Science
DRA	Drama
DRF	Drafting
ECE	Early Childhood Education
ECN	Economics
EDU	Education
EGT	Engineering Technology
ELE	Electrical Technology
ELT	Electronics
EMS	Emergency Medical Services
ENG	English Composition
ENV	Environmental Science
ESL	English as a Second Language
FIN	Finance
FIR	Fire Science
FLF	Foreign Language – French
FLG	Foreign Language – German
FLS	Foreign Language – Spanish
GEO	Geography
GRA	Graphic Communications
HIS	History
HIT	Health Information Technology
HSC	Health Sciences
HSV	Human Services
HUM	Humanities
IND	Industrial Technology
JOU	Journalism
LIT	Literature
MAP	Medical Assistant
MAT	Mathematics
MFG	Manufacturing
MGT	Management
MKT	Marketing
MMS	Mass Media Studies
MTR	Medical Transcription
MUA	Music – Applied
MUS	General Music
NET	Computer Networking
PEA	Physical Education Activities
PEC	Coaching Officiating
PEH	General Phys Ed & Health
PEV	Intercollegiate Physical Ed
PHI	Philosophy
PHS	Physical Science
PHY	Physics
PNN	Practical Nursing
POL	Political Science
PSY	Psychology
RCP	Respiratory Therapy
RDG	Reading
REL	Religion
SCI	Science
SDV	Student Development
SOC	Sociology
SPC	Speech
WEL	Welding

ACC Accounting

ACC-111 Introduction to Accounting
Lec. 3 Lab. 0 Credit 3

An introduction to financial accounting theory and practice with emphasis on the use of the accounting cycle and computer application thereof. This course is designed for non-business majors. Prerequisite: CSC-110 or permission of instructor.

ACC-131 Principles of Accounting I
Lec. 4 Lab. 0 Credit 4

This first course covering the principles of accounting introduces the basic terms, concepts, and procedures of the double-entry system of accounting. The course is intended for students who will major in accounting or have chosen a career which requires extensive use of accounting information. During the course, the focus will be on the completion of the accounting cycle, including the preparation of journal entries, posting to the ledger, and the preparation of adjusting entries, financial statements, and closing entries at the end of the accounting period. Specific attention will also be given to special journals and subsidiary ledgers, the information needed to account for merchandising businesses, and the special accounting procedures related to cash, receivables, payables, and systems of control. Prerequisite: COMPASS Pre-Algebra score of 50 or higher, COMPASS Algebra score of 36 or higher, ACT Math score of 19 or higher, or equivalent AND COMPASS Reading score of 61 or higher, ACT Reading score of 15 or higher, or equivalent.

ACC-132 Principles of Accounting II
Lec. 4 Lab. 0 Credit 4

A continuation of Principles of Accounting I, the second principles of accounting course will proceed through the recognition, valuation, and financial reporting requirements for merchandise inventory, fixed assets, intangibles, payroll, current liabilities, and long-term liabilities, before looking at the specific accounting issues related to corporations and partnerships. The course will conclude with coverage of the Statement of Cash Flows and financial statement analysis. Prerequisite: ACC-131.

ACC-142 Financial Accounting
Lec. 3 Lab. 0 Credit 3

An introduction to financial accounting theory and practice with emphasis on the use and interpretation of financial statements.

ACC-146 Managerial Accounting
Lec. 3 Lab. 0 Credit 3

An introduction to managerial accounting and practice with emphasis on the sources and uses of data for decisions. Prerequisite: ACC-142.

ACC-161 Payroll Accounting
Lec. 3 Lab. 0 Credit 3

Payroll accounting emphasizes the methods of computing wages and salaries, the methods of keeping records, and the preparation of government reports. Extensive coverage of federal and state laws impacting payroll accounting is provided. During the course of the semester, students will explore numerous manual and computerized payroll systems. Prerequisite: ACC-131 or equivalent.

ACC-221 Cost Accounting
Lec. 3 Lab. 0 Credit 3

This introductory course in Cost Accounting is designed as an intensive, practical course in cost accounting procedures. After a preliminary consideration of the three cost elements of material, labor and factory overhead, three concepts are applied to cost gathering procedures for both job-order and process costing. Finally, attention is given to standard costing and analysis of cost factors for decision making by management. Prerequisite: ACC-132 or ACC-146.

ACC-231 Intermediate Accounting I
Lec. 3 Lab. 2 Credit 4

This first course in Intermediate Accounting examines the generally accepted accounting principles applied in income determination and balance sheet presentation. The primary purpose is the preparation of financial statements in a meaningful, understandable and adequate manner for the external user. After a preliminary review of the basic accounting process, the content and format of the income statement and balance sheet, the course material will specifically consider the balance sheet classifications of cash, temporary investments, receivables, inventories, plant and intangible assets. Prerequisites: ACC-132 or ACC-142 or equivalent.

ACC-232 Intermediate Accounting II
Lec. 3 Lab. 2 Credit 4

A continuation of ACC-231, this course will continue to examine the generally accepted accounting principles as applied to income determination and balance sheet preparation. The course will specifically consider the classification, recognition, and valuation of current liabilities, bonds and other long-term liabilities, stockholders' equity, dividends, dilutive securities and their effect on earnings per share, leases, pensions, and income taxes. The course will conclude with coverage of the Statement of Cash Flows. Prerequisite: ACC-231.

ACC-261 Income Tax Accounting
Lec. 3 Lab. 0 Credit 3

Coverage of income tax returns for individuals, including filing requirements, gross income inclusions and exclusions, dependency requirements, itemized deductions, etc.

ACC-310 Computer Accounting
Lec. 2 Lab. 0 Credit 2

This course is designed to apply the fundamental accounting principles in a computerized environment by using the text/workbook combined with computerized standard accounting software package. Also electronic spreadsheets will be explored. A prior knowledge of accounting is required and knowledge of Windows will be helpful. It is necessary that each student be able to set aside lab time to complete assignments, either in the computer labs or on a similar computer with computerized standard accounting software package. Prerequisites: ACC-131 or ACC-142 or permission of instructor.

ACC-805 Accounting Problems I
Lec. 0 Lab. 4 Credit 2

This course is designed to give the student an opportunity to apply the concepts and procedures covered in Principles of Accounting in solving manual and computerized accounting problems. Due to the relationship between the courses, it is suggested that Accounting Problems I be taken concurrently with Principles of Accounting I though this is not required. Prerequisite: Appropriate placement test score.

ACC-806 Accounting Problems II

Lec. 0 Lab. 4 Credit 2

A continuation of ACC-805, this course is also designed to give the student an opportunity to apply the concepts and procedures covered in Principles of Accounting in solving manual and computerized accounting problems. Due to the relationship between the courses, it is suggested that Accounting Problems II be taken concurrently with Principles of Accounting II, although this is not required. Prerequisites: ACC-805.

ACC-932 Accounting Internship

Lec. 0 Lab. 0 OJT 16 Credit 4

Accounting students who have completed the prerequisite courses may use this opportunity to gain practical experience in the field of accounting. Student placement will vary, depending upon availability of internship positions. The specific arrangements for the nature of the work and scheduling of contact hours will be made under the supervision of the employer. Prerequisites: ACC-132, ACC-806, CSC-110, and ENG-105 or equivalents.

ADM Administrative Assistant

ADM-020 Keyboarding Skills

Lec. 0 Lab. 2 Credit 1

The course is designed for students with no keyboarding skills or for those who need to relearn the keyboard. Emphasis will be on learning to type by touch. The entire keyboard will be included (alphabet, numbers, and symbols). This will enable students to interact with a computer via keyboard (by touch).

ADM-025 Keyboarding Skills and Applications

Lec.0 Lab.4 Credit 2

This course is designed for students with no keyboarding skills or for those who need to relearn the keyboard. Emphasis will be learning to type by touch. The entire keyboard will be included (alphabet, numbers, and symbols). This will enable students to interact with a computer via the keyboard (by touch). Students will learn to prepare simple business documents such as letters, memos, reports, and tables using word processing software. Skill building will also be emphasized for improving speed and accuracy on timed writings.

ADM-027 Keyboarding and Advanced Applications

Lec. 0 Lab. 4 Credit 2

This course is designed for students with good keyboarding skills who need to develop knowledge of writing reports utilizing different styles. Prerequisite: ADM-025.

ADM-030 Office Machine Skills

Lec. 0 Lab. 2 Credit 1

The course is designed to introduce students to the proper techniques for using transcribing machines, and/or electronic calculators.

ADM-035 Bookkeeping Skills I

Lec. 0 Lab. 2 Credit 1

The course is designed to help the student understand the principles of double-entry bookkeeping such as: journalizing, posting and preparing financial statements. The course will provide the foundation needed for advanced study in accounting.

ADM-040 Bookkeeping Skills II

Lec. 0 Lab. 4 Credit 2

Continuation of ADM-035. Expands account cycle for a merchandising business using specialized journals and subsidiary ledgers.

ADM-112 Keyboarding

Lec. 2 Lab. 2 Credit 3

A fundamental course in the techniques of keyboarding. Touch keying of letters, numbers and symbols of the keyboard is taught. Correct keying techniques are stressed. Targeted for students in arts and sciences (general education) as well as any career education program. Open to students with no previous training in keyboarding.

ADM-114 Keyboarding Applications

Lec. 2 Lab. 2 Credit 3

A fundamental course in the technique of keyboarding. Touch keying of letters, numbers and symbols of the keyboard is taught. Correct keying techniques are stressed. Emphasis on proper formatting of basic office documents such as memorandums, letters, tables and reports.

ADM-116 Keyboarding II

Lec. 1 Lab. 4 Credit 3

An introduction to basic document formatting using word processing software features to produce mailable documents. Emphasis is on speed and accuracy in keying. Prerequisites: ADM-114 or permission of instructor.

ADM-119 Keyboarding III

Lec. 1 Lab. 4 Credit 3

An advanced course enabling students to use advanced word processing software features to produce more complex business documents in mailable form. Continued development of speed and accuracy in keying. Prerequisite: ADM-116 or permission of instructor.

ADM-129 Keyboarding IV

Lec. 1 Lab. 4 Credit 3

An advanced course integrating mastery level skills in keyboarding and document formatting. Use of advanced software features in an office-style environment to produce mailable documents. Prerequisite: ADM-119.

ADM-133 Business Math/Calculator

Lec. 3 Lab. 0 Credit 3

This course will focus on the use of 10-key calculators to review arithmetic fundamentals and solve common business problems, including banking, payroll, weights and measurements, percentage, commissions, discounts, mark-ups, interest, borrowing by business, consumer credit, sales taxes, property taxes, income taxes, and insurance. Prerequisite: COMPASS Pre-Algebra score of 50 or higher, COMPASS Algebra score of 36 or higher, ACT Math score of 19 or higher, or equivalent.

ADM-149 Transcription

Lec. 2 Lab. 2 Credit 3

Designed for students in the Office Administration program to develop skills in transcribing various business documents. Prerequisites: ADM-116, ENG-131 or permission of instructor.

ADM-162 Office Procedures

Lec. 3 Lab. 0 Credit 3

Emphasis will be on records management skills including filing rules, records storage and retrieval, understanding of the overall records management process, and an understanding of equipment and supplies.

ADM-171 Records Management

Lec. 1 Lab. 2 Credit 2

This course is designed to familiarize students with alphabetic, numeric, geographic and subject filing systems. Both manual and electronic systems will be utilized. Prerequisite: ADM-114 or CSC-110 or permission of instructor.

ADM-186 Legal Documents

Lec. 1 Lab. 2 Credit 2

A specialized course in which legal documents are studied. Emphasis is on creating and completing legal documents electronically. Transcription skills are refined with a concentration on legal documents. Legal terminology is applied throughout the course. Prerequisites: ADM-149, ADM-119.

ADM-212 Medical Documents

Lec. 1 Lab. 2 Credit 2

A specialized course in which medical documents are studied. Emphasis is on creating and completing medical documents electronically. Transcription skills are refined with a concentration on medical documents. Medical terminology is applied throughout the course. Prerequisite: ADM-149, ADM-119.

ADN Associate Degree Nursing

ADN-145 Role Transition

Lec. 1 Lab. 0 Credit 1

This course allows associate degree nursing students to explore the role expectation of the registered nurse and facilitate the transition from practical nursing to registered nursing. An emphasis is placed on health education and advanced application of the nursing process. Prerequisite: PNN (Level I) Curriculum.

ADN-221 Pharmacology II

Lec. 2 Lab. 0 Credit 2

This course focuses on concepts of pharmacology with special emphasis on the role of the nurse in developing a comprehensive approach to the clinical application of drug therapy through the use of the nursing process. Understanding how drugs work and their relationship to expected outcomes and possible adverse reactions is explored. Recognition of safe dosage ranges, potential interactions, patient factors that affect drug actions, and safe administration techniques are included. The education of clients about their drug therapies is a crucial component. Prerequisite: PNN (Level I) Curriculum. Corequisite: ADN-145.

ADN-311 RN Issues and Trends

Lec. 1 Lab. 0 Credit 1

This course assists the associate degree nursing student to begin the transition to an autonomous nursing practice. Career development, opportunities, and challenges of the registered nurse are explored in relation to changing health care trends. Principles of leadership and management are introduced. Prerequisite: ADN-641.

ADN-641 Nursing III

Lec. 8 Lab. 1 Clinical 18 Credit 14.5

This course integrates concepts and strands previously presented in the curriculum. A systematic approach is utilized in planning and providing nursing care to individuals, families, and groups across the lifespan (pediatrics, adult and geriatrics). This course emphasizes selected acute and complex alterations in health and includes advanced content related to maternity care. An opportunity is provided for students to expand their theoretical knowledge, to broaden the application of critical thinking to the nursing process, and to refine their nursing skills in clinical settings. Prerequisites: ADN-145, ADN-221. Corequisite: PSY-111.

ADN-642 Nursing IV

Lec. 8 Lab. 0 Clinical 18 Credit 14

This course integrates concepts and strands previously presented in the curriculum. A systematic approach continues to be utilized in planning and providing nursing care to individuals, families, and groups across the lifespan (pediatric, adult and geriatrics). This course emphasizes selected acute and complex alterations in health and includes advanced content related to mental health. An opportunity is provided for students to expand their theoretical knowledge, to extensively apply critical thinking to the nursing process, and to continue to refine their nursing skills in clinical settings. Prerequisite: ADN-641.

AGA Agriculture - Agronomy

AGA-114 Principles of Agronomy

Lec. 2 Lab. 2 Credit 3

Detailed studies will be made of corn and soybean production, fertilization and harvesting methods. The processing of seed and grain will also be studied in this course, along with a close look at other cropping alternatives for the corn belt area. Laboratory work will be used to increase the understanding of key concepts.

AGA-154 Fundamentals of Soil Science

Lec. 2 Lab. 2 Credit 3

This course covers soil properties affected by their formation due to climate, vegetative cover, parent material, drainage and topography. Laboratory work will be used to increase the understanding of key concepts.

AGA-158 Soil Fertility

Lec. 2 Lab. 2 Credit 3

This course explains the phenomena involved in making and keeping a soil in its most economical, productive state. Students learn why soils must be managed differently due to differences in origin and make up. Laboratory work will be used to increase the understanding of key concepts.

AGA-376 Integrated Pest Management

Lec. 2 Lab. 2 Credit 3

This course includes field observation of chemical control of weeds and insects and principles of safety and ecological ramifications of chemicals used in modern farming operations. The course also includes alternative pest control systems in modern farming practices and insect and weed identification in the field. Material will also be presented to prepare the student to pass the Iowa Commercial Pesticide Core, Insects and Agriculture Weed tests. Laboratory work will be used to increase the understanding of key concepts.

AGB Agriculture - Farm Management

AGB-210 Agriculture Law
Lec. 2 Lab. 0 Credit 2

This course is designed to make the student aware of the legalities of the farm business in regard to estate planning, leasing, contracts and legal liability.

AGB-235 Introduction to Agriculture Markets
Lec. 2 Lab. 2 Credit 3

A course dealing with supply and demand relationships, determining cost of production, futures hedging, futures options, basis, technical analysis and developing marketing plans. Use of MarketMaxx.net online trading program for training purposes will be used. Laboratory work will be used to increase the understanding of key concepts.

AGB-330 Farm Business Management
Lec. 2 Lab. 2 Credit 3

A study of the use of the principles of farm management in developing a farm or farm business operation. Laboratory work will be used to increase the understanding of key concepts. Prerequisite: AGB-470.

AGB-331 Entrepreneurship in Agriculture
Lec. 3 Lab. 0 Credit 3

Entrepreneurship in Agriculture relates specifically to management of agriculture farms and businesses. Course content emphasizes budget planning, record keeping, record analysis, ag finance/credit, and machinery and land management. Management exercises simulating farm activities and decisions are incorporated. Microcomputers are used to aid in the completion of these management exercises.

AGB-336 Agricultural Selling
Lec. 3 Lab. 0 Credit 3

Students will gain the necessary knowledge and the techniques of selling agriculture products directly to producers. Included is knowledge of the buying process, communication skills and other factors that are beneficial in building relationships with customers.

AGB-437 Commodity Marketing
Lec. 3 Lab. 0 Credit 3

Commodity Marketing examines basis, fundamental and technical price analysis, commodity futures, futures options, alternative cash contracts, sources and uses of marketing information, and relevant agricultural marketing strategies.

AGB-470 Farm Records, Accounts, Analysis
Lec. 2 Lab. 2 Credit 3

Emphasis is placed on the importance of records as an essential management tool. Laboratory work will be used to increase the understanding of key concepts.

AGB-816 Student Internship I
Lec. 0 Lab. 0 OJT 15 Credit 3.7

Individuals gain practical experience as employees in approved places of business. Prerequisite: Passage of Commercial Pesticide Applicators Exam.

AGB-826 Student Internship II
Lec. 0 Lab. 0 OJT 15 Credit 3.7

Individuals gain practical experience as employees in approved places of business. Prerequisite: Passage of Commercial Pesticide Applicators Exam.

AGB-930 Agriculture Seminar
Lec. 1 Lab. 0 Credit 1

This course is designed to enable the student to gain practical experience in the areas of farm equipment maintenance, equipment adjustment and operation, crop scouting for weeds, insects and diseases, and weed and insect management. It will be taught on an arranged basis at the SCC West Burlington campus as time and weather influence the operations necessary.

AGB-949 Special Topics
Lec. 0 Lab. 2-12 Credit 1-6

This course is intended to provide the students an opportunity to explore an area of study in greater depth. Individual study projects will be determined by consultation between the student and the instructor. The course can be used for students studying abroad. Living experience, study, and travel will determine credit. The course may be repeated for up to 6 credit hours.

AGC Agriculture - Comprehensive - Misc.

AGC-420 Issues in Agriculture
Lec. 3 Lab. 0 Clinical 0 Credit 3

Provides the students the opportunity to collect, discuss, interpret, and defend current issues that affect the economic, environmental, and social conditions and production of agricultural commodities.

AGC-936 Occupational Experience
Lec. 3 Lab. 0 Credit 3

An "on-the-job" experience at a local business. The business will provide a training sponsor in cooperation with an instructor/coordinator from the college staff. Hands-on experience in observing and demonstrating the knowledge and skills developed in the classroom. Prerequisites: AGC-420, AGB-437.

AGM Agriculture - Mechanics

AGM-100 Commercial Driver's License
Lec. 0 Lab. 1 Credit .5

This course will present the material necessary for the student to pass the commercial driver's license exam.

AGM-140 Farm Shop
Lec. 0 Lab. 4 Credit 2

This course gives the student practical experience in designing and building equipment for the farm.

AGM-151 Farm Equipment Adjustment
Lec. 0 Lab. 4 Credit 2

Students will utilize the operator's manual to find information concerning the operation, lubrication and adjustment sections. Combine operations will be addressed as follows: perform initial calibration settings for wheat, corn and soybeans; determine type and amount of losses of grain and make adjustments to minimize those losses; and utilize the GPS unit to create GIS referenced yield data.

AGM-157 Machinery Management

Lec. 0 Lab. 4 Credit 2

Students will utilize the operator's manual to find information concerning operation, lubrication and adjustment sections. In addition, students will properly adjust and operate the following equipment: 1) row-crop cultivator; 2) square baler; 3) disk/harrow; 4) field cultivator. Course will also address safe handling procedures and the use of herbicides, calibration of the field sprayer for proper operation and adjusting the grain drill to plant soybeans and small seeds. Laboratory work will be used to increase the understanding of key concepts.

AGM-200 Farm Welding

Lec. .5 Lab. 2.5 Credit 1.7
A shop course dealing with welding.

AGP Agriculture - Precision Ag

AGP-329 Introduction to GPS

Lec. 3 Lab. 0 Credit 3

This course is designed to provide a hands-on experience with the tools of precision agriculture: global positioning systems, geographic information systems and remote sensing and to incorporate the use of these tools into a management system for decision making.

AGP-340 Foundations of GIS and GPS

Lec. 2 Lab. 2 Credit 3

This course will enable the students to use and demonstrate the principles of GPS, GIS, remote sensing and precision application equipment. Soil sampling, farm mapping, combine yield monitoring, and developing Geographic Information System databases will be explored. Students will be exposed to computers and the use of precision agriculture software. Laboratory work will be used to increase the understanding of key concepts.

AGP-421 Applications of GIS

Lec. 1 Lab. 2 Credit 2

This course will take students into advanced concepts in GIS and give hands on experience in the practical applications of a geographical information systems. Students will be enrolled in selected GIS short courses online and required to design a GIS project from scratch. They will setup the parameters for the project, collect the data, and format the final project. The project should be related to their career field.

AGP-456 Advanced Technology Applications

Lec. 3 Lab. 0 Credit 3

This course is designed to teach the student advanced techniques in utilization of multi-spectral imagery in agricultural applications using several different types of software such as Erdas Imagery and SS Toolbox.

AGS Agriculture - Animal Science

AGS-113 Survey of the Animal Industry

Lec. 3 Lab. 0 Credit 3

Course studies ways domestic animals serve the basic needs of humans for food, shelter, protection, fuel and emotional well-being. Terminology, basic structures of the industries surrounding the production, care and marketing of domestic animals in the U.S.

AGS-225 Swine Science

Lec. 2 Lab. 2 Credit 3

This course is designed around the life cycle concept of swine management. Each period will be discussed with respect to management of nutrition, disease control, housing and proper handling. Ethical production techniques will be stressed throughout the course. Laboratory work will be used to increase the understanding of key concepts.

AGS-228 Beef Cattle Science

Lec. 5 Lab. 0 Credit 5

A course dealing with the retail beef industry, management decisions of the cow-calf and the yearling-stocker producers, major health problems and their prevention/treatment, ruminant nutrition balance rations and forage resource management.

AGS-242 Animal Health

Lec. 3 Lab. 0 Credit 3

Provides information about the cause, nature, prevention, and treatment of the common health problems of farm animals. Identifies animal behavior and develops a herd health program.

AGS-270 Foods of Animal Origin

Lec. 3 Lab. 0 Credit 3

A general basic agri-food science course that deals with world food needs and available food supplies, types of food and nutritive value and use, and methods used and challenges involved in food production, transportation, preservation/processing, storage, distribution, marketing and consumption. The course covers both animal origin and non-animal origin food products.

AGS-319 Animal Nutrition

Lec. 2 Lab. 2 Credit 3

A course in basic animal nutrition for swine and beef cattle. Feed utilization for maintenance/growth, reproduction and lactation is discussed. The formulation of rations on both a nutritional and economic basis as well as the substitution of ingredients will be covered. Laboratory work will be used to increase the understanding of key concepts.

AGS-330 Animal Reproduction

Lec. 4 Lab. 0 Credit 4

This course will cover the principles of genetics and the physiology of male and female domesticated livestock.

ANI Animation

ANI-100 Story Development for Animation

Lec. 3 Lab. 0 Credit 3

The purpose of this course is to introduce students to screenplay and story development. The student will be introduced to the heroic myth, its story structure and learn to relate it to modern screenplay construction through watching and analyzing screenplays. Students will be provided with the opportunity to develop their own story ideas and learn the stages of a typical story development pipeline through application and lecture. Corequisite: ENG-105.

ANI-101 Animation Software I

Lec. 2 Lab. 2 Credit 3

This course will introduce students to basic computer use & to the basic processes used in animation. Students will use industry standard software to develop art assets & will be exposed to topics such as mesh modeling, rigging/skinning, character animation, & texture mapping.

ANI-102 Animation Software II

Lec. 2 Lab. 2 Credit 3

Students will learn more advanced modeling & rigging techniques to complete a low/hi-resolution character model. Students will also be introduced to basic lighting & compositing techniques. Prerequisites: ANI-101, ANI-116.

ANI-103 Animation Software III

Lec. 2 Lab. 2 Credit 3

Students will gain an understanding of technical/character animation including motion capture & matchmoving techniques. They will create animations using cartoony & realistic styles. Students will also use 3D tracking to tie together all their elements into a single scene that matches real life footage. Students will gain advanced knowledge of lightening, rendering & compositing techniques. Prerequisite: ANI-102.

ANI-104 Animation Software IV

Lec. 2 Lab. 2 Credit 3

This course will provide students with an understanding of the motion graphics workflow. Students will also learn basic design principles as well as the social impact capable with motion graphics. Students will also create realistic visual effects using various simulation tools such as texture effects & particles. Prerequisite: ANI-113.

ANI-105 Introduction to Animation

Lec. 2 Lab. 2 Credit 3

The student will gain an understanding of the basics of all types of animation. They will use this understanding to create projects using traditional 2D, flash 2D, 3D, Stop Motion, and Experimental animation techniques. Upon completion of the course, the student will have a 30 second animation created using the technique of their choice. Prerequisite or Corequisite: CSC-110.

ANI-109 Animation Principles & Techniques

Lec. 2 Lab. 6 Credit 5

This course will provide students with an applied knowledge of the 12 principles of animation, namely; squash/stretch, anticipation, staging, straight ahead/pose to pose, follow through/overlapping action, slow in/out, arcs, secondary action, timing, exaggeration, solid drawing, & appeal as well as a variety of techniques to help prepare them for animating in any medium. This course will also cover a history of animation. Prerequisites: ANI-101, ANI-116, ART-133.

ANI-110 Pre-Production

Lec. 2 Lab. 2 Credit 3

This course will provide the student with a good grasp on design as it applies to their forms and animation; identify good and bad composition & staging; identify and build an emotional impact using color, light, and camera perspective within a scene; create and use technical drawings to build models; create surfaces and lighting set-ups that strengthen the overall project design; and lastly, create strong 3D, narrative illustrations and animation. Prerequisites: ANI-100, ANI-105, CSC-110, DRA-110, ENG-105.

ANI-111 Production Pipeline Studio I

Lec. 2 Lab. 2 Credit 3

This course will introduce students to a typical story development pipeline. Students will analyze the heroic myth & screenplays in preparation for developing their own story ideas. This course is also designed to aid students in developing the materials & skills necessary to obtain & maintain employment. Upon completion of this course, students will have developed an individual story project through the animatic phase. Prerequisites: ANI-101, ANI-116, ART-133, DRA-110, ENG-105.

ANI-112 Production Pipeline Studio II

Lec. 2 Lab. 2 Credit 3

Students will be introduced to a basic marketing theory & foundation in branding. This class is designed to improve: student's marketing skills, their understanding of specific branding topics, & their ability to enter the industry workforce. Students will use previously created pre-production work to guide their project(s) to completion. Students will edit their project(s) into a demo reel, portfolio, & website. Prerequisites: ANI-101, ANI-111.

ANI-113 Production Pipeline Studio III

Lec. 2 Lab. 6 Credit 5

This course will provide the student with a good grasp on design as it applies to their forms and animation. Students will come to know the production process from setup through post by completing this animation production pipeline. This course is designed to aid students in developing the materials & skills necessary to obtain & maintain employment. Upon completion of the course, students will have begun the animation production phase of their final project. Prerequisites: ANI-102, ANI-112.

ANI-114 Production Pipeline Studio IV

Lec. 2 Lab. 6 Credit 5

This course explores the various roles involved in the production of animation. Students will prepare regulatory materials for their final project, including: a proposal, bid, scope, budget, & schedule. This course is designed to aid students in developing the materials & skills necessary to obtain & maintain employment. Upon completion of the course, students will have completed the animation post-production phase of their final project. Prerequisite: ANI-113.

ANI-116 Exploring Human Movement

Lec. 2 Lab. 2 Credit 3

This course provides students with a simplified understanding of human anatomy for the animator. Students will participate in acting exercises to help them appreciate motivation & performance. The groundwork for figure drawing will also be established through a series of gesture studies.

ANI-120 Lighting & Rendering

Lec. 2 Lab. 2 Credit 3

This course will provide the student with knowledge of core and advanced lighting and rendering techniques being used in the industry. Emphasis will be placed on traditional lighting, understanding Maya Software rendering, developing Mental Ray knowledge and workflows, and exploring various other rendering engines currently on the market including their pros and cons. Students will use this knowledge to set up a single frame image to show the skills they've absorbed throughout the course. Prerequisites: ANI-105, CIS-148, CSC-110, DRA-110.

ANI-125 Advanced Modeling, Character Setup, & Scripting

Lec. 2 Lab. 2 Credit 3

This course will provide the student with the ability to completely model and rig a hi resolution and low resolution character model. They will learn the difference between hard surface and organic modeling, the importance of functional anatomy, the base techniques used to create character models, how to detail your models using ZBruch, creating height maps using Maya, how to build a rig using joints, blendshapes, constraints, and deformers, how to paint joint weights, and a basic overview of scripting inside of Maya. They will apply all these skills to a final project, creating a fully modeled, rigged, weighted, and posed model. Prerequisites: ANI-105, CIS-148, CSC-110.

ANI-130 Technical & Character Animation

Lec. 2 Lab. 2 Credit 3

The student will gain an understanding of technical and character animation including motion capture and matchmoving techniques. They will use this understanding to create character animations using cartoon style, realistic style, and technical animation of a vehicle. They will then learn about matchmoving and use 3D tracking to tie together all their elements into a single scene that matches real life footage. Prerequisites: ANI-105, ANI-116, CIS-148, CSC-110.

ANI-135 Stop Motion

Lec. 2 Lab. 2 Credit 3

This course will facilitate an understanding of the stop motion process. They will learn how to fabricate characters, environments, set lights and cameras for stop motion. They will then learn how to animate using stop motion techniques and technology to create a walk cycle and a short animation. ANI-105, ANI-116, CSC-110.

ANI-136 Stop Motion/Video Production

Lec. 2 Lab. 2 Credit 3

Students will be introduced to video equipment operation, techniques in video & stop motion production. Students will learn how to fabricate characters, environments, set lights & cameras for stop motion. Students will apply animation principles to arrive at their final product.

ANI-140 Producing for Animation

Lec. 3 Lab. 0 Credit 3

This course explores the various roles and positions involved in the production of animation. Animation Production functions and practices will be studied, as well as performed. Throughout the course the student will study and prepare regulatory materials for their final project that include, however are not limited to a proposal, bid, scope, budget, and schedule. Students will come to know the production process from setup through post by completing this animation production pipeline. Prerequisites: ANI-100, ANI-105, ANI-110, CSC-110, DRA-110, ENG-105.

ANI-145 Particle Systems & Dynamics

Lec. 2 Lab. 2 Credit 3

This course will provide the student with the ability to create realistic visual effects. Students will learn and use texture effects, particles and nparticles, fluid containers, dynamic joint chains, ncloth, soft and rigid bodies, and hair and fur effects. Prerequisites: ANI-105, ANI-116, ANI-120, CIS-148, CSC-110.

ANI-150 Motion Graphics

Lec. 2 Lab. 2 Credit 3

A course in motion graphics will provide the student with an understanding of the motion graphics workflow. Students will also learn basic design principles as well as the social impact capable with motion graphics. Students will be able to create motion using keyframes in both 2D and 3D space. Additionally, students will learn a number of techniques in order to manipulate images and scripts using compositing tools and expressions. Students will be able to compile their work into a short motion graphics reel at the end of the course. Prerequisites: ANI-105, ANI-155, CSC-110, DRA-110. Corequisite: ANI-155.

ANI-155 Compositing

Lec. 2 Lab. 2 Credit 3

This course will provide the student with the ability to create digital media composites. They will first learn to identify the aspects of digital compositing, interpret visual elements, understand imagery at the data level, and perform basic image manipulation. After these core fundamentals are internalized, they will proceed to perform basic image compositing, understand the effect of temporal manipulations, set up 2D tracking and stabilization, internalize user interface interactions, understand the compositing pipeline, and apply the use of photographic elements. Prerequisites: ANI-105, ANI-120, CIS-148, CSC-110, DRA-110. Corequisite: ANI-150.

ANI-160 Post Production

Lec. 2 Lab. 2 Credit 3

This course will provide the student with an understanding of picture and dialogue editing, a comprehensive overview of film and video editing, as well as demonstrate sound editing and mixing. Prerequisites: ANI-105, CSC-110, DRA-110.

ANI-165 Capstone and Demo Reel for Animation

Lec. 2 Lab. 6 Credit 5

Following successful completion of animation core coursework, this course will provide the student with a basic and broad familiarity in marketing theory and foundation in branding as it potentially revisits elements in Professional Development. This course however will differ, as it allows for more of an experienced-based approach in marketing the self through branding and final capstone project. From an applied point of view, students will come to know the evolution and significance of marketing, product and service positioning, distribution, pricing and strategies for marketing communication and promotion; as well as gain insights into how branding topics and "big picture" issues of how various aspects of marketing "fit together" from a brand equity perspective, in order to apply it to the final project. Once a brand strategy is determined, students will help promote their ability to enter the industry workforce. They will use their previously created pre-production to guide their project(s) to completion. Once completed, the student will then edit together their project(s) into a demo reel to use after graduation. This course will integrate all facets of the animation course work. Prerequisites: Successful completion of 50 hours of animation core course work.

ANI-932 Animation Internship

Lec. OJT 15 Credit 3.7

This course is designed to provide the student with a practical experience in computer animation prior to completion of the Associate of Applied Science degree. The internship is supervised by the program coordinator & should be taken during the student's summer semester. Prerequisite: 48 hours completed towards the Computer Animation Program.

ANI-941 Animation Studio Practicum

Lec. 2 Lab. 2 Credit 3

This course is designed to provide students with a practical experience in computer animation prior to completion of the Associate of Applied Science degree. This course is intended for non-interning students. Prerequisite: 48 hours completed towards the Computer Animation Program.

ANI-952 Topics

Lec. 1 Lab. 2 Credit 2

The purpose of this course is to improve the marketability of students by affording them the opportunity to learn software programs specific to the companies where they are applying to work. Students will use previously gained software knowledge to make class presentations demonstrating the basics of newly attained industry standard software. Prerequisite: ANI-102.

ARC Architectural

ARC-113 Architectural Drafting I

Lec. 2 Lab. 4 Credit 4

A course designed to provide a knowledge of residential house construction and house plans. The students are required to draw architectural plans that include foundations, floor plans, electrical plans, elevations, details and perspectives. Prerequisite: CAD-172 or permission of instructor.

ARC-129 Residential/Light Commercial Drafting

Lec. 2 Lab. 4 Credit 4

Designing and drawing a complete set of plans, including specifications, calculations, and rendering for multi-family or similar two story buildings. Emphasis will also be placed on designing an energy-efficient structure. Prerequisite: ARC-113 or permission of instructor.

ART   Art

ART-101 Art Appreciation

Lec. 3 Lab. 0 Credit 3

A study of aesthetics as related to human expression, especially within the visual arts of painting, sculpture and architecture. This is a humanities-oriented course where art principles are examined as they relate to the production and interpretation of Western art in both historical and cultural contexts covering the Renaissance through post-modern periods. Lectures are illustrated with slides and video tapes. Students will form personal opinions about art by looking at art and evaluating art with methods taught in class.

ART-109 Non-Western Art

Lec. 3 Lab. 0 Credit 3

A survey of art history from prehistoric to modern times of locations outside of Western civilization. Both period style and personal styles will be compared to the lifestyles of the area. Geographical emphases will be in Africa, Eastern and Southern Asia, Central and Native North America, South America and Australia. Class work will consist of discussion of art using slides, prints, videos, hands-on activities and field trips.

*ART-120 2-D Design

Lec. 2 Lab. 2 Credit 3

This beginning level course for either non-art or art majors allows the student to explore a variety of two dimensional media such as pencil, ink, pastel, watercolor, acrylics, etc. applied on paper and other types of surfaces. A variety of design styles and methods will be introduced using the various elements and principles of design.

*ART-123 3-D Design

Lec. 2 Lab. 2 Credit 3

This beginning level design course for non-art or art majors allows the student to explore a variety of three dimensional media making constructions such as relief designs, mobiles and sculpture using a variety of media such as wood, metal, wire, paint, etc. and other media of the student's choice. A variety of design styles and methods will be introduced.

*ART-133 Drawing

Lec. 2 Lab. 2 Credit 3

A beginning drawing class in a variety of media using an assortment of subjects. The student will explore theories and concepts of drawing.

*ART-134 Drawing II

Lec. 2 Lab. 2 Credit 3

Development and techniques of a personal drawing style, a continuation of Drawing I with more emphasis on the student's individualized curriculum. Prerequisite: ART-133.

ART-138   Figure Drawing

Lec. 2 Lab. 2 Credit 3

This course introduces the students to figurative drawing. We will focus on structure of the human figure and compositional representation through observation. An emphasis will be placed on refining skills of observation and proportioning of the picture plane. A dialogue on formal aspects covered in Drawing I will continue. Personal expression, approach and conceptual language will be covered through assignments and from a figurative historical perspective. Prerequisite: ART-133 or equivalent.

*ART-143 Painting

Lec. 2 Lab. 2 Credit 3

A beginning painting course for non-art or art majors in a variety of media. A variety of subjects, theories and concepts will be considered.

*ART-144 Painting II

Lec. 2 Lab. 2 Credit 3

Development and techniques of a personal painting style; a continuation of Painting I with emphasis on the student's individualized curriculum. Prerequisite: ART-143.

ART-154   Mixed Media

Lec. 2 Lab. 2 Credit 3

This beginning level course allows students to explore art projects that combine a variety of media. The course emphasizes experimentation with conceptual approaches to art. Examples of projects include mixed media on paper, on canvas, handmade art books, assemblage, and found object sculpture.

ART-157 Printmaking

Lec. 2 Lab. 2 Credit 3

Introductory printing course with emphasis in basic printmaking techniques and processes. Printing proficiency in relief, stencil and/or intaglio prints will be pursued.

ART-173 Ceramics

Lec. 2 Lab. 2 Credit 3

A beginning level course for either non-art or art majors exploring hand built pottery techniques and use of the potter's wheel.

ART-174 Ceramics II

Lec. 2 Lab. 2 Credit 3

Advanced hand building and/or throwing techniques; larger scale or more in depth goals; projects may be more sculptural or one of a kind. Prerequisite: ART-173.

ART-184 Photography

Lec. 2 Lab. 2 Credit 3

This course introduces basic camera operations and equipment, processing, and photographic print production for both the traditional and digital cameras. Topics include contrast, depth-of-field, subject composition, density control, film selection, proper exposure, and aesthetics. Digital image scanning, current tools, technologies and software will be covered. Students will need to provide a non-automatic 35MM camera and photographic materials.

ART-203 Art History I

Lec. 3 Lab. 0 Credit 3

A survey of art history from prehistory to the Renaissance. Both period style and personal styles will be compared to the lifestyles of the period. Emphasis will be on artists and art forms of Western cultures. Class work will consist of discussion of art using slides, prints and field trips.

ART-204 Art History II

Lec. 3 Lab. 0 Credit 3

Continuation of ART-203 from Renaissance to post-modern.

ART-208 Introduction to Native American Art History

Lec. 3 Lab. 0 Credit 3

This course would be a general introduction and overview of Native American Art History. It will cover the establishment and development of the visual art from earliest tribes to current tribes. It should also promote awareness of the American Indian in cross-cultural and cross-disciplinary perspectives by studying the arts. The course will be taught by lecture and presentation of slides. Field trips to surrounding sites to view artifacts will be conducted when possible.

ART-295 Portfolio Preparation and Development

Lec. 1 Lab. 0 Credit 1

This course is designed to cover portfolio preparation and presentation, both traditionally and verbally of their art work for academic and/or professional environment. No text required. Repeatable for a total of 2 credits. Prerequisite: A minimum of two (2) ART Studio courses are required.

ART-922 Field Studies

Lec. 1-3 Lab. 0 Credit 1-3

Field tours to various nations and regions to study their art and art history. Many famous and culturally important original art works will be examined. Specific written credit and participation requirements are established in advance of the field study and according to the number of credit hours enrolled. Each hour of credit requires a minimum of 54 hours of supervised travel and living experience. May be repeated for up to 9 credit hours.

*ART-928 Independent Study

Lec. 0 Lab. 2-6 Credit 1-3

This course is intended to provide the students an opportunity to select a medium or concept and to explore it in greater depth than is possible in other art courses. Individual study projects will be determined by consultation between the student and the instructor. A minimum of 32 hours of laboratory effort is required for each semester hour of credit. Prerequisites: Any three of the following: ART-120, ART-123, ART-133, ART-143, ART-134, ART-144, ART-153, ART-173, ART-174 and permission of instructor.

May be repeated for up to nine (9) semester hours of credit.

* Note: Students who expect to transfer art credit to a senior college or art school as part of an art major or minor should be aware that a portfolio of their work in drawing, painting, design and independent study courses must be maintained for presentation to the senior institution to which they transfer. The art instructor will help select and prepare the portfolio.

AUT Automotive Technology

AUT-106 Introduction to Automotive Technology

Lec. 1 Lab. 2 Credit 2

This course will serve as an introduction to the complete automotive field, including safety, ASE certification, employment potential, customer service, employer/employee relations and the parts and service industry.

AUT-126 Fundamentals of Automotive Servicing

Lec. 1 Lab. 2 Credit 2

This course will familiarize students with basic scheduled maintenance. Proper usage of hand and power tools will be covered, as well as precision measuring systems and equipment. Prerequisite: A grade of C- or above in AUT-106.

AUT-166 Automotive Engine Repair

Lec. 3 Lab. 6 Credit 6

This course will introduce the internal combustion engine and the variety of designs in popular usage today. It also offers a general introduction to engine diagnosis and testing. The engine will be explored piece by piece, and the description and function of each part explained.

AUT-190 Hybrid Fundamentals

Lec. 1 Lab. 2 Credit 2

This course will familiarize students with general hybrid history and benefits, basic safety precautions, specific maintenance procedures, location and description of hybrid components for hybrid vehicles. Prerequisite: SCI-115

AUT-207 Automotive Transmissions and Transaxles

Lec. 2 Lab. 8 Credit 6

This course discusses automatic transmission and transaxle theory, components, operation and service.

AUT-244 Manual Drivetrains I

Lec. 1 Lab. 4 Credit 3

This course will introduce the student to the concepts of front- and rear-wheel drive, four-wheel and all-wheel drive vehicles. Clutches, CV joints, and universal joints will also be covered.

AUT-246 Manual Drivetrains II

Lec. 1 Lab. 4 Credit 3

This course will provide the student with an understanding of differentials, as well as the major parts of a manual transmission. Inspection, maintenance, lubrication, disassembly and reassembly will be emphasized. Prerequisite: AUT-244.

AUT-405 Automotive Suspension and Steering

Lec. 2 Lab. 6 Credit 5

This course will look closely at automotive suspension systems, manual, power and four-wheel steering, and proper vehicle wheel alignment.

AUT-505 Automotive Brake Systems

Lec. 2 Lab. 6 Credit 5

This course will explain and demonstrate the principles of friction and the components and operation of hydraulic brakes, including power and anti-lock brakes. Prerequisite: C- or above in AUT-126.

AUT-610 Automotive Electrical I

Lec. 2 Lab. 4 Credit 4

This course will introduce to the student the theory and operation of basic electrical and electronic principles as a science. How the basics are applied to automotive electrical circuits and the proper procedures to diagnose and repair are covered. Lab sessions are spent turning theory into "hands-on" practice with meters and basic circuits.

AUT-625 Automotive Electrical II

Lec. 4 Lab. 8 Credit 8

This course will build on the electrical and electronic basics learned in AUT-610, Electrical I. The semi-conductor will be explained and the application used in the automobile will be explored. The students will learn digital logic and computer functions and operations, which make today's automobiles run. Prerequisite: AUT-610.

AUT-700 Automotive Heating and Air Conditioning

Lec. 1 Lab. 3 Credit 2.5

This course will cover heating, venting, and air conditioning theory, components and operation. Alternative refrigerants, retrofitting, troubleshooting and service procedures will also be covered.

AUT-800 Engine Performance

Lec. 4 Lab. 8 Credit 8

This course will study the fuel and ignition delivery systems that make the internal combustion engine perform. The course covers early carburetion through fuel injection and point type ignition to distributor-less ignition systems. The students will learn the diagnosis and repair techniques needed to repair the computer-controlled automobiles of today.

AUT-911 Cooperative/Internship

Lec. 0 Lab. 0 OJT 16 Credit 4

Supervised work experience with an approved auto technology employer. Individual student eligibility will be determined by the instructor. Placement will depend on the student's skill level and the availability of appropriate training sites.

BCA Business Computer Applications

BCA-055 Developing Computer Literacy

Lec. 0 Lab. 1 Credit .5

The purpose of this course is to provide hands-on experience while introducing students to computers and to develop computer literacy.

BCA-060 Word Processing

Lec. 0 Lab. 4 Credit 2

This course is intended for students who have adequate basic keyboarding skills to provide a realistic view of information processing procedures. Major emphases are on formatting and text-editing concepts.

BCA-065 Spreadsheets for Clerical Workers

Lec. 0 Lab. 4 Credit 2

This course provides students with hands-on experience using computers and a commercial application software program. This unit will provide students with a realistic view in designing and developing spreadsheets in relation to today's business environment. Topics covered include functions and formulas, worksheet formatting, and macros. Prerequisite: BCA-055 or equivalent.

BCA-067 Databases for Clerical Workers

Lec. 0 Lab. 4 Credit 2

This course provides students with hands-on experience using computers and a commercial application software program. This unit will teach what constitutes a database and the associated terminology. The student will manipulate information in pre-developed databases and construct databases to help solve particular problems. Prerequisite: BCA-055 or equivalent.

BCA-116 Introduction to the Internet

Lec. 3 Lab. 0 Credit 3

The course provides the student with an understanding of the history of the internet, internet terminology, and how to efficiently use the internet resources available. Topics covered are: communicating over the internet, how to find information, how to create web pages, and how to use multimedia on the internet.

BCA-157 Intermediate Spreadsheets

Lec. 2 Lab. 2 Credit 3

This advanced course in electronic spreadsheets emphasizes the use of advanced features of a leading electronic spreadsheet software package in a Microsoft Windows environment. Topics to be covered include spreadsheet editing, working with multiple worksheets, creating a Web page from a spreadsheet, developing spreadsheet applications, creating and using macros, using data tables and scenario management, importing data, and enhancing a spreadsheet with Visual Basic for Applications. Prerequisite: Grade of "C-" or higher in BCA-216 or CSC-110, or CSC-140.

BCA-168 Intermediate Databases

Lec. 2 Lab. 2 Credit 3

This intermediate course in database processing emphasizes the use of advanced features of a leading database processing software package in a Microsoft Windows environment. Topics to be covered include designing custom forms and reports, creating advanced queries, integrating a database with the Web, automating tasks with macros, writing Visual Basic for Applications code, and managing and securing a database. Prerequisite: Grade of "C-" or higher in BCA-216 or CSC-110, or CSC-140.

BCA-187 Computer Applications

Lec. 1 Lab. 0 Credit 1

The student will become familiar with general computer concepts, terminology, and management using the Windows platform. File management and maintenance will be covered as well as using the Microsoft Word and Excel programs. Some Internet exposure will be covered with emphasis on bookmarking, downloading, and seeking upgrades to devices and/or software.

BCA-190 Computer Concepts

Lec. 1.5 Lab. 0 Credit 1.5

This course introduces the practical application of computers and communication technology. The course is designed to provide students with a basic understanding of computer terminology and concepts which can be applied and extended to the realm of school and work.

BCA-240 Graphic Design

Lec. 2 Lab. 2 Credit 3

A beginning course in designing printed pieces. Concepts covered may include text and page organizers, layout, size and proportion, use of color, typography, use of photos and graphics, and design of effective publications.

BCA-765 Macromedia Flash

Lec. 2 Lab. 2 Credit 3

This course will cover movies, layers, drawings, action buttons, frame animation, motion-tweened animation, and special effects. Students will also learn to import and modify graphics and build complex animation. Prerequisites: A passing grade in any computer applications, programming or operating systems course or a passing score on a computer-based file management test given on the first lab day.

BIO Biology

BIO-108 The Living World

Lec. 3 Lab. 2 Credit 4

A study of the structural and functional relationships of living organisms, their diversity and evolution. Includes an introduction to the Scientific Method. Intended for non-science major.

BIO-109 Concepts of Life

Lec. 3 Lab. 2 Credit 4

A basic molecular and cellular study with emphasis on chemical interactions, principles of inheritance, and population dynamics. Intended for non-science major.

BIO-112 General Biology I

Lec. 3 Lab. 2 Credit 4

First semester of biology for majors. An intensive cellular and molecular approach to the study of biological principles with emphases on biomolecules, cellular biology, genetics, and evolution. Prerequisite: CHM-165.

BIO-113 General Biology II

Lec. 3 Lab. 2 Credit 4

Second semester of biology for majors. Topics covered include: taxonomy and a survey of invertebrate and vertebrate organisms, fungi and plants. Prerequisite: BIO-112.

BIO-138 Field Ecology

Lec. 2 Lab. 2 Credit 3

A study of ecology and conservation using various resources but including "A Sand County Almanac" by Aldo Leopold in conjunction with both field and lab work.

BIO-163 Essentials of Anatomy and Physiology

Lec. 3 Lab. 2 Credit 4

This introductory course is designed for the student needing a one-semester combined anatomy and physiology course with laboratory. All systems will be covered with greater emphasis on the cardiovascular, respiratory, immune and urinary systems. This course also provides background for the more advanced course, BIO-177, Human Anatomy.

BIO-177 Human Anatomy

Lec. 3 Lab. 2 Credit 4

A systems approach to the study of the structure of the human body. The course covers cells, histology and the various organ systems of the body, e.g., nervous system, respiratory system, digestive system, reproductive system. Lab covers cells, tissues, bones, muscles, and other organ systems and includes dissection of selected organisms. This course must be taken prior to BIO-180 in addition to BIO-252.

BIO-180 Human Physiology

Lec. 3 Lab. 2 Credit 4

Advanced structural and functional relationships of the human body with an emphasis on function. Prerequisites: BIO-177 and BIO-252.

BIO-186 Microbiology

Lec. 3 Lab. 2 Credit 4

A study of microbial populations and their relationships to the human in health and disease. Prerequisite: BIO-252.

BIO-248 Introduction to Bioscience Technology

Lec. 3 Lab. 2 Credit 4

An exploration of the expanding field of biotechnology and its impact on science and society. Fundamental biological, chemical, and mathematical principles as they apply to biotechnology are examined. Laboratory emphasizes essential methodologies employed in scientific inquiry and experimentation.

BIO-252 Biomolecular Processes

Lec. 2 Lab. 2 Credit 3

This class is designed primarily for first-year students in various health-related programs. Emphasis is placed on descriptive aspects of inorganic chemistry, organic chemistry and biochemistry as applied to the human body.

BUS Business

BUS-102 Introduction to Business

Lec. 3 Lab. 0 Credit 3

An overview of contemporary business principles touching on all the major functional areas of business and trends that are shaping today's business environment. Understanding the fundamental pillars of the business environment – globalization, technology, and ethics – is a crucial component in this course.

BUS-121 Business Communication

Lec. 3 Lab. 0 Credit 3

Designed to help the student develop effective communication techniques necessary for general business messages. The course emphasizes application of these techniques through the composition and keyboarding of letters, memos, reports and some oral presentations. Prerequisite: the ability to keyboard class assignments in mailable form.

BUS-140 Small Business Start-Up

Lec. 2 Lab. 0 Credit 2

This course provides an introduction to the various aspects of starting a small business. There will be extensive coverage on how to create a business plan. The course will consist of various individual and group projects. Students should be able to enter the business world with the knowledge it takes to build a foundation for success in their own business.

BUS-150 E-Commerce

Lec. 3 Lab. 0 Credit 3

This course will introduce the student to the basic elements of electronic commerce as a market where commercial activities are conducted. It will focus on business concepts and how to apply technology in order to be successful. Topics include market trends, globalizing a company, vendor solutions, storefronts, advertising, resource requirements, and operational issues of launching a commercial presence in today's global electronic marketplace.

BUS-180 Business Ethics

Lec. 3 Lab. 0 Credit 3

This course introduces philosophical ethical theory and its application to business decisions. It considers theories of economic justice, social responsibility of corporations, regulation, conflict of interest and obligations, ethics of advertising, product quality and safety, environmental responsibility, hiring practices and rights of employers and employees.

BUS-185 Business Law I

Lec. 3 Lab. 0 Credit 3

The legal environment of business. The study of contract requirements, personal property and bailments, as time permits.

BUS-186 Business Law II

Lec. 3 Lab. 0 Credit 3

A continuation of BUS-185 in the area of: sales, principal-agent relationships, commercial paper, creditor's rights and secured transactions, real property, and bankruptcy. Prerequisite: BUS-185.

BUS-203 Professional Development

Lec. 2 Lab. 0 Credit 2

This course is designed to build student skills in setting goals, conversation, meetings, parliamentary procedure, business meals and travel, customer service, presentations, professional image, and writing cover letters and resumes. The course also requires attendance at leadership, civic and cultural events.

BUS-290 Employment Search and Workplace Success

Lec. 1 Lab. 0 Credit 1

A discussion of field experience problems and study of new occupational information will be presented. An internship paper covering the experience will be submitted. Corequisite: BUS-932.

BUS-932 Business Internship

Lec. 0 Lab. 0 OJT 15 Credit 3.7

The AS/Business degree options offer, at certain stages of their curriculum, cooperative programs in which students may gain practical business experience. When the student has reached a predetermined level of proficiency, each student is placed at a training station for a predetermined number of contact hours where practical experience can supplement the classroom skill building. Placement will depend on student's skill level and the availability of appropriate training firms. Students enrolled in the AS/Business Options must have completed ENG-106 and CSC-110 before enrolling in BUS-932and BUS-290. Students enrolled in the Office Administration Program must have completed ADM-162and ADM-119 before enrolling in BUS-932 and BUS-290. Corequisite: BUS-290.

BUS-936 Business Capstone

Lec. 1 Lab. 0 Credit 1

This course is designed to serve as a capstone class for Business majors. Topics covered in the course will include resumes, interview skills, and professionalism. In addition, each student will complete a case study in his/her particular area of interest including but not limited to accounting, management, marketing, and economics. In lieu of a case study, a service learning or other project may be completed. A professional presentation of whichever activity is selected will be made. An end-of-program assessment will be taken as a part of this course. Prerequisite: Student must have completed at least 48 credit hours in the Business Administration Degree or have program coordinator approval.

CAD Computer Aided Drafting

CAD-172 Introduction to CAD: Auto CAD

Lec. 1 Lab. 2 Credit 2

An introduction to computer aided design and drafting. Actual hands-on experience in designing, drawing, and dimensioning using AutoCAD micro-based CAD software. The course presents logical step-by-step instruction about the AutoCAD commands, mode settings, drawing aids, shortcuts and other valuable characteristics of AutoCAD. Finished copies of the students' work will be made on a printer or plotter.

CAD-175 Advanced CAD: AutoCAD

Lec. 1 Lab. 2 Credit 2

A continuation of computer aided design (CAD) using AutoCAD software. The student will learn calculating strategy, making blocks, symbol library creation, bills of material, three dimensional drawings and customizing AutoCAD to fit individual needs. Prerequisite: CAD-172.

CAD-180 Introduction to Solidworks

Lec. 1 Lab. 2 Credit 2

A continuation of computer aided design using Solidworks software. The student will be introduced to parametric solid modeling drafting concepts and part analysis with an emphasis on new trends and operations. Prerequisites: CAD-172 and CAD-.175

CAD-230 Geometric Dimensioning & Tolerancing

Lec. 1 Lab. 2 Credit 2

A course designed to acquaint students with the standards (ANSI Y14.5M) for Geometrical Dimensioning and Tolerancing, which is required for all government-related drawings and manufactured products. Prerequisite: DRF-113, CAD-172 or permission of instructor.

CAD-248 Parametric CAD II

Lec. 1 Lab. 4 Credit 3

A continuation of computer aided design (CAD) using SolidWorks software. The student will learn to create and print parametric solids as well as how to use SolidWorks to analyze objects. Prerequisite: CAD-180.

CFR Computer Forensics

CFR-100 Introduction to Computer Forensics

Lec. 2 Lab. 2 Credit 3

This course deals with the preservation, identification, extraction, documentation and interpretation of computer data. Special computer skills and tools will be introduced. Legal concerns and ethical conduct will be emphasized. Prerequisites: NET-142, NET-314 and NET-442.

CHM Chemistry

CHM-122 Introduction to General Chemistry

Lec. 3 Lab. 2 Credit 4

This introductory course is intended for non-science majors or for science majors who need a background in chemistry before taking College Chemistry I. Topics covered include properties of matter, measurements, atomic structure, chemical bonding and stoichiometry. Prerequisite: One year high school algebra or MAT-062.

CHM-165 General Chemistry I

Lec. 3 Lab. 2 Credit 4

The first semester of a traditional two semester sequence. General Chemistry I provides an in-depth and integrated study of chemical principles including terminology, measurements, unit conversions, atoms, elements, molecules, compounds, moles, stoichiometry, gases and gas laws, energy, electron configurations, periodicity and chemical bonding. Prerequisite: 1 year high school chemistry or CHM-122 or BIO-252; high school algebra or equivalent.

CHM-175 General Chemistry II

Lec. 3 Lab. 2 Credit 4

The second semester of the traditional two semester sequence. College Chemistry II covers basic principles of intermolecular forces, colligative properties, reaction kinetics, chemical equilibrium, acids and bases, precipitation reactions, spontaneity and electrochemistry. Prerequisite: CHM-165.

CHM-263 Organic Chemistry I

Lec. 4 Lab. 2 Credit 5

Fundamental principles of organic chemistry for pre-medical, pre-dental, pre-pharmacy, biochemistry, medical technology, forestry, and home economics students, as well as liberal arts students who have a special interest in the sciences. These general principles are illustrated by preparation and study of typical representatives of the aliphatic and aromatic series including all common functional groups. Prerequisite: CHM-175.

CHM-273 Organic Chemistry II

Lec. 4 Lab. 2 Credit 5

Continuation of Organic Chemistry I, with advanced synthesis, instrumental analysis, and emphasis on biochemistry. Prerequisite: CHM-263.

CIS Computer Programming

CIS-125 Introduction to Programming Logic w/Language

Lec. 2 Lab. 2 Credit 3

Introduction to computer programming with structured program development and module designs emphasized. Write programs related to several areas, including input/output, numerical computation, iteration, recursion, data manipulation, and interactive procedures.

CIS-148 3D Modeling and Character Animation

Lec. 2 Lab. 2 Credit 3

This course will give students a hands on, example-based introduction to modeling and animation process for use in 3D. Students will use industry standard software to develop their models and will be exposed to topics such as mesh modeling, rigging and skinning, character animation, texture and texture mapping.

CIS-161 C++

Lec. 3 Lab. 0 Credit 3

A study of Object Oriented Programming using Borland C++. The language of Classes, Objects, Inheritance, Encapsulation, Homomorphism, Polymorphism, Streams and Overloading of Functions and Operations is studied. Projects will be written by students emphasizing these topics. One complete class will be developed by the student. Prerequisite: CIS-167 or equivalent.

CIS-167 C

Lec. 3 Lab. 0 Credit 3

The course gives a brief history of the C language and presents the elements of a C program. Structure and transportability are emphasized throughout the course. Problem analysis and solution from several areas provide a major part of the programming requirements.

CIS-169 C#

Lec. 2 Lab. 2 Credit 3

This course is designed to introduce the student to the C# language. The course will cover C# basics, object-oriented programming, Windows applications and web services. Prerequisite: CIS-609.

CIS-171 JAVA

Lec. 3 Lab. 0 Credit 3

This course will introduce the object-oriented programming language JAVA. Console applications, Window applications, and JAVA applets which will be embedded in a web page will be covered. Prerequisite: CIS-609.

CIS-175 JAVA II

Lec. 3 Lab. 0 Credit 3

This course is a continuation of CIS-171, JAVA, and will build on skills learned previously. Topics will include building Web applications, JavaBeans, Enterprise JavaBeans, Network Programming, J2EE features, and security. Prerequisite: CIS-171.

CIS-207 Fundamentals of Web Programming

Lec. 2 Lab. 2 Credit 3

This course provides students with an introduction to the concepts of developing a web site. This course is intended to be the first course taken in the web site development area. Students will gain familiarity with creating web sites using HTML, JavaScript and Cascading Style Sheets.

CIS-215 Server Side Web Programming

Lec. 2 Lab. 2 Credit 3

This course is designed to provide the student with a basic understanding of Active Server pages. ASP provides the ability to deliver HTML, client-side scripts, web controls, and server-side processing. In addition, ASP can be used with ActiveX controls, JAVA applets, databases and many COM-based servers.   Prerequisite: CIS-609.

CIS-220 Web Marketing and Project Management

Lec. 1 Lab. 2 Credit 2

Students will learn to use the internet as a communications tool. Marketing topics to be covered include internet marketing, creating communication strategies, promotion/measurement and internet legal considerations. This course will also cover project management and how it specifically relates to web sites. Project management topics covered will include bids, contracts and specifications. Prerequisites: BCA-240, CIS-207.

CIS-225 Advanced Server Side Web Programming

Lec. 1 Lab. 4 Credit 3

This course is a capstone which brings together skills gained in previous web-related courses. Topics will include creating web applications using object-oriented programming languages, HTML, ASP, and SQL Server. Additional topics to be covered include creating a secured web site, tracking people who visit a site and e-commerce. Prerequisites: CIS-215, CIS-336, CIS-609. Corequisite: CIS-220.

CIS-233 Web Server Administration

Lec. 2 Lab. 2 Credit 3

This course is designed to introduce the students to both Microsoft and Linux web server administration. Students will install and configure the servers and services necessary to create and maintain a working web site environment. Prerequisites: NET-142, NET-303.

CIS-256 Dreamweaver I

Lec. 2 Lab. 2 Credit 3

This course provides an introduction to creating a Website using the Web editing software Dreamweaver. You will learn to plan and develop a successful Website. Topics include creating a Dreamweaver Web page, adding text and formatting with CSS styles, adding additional Web pages, links and images, tables, page layout with frames, forms, templates and style sheets, image maps, navigation bars, animations, and media objects.

CIS-258 Dreamweaver II

Lec. 2 Lab. 2 Credit 3

In this course, the student will build standards-compliant web sites using best practices and the latest technology, including CSS, JavaScript libraries, and PHP. The course focuses on using CSS, Ajax, and PHP in an Adobe Dreamweaver context. The course will provide the student the skills to build interactive websites, set up a database using MySQL, validate database input and user authentication, and to manage records in database using MySQL. Prerequisites: CIS-256 and CSC-110.

CIS-336 SQL/SQL Server

Lec. 3 Lab. 2 Credit 4

This course is designed to teach the student concepts and programming techniques of a Relational DataBase. Several programs will be coded and tested using SQL Server. Some basic administrative tasks will be covered. Prerequisite: CIS-609. Corequisite: BCA-168.

CIS-340 Advanced SQL/SQL Server

Lec. 3 Lab. 2 Credit 4

This course is an extension of CIS-336 and covers more advanced topics on the SQL Server. Topics to be covered include stored procedures, administration tasks, replication, indexing, cursors, and integration of SQL Server and the World Wide Web. Prerequisite: CIS-336.

CIS-505 Structured Systems Analysis

Lec. 2 Lab. 4 Credit 4

Course will provide student knowledge in the complete process of system analysis and design and the steps involved. Actual systems analysis and design lab practices will measure student's understanding. Prerequisites: Twenty-four hours of IT classes completed toward degree.

CIS-524 Beginning RPG

Lec. 3 Lab. 2 Credit 4

This is a continuation of CIS-553, CL Programming. The student will learn the basic usage of the RPG/400 programming language. Several basic programs will be written to illustrate the use of arithmetic operations, externally described files and file access methods. Prerequisite: CIS-553.

CIS-532 Advanced/Interactive RPG

Lec. 3 Lab. 4 Credit 5

This is a continuation of CIS-524, Beginning RPG. Emphasis will be on continued usage of logical and physical files, printer files, subfiles and display files. Utlilize multiple programming languages to combine data across multiple environments, designing a total solution. Prerequisite: CIS-524.

CIS-553 CL Programming

Lec. 3 Lab. 2 Credit 4

The student will be given an overview of IBM application system 400 architecture and facilities. Operating system concepts, an introduction to control language, and menu structure will be covered. Topics will also include command syntax, control language program structure, variables, parameter passing, message and error handling. Students will write programs to demonstrate knowledge of topic areas.

CIS-572 Introduction to iSeries

Lec. 3 Lab. 2 Credit 4

This course describes the basic skills and concepts needed to use an iSeries or AS/400 system. Content covered will include how to sign on, navigate the OS/400 menu structure, enter data, use commands, and perform other common tasks. Student will create CL programs, create data physical and logical files, and perform queries while learning to use various iSeries utilities.

CIS-609 Visual Basic.Net

Lec. 3 Lab. 2 Credit 4

This course is designed to be a beginning course in programming. Concepts presented will include the program planning and design; the objects, methods, controls and properties of Visual Basic; using control structures; and manipulating arrays. These will be presented using a hands-on approach. No previous programming experience is necessary.

CIS-810 Emerging Technologies Seminar

Lec. 1 Lab. 0 Credit 1

This course will provide the student with the skills to research, evaluate and make recommendations about new products and emerging technologies. Students will explore and research changing technologies and will make professional presentations of their findings. Prerequisite: Fifty hours completed toward Information Technology or Graphic Communications degree.

CIS-952 Topics

Lec. 3 Lab. 4 Credit 5

This course will enable students to explore various programming technologies and determine how they may be integrated to form practical solutions in today's marketplace. Topics may vary from semester to semester, depending on current market trends.

COM Communication

COM-102 Communication Skills

Lec. 3 Lab. 0 Credit 3

This course is structured to develop the fundamentals of acceptable communication and technical expression relevant to the students' career requirements: reading, writing, listening, and speaking. Prerequisites: Mandatory COMPASS or ACT test score and mandatory eWrite score (per SCC Writing Scores & Mandatory Course Placement Chart), or a C- or above in ENG-061, College Preparatory Writing II. No waivers.

COM-103 Communication Skills

Lec. 2 Lab. 0 Credit 2

A course structured to develop the fundamentals of acceptable communication and technical expression relevant to the student's major field of study. Assignments emphasize the practical communication skills needed for the student's career requirements.

CON Construction

CON-109 Construction Safety

Lec. 2 Lab. 0 Credit 2

A course dealing with occupational safety regulations and practices. Areas of emphasis will be the elements of an occupational safety program, safe working environment, personnel protection and welfare, occupational health hazards, safety laws and legal aspects of safety.

CON-113 Construction Printreading

Lec. 1 Lab. 2 Credit 2

Stresses principles of interpreting trade blueprints and reading of specifications basic to all aspects of the trades. Deals with types of line, development and arrangement of views, dimensioning practices, and invisible edges. Practical problems from prints suited to the particular trade will be incorporated.

CON-128 Construction Management Estimating

Lec. 2 Lab. 2 Credit 3

Interpretation of construction drawings and specifications. Introduction to estimating quantities, cost of materials, and labor costs. Work methods, job planning, project scheduling and control, field administration and management procedures of contracting will be covered.

CON-139 Construction Techniques

Lec. 2 Lab. 2 Credit 3

A course designed to enable students to develop basic skills and knowledge in the construction field. Included in the course is a study of construction techniques with emphasis on light construction involving job and site planning, materials framing techniques, electrical wiring, plumbing, and other areas related to the construction of small homes and buildings.

CON-147 Carpentry I

Lec. 3 Lab. 6 Credit 6

A course designed to enable students to develop basic skills and knowledge in carpentry. Included in this course is the study of construction techniques with emphasis on basic safety, basic math, introduction to hand and power tools, basic rigging, fasteners, wood building materials, floor and wall systems, site preparation, concrete and reinforcement materials, concrete handling, and forming foundations and flatwork.

CON-148 Carpentry II

Lec. 3 Lab. 6 Credit 6

A course designed to further enable students to develop carpentry skills with emphasis on special floor, wall and roof systems, reading plans and elevations, field engineering principles, forming, and water and damp proofing. Prerequisite: CON-147.

CON-149 Carpentry III

Lec. 3 Lab. 6 Credit 6

A continuation of carpentry skills with emphasis on stair construction, reinforcing concrete, patented forms, interior finish: ceiling systems, exterior wall finishes, roofing applications and installation of cornices, gutters and downspouts. Prerequisite: CON-148.

CON-252 Construction Electricity

Lec. 1 Lab. 4 Credit 3

This course introduces the requirements for and installation of residential and light commercial electrical systems. Emphasis will be placed on local and national Electrical Codes. Hands-on experience will include such activities as basic wiring of the service entrance, panel box, circuits, switches, receptacles, telephone and TV jacks, door chimes, smoke detectors and other similar electrical devices. This course is specifically designed for those students choosing a Construction or Design curriculum.

CON-262 Commercial Carpentry II

Lec. 3 Lab. 6 Credit 6

A course of further carpentry emphasis on finished stairs, introduction to supervision, laser instruments, supplements to ceiling systems, metal studs and drywall, interior finish: doors and windows, wall and floor specialties and cabinetry. Prerequisite: CON-149.

CON-270 Mechanical Systems

Lec. 1 Lab. 4 Credit 3

A course designed to introduce students to the requirements of residential and light commercial plumbing, heating, and ventilation systems. Emphasis will be placed on local and national code requirements. Study will include the building requirements to receive each system, determining the size of system components and the theory of size calculations. Hands-on experience will include such activities as working with DWV piping, water supply piping, plumbing fixtures, heat and vent ducting, heating controls, and ventilation components.

CON-332 Construction Materials and Resources

Lec. 3 Lab. 0 Credit 3

This course is designed as a comprehensive overview of the construction industry and materials used in the profession. It is a conceptual treatment of the construction-personnel production system. Also included is a study of the materials of construction, their properties, manufactures, characteristics and applications.

CON-340 Construction Surveying

Lec. 2 Lab. 2 Credit 3

Leveling, topographic surveying, triangulation, horizontal and vertical angles, area, determination, and other basic construction applications. Includes the layout of buildings and road curvatures, care and use of instruments.

CON-345 Soils and Concrete

Lec. 3 Lab. 0 Credit 3

This course is a study of the characteristics of soil and concrete. Such components as design, core samples, grain structure, compaction and strength test, mixes, treatments, reinforcement, "slump test", etc., will be covered as well as various application and installation methods.

CON-350 Construction Management Internship

Lec. 0 Lab. 0 OJT 8-20 Credit 5

Provide student with the opportunity to integrate classroom learning and experiences in a construction industry setting. Internship agreement must be completed before students may enroll. Prerequisite: At least two construction courses must be completed with a minimum of a "C" grade in each course.

CON-411 On-The-Job Training I

Lec. 0 Lab. 0 OJT 8-16 Credit 2-4

Supervised work experience with an approved builder. Individual student eligibility will be determined by minimum placement standards for each program. Placement will depend on student's skill level and the availability of appropriate training sites.

CON-412 On-The-Job Training II

Lec. 0 Lab. 0 OJT 8-16 Credit 2-4

Supervised work experience with an approved builder. Individual student eligibility will be determined by minimum placement standards for each program. Placement will depend on student's skill level and the availability of appropriate training sites.

CPC Certified Professional Coder

CPC-120 Introduction to Medical Procedural Coding

Lec. 3 Lab 3 Credit 4.5

This course prepares students for a career in medical coding in the medical office. Introduction to current procedural terminology (CPT) manual, ICD-9 with medical necessity, HCPCS, and medical coding compliance and guidelines. Corequisites: CPC-125 and CPC-129.

CPC-125 Diagnostic Coding

Lec. 2 Lab 2 Credit 3

The course will prepare the student for application coding nuances and guidelines along with compliance as it is related to diagnostic coding. The student will be able to assign diagnostic codes reporting all applicable codes and sequence in accordance with the guidelines. Corequisites: CPC-120, CPC-129.

CPC-129 Introduction to Medical Insurance & Billing

Lec 1 Lab 2 Credit 2

This course is designed to assist students in understanding the complexities of current insurance and billing procedures in the medical office or clinic setting. The student will obtain a sound foundation of the nuances, guidelines and requirements involved. The student will be familiarized with claims submission for major medical insurance/reimbursement programs. Corequisites: CPC-120, CPC-125.

CPC-131 Medical Insurance & Billing II

Lec 2 Lab 2 Credit 3

This course will discuss all aspects of insurance billing for today's health care plans. The latest information on HIPAA and OIG regulations, diagnostic and procedural coding, and office and insurance collection strategies will be covered, ensuring preparation for real-world situations. Also covered will be the importance of the medical insurance specialist's role in filing clean claims, solving problems that do occur and collecting overdue payments. Prerequisites: HSC-114, MAP-145, MAP-431, CPC-120, CPC-125 and CPC-129. Corequisites: CPC-160 and CPC-150.

CPC-150 Medical Procedural Coding

Lec 3 Lab 0 Credit 3

This course will discuss the background of CPT, HCPCS coding, modifier assignment, CPT guidelines and the assignment of codes, ICD-9 selection, medical necessity regulations, documentation guidelines, HIPAA law, and how to read, interpret, and audit a chart or operative record. Prerequisites : HSC-114, MAP-145, MAP-431, CPC-120, MAP-105 and BIO-163. Corequisite: CPC-160.

CPC-160 Applications of Procedural Coding

Lec 0 Lab 4 Credit 2

This course allows the student to apply knowledge of CPT, modifier assignment, HCPCS, ICD-9 selection, with medical necessity. Prerequisites: HSC-114, MAP-145, MAP-431, CPC-120, MAP-105 and BIO-163. Corequisite: CPC-150.

CPC-810 Medical Coding & Billing Externship

Lec 0 Lab 0 OJT 10 Credit 2.5

The student will be placed in a predetermined medical office, clinic or related facility, and work under the supervision of an office manager or coding/billing supervisor, and the program coordinator for a 160 hour minimum required practicum. Prerequisites : HSC-114, MAP-145, MAP-431, CPC-129, CPC-120, CPC-150, CPC-131, CPC-160, MAP-401 and MAP-532. Corequisite : CPC-945.

CPC-945 Medical Coding & Billing Seminar

Lec 1 Lab 0 Credit 1

This course prepares students for job readiness skills needed in their chosen career of medical coding and billing. The student will also be prepared to take a mock certification examination. Prerequisites : HSC-114, MAP-145, MAP-431, CPC-129, CPC-120, CPC-125, CPC-150, CPC-131, CPC-160, MAP-401 and MAP-532. Corequisite :CPC-810.

CRJ Criminal Justice

CRJ-100 Introduction to Criminal Justice

Lec. 3 Lab. 0 Credit 3

An introductory course in criminal justice designed to provide a philosophical and historical account of American criminal justice with emphasis on constitutional limitation. Prerequisite or Corequisite: ENG-105.

CRJ-104 Interviewing and Writing Strategies

Lec. 2 Lab. 0 Credit 2

A course structured to develop the fundamentals of acceptable written and oral communication and expression relevant to the student's needs in the areas of criminal justice or social services. Specific assignments will emphasize the practical aspects of communications in social service systems and agencies.

CRJ-120 Introduction To Corrections

Lec. 3 Lab. 0 Credit 3

To trace the history of corrections and describe the various methods society has used to deal with people who violate its rules. The course will show the relationship of corrections and agencies to the overall criminal justice system.

CRJ-130 Criminal Law

Lec. 3 Lab. 0 Credit 3

A study of the history, development and classification of substantive and procedural aspects of criminal law, defenses and criminal responsibility.

CRJ-132 Constitutional Law

Lec. 3 Lab. 0 Credit 3

An analysis of the relationships between state legislations and the Bill of Rights. Includes the effect of the due process clause of the 14th Amendment on the application of the Bill of Rights to these states and Supreme Court decisions regarding the various state challenges. Prerequisite CRJ-100.

CRJ-141 Criminal Investigation

Lec. 3 Lab. 0 Credit 3

Fundamental methods of investigation, crime scene search, recording, collection and preservation of evidence, interview and interrogation, and case follow-up.

CRJ-222 Correctional Treatment Methods

Lec. 3 Lab. 0 Credit 3

A criminal justice course designed to provide students the opportunity to examine and practice correctional treatment methods for diverse offender populations. Prerequisite: 50 Criminal Justice Program Credits.

CRJ-932 Internship

Lec. 0 Lab. 0 OJT 4-12 Credit 1-3

A practical work experience under professional supervision in a criminal justice agency. Prerequisite: Completion of Criminal Justice core or permission of instructor.

CRR Collision Repair/ Refinish

CRR-120 MIG (GMAW) Welding

Lec. 1 Lab. 4 Credit 3

This course will serve as an introduction to metal inert gas welding or gas metal arc welding in collision repair. Students will learn how to identify and perform proper welding techniques to repair modern high strength steel automobiles.

CRR-201 Plastic Repair

Lec. 1 Lab. 2 Credit 2

This course will serve as an introduction to identification and repair of the most commonly used plastics on modern vehicles. Students will learn plastic welding and bonding techniques.

CRR-300 Preparation

Lec. 1 Lab. 2 Credit 2

This course is an introductory course designed to help students identify safety hazards in the work area, safe vehicle lifting techniques and how to identify and handle hazardous materials. Students will learn how to inspect, remove and store trim, glass, metal and molding components; protect adjacent panels during repairs; remove corrosion materials and other protective coatings; review damage reports and analyze damage to determine proper method of overall repair; develop repair plan; use appropriate cleaners to remove contaminants from surfaces to be repaired; apply environmental practices associated with vehicle repair. Prerequisite: Valid driver's license.

CRR-340 Metal Straightening

Lec. 1 Lab. 4 Credit 3

This course will serve as an introduction to metal straightening. Students will learn to manipulate and operate special equipment specifically designed to return metals back to their original shapes and contours. Students will learn to heat shrink and cold shrink metals to obtain original contours within industry standards and will learn to mix, apply and shape polyester fillers to OE appearances.

CRR-400 Panel Replacement and Adjustment

Lec. 2 Lab. 3 Credit 3.5

This course will serve as an introduction to replacement and adjustment of non-structural parts. Students will learn to determine extent of damage; remove bolted, bonded and welded parts; repair aluminum; align hoods, doors, deck lids and fenders; straighten and rough out contours to their original shapes; weld torn sheet metal; restore corrosion protection; replace door skins; repair wind, water and dust leaks.

CRR-410 Full or Partial Body Panel Replacement

Lec. 1 Lab. 5 Credit 3.5

This course will serve as an introduction to the replacement of major structural and cosmetic weld on body panels on modern automobiles. Students will learn I-CAR based body panel and structural component sectioning techniques using metal inert gas welding and bonding materials.

CRR-454 Glass Replacement

Lec. 1 Lab. 2 Credit 2

This course will serve as an introduction to replacement of broken tempered and laminated safety glass. Students will learn different types of installation techniques and how to identify and use proper adhesives for glass installation.

CRR-500 Damage Analysis

Lec. 1 Lab. 2 Credit 2

This course will serve as an introduction to the evaluation of collision damage. Students will learn to identify primary and secondary damage and prepare a successful repair plan.

CRR-525 Straightening Structural Parts

Lec. 2 Lab. 7 Credit 5.5

This course will serve as an introduction to the repair and realignment of modern Unibody and Body-over-frame constructed vehicles. Students will learn to apply corrective forces to reverse collision damage accurately and efficiently with all forms of measuring equipment to restore vehicle to pre-accident condition.

CRR-575 Advanced Structural Repair

Lec. 2 Lab. 8 Credit 6

This course will cover the proper sectioning techniques for structural components damaged in a collision. Techniques will focus on unibody and hydro extruded frame components.

CRR-580 Advanced Frame Straightening

Lec. 2 Lab. 8 Credit 6

This course will explain new techniques in full-frame and unibody anchoring which are used to straighten to pre-collision specifications. The use of advanced measuring systems will be explained and utilized.

CRR-610 Steering and Suspension

Lec. 1 Lab. 1 Credit 1.5

This course will serve as an introduction to wheel alignment and steering component and suspension repair. Students will learn suspension repair related to collision damage, how to measure, diagnose and realign steering components using modern state of the art equipment.

CRR-745 Computerized Damage Reports

Lec. 2 Lab. 0 Credit 2

This course will serve as an introduction to creating damage estimates manually and by computer on today's modern automobiles. Students will learn Mitchell manual estimating and Mitchell Ultramate computerized estimating.

CRR-765 Computer Diagnosis for Auto Collision

Lec. 2 Lab. 6 Credit 5

This course will study the safety-related components that are damaged in a collision. The topics to be covered are: anti-lock brakes, seat belts, supplemental inflatable restraints, and the computers that control them.

CRR-800 Introduction to Automotive Refinishing
Lec. 1 Lab. 3 Credit 2.5

This course will serve as an introduction to the field of automotive refinishing and teach students to practice environmentally friendly application and disposal procedures. Students will learn to identify modern automotive refinishing products and reference related technical data for proper mixing and application.

CRR-812 Surface Preparation
Lec. 2 Lab. 6 Credit 5

This course will serve as an introduction to applying modern automotive finishes and properly preparing substrates for refinishing. Students will learn to mix paint and identify and correct paint failures.

CRR-845 Color Tinting and Matching
Lec. 1 Lab. 3 Credit 2.5

This course will serve as an introduction to the evaluation of color matching and blending paint in automotive refinishing on modern automobiles. Students will learn to adjust tint, hue and chroma to obtain a blendable color match.

CRR-875 Advanced Refinishing Methods
Lec. 2 Lab. 8 Credit 6

This course will focus on today's high-tech factory finishes and the techniques used to understand and repair finishes to factory quality. The course will also cover custom refinish techniques used for restoration and painted graphic design.

CRR-932 Internship
Lec. 0 Lab. 0 OJT 16 Credit 4

Supervised work experience with an approved auto collision repair employer. Individual student eligibility will be determined by the instructor. Placement will depend on the student's skill level and the availability of appropriate training sites. Prerequisite: Successfully complete all Auto Collision Repair Course work through 3rd semester.

CSC Computer Science

CSC-110 Introduction to Computers
Lec. 3 Lab. 0 Credit 3

This course provides an introduction to computer concepts. The student will use the Windows operating system, presentation software, electronic spreadsheet software, database management software and word processing software. Microcomputer hardware and software, as well as the processing concepts associated with each, will be discussed. The course will also include information on file management, the Internet, virus protection, and e-mail basics as applicable to the academic world as well as the business environment. Lab time outside class is required to complete projects.

CSC-140 Computer Fundamentals
Lec. 3 Lab. 1 or 2 Credit 3.5 or 4

This course is an introduction to the microcomputer in both hardware and software. The terminology, internal structure, board identification and associated peripheral equipment will be introduced. The Microsoft Office suite will be covered. The operating system will be covered along with structured programming in QBASIC. Precision Machining students will be required to take a minimum of 1 lab hour.

DRA Drama

DRA-101 Introduction to Theatre
Lec. 3 Lab. 0 Credit 3

Orientation to the theatre, including a study of dramatic structure through selected play readings and through research in the basic theories of theatre.

DRA-110 Introduction to Film
Lec. 3 Lab. 0 Credit 3

This course introduces students to the various language systems of film, including film-making techniques, creators, genres, narratives, ideology, and film theory/criticism. Students will explore the cultural importance of cinema as art by analyzing selected movies and clips which demonstrate artistic excellence.

DRA-130 Acting I
Lec. 3 Lab. 0 Credit 3

Theory and practice of acting for beginners. The course provides training to help the student in developing a technique for utilizing creative resources to express personality and character. Technical elements of the stage and production for the actor are studied, and workshop performances are included. The course is designed to impart the fundamentals of the art of acting and its relationship to life and living theatre through theory, practice and performance. Prerequisite: SPC-112 or permission of instructor.

DRA-141 Theatre and Speech Participation I
Lec. 0 Lab. 2 Credit 1

A concentrated laboratory course in specific areas of speech or theatre projects. Supervised participation involving the research, analysis and preparation of a specific speech or theatre project. Students will perform or demonstrate their skills at speech contests, community organization programs, or public performances sponsored by the College. The student must arrange for the area of participation prior to enrollment. May be repeated to a maximum of 4 semester hours. Content changes as course is repeated.

DRA-142 Theatre and Speech Participation II
Lec. 0 Lab. 4 Credit 2

A more extensive application of DRA-141. The student elects to participate in more than one area of speech or theatre programs, or assumes a major role in assisting with speech or theatre performance. The student must arrange for the areas of participation prior to enrollment. May be repeated to a maximum of 4 semester hours. Content changes as course is repeated.

DRA-145 Oral Interpretation
Lec. 3 Lab. 0 Credit 3

A study in developing skills in reading aloud to convey the intellectual, emotional, and aesthetic values of literature. Prerequisite: SPC-112 or permission of instructor.

DRF Drafting

DRF-113 Fundamentals of Technical Drafting

Lec. 1 Lab. 4 Credit 3

Fundamentals of drawing techniques conveyed using freehand sketching. Emphasis is placed on the ability to visualize in three dimensions, neatness, accuracy, legibility, speed and use of computer graphics in the solution of graphic problems.

DRF-121 Fundamentals of Technical Drafting II

Lec. 1 Lab. 4 Credit 3

Graphic communications emphasizing working drawings, detailing, dimensioning practices, tolerances, sectioning, auxiliaries, pictorials, fasteners, technical illustration and machine design. Prerequisites: DRF-113 and CAD-172.

DRF-161 Descriptive Geometry

Lec. 0 Lab. 6 Credit 3

To provide the student with the ability to solve three dimensional space problems by the application of graphic methods. Problems studied will include points, line, intersections, piercing points, revolutions, developments and intersections of surfaces. The course is designed for pre-engineering students and other students desiring to specialize in drafting. Prerequisite: DRF-113 or permission of instructor.

DRF-805 Drafting Internship

Lec. 0 Lab. 0 OJT 8-20 Credit 2-5

This course is designed to provide the student with a practical experience in the drafting and/or design field prior to the completion of their program. The practicum experience will be coordinated by the personnel of the drafting program. Prerequisite: Advanced standing and permission of instructor.

ECE Early Childhood Education

ECE-133 Child Health, Safety, and Nutrition

Lec. 3 Lab. 0 Credit 3

Health, Safety, and Nutrition helps students learn how to create and maintain a safe and healthy environment for young children. Proper nutrition for children and practices that contribute to the prevention of illness are examined. The course reviews state laws and established policies for licensed child care centers related to health, nutrition, safety and child abuse and neglect. Students also learn American Red Cross First Aid and CPR for infants and children.

ECE-290 Early Childhood Program Administration

Lec. 3 Lab. 0 Credit 3

Addresses the child care needs of parents and children in conjunction with child care as a business. Child care as a business is influenced by such external components as needs of families, locations, and history while the internal components of planning space, purchasing equipment, program management, resources, time and personnel also impact the program.

ECE-932 Internship

Lec. 0 Lab. 0 OJT 6 Credit 2

Early Childhood Education Internship provides students the opportunity to have a supervised work experience in an actual early childhood classroom setting. Cooperative sites could include area infant/toddler, preschool and K-1 programs in both public and private settings. Prerequisites: Certification in first aid, CPR and mandatory reports of child abuse and neglect.

ECN Economics

ECN-110 Introduction to Economics

Lec. 3 Lab. 0 Credit 3

An introductory economics course. Lessons will include both micro and macro economies. Competencies will include supply, demand, market structures, unemployment and international trade.

ECN-120 Principles of Macro-Economics

Lec. 3 Lab. 0 Credit 3

An introductory course in economics emphasizing macro-economic theory and policy. The major topics will include economic systems, national income, national output, fiscal and monetary policy, unemployment, inflation, and, as time permits, international trade.

ECN-130 Principles of Micro-Economics

Lec. 3 Lab. 0 Credit 3

An introductory course in economics emphasizing micro-economic theory and contemporary problems. The major topics will include a description of the United States economy; demand and supply, price, output, and wage determination; domestic problems; international economics and the world economy.

EDU Education

EDU-125 Making a Difference

Lec. 3 Lab. 0 Credit 3

This course introduces careers related to working with people with disabilities. It includes an introduction to special education, residential services, vocational services, recreational services and other services for children and adults with disabilities. It includes an introduction to specific disabilities and human development. It covers communication skills and behavior management. This course requires completion of service learning projects. This course will meet one of the requirements for the Generalist Paraeducator Certification issued by Department of Education.

EDU-126 Observation and Management of Behavior

Lec. 3 Lab. 0 Credit 3

Through this course, students develop skills of observation and management of the behavior of others, individually and in groups. Students develop strategies for helping others manage their own behavior. This course will meet one of the requirements for the Generalist Paraeducator Certification issued by Department of Education.

EDU-210 Foundations of Education

Lec. 3 Lab. 0 Credit 3

A survey course introducing prospective teachers to the American education system. Topics of study include the following: characteristics of teachers and learners; curriculum, classroom management, and assessment; foundations of education-history, philosophy, governance, and law; and schools' response to social and educational challenges. Students will complete a lesson plan and present it to the class. Corequisite: EDU-920.

EDU-247 Teaching Exceptional Learners

Lec. 3 Lab. 1 Credit 3.5

A survey course introducing current and prospective teachers to the field of special education. Topics of study include the following: foundational knowledge, the new relationship between special and general education, legislation, characteristics of different types of exceptional learners, and research-based teaching strategies and accommodations.

EDU-920 Field Experience

Lec. 0 Lab. 4 Credit 2

Field Experience provides the student an opportunity to observe a teacher in a local classroom and to work with the students in that classroom under direct supervision of the cooperating teacher. The student will keep a reflective journal. Corequisite: EDU-210.

EGR Engineering

EGR-400 Introduction to Engineering Design

Lec. 1 Lab. 4 Credit 3

This course uses a design development process while enriching technical and engineering problem-solving skills; students create and analyze models using specialized computer software (AutoCAD Inventor).

EGT Engineering Technology

EGT-116 Continuous Quality Management

Lec. 3 Lab. 0 Credit 3

This introductory course will lead the student into the world of quality and the quality process. Students will analyze the performance of a production process, formulate process adjustments or improvements, and carry out the strategies for process adjustment and/or improvement.

EGT-142 Fluid Power I (Hydraulics)

Lec. 1 Lab. 2 Credit 2

This course discusses the fundamentals of hydraulic technology. Students will learn hydraulic circuits, pumps, actuators, valves, fluid, safety, maintenance, and troubleshooting. Students will also learn how to operate, install, analyze performance and design hydraulic systems.

EGT-143 Fluid Power II (Pneumatics)

Lec. 1 Lab. 2 Credit 2

This course discusses the fundamentals of pneumatic technology. Students will learn specific skills needed to understand the principles of pneumatics including circuits with compressed air power, air processing, valves, safety, maintenance, and troubleshooting. Students will learn industry skills including how to operate, install, analyze and design pneumatic systems.

EGT-147 Hydraulic Power Systems & Troubleshooting

Lec. .5 Lab. 1 Credit 1

This course will cover the operation, diagnosis and maintenance of basic and complex hydraulic systems. Prerequisites: EGT-142.

ELE Electrical Technology

ELE-116 Blueprint Reading

Lec. 1 Lab. 0 Credit 1

This course discusses the specific data that is drawn on a blueprint and explains how to read and interpret the drawing format. Students will learn orthographic and isometric drawings to understand shapes, sizes, and dimensions. Students will study building terms and construction features of carpentry, masonry, electrical, mechanical and plumbing trades.

ELE-127 Troubleshooting

Lec. .5 Lab. 1 Credit 1

This course introduces students to the fundamental sequence of steps that can be applied when attempting to locate and repair problems in electrical and mechanical equipment. Students will learn how to use proper testing equipment to assist in finding faulty components. Students will learn how to plan a course of action for troubleshooting and repairs of equipment.

ELE-130 Home and Farm Electricity

Lec. 1 Lab. 2 Credit 2

This course introduces the requirements for residential and farm electrical systems. Emphasis will be placed on local and national Electrical Codes. Hands-on experience will include such activities as basic wiring of the service entrance, circuits, switches, receptacles, lighting, special appliance circuits, and motor circuits. This course is specifically designed for students not choosing a construction curriculum.

ELE-195 Motor Controls

Lec. 1 Lab. 4 Credit 3

This course discusses Motor Controls, components, operation and service. Students will learn electric relay control of AC and DC electric motors found in industrial applications. Students will also learn industry-relevant skills including how to operate, install, design, and troubleshoot AC and DC motor control circuits.

ELE-310 Industrial Electricity

Lec. 1 Lab. 2 Credit 2

This course discusses important properties of electricity and the common electrical elements found in industrial settings. Students will learn how to install and wire electrical components. Students will also learn how to layout a project; estimate wiring quantities, lengths, and sizes between panels and properly size and install conduit.

ELT Electronics

ELT-116 Principles of Electronics

Lec. 3 Lab. 4 Credit 5

This course analyzes the physical phenomenon of electricity in direct and alternating current circuits. Circuit analysis shall be through the application of various laws and theorems, and in the laboratory, through the use of typical test equipment. Prerequisite: placement test.

ELT-119 Applied Human Biology for Biomed Technicians

Lec. 3 Lab. 0 Credit 3

This course presents the human biology, anatomy, physiology, and medical terminology essential for biomedical equipment technicians and the devices involved in patient care. Focus is on the vocabulary necessary for effective medical communication skills in the hospital environment as part of the health care team.

ELT-132 Motor Drives

Lec. .5 Lab1 Credit 1

This course discusses the fundamentals of motor drive operation and setup. Students will learn industrial AC electronic motor drives, which are used to provide accurate control of speed, position, and acceleration of industrial motors. Students will also learn industrial skills on how to operate, install, tune, and troubleshoot various industrial drives. Prerequisite: ELE-195.

ELT-176 Instrumentation

Lec. 1 Lab 4 Credit 3

This course introduces students to the basic principles and concepts of process control, calibration, replacement, repair adjustment, troubleshooting, and use of test equipment. Students will learn how calibrate, adjust, install, operate, and connect process control systems. Students will also learn how to measure signals and connect devices in a wide variety of control configurations including: PID control on/off control, and manual control. Prerequisite: ELT-295.

ELT-232 PLC Applications

Lec. 2 Lab. 4 Credit 4

This course provides a hands-on approach to develop fundamental knowledge of PLC (Programmable Logic Controller) principles by exposing the student to ladder logic circuits and their practical applications. Ancillary input and output devices used with PLC systems are included as well as elementary electrical machines. While the laboratory utilizes Allen-Bradley PLC's, a generic design approach is stressed during the lectures. Design of practical working control circuits is included to enhance understanding. Also included are the various number systems, digital codes and program commands used in PLC's and integrated systems. Prerequisite: CSC-140 or equivalent.

ELT-250 Programmable Logic Controller

Lec. 1 Lab. 4 Credit 3

This course introduces students to PLC tasks such as programming, wiring, troubleshooting, communications, and advanced programming. Students will learn industrial relevant skills on how to operate, interface, program and troubleshoot PLC systems. Students will learn how to set up software drivers, log onto networks, upload and download projects, and search for documentation.

ELT-295 AC/DC Fundamentals

Lec. 1 Lab. 2 Credit 2

This course introduces students to the components used in most electronic circuits and how they are measured, tested and function. Students will learn the fundamentals of AC and DC electrical systems used for power and control in industrial applications. Students will learn how to operate, install, design and troubleshoot basic AC and DC electrical circuits.

ELT-329 Digital Electronics for ET

Lec. 3 Lab. 2 Credit 4

An introduction to fundamental digital circuits and systems is presented by study of integrated circuit logic modules. Number systems, coding and elemental Boolean principles are also covered. Emphasis is placed on trouble-shooting techniques and tools.

ELT-355 Electronic Circuits I

Lec. 3 Lab. 4 Credit 5

Introduction to semiconductor circuit analysis. The operational characteristics and applications of diodes, bipolar and field-effect transistors, and linear integrated circuits will be examined. Troubleshooting methods and techniques will be discussed and applied in the laboratory. Prerequisite: ELT-116.

ELT-357 Electronic Circuits II

Lec. 3 Lab. 4 Credit 5

An expansion on the material presented in Electronic Circuits I. This course will examine the op-amp further in its many linear and non-linear applications. Other related linear integrated circuits will be investigated and applied. Basic modulation and demodulation processes will be included. Prerequisite: ELT-355.

ELT-435 Telecommunications

Lec. 4 Lab. 2 Credit 5

Examines electronic communications topics such as noise, frequency domain analysis, analog and digital modulation methods, transmitters, receivers, multiplexing, digital communications, telephony, transmission lines and wave guides, antennas, wave propagation, microwave and video. Prerequisite: ELT-355 or equivalent.

ELT-486, Electromechanical technology

Lec. 2 Lab. 2 Credit 3

Students will use their previous knowledge in electronics to understand and apply real world mechanical applications in the industrial setting. Concepts learned will include fixturing, gearing, motors, and linear motion. Prerequisite: ELT-355.

ELT-630 Microprocessor/ Interfacing

Lec. 3 Lab. 4 Credit 5

This course is an introduction to techniques and equipment used for a variety of data acquisition requirements. The use of computers, test equipment, sensors and software for data acquisition in an industrial environment will be the main focus. Prerequisites: ELT-355 and ELT-329.

ELT-800 Biomedical Electronics Systems

Lec. 3 Lab. 2 Credit 4

This course examines the use of electronics in health sciences and related fields by bringing together the student's understanding of anatomy and physiology, chemistry and electronics to study the measurement of the body's electrical signals and other physiological measurements, to include cardiovascular, pulmonary, temperature, flow and pressures. This will include a hands-on study of medical equipment used in the hospital and other medical environments to diagnose and treat patients. Issues associated with patient and technician safety will be emphasized. This course will also explore applicable NFPA99, JCAHO, CLIA, FDA, and other regulatory agencies and their regulations governing medical equipment in the clinical environment. Prerequisites: ELT-119, ELT-357, ELT-630, BIO-252.

ELT-932 Internship

Lec. 0 Lab. 0 OJT 16 Credit 4

This internship is intended to be the clinical experience portion of the Biomedical Electronics Seminar. Students in this course will be assigned to a selected setting to apply principles and skills learned in previous courses. Graded on a Credit (P)/No Credit (Q) basis. Prerequisite: ELT-800.

EMS Emergency Medical Services

EMS-114 Emergency Medical Responder

Lec. 1 Lab. 2 Credit 2

This course emphasizes the development of student skills in emergency medical care procedures. Curriculum includes life threatening emergencies, injuries to various body parts, techniques of moving patients, CPR BLS, Mandatory Reporting, and blood borne pathogens. Successful completion of course requirements allows students to write certification examination for Emergency Medical Responder. Course meets preadmission requirements for all health occupations. Students must be 17 to enroll.

EMS-201 Emergency Medical Technician

Lec. 5 Lab. 2 Clinical 3 Credit 7

This course is designed to instruct a student to the level of emergency medical technician who serves as a vital link in the chain of the health care team. Southeastern Community College's training program follows the National Highway Traffic Safety Administration's Department of Transportation (DOT) EMT curriculum. This course includes all skills necessary for the individual to provide emergency medical care at a basic life support level with an ambulance service or other specialized service. Southeastern Community College is approved by the Iowa State Department of Public Health (Bureau of EMS). Upon successful completion of this course the student will be eligible to take the National Registry's practical and written exam for EMT certification. Students must be 17 years old to enroll. Prerequisite: Current basic life support certification (health care providers module).

EMS-239 Advanced Emergency Medical Technician

Lec. 5 Lab. 2 Clinical 3 Credit 7

This course will provide the student with roles and responsibilities of the EMS provider; well-being including injury prevention and infections disease; an overview of human systems; pharmacology; venous access; airway management; training for management of medical and trauma emergencies; special considerations of the obstetric; neonatal, pediatric, and geriatric patients; and focus on assessment-based management. This course will also provide the student the opportunity to apply past and current cognitive knowledge and psychomotor skills in a supervised clinical or field setting. Student must have current Iowa EMT certification. Prerequisites: Healthcare Provider CPR, Current EMT Certificate.

EMS-663 Paramedic I

Lec. 12 Lab. 8 Credit 16

This course prepares the student in the knowledge and skills needed in the pre-hospital environment. National Standard Paramedic Curriculum topics covered include: Well-being of EMT, Illness and Injury Prevention, Ethics, EMS System, Roles & Responsibilities, Medical Legal Issues, Pathophysiology, Therapeutic Communications, Life Span Development, Airway Management and ventilation, Patient Assessment, Communications, Documentation, Medication Administration, Pharmacology

and Cardiology. Lab skills addressed include patient assessment, development of airway management skills, IV fluid management skills, communication skill development and cardiac monitoring skills. Prerequisite: Current Iowa EMT Certification.

EMS-664 Paramedic II

Lec. 9 Lab. 8 Clinical 3 OJT 4 Credit 15

This course prepares the student in the knowledge and skills needed in the pre-hospital environment. National Standard Paramedic curriculum topics covered include: Medication Administration and Medical and Trauma Emergencies of various body systems. This course has a hospital clinical internship. This internship provides the opportunity to apply, in the clinical setting, the didactic knowledge and skills developed in the classroom and lab. It serves to assist the student to become an employable EMS provider. Clinical skills addressed include trauma management, patient assessment and evaluation; airway management skills, IV fluid management skills, communication skill development, and cardiac monitoring skills. Prerequisite: EMS-663.

EMS-665 Paramedic III

Lec. 3 Lab. 2 OJT 12 Credit 7

This course prepares the student in the knowledge and skills needed in the pre-hospital environment. National Standard Paramedic Curriculum topics covered include: Review of previous course material, Pediatrics, Geriatric, Psychiatric disorders, and Patients with Special Challenges. This course also includes hospital clinical internship. This internship provides the opportunity to apply, in the clinical setting, the didactic knowledge and skills developed in the classroom and lab. It serves to assist the student to become an employable EMS provider. Clinical skills addressed include pediatric assessment and management, gynecological management, geriatric management, trauma management, patient assessment, airway management skills, IV fluid management skills, communication skill development, and cardiac monitoring skills. Prerequisite: EMS-664.

EMS-949 Special Topics

Lec. 0 Lab 0 OJT 4-20 Credit 1-5

This course will provide the EMS student with additional clinical hours necessary to complete competencies required for State and National Certification as a Paramedic. The course is variable credit and the student shall register for the number of credit hours recommended by the faculty member in order to complete the competencies of the Paramedic Program. This course will be offered in increments of 64 hours (1 credit). Prerequisites: EMS-212, EMS-660, EMS-661 and EMS-662.

ENG English Composition

ENG-006 Quick Review Writing

Lec. 2 Lab. 0 Credit 2

A survey course to boost students' understanding and use of the "tools for writing." These include proper grammar and punctuation, the writing process, and campus resources such as the library and computer labs. Students will retake the COMPASS at the end of the course. This course will be taught during our existing 7x7 session. Each of its five days will run approximately 7 hours.

ENG-055 Basic English I

Lec. 0 Lab. 4 Credit 2

This foundation English course is for students who need to improve skills in preparation for subsequent college writing courses. Emphasis is on grammar, punctuation and mechanics of basic writing within the context of producing effective sentences and paragraphs. This course may be administered by independent study in the SuCCess Center. Prerequisites: Mandatory COMPASS or ACT test score and mandatory eWrite score (per SCC Writing Scores & Mandatory Course Placement Chart). No waivers.

ENG-060 College Preparatory Writing I

Lec. 2 Lab. 2 Credit 3

This comprehensive English course concentrates on sentence structure and provides practice in writing complete sentences, editing and basic paragraph planning. This course includes the same material as ENG-055 but is more intensive. It is offered in the classroom and in the computer lab. Prerequisite: Mandatory COMPASS or ACT test score and mandatory eWrite score (per SCC Writing Scores & Mandatory Course Placement Chart), or a C- or above in ENG-055, Basic English I. No waivers.

ENG-061 College Preparatory Writing II

Lec. 2 Lab. 2 Credit 3

College Preparatory Writing II is a preparatory course for ENG-105, Composition I. Emphasis is on paragraph development in the rhetorical modes, basic grammar, and punctuation. Computer lab time is provided, as well as basic instruction in word processing. Prerequisites: Mandatory COMPASS or ACT test score and mandatory eWrite score (per SCC Writing Scores & Mandatory Course Placement Chart), or a C- or above in ENG-060, College Preparatory Writing I. No waivers.

ENG-067 Composition I Laboratory

Lec. 0 Lab. 2 Credit 1

A basic writing skills laboratory to assist selected students while they are enrolled in English Composition I. Graded on a Pass(P)/No Pass(Q) basis. Prerequisites: Mandatory COMPASS or ACT test score and mandatory eWrite score (per SCC Writing Scores & Mandatory Course Placement Chart), or a C- or above in ENG-061, College Preparatory Writing II. No waivers.

ENG-105 Composition I

Lec. 3 Lab. 0 Credit 3

A study of the principles of writing. Emphasis on rhetoric, mechanics, and development of expository patterns: narration, description, illustration, comparison/contrast, classification, process, and cause/effect. Required for AA and AS Degrees. Prerequisites: Mandatory COMPASS or ACT test score and mandatory eWrite score (per SCC Writing Scores & Mandatory Course Placement Chart), or a C- or above in ENG-061, College Preparatory Writing II. No waivers.

ENG-106 Composition II

Lec. 3 Lab. 0 Credit 3

A continuation of study of the principles of writing begun in ENG-105. Emphasis is placed on persuasive writing as well as literary analysis and the MLA research paper. Time will also be spent exploring the research sources available from the library. Required for AA and AS Degrees. Prerequisite: C- or above in ENG-105.

ENG-111 Technical Writing

Lec. 3 Lab. 0 Credit 3

Studies the rhetorical techniques specifically oriented to industrial requirements. Applies expository patterns as incorporated within the report apparatus, including such specialized formats as process analysis, progress/lab reports, feasibility study, and the proposal. Also includes correspondence and application of basic library research skills. Course designed to satisfy specified career program requirements. Prerequisites: Mandatory COMPASS or ACT test score and mandatory eWrite score (per SCC Writing Scores & Mandatory Course Placement Chart), or a C- or above in ENG-061, College Preparatory Writing II. No waivers.

ENG-112 Technical Writing II

Lec. 3 Lab. 0 Credit 3

Continues and refines the development of technical writing skills with emphasis on the formal report. Stresses organizational strategies, descriptive analysis, and advanced research. Prerequisite: ENG-111.

ENG-131 Business English

Lec. 3 Lab. 0 Credit 3

This course teaches the fundamentals of written communication with a focus on the elements of effectively written business documents. The emphasis is on the development of writing skills through a) exercises in grammar, mechanics, usage, and spelling, and b) application of these skills in a variety of written business documents. Prerequisites: Mandatory COMPASS or ACT test score and mandatory eWrite score (per SCC Writing Scores & Mandatory Course Placement Chart), or a C- or above in ENG-061, College Preparatory Writing II. No waivers.

ENG-221 Creative Writing

Lec. 3 Lab. 0 Credit 3

Instruction and practice in multiple genres of creative writing. Students study the art, craft, and discipline of creative writing by reading, discussing, and critiquing the work of prominent writers; by experimenting with various writing methods and techniques; and by reading, discussing, and critiquing student work. Instruction, practice, and workshops will address elements of creative writing such as content, structure, form, and style in particular and multiple genres. This course may be repeated for up to six credit hours. Prerequisite: C- or above in ENG-105.

ENG-929 Individualized Projects

Lec. 1-3 Lab. 0 Credit 1-3

Extensive writing based on the interest and experience of the student. May receive 1 – 3 credits, based upon consultation with instructor. May be repeated for up to 4 credit hours.

ENV Environmental Science

ENV-111 Environmental Science

Lec. 3 Lab. 2 Credit 4

An interdisciplinary approach to the problems of the environment. An examination and evaluation will be made of man's impact on the environment. Specific topics that may be covered include, but are not limited to: population issues, atmospheric issues, water issues, energy issues, resource issues, wildlife issues, and food issues. This course contains a lab component.

ESL English as a Second Language

ESL-002 Cultural Orientation

Lec. 0 Lab. 2 Credit 1

This course introduces new international students to American life, the educational system and the Burlington community. It covers such topics as culture shock, academic honesty, personal safety, driving in Iowa, etc. This course will be taken on a Pass/No Pass basis only.

ESL-013 ESL Listening/Speaking I

Lec. 4 Lab. 0 Credit 4

Listening/Speaking course for non-native speakers of English. The course helps students develop basic speech competencies through integrated language skills. Students focus on language: pronunciation, word forms, word domains, idiomatic expressions, analogies using semantic context. It is recommended to take the course concurrently with ESL-015, Reading/Writing I, and ESL-018, Grammar I.

ESL-015 ESL Reading/Writing I

Lec. 4 Lab. 0 Credit 4

Reading/Writing course for non-native speakers of English. A beginning course designed to develop reading and writing skills. Students work on expanding vocabulary, focus on word forms, prefixes, suffixes and phrases. Writing topics include paragraphs, letters and brief summaries. It is recommended to take the course concurrently with ESL-013, Listening/Speaking I and ESL-018, Grammar I.

ESL-018 ESL Grammar I

Lec. 3 Lab. 0 Credit 3

Grammar course for non-native speakers of English. The course introduces students to the form, meaning, and usage of basic structures in English. It provides opportunities to practice through extensive and varied exercises leading to communicative activities. Concentration is on present and past tenses, copular be, nouns and pronouns. It is recommended to take the course concurrently with ESL-015, Reading/Writing I and ESL-013, Listening/Speaking I.

ESL-033 ESL Listening/Speaking II

Lec. 3 Lab. 0 Credit 3

Listening/Speaking course for non-native speakers of English. This course further develops conversational skills in order to improve the ability to speak clearly and effectively. Authentic audio recordings, videotapes and listening to peers are used to develop listening skills. Daily work on pronunciation targeted at achieving an understandable accent. It is recommended to take the course concurrently with ESL-035, Reading/Writing II, and ESL-038, Grammar II. Prerequisite: ESL-013, Listening/Speaking, COMPASS ESL Level II, TOEFL score 370.

ESL-035 ESL Reading/Writing II

Lec. 3 Lab. 0 Credit 3

Reading/Writing course for non-native speakers of English. This course increases reading skills in comprehension, speed and fluency. It continue development of understanding and using English sentence patterns through written practice. It is recommended to take the course concurrently with ESL-033, Listening/Speaking II and ESL-038, Grammar II. Prerequisite: ESL-015, Reading/Writing I, COMPASS ESL Level II, TOEFL score 370

ESL-038 ESL Grammar II

Lec. 3 Lab. 0 Credit 3

Grammar course for non-native speakers of English. The course introduces students to the form, meaning and usage of the English structures. Communicative approach provides students with the immediate applications of the knowledge gained in the class. Work on new grammar tenses, modal verbs, adjectives and adverbs. It is recommended to take the course concurrently with ESL-035, Reading/Writing II and ESL-033, Listening/Speaking II.

ESL-053 ESL Reading/Writing III

Lec. 2 Lab. 0 Credit 2

Reading/Writing course for non-native speakers of English. This course provides the students with intensive practice in reading strategies acquisition. Emphasis on understanding of the content while building language skills, predicting and understanding main ideas and details, identifying parts of speech. Critical thinking skills are practiced throughout the course. The students learn the process of prewriting, organizing, revising, and editing while reviewing and expanding the acquired vocabulary. It is recommended to take the course concurrently with ESL-055, Listening/Speaking III and ESL-058, Grammar III. Prerequisite: TOEFL score 400 or ESL-035 and ESL-033. Corequisite: ESL-055.

ESL-055 ESL Listening/Speaking III

Lec. 2 Lab. 0 Credit 2

Listening/Speaking course for non-native speakers of English. This course is designed to develop fluency in English and to improve the listening and conversational skills needed for careers and academic study. Speaking focuses on stress, rhythm, and intonation. Theme-based pronunciation practice reinforces the vocabulary and content of the class. It is recommended to take the course concurrently with ESL-055, Reading/Writing III and ESL-058, Grammar III. Prerequisite: TOEFL score 400, COMPASS ESL Level III, ESL-033.

ESL-058 ESL Grammar III

Lec. 2 Lab. 0 Credit 2

Grammar course for non-native speakers of English. The class studies the structures of English with particular focus on patterns in grammar that are especially troublesome for non-native speakers of English. Applications of these structures are performed through extensive speaking and writing, and a variety of exercises. It is recommended to take the course concurrently with ESL-053, Reading/Writing III and ESL-055, Listening/Speaking III.

ESL-073 ESL Reading/Writing IV

Lec. 2 Lab. 0 Credit 2

Reading/Writing course for non-native speakers of English. Develops higher order comprehension skills such as distinguishing fact and opinion, mastering persuasion techniques. Emphasizes strategies and skills which will help increase reading speed and build vocabulary of words with multiple meanings and connotations. Leads students through the writing process by providing a wide variety of activities to help them master skills necessary for academic writing. It is recommended to take the course concurrently with ESL-075, Listening/Speaking IV and ESL-079, Grammar IV. Prerequisite: ESL-053, COMPASS ESL Level IV, TOEFL score 430.

ESL-075 ESL Listening/ Speaking IV

Lec. 2 Lab. 0 Credit 2

Listening/Speaking course for non-native speakers of English. Strong emphasis on comprehension of oral language as spoken by native English speakers. Continues to practice pronunciation in factual discourse. Develops skills in utilizing idiomatic expressions, negotiations, reducing miscommunication. It is recommended to take the course concurrently with ESL-073, Reading/Writing IV and ESL-079, Grammar IV. Prerequisite: TOEFL score 430; COMPASS ESL Level IV; ESL-055.

ESL-079 ESL Grammar IV

Lec. 2 Lab. 0 Credit 2

Advanced course in grammar for non-native speakers of English offering introduction to such structures as gerund, infinitive, different types of clauses, and conditional sentences. Students learn to apply the structures in the factual discourse in class, and in a variety of written tasks. It is recommended to take the course concurrently with ESL-073, Reading/Writing IV and ESL-075, Listening/Speaking IV.

ESL-080 ESL Reading/Writing V

Lec. 1-2 Lab. 0 Credit 1-2

Reading/Writing course for non-native speakers of English. Provides an extensive review of the skills necessary for academic success. Explores contemporary themes to stimulate critical thinking while building language competence. It is recommended to take the course concurrently with ESL-081, Listening/Speaking V, and ESL-082, Grammar V.

ESL-081 ESL Listening/Speaking V

Lec. 1-2 Lab. 0 Credit 1-2

Listening/Speaking course for non-native speakers of English. Listening to live and audio-taped, authentic lectures, taking notes and making oral presentations based on research utilizing visual aids and support. It is recommended to take the course concurrently with ESL-080, Reading/Writing V, and ESL-082, Grammar V.

ESL-082 ESL Grammar V

Lec. 1-2 Lab. 0 Credit 1-2

Grammar course for non-native speakers of English. A survey of English grammar with emphasis on the production of more complex verb and sentence structures. Mastering the learned skills through the applications in a natural discourse, peer interaction, group discussions. It is recommended to take the course concurrently with ESL-080, Reading/Writing V, and ESL-081, Listening/Speaking V.

FIN Finance

FIN-101 Principles of Banking

Lec. 3 Lab. 0 Credit 3

This course will cover the three primary functions of banking and the relationship banks have with their customers and their communities. Discussions will cover the development of commercial banking in the United States and the federal legislation that shaped its development. Students will learn about the increasingly competitive and regulated environment in which banks operate, including the creation of the Federal Reserve System, and the federal role as the agent of monetary policy and as a bank regulator.

FIN-110 Money and Banking

Lec. 3 Lab. 0 Credit 3

This course will cover key concepts, theories, processes, and interrelationships that link money and banking to the workings of the U.S. economy. Students will learn to recognize the changes affecting the banking industry and thus better understand the strategies adopted by financial institutions for increasing profit, containing cost, and meeting the competition.

FIN-121 Personal Finance

Lec. 3 Lab. 0 Credit 3

A study and evaluation of financial problems which individuals and families encounter within their personal affairs. The topics covered are: budgeting, saving, consumer credit, personal insurance, renting or owning a home, investments, transportation and taxes.

FIN-130 Principles of Finance

Lec. 3 Lab. 0 Credit 3

An examination of the tools and techniques used in the world of finance. This course will introduce the student to basic financial concepts such as time value of money, asset valuation, risk analysis and return on investment. Evaluation and decision-making techniques will be used as they pertain to financial management in various business situations. Prerequisites: ACC-142, ACC-146 and ECN-120.

FIR Fire Science

FIR-124 Building Construction for Fire Protection

Lec. 3 Lab. 0 Credit 3

This course provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

FIR-127 Fire Behavior and Combustion

Lec. 3 Lab. 0 Credit 3

This course explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.

FIR-130 Fire Prevention

Lec. 3 Lab. 0 Credit 3

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education.

FIR-139 Fire Fighter I

Lec. 3 Lab. 2 Credit 4

This course shall ready the student at Level I for testing and certification as a Fire Fighter I as accredited by the International Fire Service Accreditation Congress.

FIR-143 Fire Fighter II

Lec. 2 Lab. 2 0 Credit 3

This course shall ready the student at Level II for testing and certification as a Fire Fighter II as accredited by the International Fire Service Accreditation Congress. Prerequisite: FIR-139 or Certification as Fire Fighter I.

FIR-145 Strategy and Tactics

Lec. 3 Lab. 0 Credit 3

This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground.

FIR-149 Fire Protection Hydraulics and Water Supply

Lec. 3 Lab. 0 Credit 3

This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

FIR-152 Fire Protection Systems

Lec. 3 Lab. 0 Credit 3

This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

FIR-180 Hazardous Materials Chemistry

Lec. 3 Lab. 0 Credit 3

This course provides basic fire chemistry relating to the categories of hazardous materials including problems of recognition, reactivity, and health encountered by firefighters.

FIR-200 Occupational Safety and Health for Fire Service

Lec. 3 Lab. 0 Credit 3

This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. Upon completion of this course, students should be able to establish and manage a safety program in an emergency service organization.

FIR-213 Principles of Emergency Services

Lec. 3 Lab. 0 Credit 3

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

FIR-214 Legal Aspects of the Fire Service

Lec. 3 Lab. 0 Credit 3

This course introduces the Federal, State, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases.

FIR-226 Fire Administration I

Lec. 3 Lab. 0 Credit 3

This course introduces the student to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis on fire service leadership from the perspective of the company officer.

FIR-235 Fire Investigation I

Lec. 3 Lab. 0 Credit 3

This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security motives of the firesetter, and types of fire causes.

FIR-236 Fire Investigation II

Lec. 3 Lab. 0 Credit 3

This course is intended to provide the student with advanced technical knowledge on rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and testifying.

FIR-949 Special Topics

Lec. 3.5 Lab 1 Credit 4

This course will include the following individual topics; each course within this topic is an employment requirement for firefighters; Incident Command/National Incident Management System, Fire Fighter Line of Duty Deaths, Confined Space Awareness, 24 Hour Introduction to Firefighting & Safety, and Emergency Vehicle Operations.

FLF Foreign Language - French

FLF-141 Elementary French I
Lec. 3 Lab. 2 Credit 4

Introductory course for those with no prior background. Students become acquainted with the sounds and structure of French emphasizing useful vocabulary and development of basic conversational skills. Practice supplemented by regular lab activities.

FLF-142 Elementary French II
Lec. 3 Lab. 2 Credit 4

Progressive development of conversational skills with additional emphasis on reading. Prerequisite: FLF-141 or equivalent.

FLF-241 Intermediate French I
Lec. 4 Lab. 0 Credit 4

Thorough review of language structures with ongoing emphasis of the language skills of reading, writing, speaking and listening. Focus on cultural literacy with parallel vocabulary development. Prerequisite: FLF-142.

FLF-242 Intermediate French II
Lec. 4 Lab. 0 Credit 4

Continuing review of language structures with ongoing emphasis of the language skills of the four basic language skills. Reading focus on cultural subjects, current events and literature. Prerequisite: FLF-241 or permission of instructor.

FLG Foreign Language - German

FLG-141 Elementary German I
Lec. 3 Lab. 2 Credit 4

Introductory course for those with no prior background. Students become acquainted with the sounds and structure of German emphasizing useful vocabulary and development of basic conversational skills. Practice supplemented by regular lab activities.

FLG-142 Elementary German II
Lec. 3 Lab. 2 Credit 4

Progressive development of conversational skills with additional emphasis on reading. Prerequisite: FLG-141 or equivalent.

FLG-231 Intermediate German I
Lec. 3 Lab. 0 Credit 3

Active use of conversational German in class. Development and practice of reading, writing and functional speaking skills. Introduction to German literature. Prerequisite: FLG-142 or equivalent.

FLG-232 Intermediate German II
Lec. 3 Lab. 0 Credit 3

Use of conversational German in class. Application of speaking, reading and writing skills to personal interest, German culture, or commercial interests. The individual should be able to assure responsibility for the learning of German on a continuing basis relating to specific needs. Prerequisite: FLG-231 or equivalent.

FLG-922 Field Studies
Lec. Arranged Credit 1-3 Clinical 3-9

Supervised travel and living experience in a German language speaking culture. Adequate preparation as judged by the instructor is required for credit participation. Specific written credit and participation requirements are established in advance of the field study. Each hour of credit requires a minimum of 54 hours of supervised travel and living experience.

FLS Foreign Language - Spanish

Spanish for Professionals
Lec. 2 Lab. 0 Credit 2

Continuation of FLS-127. Designed to improve oral-aural skills; emphasis is given to the specific needs of students in law enforcement, health occupations, social services and business. Does not satisfy the foreign language requirement. Prerequisite: FLS-127 or equivalent.

FLS-110 Spanish for Professionals: Law Enforcement

FLS-111 Spanish for Professionals: Health Care

FLS-112 Spanish for Professionals: Business

FLS-113 Spanish for Professionals: Education

FLS-127 Conversational Spanish
Lec. 2 Lab. 0 Credit 2

Basic conversational Spanish designed to meet the immediate needs of students whose professions require a working knowledge of Spanish or of travelers to Spanish-speaking countries. In addition, the sociocultural aspects of the Hispanic people are studied. Emphasis is on oral-aural proficiency. Does not satisfy the foreign language requirement.

FLS-129 Spanish Conversation and Cultural Topics
Lec. 2 Lab. 0 Credit 2

Development of oral fluency and vocabulary enhancement in Spanish through role playing, pair and group discussions, oral presentations on cultural issues and current events. This course is not open to those students whose primary language is Spanish. It does not satisfy the foreign language requirement. Prerequisite: FLS-142 or permission of instructor.

FLS-141 Elementary Spanish I
Lec. 3 Lab. 2 Credit 4

This is an introductory course for those with no prior background in Spanish. Student is introduced to language skills of understanding, speaking, reading and writing with emphasis given to the first two skills. Related lab activities.

FLS-142 Elementary Spanish II
Lec. 3 Lab. 2 Credit 4

A continuation of FLS-141 emphasizing all four language skills with special attention to further development of conversational skills. Cultural readings and lab activities. Prerequisite: FLS-141 or C grade on Proficiency Test or permission of instructor.

FLS-231 Intermediate Spanish I
Lec. 3 Lab. 0 Credit 3

A review of the fundamentals of grammar, emphasizes oral communication among students. It also aims at increasing students' reading comprehension, vocabulary and a better understanding of Hispanic culture. Prerequisite: FLS-142 or C grade on Proficiency Test or permission of instructor.

FLS-232 Intermediate Spanish II

Lec. 3 Lab. 0 Credit 3

A continuation of Intermediate Spanish I, reviews the fundamentals of grammar while emphasizing oral communication among students. It also aims at increasing students' reading comprehension, vocabulary and a better understanding of Hispanic culture. Prerequisites: FLS-231 or C grade on Proficiency Test or permission of instructor.

FLS-922 Field Studies

Arranged Credit 1-3 Clinical 3-9

Supervised travel and living experience in a Spanish language speaking culture. Adequate preparation as judged by the instructor is required for credit participation. Specific written credit and participation requirements are established in advance of the field study. Each hour of credit requires a minimum of 54 hours of supervised travel and living experience.

GEO Geography

GEO-121 World Regional Geography

Lec. 3 Lab. 0 Credit 3

The study and analysis of the major physical and cultural elements of the world. Emphasis on processes of acquiring, treating, and evaluating related information. For those with little or no prior background in the study of geography.

GEO-141 Economic Geography

Lec. 3 Lab. 0 Credit 3

The examination of the uneven and real distribution of production, exchange, and consumption, extractive industries, manufacturing, agriculture, transportation and services in relation to human techniques, resource potentials, demographics. Some prior background in geography helpful.

GEO-161 Regional Landscapes Of North America

Lec. 3 Lab. 0 Credit 3

The examination of the physical and cultural features of the United States and Canada. Emphasis on influence of environment on patterns of settlement, agricultural and industrial development, urbanism, land use and planning. Some prior background in geography helpful.

GEO-922 Field Studies

Lec. Arranged Credit 1-3 Clinical 3-9

This course is open to students who desire to participate in selected geographic field experiences designed around supervised observation and practice. The experience provides an opportunity to apply classroom learning in the field. Specific written credit and participation requirements are established in advance of the field study. Each hour of credit requires a minimum of 54 hours of supervised travel and living experience.

GRA Graphic Communications

GRA-116 Digital Preflight Production

Lec. 2 Lab. 2 Credit 3

The main focus of this course is in preflighting techniques and color control. Advanced graphic design, color management skills, and printing technologies will be used in complex projects. The importance of communication between printer/ pressroom and the graphic designer is also emphasized. This course integrates all facets of the graphic communications coursework and should be taken during the student's final semester. Prerequisites: GRA-275 and GRA-131.

GRA-127 Illustrator I

Lec. 2 Lab. 2 Credit 3

This course is designed to introduce the student to the application of rendering techniques. Emphasis is placed on controlling various media, methods, surfaces, design problems and the appropriate media selection process. Prerequisites: CSC-110 and ART-120.

GRA-131 Digital Layout

Lec. 2 Lab. 2 Credit 3

The student will gain familiarity with the document production cycle of graphic layout using prevalent industry pagination software. Emphasis will be placed on planning the publication, using page elements, working with graphics, preparing the publication page, and reproduction. Students will use this publishing package to create a variety of print media utilizing proper design principles. Prerequisite: GRA-137. Corequisite: GRA-275.

GRA-137 Digital Design

Lec. 2 Lab. 2 Credit 3

The student will gain familiarity with the function of graphic layout using electronic pagination software. Emphasis will be placed on publication design, development, reproducibility, and utilization of proper design techniques. Students will use this publishing package to create a variety of print media. Prerequisite: CSC-110.

GRA-140 Digital Imaging

Lec. 2 Lab. 2 Credit 3

This course is designed to introduce the student to image manipulation software used in the electronic and print media industry. Emphasis will be placed on scanning, image editing techniques, using painting tool sets, color correction, ethics and digital photography techniques. Prerequisite: CSC-110.

GRA-141 Digital Imaging II

Lec. 2 Lab. 2 Credit 3

A continuation of GRA-140 in the area of image manipulation and will build on skills used previously for the multimedia and print industries. Emphasis will be placed on web graphics, alpha channels, masking, adjustment layers, color correction, and actions. Prerequisite: GRA-140.

GRA-173 Typography

Lec. 3 Lab. 0 Credit 3

This course is designed to provide the student with an introduction to the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, identification, type aesthetics, communicative aspects and production problems. A working knowledge of type in relation to images will be emphasized. Prerequisite: GRA-175.

GRA-175 Graphic Design Principles

Lec. 3 Lab. 0 Credit 3

A beginning course in designing printed pieces. This course will provide the student with an introduction to some of the basic principles of design aesthetics for print and web media. A history of the desktop publishing process, basics of communication, basic document structure, typography, use of color and illustration will be covered.

GRA-190 Electronic Media Projects

Lec. 1 Lab. 4 Credit 3

Students will interview originators to determine target audience, message, and time and cost constraints for a project. They will then use various pagination software and graphic design skills to produce finished, print-ready pieces. Prerequisites: GRA-137 and GRA-175 or BCA-240.

GRA-275 Advanced Graphic Design

Lec. 2 Lab. 2 Credit 3

This course is designed to continue to guide the student in proper design and layout aesthetics. Emphasis will be on utilization of design principles and techniques for both short and long documents, publication planning, budgeting, scheduling, finishing processes, and working with outside printing companies. Prerequisite: GRA-175.

GRA-932 Internship

Lec. 0 Lab.0 OJT 15 Credit 3.7

This course is designed to provide the student with a practical experience in graphics communication prior to completion of the associate of science/career option degree. The internship is supervised by the program coordinator and should be taken during the student's final semester. Prerequisite: Fifty-five hours completed toward the graphic communications technology program.

HIS History

HIS-131 World Civilization I

Lec. 3 Lab. 0 Credit 3

This course is an economic, social, political and cultural survey of world civilization from earliest times to 1300, as these areas relate to contemporary civilization. Areas covered include: history of primitive, ancient, medieval religions, government and law; far Eastern and ancient European philosophy; primitive and ancient medieval fine arts.

HIS-132 World Civilization II

Lec. 3 Lab. 0 Credit 3

This course is an economic, social, political and cultural survey of development of world civilization from 1300 to the present. It is a continuation of HIS-131. However, students may enter during any semester.

HIS-151 United States History to 1877

Lec. 3 Lab. 0 Credit 3

A survey of American social, political, economic and intellectual developments from the Colonial period to 1877.

HIS-152 United States History since 1877

Lec. 3 Lab. 0 Credit 3

A survey of American social, political, economic and intellectual developments since 1877.

HIS-211 Modern Asian History

Lec. 3 Lab. 0 Credit 3

An introduction to the three dominant societies of modern Asia; China, Japan and India. Emphasis will be given to the transformation of cultural, economic, intellectual and social patterns brought about by the military power and economic demands of contemporary Western societies.

HIS-231 Contemporary World Affairs

Lec. 3 Lab. 0 Credit 3

This course deals with the immediate problems facing the world from 1945 to the present, efforts to establish peace, the decline of colonialism, developments in the Third World, the Cold War, conflicting ideologies of the twentieth century and their interpretation in conflicting international economics and power struggles.

HIS-251 United States History 1945 to Present

Lec. 3 Lab. 0 Credit 3

An intensive study of the history of the United States since 1945, with an emphasis upon America's national and international problems during this period.

HIS-257 African American History

Lec. 3 Lab. 0 Credit 3

A study of African American people from their African origins through the contemporary civil rights movement in the United States. This survey includes the study of slavery before the Civil War, the examination of the role of the African American during the war and Reconstruction period, growth of segregation, and the fight for civil rights culminating in the current position of the African American in the United States.

HIS-266 The Civil War

Lec. 3 Lab. 0 Credit 3

A study of the United States during the Civil War. A study of the political, social, economic, military, and diplomatic history of the United States from 1850 to 1877. A look at the causes of the Civil War, the War and its impact on US society, and the aftermath of the war.

HIS-268 American Experience in Vietnam

Lec. 3 Lab. 0 Credit 3

A study of the United States' involvement in the Vietnam War. The course will survey the military policies, battles, tactics, and strategies of the Vietnam War, 1954 – 1975. The course will look at the origins of the war as well as at the effects of the war on domestic, social and political issues in the United States.

HIS-271 American Frontier History

Lec. 3 Lab. 0 Credit 3

An intensive study of the westward movement in American history. Topics to be covered include: the Indians, the fur trade, the development of transportation, the government land policy, and the settlement of the Great Plains.

HIT Health Information Technology

HIT-211 Basic Medical Insurance and Coding

Lec. 2 Lab. 2 Credit 3

This course is designed to assist students in understanding the complexities of current insurance procedures encountered in today's medical facilities. The student will be familiarized with claims submission for programs such as Blue Cross/Blue Shield, Medicaid, Medicare, CHAMPUS/CHAMPVA, and Worker's Compensation. A comprehensive unit on CPT Procedural Coding as well as ICD-9-CM Diagnostic Coding is incorporated into the course. Managed health care is explored in depth. Prerequisite or Corequisite: HSC-114 and BIO-163.

HSC Health Sciences

HSC-114 Medical Terminology

Lec. 2 Lab. 2 Credit 3

This course is designed to study the basic language related to medical science with emphasis on word analysis, construction, definitions, pronunciations, spelling and standard abbreviations.

HSC-133 First Aid/CPR

Lec. .5 Lab. 0 Credit .5

This course follows the American Heart Association Basic Life Support (CPR) Heart Saver for the lay person program. Includes AED, Basic First Aid. This course is not for health care workers.

HSC-144 Pharmacology

Lec. 2 Lab. 0 Credit 2

This course introduces essential concepts of pharmacology, including drug legislation, terminology, and pharmacology therapy in the clinical management of patient care. It also provides an overview of commonly prescribed drugs, their classifications, uses, and side effects. Concentration on spelling and pronunciation is emphasized. Prerequisites: HSC-114, BIO-163

HSC-163 Nutrition

Lec. 3 Lab. 0 Credit 3

Nutrition concepts across the lifespan are presented. An emphasis on weight management, obesity avoidance and prevention of common diseases (diabetes, heart disease, cancer and hypertension) that are dietary-related are discussed. Proper nutrition, a critical component for optimal learning, growing, healing and quality of life is emphasized.

HSC-172 Nurse Aide (Direct Care Giver)

Lec. 2 Lab. 1 Clinical 2 Credit 3

Emphasis of this course is on students gaining a basic level of knowledge and demonstrating skills to provide safe, effective resident care. This course meets the requirement of the Department of Inspections and Appeals requirements for direct care givers working in long-term care and skilled facilities. Upon completion, students are eligible to take the written/oral and skills performance competency tests to become a Direct Care Worker in the State of Iowa. NOTE: This course will NOT cover BLS and Mandatory Reporter requirements.

HSC-180 BLS & Emergency Preparedness for Healthcare Workers

Lec. 1 Lab. 2 Credit 2

This course contains the American Heart Association Basic Life Support (CPR), AED, Advanced First Aid Techniques and Emergency Preparedness in the workplace & community for Health Care Providers.

HSC-181 First Aid/CPR for Non-Health Care Workers

Lec. 1 Lab. 1 Credit 1.5

This course follows the American Heart Association Basic Life Support (CPR) Heart Saver for the Lay Person. It includes AED and basic first aid. This course is not for health care workers.

HSV Human Services

HSV-163 Helping Skills

Lec. 3 Lab. 0 Credit 3

An introduction to skills useful in dealing with people who abuse alcohol and drugs by introducing the student to basic communication and helping skills appropriate to dealing with people suffering from alcohol and other drug abuse, giving the student working knowledge of and practical experience with those skills. Prerequisites: HSV-261, SPC-112, ENG-105.

HSV-220 Introduction to Counseling Theories

Lec. 3 Lab. 0 Credit 3

A survey of differing philosophies and styles of counseling approaches and their practical application. Including but not limited to: Transactional Analysis, Client-Centered Therapy, Rational Emotive Theory, Reality Therapy, Gestalt, etc. Actual practice in standard means of facilitating the helping process and identification of personal counseling style is included. Prerequisites: HSV-261.

HSV-228 Group Counseling Techniques

Lec. 2 Lab. 2 Credit 3

An overview of group counseling theories, methods and skills. Students will obtain the knowledge and skills necessary to facilitate counseling groups with chemically dependent clients. Students will practice and demonstrate competency in group facilitation skills. Students will also obtain experience as a group member through participation in a weekend training group lab and ongoing group lab in class. Prerequisites: HSV-261, SPC-112 OR SPC-122, ENG-105. Pre or Corequisite: HSV-163.

HSV-261 Intro to Chemical Dependency Counseling

Lec. 3 Lab. 0 Credit 3

A survey of the use, abuse and addictive nature of ethyl alcohol and other mood altering chemicals, providing the student with a basic knowledge of its nature, scope and complexity and the wide range of current approaches to its treatment and prevention.

HSV-262 Working with Families of Alcohol and Drug Abuse

Lec. 3 Lab. 0 Credit 3

A survey of the needs, symptoms, assessment and brief treatment of families of alcohol and drug abuse. Prerequisites: HSV-220, HSV-261.

HSV-265 Substance Abuse Prevention

Lec. 3 Lab. 0 Credit 3

This course will offer an introduction to the history of the field of substance abuse prevention and the various methodologies used. Students will acquire the knowledge and skills needed to perform the seven core functions of the prevention specialist as specified by the Iowa Board of Substance Abuse Certification. Prerequisite: HSV-220 and HSV-261.

HSV-270 Crisis Intervention

Lec. 3 Lab. 0 Credit 3

This course is intended to develop an understanding of the dynamics of a crisis, the skills to assess the multidimensional aspects of a crisis and the ability to productively assist individuals who are experiencing a crisis. Prerequisites: HSV-261, HSV-163.

HSV-285 Case Management: Intake to Discharge

Lec. 3 Lab. 0 Credit 3

The course will offer an overview of the twelve core functions recognized as necessary for certification (assessment, treatment, planning, recordkeeping, etc.). Students will learn the knowledge and skills needed to effectively perform each core function. Prerequisites: HSV-261, HSV-163, SPC-112, ENG-105.

HSV-920 Counseling Practicum

Lec. 0 Lab. 0 OJT 40 Credit 11

Supervised experience in substance abuse counseling which emphasizes practical application of the core functions. Prerequisite: A student must receive a grade of "C" (2.0) or higher in each of the following courses: HSV-261, HSV-163, HSV-228, HSV-262, HSV-220 and HSV-285. Corequisite: HSV-925.

HSV-925 Counseling Practicum Seminar

Lec. 1 Lab. 0 Credit 1

A class discussion and review of HSV-920 experience and the study of current issues in substance abuse. Prerequisites: HSV-261, HSV-163, HSV-228, HSV-262, HSV-220 and HSV-285.

HUM Humanities

HUM-114 Multicultural Perspectives

Lec. 3 Lab. 0 Credit 3

Selected readings from the critical perspectives of race, class and gender will provide the theoretical framework for class discussions. At the same time, films and works of literature from different cultural points of view will help students reach a new understanding of their own and other cultures and will open themselves up for a multicultural understanding of society.

HUM-145 Language and Society

Lec. 3 Lab. 0 Credit 3

This course is an introduction to sociolinguistics exploring the relationship between social and linguistic behavior. Analyzes factors influencing the choice of sounds, grammatical elements, and vocabulary; it codes the social function of a language. Focuses on the history of the language, various dialects, jargon, slang and differences between male and female language.

HUM-287 Leadership Development Studies

Lec. 3 Lab. 0 Credit 3

This course is designed to provide emerging and existing leaders the opportunity to explore the concept of leadership and to develop and improve their leadership skills. The course integrates readings from the humanities, experiential exercises, films/videos and contemporary readings on leadership.

HUM-290 A Call to Lead

Lec. 3 Lab. 0 Credit 3

This course is designed to put leadership into practice by exploring the concept of self-leadership and servant leadership. The curriculum of this class will improve and expand on current leadership skills by building a strong foundation in values clarification, communication skills, group development, conflict management, and diversity education.

IND Industrial Technology

IND-103 Machine Shop

Lec. 1 Lab. 2 Credit 2

This course identifies the tools commonly used in a machine shop and their components as well as how each tool is used for a particular job. Students will learn how to use every day hand tools. Students will learn skills on various tools such as milling machines, drill presses, band saws, grinders, and precision instruments. They will learn how to select, size, and install a variety of different types of piping, fittings, and valves.

IND-104 Industrial Pumps

Lec. .5 Lab. 1 Credit 1

This course discusses the principles and applications of centrifugal pumps. Students will learn centrifugal pump construction, uses, system properties, monitoring, and troubleshooting techniques. Students will also learn the skills they need to select, operate, install, maintain and repair the many different types of pumps used in industry.

IND-106 Machine Shop II

Lec. 1 Lab. 2 Credit 2

This course introduces students to the basics of calculating cutting speeds and feeds for machining ferrous, non-ferrous, and plastics materials on the lathe. It also demonstrates the fundamentals of mounting a chuck on an engine lathe and truing a work piece in a chuck and introduces students to the three methods of facing work to length in a chuck. The course will show students how to straight turn a work-piece to two concentric diameters in a four-jaw independent chuck. Students will learn the correct procedures for taking both roughing and finishing cuts. They will also learn to turn between centers. Finally, students will learn the proper method of finishing one end of work to one diameter, reversing the work in the chuck, and finishing the other end to another diameter. It will demonstrate how to perform four internal machining operations on the engine lathe; drilling, boring, counter-boring, and reaming. Prerequisites: IND-103.

IND-107 Valves

Lec. 1 Lab. 0 Credit 1

This course gives students a fundamental understanding of the various shutoff valve constructions including wedge, ball, plug, globe, pinch, and diaphragm types, basic maintenance techniques, and the sources of many problems. From this foundation, students will be better able to develop maintenance skills through plant training programs or on-the-job experiences. The course also provides basic guidelines for installing various types of shutoff valves.

IND-141 Power Transmission

Lec. 1 Lab. 2 Credit 2

This course discusses the fundamentals of mechanical transmission systems used in industry. Students will learn industrial skills on how to operate, install, analyze performance, and design basic mechanical transmission systems using chains, v-belts, spur gears, bearings, and couplings.

IND-179 Boiler Operations and Control

Lec. 1 Lab. 2 Credit 2

This course is designed to help students understand the evolution of the boiler system from the first century to modern day and understand the principles and applications of steam traps. This course will provide an overview of the operation of the boiler plate system, beginning with basic principles of steam energy and boiler plate design. This course will describe steam, steam trapping and different types of steam traps including sizing, installation and monitoring.

IND-180 Industrial Heating and Cooling

Lec. 1 Lab. 2 Credit 2

This course is designed to help students understand the fundamentals of HVAC & R. The students will learn chiller, air handler, cooling tower, and condenser operations as well as how to perform basic preventative maintenance tasks. The course also shows how preventative maintenance practices can be used in troubleshooting common HVAC & R problems.

JOU Journalism

JOU-120 Beginning Newswriting

Lec. 3 Lab. 0 Credit 3

This course introduces students to the fundamentals of news judgment, reporting, and writing. Students will learn about professional standards and ethics, cultural awareness, current events and how to keep up with them, Associated Press and local style rules, and the use of the tools of the trade. Prerequisite: C- or above in ENG-106.

JOU-121 Newswriting and Reporting

Lec. 3 Lab. 0 Credit 3

This course introduces students to writing in a professional environment and to the forms of writing for the mass media. These forms include news stories for print and broadcast, advertising copy for print and broadcast, and other types of writing for public relations. Prerequisite: C- or above in JOU-120.

LIT Literature

LIT-101 Introduction to Literature

Lec. 3 Lab. 0 Credit 3

Designed to promote an appreciation of excellence in literature through illustrative types of short fiction, poetry, and drama. Emphasis is placed on the reader's interpretive skills in examining an author's craft, intent, and format.

LIT-105 Children's Literature

Lec. 3 Lab. 0 Credit 3

Study and selection of supplementary reading material for children in the preschool and elementary grades. Use of children's books for information, entertainment and relaxation is considered.

LIT-120 American Novel

Lec. 3 Lab. 0 Clinical 0 Credit 3

A survey of the American novel with emphasis on 20th century works.

LIT-121 American Short Story

Lec. 3 Lab. 0 Credit 3

A survey of the American short story from Edgar Allen Poe to the present.

LIT-122 American Fiction

Lec. 3 Lab. 0 Credit 3

A survey of American short stories, novellas, and novels from the early part of the nineteenth century to the present.

LIT-125 American Poetry and Drama

Lec. 3 Lab. 0 Credit 3

A survey of American poetry and drama with emphasis on 20th century works.

LIT-131 Native American Literature

Lec. 3 Lab. 0 Credit 3

A survey of literature of all genres, fiction and nonfiction, produced by Native Americans. Elements of study include the oral tradition influences, regional folklore, and autobiographical and historical materials created by contemporary and historical Native American authors. Off-campus visits to centers of Native American study will be conducted whenever possible.

LIT-150 World Literature I

Lec. 3 Lab. 0 Credit 3

A survey of important works of literature from the ancient world through the Renaissance. This will include selections of prose, poetry, and drama that represent the spirit of the times in which they were written.

LIT-151 World Literature II

Lec. 3 Lab. 0 Credit 3

A survey of important works of literature from the Renaissance to the present. This will include selections of prose, poetry, and drama that represent the spirit of the times in which they were written.

LIT-184 Young Adult Literature

Lec. 3 Lab. 0 Credit 3

A discussion and evaluation of the literature written for adolescents. Types of literature for this age group and methods of utilizing this literature in school and home are addressed.

LIT-204 Forms of Literature: Nonfiction

Lec. 3 Lab. 0 Credit 3

This course focuses on the genre of creative non-fiction literature and its sub-genres (including personal essays, memoirs, profiles, collages, nature essays, travel essays, criticisms, and "the short") and explores how creative non-fiction literature informs while using language in a creative manner. Prerequisites: C or better in ENG-105 or C or better in any college-level literature course or permission of the instructor.

MAP Medical Assistant

MAP-105 Keyboarding for the Medical Professional
Lec. 1 Lab. 2 Credit 2

This course is designed to train the medical professional in preparing documents with proficiency and accuracy. The student is introduced to word processing software and the tools available to assist with document design, formatting and editing. Competency with grammar, spelling and punctuation is developed through skill-building exercises. The laboratory sessions are designed to assist students to achieve speed, accuracy and confidence with preparation of medical office documents. Prerequisite: 35 nwpm timed typing test score.

MAP-121 Administrative Procedures I: Medical Office
Lec. 2 Lab. 4 Credit 4

This course is designed to acquaint students with the front-office administrative responsibilities of the medical assistant. The student will develop competency in written communication skills including editing practice, sentence revision, paragraph writing and exercises in grammar, mechanics and usage. Other competencies will include appointment scheduling, telephone techniques, recording and filing medical records, processing mail, billing and collection procedures, banking services, accounting methods and payroll preparation. The student will also be introduced to preparation of professional medical meetings, travel arrangements and development of professional reports. The content of the course is adapted to the 2003 approved standards of CAAHEP.

MAP-122 Administrative Procedures II: Medical Office
Lec. 2 Lab. 2 Credit 3

This course introduces basic computer concepts and emphasizes the practical applications approach using simulated medical office management programs. The student is guided through a series of computer applications that highlight the most common aspects of the modern medical office including electronic claim filing. Resume development and job-seeking skills are also presented. Prerequisite: HSC-114, MAP-431, MAP-105, MTR-112, MAP-121, MAP-364, BIO-163.

MAP-145 Medical Records Management
Lec. 2 Lab. 2 Credit 3

This is a comprehensive introduction to the field of medical records and documentation, automated information systems in health care delivery, and the management of health data. Students will learn the purpose, content, and ethical and legal principles of the medical record. Health Information Management Department functions, workflow, and quality considerations will also be discussed. In addition, students will learn standards and regulations related to healthcare documentation as set by bodies such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), National Committee for Quality Assurance (NCQA), the Health Care Financing Administration (HCFA), as well as others. Confidentiality and compliance with HIPAA will be stressed. Corequisite: HSC-114.

MAP-364 Clinical Procedures for Medical Office I
Lec. 3 Lab. 8 Credit 7

This course includes the numerous competencies required to assist the physician with patient examinations. Fundamental skills include: aseptic techniques and the sterilization of medical supplies; the psychological and physical preparation of the patient for a medical examination; preparation of surgical trays and assisting with minor surgeries; and the performance of routine urinalysis as ordered by the physician. Prerequisite: Acceptance into the program.

MAP-369 Clinical Procedures for Medical Office II
Lec. 4 Lab. 6 Credit 7

This course is designed to acquaint the student with the knowledge and skills required in the preparation, administration and documentation of various forms of medication. Dosage calculations and the physiological actions of drugs on the human body are addressed. Students will gain knowledge of venipuncture and use of quality controls. The student will gain knowledge of blood chemistries, serology, microbiology and hematology. Student will gain knowledge regarding the electronic medical record and its application in the clinical setting. Prerequisite: Successful completion of all fall semester curriculum.

MAP-370 Specialty Clinical Procedures
Lec. 1 Lab. 2 Credit 2

Students are acquainted with basic theory and techniques required to perform an electrocardiogram. Students will also be acquainted with pulmonary function testing. The student will attain knowledge in specialty procedures: gynecology, pediatrics, radiology and diagnostic imaging and male reproductive system and documentation within specialty. Student will also gain knowledge in physical agents to promote tissue healing. Prerequisite: Successful completion of all fall semester curriculum.

MAP-401 Medical Law and Ethics
Lec. 1 Lab. 0 Credit 1

This course is designed to expose the student to legal concepts of standard of care, scope of employment, criminal and civil acts, contract, negligence and ethical concepts.

MAP-431 Human Relations
Lec. 1 Lab. 0 Credit 1

This course includes the study of the fundamental principles related to human relations, self-improvement, professional appearance and attitudes, limitations, and behaviors. Principles of individualized client care and etiquette of the medical practice are emphasized.

MAP-532 Human Body: Health and Disease
Lec. 3 Lab. 0 Credit 3

This course is designed to acquaint the student with the basic concepts and characteristics of disease processes, to impart basic knowledge of the etiology of the disease and to enable the student to understand the relationship between clinical signs and the disease process. Diagnostic tests and common treatments will be discussed. Concepts of Health promotion and client education will be emphasized. Prerequisite: BIO-163.

MAP-602 Clinical Experience Seminar
Lec. 1 Lab. 0 Credit 1

A discussion of job related problems and study of current medical office procedures. Prerequisites: All previous program classes and student must successfully complete and obtain the mandatory reporter certificate for adult and child abuse. Corequisite: MAP-615.

MAP-615 Clinical Externship

Lec. 0 Lab. 0 OJT 20 Credit 5

Following successful completion of the academic hours, the student is placed in a selected physician's office for a two-month required clinical practicum, working directly under supervision. A balance of learning experiences in both the administrative and clinical areas of the medical facility will be provided for the student during this training period. Students do not receive monetary compensation for externship experience. Prerequisites: All previous program classes and student must successfully complete and obtain the mandatory reporter certificate for adult and child abuse. Corequisite: MAP-602.

MAT Mathematics

MAT-006 Quick Review Math

Lec. 1.5 Lab. .5 Credit 2

An intensive one-week review course designed for committed students who wish to accelerate through the developmental sequence in math. Students who successfully complete this course will be given the opportunity to retake the COMPASS in math and can earn themselves a higher placement in the math sequence. This course will be taught during our existing 7x7 sessions, will be offered pass/fail, and can be repeated though the student will only receive credit once. Each of its five days will run approximately 7.5 hours. Prerequisites: High school or college transcripts to indicate that the student has completed a course in algebra.

MAT-052 Pre-Algebra

Lec. 2 Lab. 2 Credit 3

Designed for students who have not mastered the basic skills of arithmetic or for students who need to review arithmetic. Topics studied include operations on whole numbers, fractions, decimals, percents, measurement, basic statistics, beginning geometry and beginning algebra. These topics are similar to those topics covered in Math Skills I and II with an emphasis on problem solving techniques. Prerequisites: COMPASS Pre-Algebra score of 22-49 or ACT Math score of 14-17 or math faculty approval.

MAT-062 Elementary Algebra

Lec. 2 Lab. 2 Credit 3

This course is designed for Business and Social Science majors. It introduces them to matrix solutions, to linear equations, linear programming, matrix algebra, mathematics of finance, computer applications, value of slope of a line, and exponential/logarithmic functions. Application problems are taken from Business Management and Social Science area. Prerequisites: Completion of MAT-052 with a grade of at least C- or Pre-Algebra COMPASS score of 50-99 or ACT Math score of 18-19 or math faculty approval.

MAT-079 Elementary Geometry

Lec. 1 Lab. 2 Credit 2

This course is designed for college students who have completed an introductory algebra course but did not take high school geometry or took it so long ago they need a review. This will be equivalent to one year of high school geometry. Prerequisite: MAT-062 Elementary Algebra or its equivalent. Credit earned in this class will not count toward the A.A. or A.S. degree requirements.

MAT-080 Math Skills I

Lec. 1 Lab. 0 Credit 1 (Face-to-Face) **or**
Lec. 0 Lab. 2 Credit 1 (SuCCess Center)

This course is designed for students who have not mastered the basic skills of arithmetic or for students who need to review arithmetic or for students who are looking to improve their math score on standardized tests through studying arithmetic. Topics studied include arithmetic operations on whole numbers, fractions, decimals, percents, and integers.

MAT-081 Math Skills II

Lec. 1 Lab. 0 Credit 1 (Face-to-Face) **or**
Lec. 0 Lab. 2 Credit 1 (SuCCess Center)

This course is a continuation of MAT-080/MAT-084 and is designed for students who have a good background in arithmetic and want an introduction to a variety of mathematical topics or for students who are looking to improve their math score on standardized tests through work with word problems. Topics studied include ration and proportion, measurement and conversions, geometry, statistics and probability, and algebra concepts. Prerequisite: Successful completion of MAT-080/MAT-084 or permission of instructor.

MAT-084 Math Skills I

Lec 2 Lab. 0 Credit 2 (Face-to-Face) **or**
Lec. 0 Lab 4 Credit 2 (SuCCess Center)

This course is designed for students who have not mastered the basic skills of arithmetic or for students who need to review arithmetic or for students who are looking to improve their math score on standardized tests through studying arithmetic. Topics studied include arithmetic operations on whole numbers, fractions, decimals, percents, and integers.

MAT-085 Math Skills II

Lec. 2 Lab. 0 Credit 2 (Face-to-Face) **or**
Lec. 0 Lab. 4 Credit 2 (SuCCess Center)

This course is a continuation of MAT-080/MAT-084 and is designed for students who have a good background in arithmetic and want an introduction to a variety of mathematical topics or for students who are looking to improve their math score on standardized tests through work with word problems. Topics studied include ration and proportion, measurement and conversions, geometry, statistics and probability, and algebra concepts. Prerequisite: Successful completion of MAT-080/MAT-084 or permission of instructor.

MAT-094 Independent Study - Math

Lec. 0 Lab. 2 Credit 1

This course is designed to provide the student with an opportunity to select a specific mathematical area to explore in greater depth than is possible in other available courses. Independent Study topics will be determined by consultation between the student and instructor. Typical topics could include geometry, trigonometry, estimating, carpentry/mechanical/electrical preparation, etc. Credit earned in this course will not count toward the A.A., A.S., or A.A.S. degree requirements.

MAT-102 Intermediate Algebra

Lec. 3 Lab. 2 Credit 4

This course is designed as an intermediate level algebra course recommended for students with at least one year of high school algebra or equivalent. It serves as a foundation for many other math, science, and business courses. A computer assisted tutorial is used in the lab portion of this course. Students will learn to apply computer software as a math assistant in solving problems algebraically. Topics covered include sets, polynomials, rational expressions, exponents, radicals, logarithms, systems of linear equations, equation solving, functions and application problems. (The credit earned in this class will not meet the math requirement for an Associate of Arts or Associate of Science degrees. It can be used to meet elective credit toward these degrees.) Prerequisites: MAT-062 with a grade of at least C- or equivalent or COMPASS Algebra score of 20 or higher or ACT Math score of 20-21 or math faculty approval.

MAT-110 Math for Liberal Arts

Lec. 3 Lab. 0 Credit 3

Math for Liberal Arts is a survey course for students who have little background in mathematics. Topics include survey of sets, numbers, algebra, geometry, probability, and statistics. This course is not intended for Mathematics and Science majors. Prerequisites: MAT-062 with a grade of at least C- or equivalent or COMPASS Algebra score of 20 or higher or ACT Math score of 20-21 or math faculty approval.

MAT-112 Math for Elementary Teachers I

Lec. 3 Lab. 0 Credit 3

Mathematics for Elementary Teachers is a first mathematics course for students who want to pursue a major in elementary education. The course will use a variety of problem-solving skills while exploring many aspects of the real number system. Algebraic and concrete mathematical models will be incorporated in strategies used to solve problems. Prerequisite: One year of algebra.

MAT-113 Math for Elementary Teachers II

Lec. 3 Lab. 0 Credit 3

Mathematics for Elementary Teachers II is a second mathematics course for students who want to pursue a major in elementary education. The course will use a variety of problem-solving skills while exploring the many aspects of geometry and data analysis. Applications using concrete and pictorial models will be incorporated in strategies used to solve problems. Prerequisite: C- or above in MAT-112.

MAT-127 College Algebra and Trigonometry

Lec. 5 Lab. 0 Credit 5

The study of rational, exponential, logarithmic, and polynomial functions and relations, their graphs and related equalities. The study of the circular functions, graphs, and applications. Vectors, trigonometric properties, equations, identities and complex numbers are treated extensively. Prerequisite: MAT-102 with a grade of at least C- or equivalent or COMPASS Algebra score of 73-92 or ACT Math score of at least 25 or math faculty approval.

MAT-128 Precalculus

Lec. 4 Lab. 0 Credit 4

This course encompasses an in-depth review of mathematical concepts necessary in preparing students for the calculus. Problem solving is emphasized. Topics from algebra, trigonometry, and analytic geometry essential in the calculus are covered in this course. Topics include: properties of lines and quadratics, absolute value equations and inequalities, functions and their graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, analytic trigonometry, vectors, conics in both the rectangular and polar coordinate systems, parametric equations, systems of equations and inequalities, matrices, three-dimensional coordinate geometry, partial fractions, sequences and mathematical induction. Prerequisite: MAT-127 or equivalent.

MAT-140 Finite Math

Lec. 3 Lab. 0 Credit 3

This course is designed for Business and Social Science majors. It introduces them to matrix solutions, to linear equations, linear programming, matrix algebra, mathematics of finance, computer applications, value of slope of a straight line, and exponential/logarithmic functions. Application problems are taken from Business Management and Social Science areas. Prerequisite: 3 years of high school college prep math AND an ACT score of at least 25 or COMPASS Algebra score of 73-92 or MAT-127 (or college algebra) with a grade of at least C-.

MAT-149 Linear Algebra

Lec. 3 Lab. 0 Credit 3

This course will include the study of systems of equations, matrices, determinants, vector spaces, inner product spaces, linear transformations, eigenvalues and eigenvectors. Applications relating to these topics will be investigated. Prerequisite: MAT-216 or math faculty approval.

MAT-156 Statistics

Lec. 3 Lab. 0 Credit 3

This course is an applied course in statistics, designed to introduce students to some of the concepts, symbols, procedures, and vocabulary used in the field of statistics. Topics covered in this course include: organizing and graphing data, descriptive statistics, probability, various distributions, the sampling distribution of the mean, estimating a population mean, confidence intervals, inferential statistics (hypothesis testing), comparing two population parameters, analysis of variance, correlation, simple linear and multiple regression, contingency tables, and nonparametric statistics (time permitting). Prerequisite: MAT-102 or COMPASS Algebra score of 55 (or higher) or ACT score of 22 or above or math faculty approval.

MAT-165 Business Calculus

Lec. 3 Lab. 0 Credit 3

This course is intended for Business Management and Social Science majors. It introduces them to theorems for finding derivatives, applications to maximum and minimum, related rates, graphing of functions, marginal cost and revenue, supply and demand, partial derivatives, antiderivatives, definite integral, tests for increasing and decreasing functions, concavity, maximum and minimum of functions of more than one variable, area under a curve, seperable differential equations, growth and decay, and applications of the above to Business Management and Social Sciences. Prerequisites: 3 years of high school college prep math AND an ACT score of at least 25 of COMPASS Algebra score of 73-92) OR MAT-127 (or college algebra) with a grade of at least C-.

MAT-170 Calculus for the Life Sciences

Lec. 4 Lab. 0 Credit 4

This course is designed primarily for students who are (or will be) pursuing degrees in the life sciences, such as biology, medicine, pharmacy, or other related biomedical areas. This course exposes students to numerous differentiation and integration techniques, including some techniques for solving differential equations, with an emphasis on applications to the life sciences, (If time permits, students will be introduced to additional calculus concepts and techniques.) This course is designed primarily for life science students who need only one terminal calculus course. For students who need a more comprehensive or traditional calculus sequence, it is recommended that MAT-210 and MAT-216 be taken. Prerequisite: MAT-127 and/or MAT-128 or equivalent.

MAT-210 Calculus I

Lec. 4 Lab. 0 Credit 4

This course includes the study of limits and continuity, derivatives and differentiation, differentials, maximum and minimum function values and techniques of graphing, applications, and an introduction to integration. Prerequisite: MAT-127 or MAT-128 with a grade of at least C- or COMPASS Algebra score of 93-99 (or higher) or ACT score of 29 or above or math faculty approval.

MAT-216 Calculus II

Lec. 4 Lab. 0 Credit 4

The study of integration, techniques of integration, applications and accompanying mathematical structure. Prerequisite: MAT-210 or math faculty approval.

MAT-219 Calculus III

Lec. 4 Lab. 0 Credit 4

Multivariable calculus is to cover topics from the functions of several variable and vector valued functions. The course includes directional derivative, gradients, the curl, the divergence, multiple integrals over regions and volumes. Line and surface integrals will be covered. Double integral in the polar coordinates will be done. Prerequisite: MAT-216 or math faculty approval.

MAT-227 Differential Equations with Laplace

Lec. 4 Lab. 0 Credit 4

The study of elementary theory and applications of ordinary differential equations. Course includes first and second order differential equations. Prerequisite: MAT-216 or math faculty approval.

MAT-702 Introduction to Math Applications

Lec. 2 Lab. 2 Credit 3

This course is offered to students who can profit from an applied course in mathematics and will prepare students who need to develop skills for MAT-704. It is designed as an introductory level algebra course recommended for students with one year of high school algebra. Emphasis is on the building of basic algebra skills and the application of these mathematical techniques. The course studies the relationship of geometry and algebra as they apply to various fields. This course will also cover whole numbers/decimals, integers, fractions/percents, direct measurement, basic geometric concepts/relationships, linear equations, and right-triangle trigonometry. Prerequisite: MAT-052 or Pre-Algebra COMPASS score of 50-99 or ACT Math score of 18-19 or math faculty approval.

MAT-704 Math Applications

Lec. 5 Lab. 0 Credit 5

This course is offered to technical and other students who can profit from an applied course in mathematics. It is designed as an intermediate level algebra course recommended for students with at least one year of high school algebra. Emphasis is on the application of mathematical techniques. Students will study the relationship of geometry and algebra as they apply to electronics and mechanical technology problems. Algebraic manipulation of formulas, equations, radicals, exponents, logarithms, polynomials, rational expressions, systems of linear equations, plane trigonometry, vectors, and graphs of equations are studied. Prerequisite: MAT-062 or MAT-702 or COMPASS Algebra score of 20 or higher or ACT Math score of 20-21 or math faculty approval.

MAT-726 Machine Shop Mathematics I

Lec. 4 Lab. 0 Credit 4

Review of basic arithmetic operations, practical algebra, geometry, and trigonometry. The application of these math functions for the machine shop will be stressed.

MAT-730 Machine Shop Mathematics II

Lec. 3 Lab. 0 Credit 3

Oblique triangle laws are introduced with emphasis placed on practical and more difficult shop related problems. Prerequisite: MAT-726.

MAT-772 Applied Math

Lec. 3 Lab. 0 Credit 3

This course is designed to acquaint the student with the mathematics necessary to function within technical careers and to become a more aware consumer. Topics include: review of arithmetic operations; measurement; metric system; fundamentals of geometry; introductory statistics and probability; graphs; and elementary algebra concepts with emphasis on applications.

MFG Manufacturing

MFG-105 Machine Shop Measuring
Lec. 1 Lab. 4 Credit 3

This course covers a variety of precision measurement devices that are used in manufacturing processes. Emphasis will be placed on how the student will accurately use these devices in the laboratory situation.

MFG-165 Engineering Materials
Lec. 3 Lab. 0 Credit 3

A study of materials, their production, properties and uses in engineering design. Ferrous and nonferrous metals, polymeric and ceramic materials are covered. Methods of selecting acceptable materials based on their costs, availability and properties are discussed. Pre or Corequisites: PHY-106 or PHY-160 and MFG-206 or MFG-244 or MFG-212.

MFG-186 Plant Safety
Lec. 1 Lab. 0 Credit 1

This course discusses safety in a manufacturing workplace. Students will develop skills to work safely in an Industrial environment. Students will learn basic safety, electrical safety, chemical health hazards, forklift safety and machine tool safety.

MFG-212 Basic Machine Theory
Lec. 1 Lab. 4 Credit 3

Introduction to basic machining processes involving drill press, lathe, mills, and grinders. Classes will cover safety, tooling, metal removal methods, and different various pieces of equipment.

MFG-520 Predictive Maintenance
Lec. 1 Lab. 2 Credit 2

This course discusses the principles of machinery oil analysis, thermography, ultrasonics and machine vibration. Students will learn how to properly diagnose an equipment failure. Students will also learn steps to prevent equipment failures and keep equipment running efficiently.

MFG-546 Statics/Strength of Materials
Lec. 4 Lab. 2 Credit 5

Study of the internal stresses and deformation of elastic bodies resulting from the action of external forces. Emphasis is given to analysis of simple and combined stresses and the properties of materials to meet the functional requirements in design. Prerequisite: MAT-704 or equivalent, PHY-106 or PHY-160, or permission of instructor.

MFG-805 Teamwork and Project Management
Lec. 2 Lab. 2 Clinical 0 Credit 3

This capstone course provides a structured approach to problem solving by interdisciplinary teams. Emphasis is placed on the techniques and methodologies of project management and interpersonal relationships with the team. Professional ethical issues are presented in examples. Prerequisites: CAD-172, completion of 40 semester hours within technology programs.

MFG-932 Internship
Lec. 0 Lab. 0 OJT 16 Credit 4

Designed to provide students with practical, supervised work experience in their chosen manufacturing field prior to the completion of the AAS degree. The internship is approved and supervised by the program faculty and should be taken during or after the student's last semester of the AAS degree. Prerequisite: Completion of 53 Welding Program credits.

MGT Management

MGT-101 Principles of Management
Lec. 3 Lab. 0 Credit 3

This course provides an intensive examination of the basic fundamentals of organization and management underlying the solution to management problems.

MGT-130 Principles of Supervision
Lec. 3 Lab. 0 Credit 3

This course provides an overview of the principles involved in supervision, including planning, organizing, motivating, staffing and appraising. Also covered are interpersonal skills including communication, decision making, conflict and team work.

MGT-170 Human Resources Management
Lec. 3 Lab. 0 Credit 3

This course provides an overview of the principles involved in human resources management including strategy, legal environment, EEO, and job analysis and job design. Also covered are acquiring human resources, training and developing employees, compensation issues, and labor relations.

MKT Marketing

MKT-110 Principles of Marketing
Lec. 3 Lab. 0 Credit 3

This introductory class uses the managerial approach to study a market-directed system of marketing. The emphasis is on market strategy planning from the viewpoint of the marketing manager. The "4 P's"—product, place, price, and promotion—provide the structure underlying the organization of this course.

MKT-140 Principles of Selling
Lec. 3 Lab. 0 Credit 3

Fundamental terminology, principles and techniques of direct and indirect selling as well as promotional methods. Emphasis on human behavior and the motivation, rewards, duties, and qualifications of a person in sales. This course is designed for an individual preparing for initial or improved employment.

MKT-150 Principles of Advertising
Lec. 3 Lab. 0 Credit 3

A detailed look into the study and practice of advertising with special emphasis placed on allowing students to plan and think more strategically, evaluate alternative courses of action, develop more creative solutions to problems, analyze why people behave the way they do, express themselves and their ideas, and persuade others to their point of view by using advertising terms, concepts, and procedures. Prerequisite: MKT-110.

MKT-154 Visual Merchandising
Lec 2 Lab. 0 Credit 2

A study of the fundamentals of retail display, including window and point-of-purchase display. Includes the relationship of display to the total promotional program, the role of the display manager, elements of display design, merchandise selection, construction materials, and the actual display construction. Prerequisite: MKT-110.

MKT-160 Principles of Retailing

Lec. 3 Lab. 0 Credit 3

Retailing organization, buying, selling, promotion, inventory control, pricing, location and layout.

MMS Mass Media Studies

MMS-111 Video Production

Lec. 1 Lab. 4 Credit 3

Video Production introduces video equipment operation, techniques in video production, and specific production skills, including proper use of the non-linear editing systems, microphones, cameras, lighting equipment and tripods. For approximately 50 percent of the course, students experience hands-on application of material covered in lecture. Students produce both short and long format programs.

MTR Medical Transcription

MTR-112 Medical Transcription

Lec. 1 Lab. 2 Credit 2

This course is designed for the student desiring employment in a private physician's office, clinic, or hospital or to be self-employed and free-lance. In addition to developing proficiency in preparing a variety of medical reports, the student will learn how to compose letters, basic English rules and proper grammar usage, accurate spelling, proper punctuation, word division, and references usage. Audio tapes of actual medical dictation and office simulation augment the text. Prerequisites: MAP-105 and HSC-114.

MTR-140 Advanced Medical Transcription

Lec. 1 Lab. 4 Credit 3

This course is designed primarily for advanced medical transcription students. It offers realistic and challenging dictation in eighteen specialties and subspecialties from medical professionals of various ethnic groups. Emphasis is placed on accuracy of transcription using in-depth proofreading skills. Critical thinking is emphasized using problem solving scenarios from clinical settings. Students will practice transcription skills in hospital and clinic settings during the last two weeks of the semester. Prerequisites: HSC-114, MAP-105, MTR-112, BIO-163.

MUA Music - Applied

Applied Music

Private instrumental and vocal instruction is available through SCC's music department. Credit is granted for the specific area studied, based on the amount of work, time and content level as specified by the instructor. Content level is based on a student's background and interest. A maximum of 8 semester hours may be earned, with content changing each time. A "juried" performance may be required at the end of each semester.

MUA-101 Applied Voice

Lec. 1 Lab. 0 Credit 1

MUA-104 Applied Voice

Lec. 2 Lab. 0 Credit 2

MUA-120 Applied Piano

Lec. 1 Lab. 0 Credit 1

MUA-121 Applied Piano

Lec. 2 Lab. 0 Credit 2

MUA-122 Applied Organ

Lec. 1 Lab. 0 0 Credit 1

MUA-123 Applied Organ

Lec. 2 Lab. 0 Credit 2

MUA-124 Applied Guitar

Lec. 1 Lab. 0 Credit 1

MUA-125 Applied Guitar

Lec. 2 Lab. 0 Credit 2

MUA-126 Applied Strings

Lec. 1 Lab. 0 Credit 1

MUA-127 Applied Strings

Lec. 2 Lab. 0 Credit 2

MUA-143 Applied Brass

Lec. 1 Lab. 0 Credit 1

MUA-146 Applied Brass

Lec. 2 Lab. 0 Credit 2

MUA-170 Applied Woodwinds

Lec. 1 Lab. 0 Credit 1

MUA-173 Applied Woodwinds

Lec. 2 Lab. 0 Credit 2

MUA-180 Applied Percussion

Lec. 1 Lab. 0 Credit 1

MUA-183 Applied Percussion

Lec. 2 Lab. 0 Credit 2

MUA-108 Italian/Latin/English Diction for Singers

Lec. 2 Lab. 0 Credit 2

Italian/Latin/English is the first of a two-semester two-credit hour course for singers. The course is required for vocal majors at Southeastern Community College and is also open to interested singers of all ages. Students will be introduced to the International Phonetic Alphabet and its application in fostering correct pronunciation when singing. Application of concepts through singing and written exams is an aspect of the course.

MUA-109 German/French Diction for Singers

Lec. 2 Lab. 0 Credit 2

German/French Diction is the second of a two-semester course for singers. All aspects of MUA-108 are similar with the exception of language. Like MUA-108, singing and written exams make up the assessment of the success of the student.

MUS General Music

MUS-100 Music Appreciation

Lec. 3 Lab. 0 Credit 3

This is a general overview course which includes basic music concepts and elements of the art, a general historical look, and critical approach. Music as it has evolved from the beginning to present-day is studied. This involves listening to musical examples.

MUS-102 Music Fundamentals

Lec. 3 Lab. 0 Credit 3

This course is designed for students who wish to learn how to read music for either further study as a major or for personal reasons. It is open to all students and is recommended for elementary education majors.

MUS-120 Music Theory I

Lec. 3 Lab. 0 Credit 3

This course is offered to students who wish to increase their musicianship through better understanding of the materials and structure of music and to those who plan to major or minor in music. The general purpose of the course is to help the student gain the necessary basic concepts of music fundamentals and harmony which will support more advanced theoretical instruction. Prerequisite: MUS-102 or permission of instructor. Corequisite: MUS-135.

MUS-121 Music Theory II

Lec. 3 Lab. 0 Credit 3

This course is a continuation of Music Theory I. Requires attendance at music programs as specified by the music faculty. Prerequisite: MUS-120. Corequisite: MUS-136.

MUS-135 Music Theory Lab I

Lec. 0 Lab. 2 Credit 1

This course is for development of skills in reading and hearing pitch, rhythm, melodic and harmonic sounds of music. The course is based on the principal that a qualified musician must develop reading, singing and notation skills in order to achieve acuity of aural perception and make this acuity effective in the use of these skills. Corequisite: MUS-120.

MUS-136 Music Theory Lab II

Lec. 0 Lab. 2 Credit 1

A continuation of MUS-135. Prerequisite: MUS-135. Corequisite: MUS-121.

MUS-140 Concert Choir

Lec. 0 Lab. 2 Credit 1

Open to all college students who enjoy the aesthetic experience of choral singing. The choir is a performing group which meets regularly and performs a wide variety of choral literature. The choir presents programs throughout the college area and presents (or preforms) a concert at the end of each semester. Maximum of 4 semester hours may be earned. Content changes each semester.

MUS-150 Chamber Ensemble

Lec. 0 Lab. 2 Credit 1

Chamber chorale is a select ensemble that numbers between 12 and 20 and is the traveling group representing the college. Eligibility: should have advanced musical ability and a strong desire to perform. Membership in concert choir is required before auditioning for chamber chorale. Final membership and number are determined by the director. A maximum of 4 semester hours may be earned. Content changes each semester. Corequisite: MUS-140.

MUS-162 Instrumental Ensembles

Lec. 0 Lab. 2 Credit 1

This course is open to students who seek creative expression through ensemble performance. Credit is granted to those who meet requirements for rehearsals and performances through participation in the Southeast Iowa Symphony Orchestra, the Southeast Iowa Concert Band or an established instrumental ensemble at Southeastern Community College. A maximum of 4 semester hours may be earned. Content changes each semester.

MUS-204 History of Rock and Roll

Lec. 3 Lab. 0 Credit 3

This introductory course traces the history of rock and roll from its inception as a fusion of African-American and white music traditions amidst the youth culture of post WWII era in America to its present state as an internationally known musical style. This course will develop listening skills and incorporate extensive exposure to recorded music.

MUS-220 Music Theory III

Lec. 3 Lab. 0 Credit 3

This course is to acquaint the students with the standard forms of tonal music and equip them with the necessary techniques in form and analysis of music. It is designed to help the students approach a piece of music unencumbered by a prior notion as to what characteristics it should not have and to strengthen their ability to discover for themselves the structure of music. Prerequisite: MUS-121. Corequisite: MUS-235.

MUS-221 Music Theory IV

Lec. 3 Lab. 0 Credit 3

A continuation of MUS-220. Prerequisite: MUS-220. Corequisite: MUS-236.

MUS-235 Music Theory Lab III

Lec. 0 Lab. 2 Credit 1

A continuation of MUS-136. Prerequisite: MUS-136. Corequisite: MUS-220.

MUS-236 Music Theory Lab IV

Lec. 0 Lab. 2 Credit 1

A continuation of MUS-235. Prerequisite: MUS-235. Corequisite: MUS-221.

NET Computer Networking

NET-118 Basic Computer Networking/ Hardware

Lec. 2 Lab. 2 Credit 3

This course is an introductory course about basic computer networking concepts and computer hardware. It will provide a foundation for anyone needing basic computer knowledge. It covers network and hardware terminology, hardware devices, network protocols, topologies and connections. The student will get hands-on experience adding and replacing hardware and network components.

NET-122 Computer Hardware Basics

Lec. 2 Lab. 2 Credit 3

This course is designed to improve the student's understanding of computer hardware and peripherals. The student shall gain an ability to determine the source of elementary equipment problems and the ability to isolate problems relating to software and hardware. Through hands-on labs, the student will obtain and demonstrate knowledge of installation, configuration, and repair.

NET-142 Network Essentials

Lec. 3 Lab. 0 Credit 3

This course is designed to provide students with the background necessary to understand the local area networking information in Microsoft courses on workstations and networking. This course provides students with the information needed to build a foundation in current networking technology for local area networks, wide area networks and the Internet. Corequisite: CSC-110.

NET-153 Advanced Networking

Lec. 2 Lab. 4 Credit 4

This course will allow the student to take knowledge from previous networking courses and apply it in a hands-on environment. The Microsoft network operating system will be emphasized. The student will also receive exposure to advanced technologies, such as switch/router configuration. Other technologies may include: computer forensics, computer ethics and cryptography. Students will also prepare and take CIW Network Technology Associate Certification. Prerequisites: NET-142, NET-303, NET-314. Corequisites: NET-656.

NET-303 Windows Workstation Operating Systems

Lec. 2 Lab. 2 Credit 3

This course covers both the Windows Workstation operating system and setting up a peer-to-peer networking using Windows Workstation. Topics may include manipulating the Workstation desktop, files and folders, changing system settings with Control Panel, and using a workstation as a server. Students will install the software and set up a network administrator's workstation and printers. Hands-on troubleshooting will be included.

NET-309 Virtual Machines

Lec. 1 Lab. 2 Credit 2

This course will cover the concepts of virtual machines and virtualization software. Topics will include installing and configuring virtualization software as well as running multiple operating systems through virtual machines. Prerequisite or Corequisite: NET-303.

NET-314 Windows Server

Lec.2 Lab. 4 Credit 4

Windows Server covers the issues of setting up a client/server environment using Windows Server software. The course begins with file server basics. Determining the cost of a network and choosing appropriate network hardware are included. Students will receive hands-on experience in preparing client computers, installing Windows Server software and setting up a complete client/server environment. They will learn how to configure a domain environment with DNS, DHCP, and remote access. There will be hands-on troubleshooting in the labs. Prerequisite: NET-142 and NET-303. NET-303 may also be a Corequisite.

NET-442 Linux Operating System

Lec. 2 Lab. 2 Credit 3

This course will cover the essentials of installing, configuring, maintaining, administering and troubleshooting the Linux operating system.

NET-637 Network Intrusion Investigation

Lec. 2 Lab. 2 Credit 3

This course enables students to use penetration-testing tools and techniques that ethical hackers and security testers utilize to protect computer networks. Skills and techniques include foot printing, social engineering, port scanning, enumeration, and cryptography. This course incorporates a lab component in which students practice skills designed to secure network connections and prevent attacks. Prerequisites: NET-142, NET-314, NET-442, CIS-233.

NET-656 Microsoft Server Applications

Lec. 2 Lab. 2 Clinical 0 Credit 3

This course will provide the student with experience installing, configuring, maintaining, and administering Exchange, SQL Server and other server applications. Prerequisite: NET-314.

NET-820 Network Internship

Lec. 0 Lab. 0 OJT 15 Credit 3.7

This course is designed to provide the Network Administration & Cyber Security student with a practical experience in information technology prior to completion of the Associate of Applied Science degree. The internship is supervised by the program coordinator and should be taken during the student's last spring or fall semester on campus. Prerequisite: Fifty hours completed towards IT degree as a Network Administration & Cyber Security, including CIS-505.

NET-825 Internet/Web Internship

Lec. 0 Lab. 0 OJT 15 Credit 3.7

This course is designed to provide the Web Design and Administration student with a practical experience in information technology prior to completion of the Associate of Applied Science degree. The internship is supervised by the program coordinator and should be taken during the student's last spring or fall semester on campus. Prerequisite: Fifty hours completed towards IT degree as a Web Design and Administration, including CIS-505.

PEA Physical Education Activities

Physical Education Activities

Lec. 0 Lab. 2 Credit 1

Participation emphasizing physical conditioning, personal habits conducive to physical fitness, individual and team games and hygienic practices with a view toward carry-over values in future leisure time activities. A maximum of 4 semester hours may be earned in each PE course.

PEA-117 Physical Education Activity – Bowling

An additional equipment fee is charged for each student.

PEA-160 Physical Education Activity - Soccer

PEA-174 Physical Education Activity – *Tennis

PEA-176 Physical Education Activity - *Volleyball

PEA-187 Physical Education Activity – Weight Training

*Courses are scheduled for 5 weeks during the semester.

PEC Coaching/ Officiating

PEC-101 Introduction to Coaching

Lec. 3 Lab. Credit 3

Introduction to Coaching consists of a four-part course that includes coaching theory, sports medicine, sports psychology, and sports physiology. It leads to coaching authorization for the State of Iowa as a junior high or senior high coach.

PEC-127 Care and Prevention of Athletic Injuries

Lec. 2 Lab. 0 Credit 2

This course will address causes and preventative measures related to specific injuries commonly found in both day-to-day living and athletics. This course will also provide practical experience dealing with treatment for such injuries.

PEC-148 Theory of Coaching Basketball
Lec. 2 Lab. 0 Credit 2

A study of the methods and techniques of coaching basketball. Discussion of pre-season, in-season and post-season program; practice organization; scouting; and game preparation.

PEC-185 Sports Officiating, Basketball, Volleyball
Lec. 2 Lab. 0 Credit 2

An integration of rules, knowledge and floor responsibilities through actual participation in basketball and volleyball officiating. Students are required to provide designated equipment for officiating purposes.

PEH General Physical Ed and Health

PEH-102 Health
Lec. 3 Lab. 0 Credit 3

A survey of individual problems and community health problems. Aspects of mental illnesses; communicable, infectious, congenital, degenerative and vitamin deficiency diseases; hormone imbalance and harmful effects of narcotic drugs and alcohol are stressed. Measures involving the preventing, controlling and promoting of better mental health and physical health in general are emphasized. Designed to stimulate the formation of desirable attitudes toward the health of the individual and the community.

PEH-161 Introduction to Physical Education
Lec. 2 Lab. 0 Credit 2

Orientation and exploration in the physical education field, career opportunities, responsibilities to the profession, ethical sports practices, historical background and social forces that act upon organized as well as informal sports.

PEV Intercollegiate Physical Education

Varsity Sports Participation
Lec. 0 Lab. Arr. 0 Credit 1

A course designed to give credit for knowledge and skills gained through varsity sports participation. Maximum of 4 semester hours may be earned.

PEV-115 Varsity Baseball
PEV-121 Varsity Basketball, Men
PEV-122 Varsity Basketball, Women
PEV-140 Varsity Golf
PEV-160 Varsity Softball
PEV-170 Varsity Volleyball

PEV-190 Varsity Spirit Squad
Lec. 0 Lab. Arr. Credit 1

A course designed to give credit for knowledge and skills gained through varsity cheerleading participation. Maximum of 4 semester hours may be earned.

PEV-195 Sports Management
Lec. 0 Lab. 0 Clinical 4 Credit 1

This course is designed to provide practical experience in various operations of an athletic program. Topics to be covered include, but may not be limited to: event and facility management, promotions and marketing, eligibility and compliance, budgeting, and public relations. Maximum of 2 semester hours may be earned. Prerequisite: permission of instructor.

PHI Philosophy

PHI-101 Introduction to Philosophy
Lec. 3 Lab. 0 Credit 3

A topical introduction to the major areas of philosophical inquiry.

PHI-105 Introduction to Ethics
Lec. 3 Lab. 0 Credit 3

A survey of the major ethical emphases from ancient to modern times with pertinent reading in the works of representative philosophers.

PHI-110 Introduction to Logic
Lec. 3 Lab. 0 Credit 3

This course is designed to give students an overview of the study of logic including informal and formal logic and to increase their ability to use logical statements and arguments in academic and nonacademic applications.

PHI-122 Philosophy of Contemporary Issues
Lec. 3 Lab. 0 Credit 3

An introductory course treating the philosophical nature of contemporary social, moral, legal, political, and religious issues and problems. Examples of such issues and problems would be abortion, capital punishment, euthanasia, war, terrorism, justice, discrimination and sexual morality.

PHS Physical Science

PHS-120 Exploring Physical Science
Lec. 3 Lab. 2 Credit 4

This is combined lecture and lab course where lab/lecture are directly integrated. Topics covered come from physics, astronomy, chemistry, geology, and meteorology. Course intended for non-science majors. Prospective elementary and middle school teachers may find this course especially helpful. MAT-062 or High School Algebra recommended.

PHS-151 Introduction to Astronomy
Lec. 2 Lab. 2 Credit 3

A survey of astronomy including historical considerations, the solar system, the universe and several topics. Topics may include the laws, the methods, and current research. Each planet will be studied as well as major stars and galaxies. Special topics include: cosmology, cosmogony, nova, pulsars, quasars, relativity, space travel, black holes, and other space mysteries. Lab to include: experiments, observations, slides and movies.

PHS-165 Introduction to Meteorology
Lec. 3 Lab. 0 Credit 3

Introduction to atmospheric sciences and meteorology. Includes physical elements and process of weather, climatic types and regions, forecasting and associated activity.

PHS-185 Introduction to Earth Science

Lec. 3 Lab. 0 Credit 3

An introduction to geologic processes that have generated and continue to alter the surface of the earth. Covers: major types of rocks and the rock cycle; rock deformation, weathering, transport and deposition by fluid agents; plate tectonics, volcanoes, earthquakes, orogeny; absolute and relative time and the geologic column. Includes segment on the history of geology.

PHY Physics

PHY-106 Survey of Physics

Lec. 3 Lab. 2 Credit 4

This class is designed as an introduction to the basic concepts of physics. Measurement, the scientific method, motion, forces, work and energy, simple machines, temperature and heat plus electricity and magnetism will be covered. Lab will be an integral part with activities augmenting the lecture concepts.

PHY-160 General Physics I

Lec. 4 Lab. 2 Credit 5

This course is designed to provide a working knowledge of physics for those who need physics but do not need the rigor of a calculus-based physics course. The topics covered will include motion, force, energy, work, power, torque, linear momentum, rotational motion, angular momentum and selected topics from thermodynamics. The conservation laws will be stressed. Topics in modern physics are covered as time permits. Solving practical problems will be a major emphasis. Prerequisite: Student must be familiar with algebra and simple trigonometry.

PHY-161 General Physics II

Lec. 4 Lab. 2 Credit 5

This course is a continuation of General Physics I. The major topics to be covered will include selected topics from thermodynamics, vibrations, wave motion, electricity, and magnetism. Topics in modern physics are covered as time permits. Solving practical problems will be a major emphasis. Prerequisite: PHY-160.

PHY-212 Classical Physics I

Lec. 4 Lab. 2 Credit 5

College Physics introduces the students to the classical topics of motion in one, two and three dimensions (kinematics and dynamics), gravitation, work and energy, relativistic dynamics, rotational and oscillatory motion and thermodynamics. This physics course depends very much on the calculus of reals and vector integral calculus. Pre or Corequisite: MAT-210.

PHY-222 Classical Physics II

Lec. 4 Lab. 2 Credit 5

College Physics continues in the second semester with emphasis on the theory of electricity and magnetism. The concept of a field is applied to the electrostatic charge. The laws of Coulomb and Gauss are to be developed and applied to various types of charge distribution. Electric current and magnetic force are to be discussed in connection with their application to electromagnetic induction. Prerequisite: PHY-212.

PNN Practical Nursing

PNN-160 Introduction to Nursing Practice

Lec. 2 Lab. 0 Credit 2

This course provides the student with an introduction to nursing concepts and principles. From a historical perspective, the student will explore the roles and challenges of the nurse in the health care continuum. The curriculum strand of the nursing process is introduced and serves as the foundation for the development of critical thinking skills. Other curriculum strands introduced include communication, stress and adaptation, wellness, professional accountability, information technology, time management and priority setting. Prerequisite: Certification in Iowa CNA 75 clock hrs. Corequisite: PNN-220.

PNN-220 Pharmacology for Nursing I

Lec. 2 Lab. 0 Credit 2

This course introduces the student to the basics of pharmacology. Principles of drug administration, including dosage calculation and routes and techniques of administration are presented. Legal/ethical considerations, as related to drug therapy, are discussed. An overview of drug classifications, drug actions, common adverse reactions, and nursing interventions are included. Emphasis is placed on nursing responsibilities in drug therapy, including safe administration of all drugs. Corequisite: PNN-160.

PNN-311 PN Issues and Trends

Lec. 1 Lab. 0 Credit 1

This course is an overview of the role of the licensed practical nurse. Ethical and legal responsibilities of the nurse are identified. Levels of practice, licensure, career opportunities, and job-seeking skills are addressed. Opportunities for professional growth are explored. Prerequisite: PNN-534. Corequisite: BIO-186.

PNN-534 Medical-Surgical Nursing I

Lec. 8 Lab. 1 Clinical 12 Credit 12.5

This course builds on concepts and strands previously presented in the curriculum. A systematic approach is utilized in providing nursing care to individuals across the lifespan (pediatrics, adult and geriatrics). The course emphasizes selected common and chronic alterations in health. The curriculum strands that are introduced include psychosocial, cultural and spiritual concepts, nutrition, safety and infection control. An opportunity is provided for students to apply theoretical knowledge, to utilize the nursing process, and to practice nursing techniques in clinical settings. Prerequisites: PNN-160, PNN-220 and BIO-177.

PNN-535 Medical-Surgical Nursing II

Lec. 8 Lab. 0 Clinical 12 Credit 12

This course continues to incorporate concepts and strands previously presented in the curriculum. A systematic approach is utilized in providing nursing care to individuals and families across the lifespan (pediatrics, adult and geriatrics). This course emphasizes selected common and chronic alterations in health and includes essential content related to maternity care. An opportunity is provided for students to apply theoretical knowledge, to utilize the nursing process, and to practice nursing techniques in clinical settings. Prerequisites: PNN-534. Corequisite: PNN-311.

POL Political Science

POL-110 Introduction to Political Science

Lec. 3 Lab. 0 Credit 3

An introduction to the field of political science by illustrating the kind of contemporary issues political scientists deal with, the diversity of approaches they make and the significant results they hope to achieve. It will also acquaint students with the complex and vitally important subject of contemporary government and politics.

POL-111 American National Government

Lec. 3 Lab. 0 Credit 3

A survey of the American federal system of government which includes a description and analysis of interest groups, political parties, public opinion, the presidency, the Congress, the court system and foreign policy making.

POL-112 American State and Local Government

Lec. 3 Lab. 0 Credit 3

A survey of state and local government in the United States which includes an analysis of state constitutions, state and local legislative, executive and judicial systems, rural and urban problems and their possible political solutions.

PSY Psychology

PSY-102 Human and Work Relations

Lec. 3 Lab. 0 Credit 3

This is a course that includes the understanding of the applications of psychological principles, theory, and research related to the work setting.

PSY-111 Introduction to Psychology

Lec. 3 Lab. 0 Credit 3

A basic course in the understanding of behavior, designed to give the student a scientific background in the fundamental problems and techniques covered in the field of psychology.

PSY-121 Developmental Psychology

Lec. 3 Lab. 0 Credit 3

A systematic study of life-span development. Individual differences in behavior as well as cultural norms are considered in relation to heredity and environment.

PSY-211 Psychology of Adjustment

Lec. 3 Lab. 0 Credit 3

A study of the adjusting/coping behavior of the individual in various aspects of life situations. Prerequisite: PSY-111.

PSY-226 Psychology of Aging

Lec. 3 Lab. 0 Credit 3

This course will examine the physical, cognitive, social, and psychological changes that occur across the adult years and the factors influencing development in each area. Individual differences in the aging process will be emphasized with attention to the factors contributing to individual differences and the relevance of individual differences in addressing aging issues. The influence of society and societal attitudes toward older adults and the aging process will also be addressed. Additional learning opportunities will include interactions with older adults in various situations including those in nursing homes, assisted living homes, retirement homes, and living independently in the community.

PSY-227 Introduction to Gerontology

Lec. 3 Lab. 0 Credit 3

This course will introduce students to the field of gerontology and to the role of society and members of society in addressing aging-related issues. The course will address a number of topics including care of the elderly, living arrangements among older adults, mental health issues in old age, public policy related to aging, the economic and social impact of an aging society, the history of ageism in the United States, and more. Students will also conduct an analysis of the local community with respect to community services, attitudes, and/or practices geared toward older adults and their families.

PSY-228 Death and Dying

Lec. 3 Lab. 0 Credit 3

This course will introduce students to the study of death and dying and the cultural, social, biological, and psychological aspects of death and dying. Topics to be covered include the reality and definition of death, the grief process, care of the dying, cultural customs related to death and dying, views and attitudes toward death and dying, and the scientific, legal, and ethical issues surrounding death and dying. Exploration of one's own views and attitudes concerning death and dying will be encouraged. In addition, opportunities to visit death-related industries such as funeral homes and cemeteries and to interact with professionals in the field such as hospice workers, grief counselors, and funeral directors will be provided.

PSY-241 Abnormal Psychology

Lec. 3 Lab. 0 Credit 3

A survey of the history of mental illness including a study of normal and abnormal behavior as related to various cultures. Personality development, individual adjustment, and description of the various clinical entities and their relevance to present day life will be covered. Character disorders and personality structures which cause maladjustment are reviewed. A review of the theories of personality is included. Prerequisite: PSY-111.

PSY-251 Social Psychology

Lec. 3 Lab. 0 Credit 3

The study of interpersonal relations, social attitudes, group dynamics, intergroup relations, class and cultural influences in a psychological context. Prerequisite: PSY-111.

RCP Respiratory Care

RCP-230 Introduction to Respiratory Care

Lec. 3 Lab.4 Credit 5

This course is an introduction to Respiratory Care, including basic equipment and therapeutic modalities for entry-level practice. Emphasis will be placed on preparing the student for patient encounters and the skills needed to provide competent entry-level care in the clinical setting. Prerequisite: Admission to program.

RCP-330 Respiratory Care II

Lec. 4 Lab. 2 Credit 5

This course is a continuation of RCP-230 and will build on the equipment and therapeutic modalities essential to clinical practice. Major topics include electrocardiograms, airway management and airway clearance techniques, arterial blood gases, assessment of respiratory failure and methods of non-invasive ventilation. Prerequisites: BIO-163, RCP-230. Corequisites: RCP-350, RCP-751.

RCP-350 Pulmonary Pathology

Lec. 3 Lab. 0 Credit 3

This course presents an overview of acute and chronic diseases affecting the pulmonary system. Diagnosis, assessment, treatment and management of the disease will be discussed. Prerequisites: RCP-330, RCP-340.

RCP-440 Cardio/Pulmonary Diagnostics

Lec. 2 Lab. 0 Credit 2

This course will present various cardio-pulmonary diagnostic tests and the role of the respiratory care practitioner. Contents included: pulmonary function testing, cardiopulmonary exercise testing, specialized test regimens and quality assurance in the pulmonary function laboratory. Prerequisite: RCP-524, RCP-350.

RCP-450 Respiratory Care IV

Lec. 2.5 Lab. 1 Credit 3

This course will focus on advanced equipment and therapeutic modalities used in the practice of Respiratory Care. Major topics include ECGs, hemodynamic monitoring, cardiac pharmacology, polysomnography and pulmonary rehabilitation. Prerequisite: RCP-524. Corequisites: RCP-440 and RCP-620.

RCP-524 Respiratory Care III

Lec. 4.5 Lab. 1 Credit 5

This course introduces the concepts of mechanical ventilation used in the respiratory support of the critically ill patient, with emphasis on indications for ventilation, parameters monitored during ventilation, function, and clinical applications. Prerequisite: RCP-330. Corequisite: RCP-761

RCP-620 Neonatal/Pediatric Respiratory Care

Lec. 3 Lab. 4 Credit 5

This course will cover the assessment of the newborn and pediatric patient. Fetal circulation, congenital anomalies, respiratory disorders of the newborn, ventilation of the newborn, surfactant replacement, oxygen and aerosol therapy of the newborn and pediatric patient, as well as child development will be discussed. Prerequisite: RCP-524, RCP-350.

RCP-751 Respiratory Care Clinic I

Lec. 0 Lab. 0 Clinical 15 Credit 5

Learners are assigned to various clinical experiences within the hospital and homecare settings in order to apply principles and skills learned in RCP-330. Prerequisite: Satisfactory completion of RCP-230. Must be currently enrolled in or have satisfactorily passed RCP-330. Graded on a Pass/No Pass basis.

RCP-757 Respiratory Care Clinic II

Lec. 1 Lab. 0 Clinical 4.5 Credit 2.5

Learners are assigned to various clinical experiences within hospital and homecare setting in order to apply principles learned in the respiratory curriculum. Students will also be required to participate in clinical "grand rounds". Prerequisites: RCP-330, RCP-750. Corequisite: RCP-520.

RCP-761 Respiratory Care Clinic III

Lec. 0 Lab.0 Clinical 15 Credit 5

Learners are assigned to various clinical experiences within a hospital and homecare setting to apply principles learned in the respiratory curriculum. Prerequisite: Satisfactory completion of RCP-524, RCP-756. Must be currently enrolled in or have satisfactorily passed RCP-450. Graded on a Pass/No Pass basis.

RCP-766 Respiratory Care Clinic IV

Lec. 0 Lab.0 Clinical 21 Credit 7

Learners are assigned to various clinical experiences within a hospital and homecare setting to apply principles learned in the respiratory curriculum. Prerequisite: RCP-450, RCP-440, RCP-761 and RCP-620. Graded on a Pass/No Pass basis.

RCP-810 Respiratory Care Professional

Lec. 2 Lab. 0 Credit 2

The purpose of this course is to assist second year respiratory care students in preparing for autonomous professional practice. The Role of the Professional: duties to client, employer and public; professional responsibilities; involvement in continuing education and professional career development will be explored. Prerequisites: RCP-450, RCP-440, RCP-620 and RCP-761. Corequisites: RCP-766 and RCP-880.

RCP-880 Respiratory Care V

Lec. 4 Lab. 2 Credit 5

This course will involve discussions of patient case studies and modifications in therapy based on patient response. Students will learn how to make recommendations and interact with other health care team members to provide appropriate treatment. Mock CRTT and RRT simulations will be taken and discussed. Prerequisite: RCP-450, RCP-440, RCP-761 and RCP-620.

RDG Reading

RDG-033 Introduction to College Reading

Lec. 2 Lab. 2 Credit 3

This course is designed to further build reading skills, most specifically reading techniques to gain the most from college textbooks such as: applying, comparing, inferring, concluding and judging. Vocabulary skill building will also be stressed. Students will work on vocabulary at the appropriate level as determined by a pretest.

RDG-045 Keys to Reading

Lec. 2 Lab. 2 Credit 3

A beginning course designed to build basic reading skills: identifying topics and main ideas, identifying supporting details, making inferences and recognizing patterns in paragraphs. A pretest will determine the student's appropriate level for vocabulary skill building, and students will work on vocabulary development at the appropriate level.

REL Religion

REL-101 Survey of World Religions

Lec. 3 Lab. 0 Credit 3

A survey of the major religions of the eastern and western world. Each religion is placed in its historical context, and its major tenets are explored. This course includes a general understanding of the various religions studied, some specific insights into each religion's belief structures and discussion of the general function of religion in human experience.

SCI Science

SCI-006 Basic Science I

Lec. 0 Lab. 2 Credit 1

Basic Science I is designed for students interested in learning basic scientific facts. Emphasis is placed on the fundamentals and understanding of earth or life science. Specific topics will be selected based upon student needs. Credit earned in this course will not count toward the AA, AS, AAS degree science requirements.

SCI-007 Basic Science II

Lec. 0 Lab. 2 Credit 1

Basic Science II is a continuation of Basic Science I. Specific topics will be selected based upon student needs. Credit earned in this course will not count toward the AA, AS or AAS degree science requirements. Prerequisite: SCI-006.

SCI-115 Basic Electricity

Lec. 1 Lab. 2 Credit 2

An introduction to basic electricity and magnetism. A study of the relationship between voltage, current, and resistance. Power generation, power transfer and their applications. A basic understanding of the applied electrical circuits.

SCI-142 Criminalistics

Lec. 2 Lab. 2 Credit 3

General course in laboratory techniques. Photography, crime scene search, collection and preservation of evidence, fingerprints, firearms, arson, blood and stains, polygraph, questioned documents, voice prints, and other topics will be demonstrated or discussed. A practical introduction to the role of the natural sciences laboratory in crime detection and investigation.

SCI-922 Field Studies

Lec. 0-3 Lab. 0-6 Credit 1-3

Field tours to various biomes, museums, and science research facilities to enhance the study of scientific concepts. Collections and displays of scientific importance, diverse ecological conditions, and/or laboratory facilities of interest will be examined. Specific written credit and participation requirements are established in advance of the field study and according to the number of credit hours enrolled.

SCI-928 Independent Study

Credit 1-3

Individual study in a science area determined by consultation between the student and the department instructional staff. Study to be based on interest of student and capabilities of college facilities. Prerequisite: 12 hours of science work.

SDV Student Development

SDV-021 College Study Skills

Lec. 0 Lab. 2 Credit 1

College Study Skills will assist students in developing tools that are an integral part of the process of lifelong learning, focusing on challenges characteristic of the college setting. The following topics are explored in the process of becoming a master student: personal learning style, time management, strategies to improve memory, reading, note taking, test taking and critical thinking. Topics of relationships, health and career planning will also be covered. This course is accomplished independently in the SuCCess Center.

SDV-024 College Study Skills

Lec. 0 Lab. 4 Credit 2

College Study Skills will assist students in developing tools that are an integral part of the process of lifelong learning, focusing on challenges characteristic of the college setting. The following topics are explored in the process of becoming a master student: personal learning style, time management, strategies to improve memory, reading, note taking, test taking and critical thinking. Topics of relationships, health and career planning will also be covered. This course is accomplished independently in the SuCCess Center.

SDV-037 Spelling Improvement

Lec. 0 Lab. 2 Credit 1

A course designed to identify spelling problems of students and to assist them on an individual basis. Emphasis will be directed to: aural discrimination, structural rules related to dividing words into syllables, adding suffixes and prefixes to root words, spelling compound words, forming plurals, possessives and contractions, and spelling other derived forms.

SDV-038 Library Skills

Lec. 1 Lab. 0 Credit 1

A course designed to provide students with basic library skills. Students will learn how information is organized and structured; how to select information suitable to the student's needs; and how to access the needed information. Students will learn to use and find information in all formats including books, periodicals and various computerized formats.

SDV-104 College Overview: Preparation Experiences

Lec. 1 Lab. 0 Credit 1

This course is an overview of college study and reading skills with an emphasis on time management, principles of memory and learning, note taking, test-taking strategies, and general library/campus orientation.

SDV-123 (E.D.G.E.) Eight Dimensions to a Great Education

Lec. 2 Lab. 0 Credit 2

This credit seminar requires students to master the essential skills necessary for the academic rigor of college. These skills include, but are not limited to, reading, studying and test taking strategies, computer literacy, information literacy, and critical thinking. The seminar will also emphasize academic responsibility. Other SCC services will be introduced that can aid in a successful first-year college experience.

SDV-124 CLUE: Core Learning for Undergraduate Education

Lec. 1 Lab. 0 Credit 1

This workshop is designed for new students to improve skills essential for the academic rigor of college. Emphasis will be on study strategies and test taking skills, academic responsibility, and technological activities specific to college course work and effective research. Other SCC services will be introduced that can aid in a successful first-year college experience.

SDV-125 Workplace Readiness

Lec. 1 Lab. 0 Credit 1

This course is designed to assist students in obtaining and maintaining employment. Topics include making career decisions, using labor market information, developing a portfolio and demonstrating positive attitudes and behaviors in the workplace.

SDV-128 The College Experience - STEM

Lec. 1 Lab. 0 Credit 1

This class meets once a week for the entire semester to discuss issues important to college students, develop tools for academic success, act as a cohort support group, and provide insight into how to ensure success at college. Students will participate in visits to local businesses and nearby four year colleges. It is limited to students participating in SCC's 'Success in STEM' scholarship program.

SDV-130 Career Exploration

Lec. 1 Lab. 0 Credit 1

This course is designed for students in developing an awareness of and skillfulness in career development process emphasizing self-assessment, occupational exploration and job placement.

SDV-132 College Overview: Preparation Experiences/Anatomy

Lec. 1 Lab. 0 Credit 1

This course pairs with BIO-177 Human Anatomy to offer a learning environment to encourage and to inform pre-health care science students to become active learners independently as well as in a group setting. In sixteen sessions, learning strategies will be applied to the study of Human Anatomy. Corequisites: BIO-177.

SDV-133 College Overview: Preparation Experiences/Physiology

Lec. 1 Lab. 0 Credit 1

This course pairs with BIO-180 Human Physiology to offer a learning environment to encourage and to inform pre-health care science students to become active learners independently as well as in a group setting. In sixteen sessions, learning strategies will be applied to the study of Human Physiology. Prerequisites: BIO-177 and BIO-252. Corequisites: BIO-180.

SDV-134 S-STEM Cohort II

Lec. 1 Lab. 0 Credit 1

This class meets once a week for the entire semester to discuss issues important to college students pursuing careers or further study in the fields of engineering and technology, act as a cohort support group, and provide insight into how to ensure success at college and in the workplace. Students will also participate in visits to local businesses and nearby four-year colleges. It is limited to students participating in SCC's (Success in STEM) scholarship program.

SDV-138 S-STEM Cohort III

Lec. 1 Lab. 0 Credit 1

This class meets once a week for the entire semester to discuss issues important to college students preparing to enter the workplace or transfer to four-year institutions, act as a cohort support group, and provide opportunities to mentor and inform students pursuing (or interested in pursuing) technical careers. Students will also participate in visits to local businesses and nearby four-year colleges. It is limited to students participating in SCC's (Success in STEM) scholarship program.

SDV-139 S-STEM Cohort IV

Lec. 1 Lab. 0 Credit 1

This class meets once a week for the entire semester to discuss issues important to college students preparing to enter the workplace or transfer to four-year institutions, act as a cohort support group, guide students in preparing resumes and/or portfolios, and provide opportunities for students to hone their interview skills. It is limited to students participating in SCC's 'Success in STEM' scholarship program.

SDV-141 Launch: A College Success Seminar

Lec. 3 Lab. 0 Credit 3

This seminar is designed to enhance students' academic success. It will guide first-time college students to develop and utilize skills essential for facing the challenges and academic rigor of college. Emphasis will be on learning strategies, classroom performance, and navigating the college culture. Prerequisite: First Semester only.

SDV-153 Pre Employment Strategies

Lec. 2 Lab. 0 Credit 2

This course is designed to aid students in developing the materials and skills necessary to obtain and maintain employment. Topics include character development associated with job success, job seeking skills, the application & hiring process, communication, teamwork skills and leadership skills.

SDV-251 Service Learning/Peer mentoring

Lec. 2 Lab. 2 Credit 3

This course is structured to provide students with the theoretical framework and practical experience needed to become a successful mentor/tutor for a school-aged child. This course will be coordinated with area school districts and enrollment will be limited by the number of students requiring mentor/tutors. Students must agree to a background check, and be willing to follow the policies and procedures necessary to this program and its coordination with the school district.

SDV-812 Experiential Credits

Lec 0 Lab 0 OJT 12-24-36 Credit 3-6-9

This supervised internship is designed to provide participation in a living and learning experience through an approved business establishment. This course may not be substituted for program specific internships. The course can be repeated up to a total of 9 credits.

SOC Sociology

SOC-110 Introduction to Sociology

Lec. 3 Lab. 0 Credit 3

An analysis of social organization (or the social order). This course deals with the nature of sociology as a science, the original nature of man, the socialization of the individual, the development of groups and group behavior, the nature of culture and culture patterns, the organization of institutions, the nature of social order, the organization of human stratification and examination of major social processes. Special emphasis is placed upon the American cultural patterns.

SOC-115 Social Problems

Lec. 3 Lab. 0 Credit 3

An investigation into a selection of social problems involving alternative solutions. Topics may include drug and alcohol abuse, crime, violence, prejudice and discrimination, and human sexuality.

SOC-120 Marriage and Family

Lec. 3 Lab. 0 Credit 3

A critical approach to the problems of the modern family with some information given to the historical perspective. Such topics as courtship and marriage, marital adjustment, the achievement of family unity, minority family types, parent-child relationships, economic and social changes in family organizations and family control will be covered.

SOC-136 Foundations of Conflict Resolution

Lec. 3 Lab. 0 Credit 3

This course is designed to study the theories of conflict and conflict transformation. The course will provide students with the opportunity to develop conflict resolution skills as well as to examine their own comfort with conflict. The course will also introduce students to various forms of conflict resolution and transformation, including mediation, structured dialogue, circle processes, restorative justice and strategic peacebuilding.

SOC-160 Introduction to Social Work

Lec. 3 Lab. 0 Credit 3

The introductory course in social welfare systems and social work practice surveys the historical development of the social work profession in conjunction with the development of social welfare services in the United States; social welfare system responses to a variety of current social problems; generalist social work as a district profession; and specific settings and methods of social work practice.

SOC-161 Introduction to Social Work Lab

Lec. 0 Lab.0 OJT 4 Credit 1

Students will complete 72 hours of volunteer service in a social service setting. They will complete a paper analyzing the agency and evaluating their work in the agency. Corequisite: SOC-160.

SOC-207 Introduction to Anthropology

Lec. 3 Lab. 0 Credit 3

This course is a basic survey of general anthropology for students who have little acquaintance with the subject. The goal is to provide knowledge of basic concepts and approaches of anthropology so the student can have a scientific understanding of people. The study of human evolution, emergence of human culture, evolution of language, kinship and descent, and cultural diversity today are covered.

SOC-230 Juvenile Delinquency

Lec. 3 Lab. 0 Credit 3

A study of juvenile delinquency as an individual and social problem. This course includes theories of delinquency causations, law enforcement procedures, methods of corrections and prevention of juvenile delinquency.

SOC-240 Criminology

Lec. 3 Lab. 0 Credit 3

A general survey of the history, nature and causes of crime, criminal investigation and prosecution, punishment, correctional treatment and crime prevention. Prerequisite: CRJ-100.

SOC-851 Study Abroad in Peace Studies and Conflict Resolution-Costa Rica

Lec. 3 Lab. 0 Credit 3

This course examines the political, socioeconomic, and historical factors contributing to a culture of peace and nonviolence in Costa Rica as well as the contemporary challenges in maintaining that culture. Students will meet with decision makers and practitioners in the fields of government, business, education, religion, security, foreign policy, environment and the media. Basic language and cultural instruction will be included along with excursions to areas of interest in Costa Rica. Recommended preparatory classes: SOC-136, Foundations of Conflict Resolution and FLS-121, Conversational Spanish.

SOC-922 Field Studies

Lec. 1-3 Lab. 0 Clinical 3-9 Credit 1-3

Supervised travel and living experience in a selected sociological culture experience. Adequate preparation as judged by instructor is required for credit participation. Specific written credit and participation requirements are established in advance of the field study. Each hour of credit requires a minimum of 54 hours of supervised travel and living experience.

SPC Speech

SPC-101 Fundamentals of Oral Communication

Lec. 3 Lab. 0 Credit 3

Development of the basic skills involved in variety of speaking situations, including oral presentations and interpersonal speaking. Emphasis is placed on organization, voice, articulation, listening, non-verbal communication, critical thinking, and methods of dealing with speech apprehension.

SPC-112 Public Speaking

Lec. 3 Lab. 0 Credit 3

This course examines both the theoretical and practical basis of speech communication, particularly public speaking. Emphasis is on speech preparation, organization, support, delivery, and audience analysis. Required for AA and AS degrees.

SPC-115 Advanced Public Speaking

Lec. 3 Lab. 0 Credit 3

A continuation of SPC-112. This course presents advance theories and techniques used in public speaking. After dinner speaking, persuasive presentations and campaigns, and lecture and training may be covered in this course; however, the course shall be designed to meet the students' need. Prerequisite: SPC-112.

SPC-122 Interpersonal Communication

Lec. 3 Lab. 0 Credit 3

Emphasizes group problem-solving, semantics, and communication exercises leading toward better working relationships between individuals. Areas covered for this course would be language theory, nonverbal communication, perception theory, listening, group process and influences.

SPC-132 Group Communication

Lec. 3 Lab. 0 Credit 3

Group Communication emphasizes the development and application of small group communication theories designed to enhance communication skills needed in the work place and in various social environments. Competencies in the areas of effective communication, adaptability, conveying information, managing conflict, organized thinking, and problem-solving are addresses. Prerequisites: SPC-101 or SPC-112.

WEL Welding

WEL-111 Welding Blueprint Reading

Lec. 2 Lab. 2 Credit 3

A course concerned with basic fundamentals of interpreting drafting as applied in the welding trade. Emphasis is placed on developing the ability to interpret blueprints from which the welder must work. A thorough coverage of welding symbols is integrated within the course.

WEL-130 Oxyacetylene Welding

Lec. 1 Lab. 2 Credit 2

To provide a thorough technical understanding of metallurgy, oxyacetylene welding, flame cutting and brazing fundamentals and to develop skills necessary to produce high quality fillet and square groove welds in 3/16" plate and schedule 50 carbon steel pipe. Students develop understanding of weld hazards and safety procedures throughout the course.

WEL-159 Submerged Welding

Lec. 1 Lab. 2 Credit 2

To develop technical understanding of submerged arc joint designs and procedures, fluxes, electrodes, and welding variables. Emphasis is on developing the ability to set up and operate submerged arc equipment and to manually produce high quality welds in the flat and horizontal positions on 1/8" to 1" carbon steel. Prerequisites: WEL-186 and/or WEL-182.

WEL-160 Arc Welding (SMAW)

Lec. 2 Lab. 6 Credit 5

Provides a thorough technical understanding of shielded metal arc welding fundamentals, weld hazards and weld safety, power sources and electrode selection. Provides ample time and direction to develop skills necessary to make high quality welds on 16 gauge to 1/4" mild steel in all positions.

WEL-164 Arc Welding II (SMAW)

Lec. 1 Lab. 6 Credit 4

An advanced course designed to develop skills, integrity, and confidence necessary to pass skill tests on pre-qualified joints on plate and structural steel as required of code welding by the American Society of Mechanical Engineers and American Welding Society. Prerequisite: WEL-160 or equivalent.

WEL-172 Advanced Shielded Metal Arc Welding II

Lec. 1 Lab. 6 Credit 4

Provides understanding and skill development necessary to produce high quality welds on 3/8" to 1" mild steel in all positions. Includes information relating to air-arc cutting and gouging, procedures and welder qualifications, testing of welds and metals identification. Prerequisite: WEL-160 or equivalent.

WEL-182 FCAW

Lec. 1 Lab. 2 Credit 2

Provides thorough technical understanding of the flux cored arc welding process including adjustment and operation of power source, types of arc shielding, and safe operating procedure. Quality welds are produced on 3/8" to 1" carbon steel in all positions. Prerequisite: WEL-186.

WEL-186 GMAW

Lec. 2 Lab. 4 Credit 4

Provides a technical understanding of the gas metal arc welding process, power sources and adjustment, metal transfer, shielding gases and weld safety. Develops skills necessary to produce high quality welds of 1/16" at 3/8" mild steel in all positions. Students will develop skills necessary to produce and bend-test single vee groove welds on 3/8" carbon steel in all positions according to American Welding Society code requirements.

WEL-192 Gas Tungsten Arc Welding

Lec. 2 Lab. 4 Credit 4

Provides a thorough technical understanding of the TIG (Heliarc) process including metal characteristics, electrode, filter metals, and shielding gases with emphasis on weld safety and procedures. Prerequisite: completion of WEL-130 or equivalent.

WEL-197 Gas Tungsten Arc Welding—Tube

Lec. 1 Lab. 4 Credit 3

Develops skills necessary for making high quality all position welds on schedule 10 to schedule 40 carbon steel pipe; preparation and testing of pipe is included. Prerequisite: WEL-192.

WEL-198 Advanced Gas Metal Arc Welding—Aluminum

Lec. 1 Lab. 2 Credit 2

An advanced gas metal arc welding course designed for the student who wishes to develop skills necessary to weld 0.050" to 0.250" aluminum in all positions. Prerequisite: WEL-186 or equivalent.

WEL-220 Thermoplastic Welding

Lec. 1 Lab. 2 Credit 2

To gain understanding of the types and characteristics of the basic thermoplastics used by the automotive, chemical and related industries. Student will develop basic skills necessary to produce sound welds on various plastics including polyvinyl chloride.

WEL-235 Layout & Fabrication

Lec. 0 Lab. 8 Credit 4

Teaches layout & fitting skills applicable to an industrial welding shop, including reading prints, estimating & ordering materials, performing layout & cutting work, and welding procedures applicable to fabricating a finished product. Emphasizes problem solving & cooperation within an industrial-like environment. Safety, accuracy and a commitment to excellence is emphasized. Prerequisite: Completion of first 3 semesters of welding program curriculum or approval of instructor.

WEL-292 Pipe Welding/SMAW—Uphill

Lec. 1 Lab. 6 Credit 4

Provides thorough technical understanding of uphill pipe welding procedures and application. Students produce welds using schedule 40 and 60 carbon steel pipe in 1G, 2G, 4G and 6G positions with a degree of skill necessary to meet American Society of Mechanical Engineer's code requirements. Prerequisites: WEL-160 and WEL-172 or successfully passing vertical and overhead guided bend-test on single vee open butt weld on 3/8" carbon steel according to American Welding Society code requirements.

WEL-295 Pipe Welding/GTAW

Lec. 2 Lab. 8 Credit 6

Covers procedure, joint preparation and fit-up, and develops skill for welding 6" carbon steel pipe in the horizontal, vertical and 45 degree fixed position. Alloy steel, stainless steel, and non-ferrous pipe may be included if prepared work pieces are furnished by student. Prerequisites: WEL-192 and WEL-292.

WEL-306 Pipe Welding/GMAW

Lec. 1 Lab. 4 Credit 3

Provides training to develop manual skills necessary to produce high quality groove welds on 6" diameter schedule 40 steel pipe in the 2G, 5G, and 6G positions. Prerequisite: WEL-186.

WEL-331 Welding Fundamentals

Lec. 1 Lab. 2 Credit 2

To develop understanding of weld hazards and safety, correct equipment set-up and usage and to develop basic skills to produce welds in the flat position using the oxyacetylene and shielded metal arc process.

WEL-720 Introduction to Robotic Arc Welding

Lec. 1 Lab. 2 Credit 2

This course is an overview of robots used in the welding industry. Basic mechanisms, hydraulics, and pneumatics are covered. Students receive hands-on experience in programming a robot to weld fixture parts using the GMAW process. Prerequisite: WEL-186.

WEL-947 Special Projects

Lec. 0 Lab. 3 Credit 1.5

To develop creativity and confidence by designing and fabricating by welding, a personal object having functional or ornamental value. Prerequisite: first semester welding curriculum.