



Credit Course Catalog  
2010-2011

***Southeastern***  
**COMMUNITY COLLEGE**

# Southeastern Community College

## 2010-2011 Course Catalog

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## SCC Campus Information

<b>■ West Burlington Campus</b>	<b>■ Keokuk Campus</b>	<b>■ Center for Business</b>
1500 West Agency Road	335 Messenger Road	RiverPark Place
P.O. Box 180	P.O. Box 6007	610 North 4th Street, Suite 220
West Burlington, IA 52655-0180	Keokuk, IA 52632-6007	Burlington, IA 52601
319-752-2731	319-524-3221	319-752-2731
Toll-free 866-722-4692	Toll-free 866-722-4692	Toll-free 866-722-4692
Fax 319-752-4957	Fax 319-524-8621	Fax 319-752-3407
<b>■ SCC Fort Madison Center</b>	<b>■ SCC Mount Pleasant Center</b>	
1602 Avenue F	200 North Main Street	
Fort Madison, IA 52627	Mount Pleasant, IA 52641	
319-376-2286	319-385-8012	



**MISSION:** The mission of Southeastern Community College, an institution of higher education, is to provide quality, affordable, and accessible lifelong learning opportunities which meet or exceed the expectations of the people we serve.

**VISION:** Southeastern Community College envisions itself as a dynamic leader in lifelong learning, an innovator of responsive programs and services, and a promoter of professional, personal, social, and economic development.

**GOAL:** The goal of Southeastern Community College is to be a model of excellence among community colleges.

**VALUES:** We at Southeastern Community College value quality education. We value our students and employees, respect their diversity, recognize and encourage the use of their unique talents and contributions to our entire college community, and support their personal and professional development. We encourage their co-curricular, social, civic, and cultural participation. We invite innovation, creative problem solving, and risk-taking. We value teamwork, cooperation and collaboration as part of our continuous improvement efforts. We believe in an industrious, enthusiastic, and congenial work and learning environment. We value integrity in our interactions, advocating open and respectful communication. We honor the trust placed in us to prepare learners for their many roles in a dynamic global society.

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](http://www.ncahigherlearningcommission.org) Southeastern



*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.*

# 2010-2011 Academic Calendar

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## ■ Fall 2010

- 8/16-17 .....Faculty Workshops
- 8/18 .....Fall Semester classes begin
- 8/31 .....Last day for 16 week Fall Semester 100% tuition and Bookstore refund\*
- 9/6 .....Labor Day. No classes. Offices closed
- 10/13 .....Workshop/In-service. No classes
- 10/15 .....Professional Development Day. No classes. Offices closed
- 11/3 .....Last day to withdraw from 16 week Fall Semester with a grade of "W" \*
- 11/24-26 ..Thanksgiving vacation. No classes. Offices closed
- 12/14 .....Fall Semester ends
- 12/16 .....Faculty Workshop. Final grades due
- 12/17-22...Faculty and Students off. No classes
- 12/22-12/31...College Offices closed

## ■ Spring 2011

- 1/3 .....College offices reopen
- 1/3-7 .....Faculty and Students off. No classes
- 1/10-11 .....Faculty workshops
- 1/12 .....Spring Semester classes begin
- 1/25 .....Last day for 16 week Spring Semester 100% tuition and Bookstore refund \*
- 3/14-18 ....Spring break. No classes. Offices closed
- 4/4 .....Last day to withdraw from 16 week Spring Semester with a grade of "W" \*
- 4/15 .....Workshop/In-service. No classes
- 5/10 .....GED Graduation
- 5/11 .....Keokuk Campus Commencement
- 5/12 .....West Burlington Campus Commencement Spring Semester ends
- 5/13 .....Faculty Workshop. Final grades due

## ■ Summer 2011

- 5/16 .....Early 6 week summer classes begin
- 5/23 .....Early 6 week Summer Session Credit/No Credit and Audit deadline
- 5/30 .....Memorial Day. No classes. Offices closed
- 5/31 .....Summer Session classes begin (four and eight weeks in length)
- 6/27 .....Early Summer Session (six week) classes end
- 6/28 .....Late Summer Session classes begin (four-week length only)
- 7/4 .....Independence Day. No classes. Offices closed
- 7/26 .....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. Even in the case of these established standards, the enrollment coordinator is given a degree of flexibility, which permits following the premise that the welfare of the individual student is paramount. 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

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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](http://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.

# Arts and Sciences (College Transfer)

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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 universities. 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

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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](http://www.scciowa.edu)), click on “current students”, then “after SCC”, then “transferring to a 4-year college”.



# Educational Services Available at SCC

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## ■ Degree and Certificate Services and Programs

### AA Degree

College Transfer

### AS Degree

Business

College Parallel/Career Option

Business Administration Option

Construction Management

Criminal Justice

Graphic Communications

Graphic Design

Journalism

### AAS, Diploma, Certificate

Accounting

Agriculture Management

Agriculture

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 Technician – Paramedic

Fire Science Technology

Human Services Assistant – Carl Sandburg College

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

Precision Machining Technology

Radiography 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
<b>Communications</b>	
Composition: ENG-105, 106	6
Speech: SPC- 112	3
<b>Humanities - Select from at least 2 different departments</b>	
<b>8</b>	
Art: ART-101, 109, 120, 123, 133, 134, 143, 144, 154, 157, 173, 174, 184, 203, 204, 208, 922, 928	
Drama: DRA- 101, 130, 141, 142, 145; SPC-115	
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	
Literature: LIT- 101, 105, 120, 121, 122, 125, 131, 150, 151, 184; ENG-221, 929; JOU-120,121	
Music: MUA-101, 104, 106, 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	
<b>Social Science - Select from at least 2 different departments</b>	
<b>8</b>	
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, 160, 161, 207, 230, 240, 922	
<b>Math &amp; Science - Must include one math and one laboratory science course</b>	
<b>8</b>	
Mathematics: MAT- 110, 113, 117, 127, 128, 140, 149, 156, 165, 170, 210, 216, 219, 227	
Lab Science: BIO- 108, 109, 112, 113, 163, 177, 180, 186, 248, 252; CHM-122, 165, 175, 263, 273; ENV-111; PHS-151; PHY- 106, 160, 161, 212, 222; SCI-142	
Non-Lab Science: PHS- 165, 185; SCI- 922, 928	
<b>Distributed Requirement - Select from the above three disciplines: (Humanities, Social Science, Math/Science)</b>	
<b>8</b>	
<b>Electives</b>	
<b>21</b>	
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.	
<b>Total</b>	
<b>62</b>	

# 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.

# Accounting

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 Inventory Clerk  
Accounts Payable Clerk Bookkeeper  
Payroll Clerk Tax Accountant Clerk

## Instructor and Staff Facts

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

*\* Students must select at least 6 hours of approved Program Elective courses. Though students may choose any combination of courses to complete this requirement, it is recommended that students focus upon their own career and/or transfer objectives in making their selections. Approved Program Electives include:*

### Career Focus —

ACC-932 Accounting Internship  
BCA-216 Intro to MS Office Applications  
BUS-102 Intro to Business  
BUS-180 Business Ethics  
BUS-186 Business Law II  
BUS-201 Professional Development I  
CSC 115 Intro to Computers II  
FIN-121 Personal Finance  
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  
ENG-106 Composition II  
PSY-111 Intro to Psychology  
SOC-110 Intro to Sociology

## West Burlington and Keokuk Campuses

### Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
ACC-131	Principles of Accounting I	4	0	4
ACC-805	Accounting Problems I	0	4	2
**ADM-133	Business Math/Calculators <i>or</i>	3	0	3
**MAT-140	Finite Math	3	0	3
BUS-102	Introduction to Business <i>or</i>	3	0	3
*Elective	Program Elective	3	0	3
BUS-185	Business Law I	3	0	3
CSC-110	Introduction to Computers	3	0	3
		<u>16</u>	<u>4</u>	<u>18</u>

### Spring Semester I

ACC-132	Principles of Accounting II	4	0	4
ACC-161	Payroll Accounting	3	0	3
ACC-806	Accounting Problems II	0	4	2
ADM-114	Keyboarding Applications	2	2	3
BCA-157	Intermediate Spreadsheets	2	2	3
**ENG-131	Business English <i>or</i>	3	0	3
**ENG-105	Composition I	3	0	3
		<u>14</u>	<u>8</u>	<u>18</u>

*Program Total . . . . . 36*

### Accounting Assistant Diploma awarded

#### Fall Semester II

ACC-231	Intermediate Accounting I	3	2	4
***ACC-261	Income Tax Accounting	3	0	3
BUS-121	Business Communications <i>or</i>	3	0	3
SPC-112	Public Speaking	3	0	3
ECN-120	Principles of Macro-Economics	3	0	3
**MAT-102	Intermediate Algebra <i>or</i>	3	2	4
**MAT-165	Business Calculus	3	0	3
		<u>15</u>	<u>2-4</u>	<u>16-17</u>

#### Spring Semester II

ACC-221	Cost Accounting	3	0	3
ACC-232	Intermediate Accounting II	3	2	4
ACC-310	Computer Accounting	2	0	2
ECN-130	Principles of Micro-Economics	3	0	3
MAT-156	Statistics	3	0	3
*Elective	Program Elective	3	0	3
		<u>17</u>	<u>2</u>	<u>18</u>

*Program Total . . . . . 70-71*

*\*\* Students have an option to select 1 of the 2 different courses listed at these points in the curriculum. Though either course will meet the requirements for graduation from the program, it is recommended that students who are primarily focused upon a career in accounting immediately after graduation select the first option. Students who are interested in transferring to a 4-year college after graduation should consider the second option.*

*\*\*\* Students may substitute ACC-161 or ACC-221 toward diploma requirements. All of these courses must be completed for the AAS degree.*

SCC's Accounting Program is designed to provide students with the necessary

## 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		Lec.	Lab.	Credit
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		Lec.	Lab.	Credit
AGB-816	Student Internship I	0	15	3.7
AGB-930	Agriculture Seminar	1	0	1
		1	15	4.7

Fall Semester II		Lec.	Lab.	Credit
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		Lec.	Lab.	Credit
AGB-210	Agricultural Law	2	0	2
AGB-235	Introduction to Agriculture Markets	2	2	3
AGB-330	Farm Business Management	2	2	3
AGS-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.

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 in 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?

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

#### Instructor and Staff Facts

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

# Agriculture

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 in the areas of crop and livestock production, agriculture equipment and farm business management.

This program offers a diploma and degree in Agriculture Management.

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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?

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

## Instructor and Staff Facts

- 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

## 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		
*AGB-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

## 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
		<u>9</u>	<u>18</u>	<u>18</u>
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
		<u>10</u>	<u>20</u>	<u>20</u>
Summer Session				
CRR-201	Plastic Repair	1	2	2
*Electives	Humanities Elective	3	0	3
	Social Science Elective	3	0	3
		<u>7</u>	<u>2</u>	<u>8</u>
<b>Total Hours</b> .....				<b>46</b>

### 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
		<u>7-9</u>	<u>22</u>	<u>18-20</u>
Spring Semester II				
CRR-932	Internship	0	16	4
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
		<u>6</u>	<u>32</u>	<u>18</u>
<b>Total Hours</b> .....				<b>82-84</b>

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

### Instructor and Staff Facts

Randy Wachter - Instructor, ext. 5110  
Email: rwachter@scciowa.edu  
20 years experience in the Auto Body field  
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 Frame Repair Specialist
- Auto Collision Equipment Sales Insurance Adjuster
- Auto Body Parts Sales Paint Retailer
- Auto Collision Repair Technician Paint Product Rep/Sales
- Automotive Glass Installation Expert
- Automotive Refinishing Technician
- Automotive Wheel Alignment

## Instructor and Staff Facts

- Randy Wachter - Instructor, ext. 5110  
Email: rwachter@scciowa.edu
- Tim Weaver - Instructor, ext. 5111  
Email: tweaver@scciowa.edu

## 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
		<u>9</u>	<u>18</u>	<u>18</u>

### 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
		<u>10</u>	<u>20</u>	<u>20</u>

### Summer Session

CRR-201	Plastic Repair	1	2	2
*Electives	Humanities Elective	3	0	3
	Social Science Elective	3	0	3
		<u>7</u>	<u>2</u>	<u>8</u>

**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
		<u>15</u>	<u>2</u>	<u>16</u>

#### Spring Semester II

BUS-102	Introduction to Business	3	0	3
HUM-287	Leadership Development Studies	3	0	3
MGT-130	Principles of Supervision <i>or</i>	3	0	3
MGT-170	Human Resources Management	3	0	3
MKT-110	Principles of Marketing	3	0	3
Elective	Humanities <i>or</i> Social Science	3	0	3
		<u>15</u>	<u>0</u>	<u>15</u>

**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
*MAT-702	Introduction to Math Applications	2	2	3
Elective	Computer Science	<u>1-3</u>	<u>0</u>	<u>1-3</u>
		9-11	18	18-20
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
HSC-133	First Aid/CPR	0.5	0	0.5
SCI-115	Basic Electricity	<u>1</u>	<u>2</u>	<u>2</u>
		10.5	16	18.5
Summer Session				
AUT-700	Auto Heating & Air Conditioning	1	3	2.5
SDV-125	Workplace Readiness	1	0	1
**Elective	General Education	<u>3</u>	<u>0</u>	<u>3</u>
		5	3	6.5

*Program Total . . . . . 43-45*

### Auto Mechanics Diploma awarded

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

Spring Semester II		Lec.	Lab.	Credit
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	<u>2</u>	<u>0</u>	<u>2</u>
		6	30	17

*Total Hours . . . . . 79-81*

### 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 Product Sales Automotive Repair Technician
- Automotive Service Advisor Insurance Adjuster
- Transmission Specialist

### Instructor and Staff Facts

- Jayson Bethurem - Instructor, ext. 5108  
Email: jbethurem@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

# 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 Facts

Jayson Bethurem - Instructor, ext. 5108  
 Email: jbethurem@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

## 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
*MAT-702	Introduction to Math Applications	2	2	3
Elective	Computer Science	<u>1-3</u>	<u>0</u>	<u>1-3</u>
		9-11	18	18-20

Spring Semester I		Lec.	Lab.	Credit
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
HSC-133	First Aid/CPR	0.5	0	0.5
SCI-115	Basic Electricity	<u>1</u>	<u>2</u>	<u>2</u>
		10.5	16	18.5

Summer Session		Lec.	Lab.	Credit
AUT-700	Auto Heating & Air Conditioning	1	3	2.5
SDV-125	Workplace Readiness	1	0	1
**Elective	General Education	<u>3</u>	<u>0</u>	<u>3</u>
		5	3	6.5

**Total Hours . . . . . 43-45**

### Auto Mechanics Diploma awarded

Fall Semester II		Lec.	Lab.	Credit
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	<u>3</u>	<u>0</u>	<u>3</u>
		15	2	16

Spring Semester II		Lec.	Lab.	Credit
BUS-102	Introduction to Business	3	0	3
HUM-287	Leadership Development Studies	3	0	3
MGT-130	Principles of Supervision <i>or</i>	3	0	3
MGT-170	Human Resources Management	3	0	3
MKT-110	Principles of Marketing	3	0	3
Elective	Humanities <i>or</i> Social Science	<u>3</u>	<u>0</u>	<u>3</u>
		15	0	15

**Total Hours . . . . . 74-76**

### AAS in Auto Technology Management Awarded

\* or higher

\*\* Required for AAS students; optional for diploma students

# Biomedical Electronics Technician

## West Burlington Campus

### Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
CSC-140	Computer Fundamentals	3	2	4
DRF-113	Fundamentals of Technical Drafting	1	4	3
ELT-116	Principles of Electronics	3	4	5
*MAT-127	College Algebra & Trigonometry <i>or</i>	5	0	5
*MAT-704	Math Applications	5	0	5
		<u>12</u>	<u>10</u>	<u>17</u>
<b>Spring Semester I</b>				
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
		<u>14</u>	<u>8</u>	<u>18</u>
<b>Fall Semester II</b>				
ELT-357	Electronic Circuits II	3	4	5
ELT-630	Microprocessor/Interfacing	3	4	5
ELT-800	Biomedical Electronics Systems	3	2	4
NET-118	Basic Computer Networking/Hardware	2	2	3
		<u>11</u>	<u>12</u>	<u>17</u>
<b>Spring Semester II</b>				
ELT-435	Telecommunications	4	2	5
ELT-932	Internship	0	16	4
Elective	Humanities <i>or</i> Social Science	3	0	3
		<u>7</u>	<u>18</u>	<u>12</u>
<b>Program Total</b> .....				<b>64</b>

\* 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?

- Applications Engineer Field Service Technician
- Automation Specialist Fiber & Satellite Installer/Maintainer
- Communications Technician Industrial Engineering Technician
- Customer Systems Engineer Manufacturing Technician
- Electromechanical Technician Network Technician
- Electronics Technologist Prototype Assembler
- Electronics Technician Robotics Technician
- Electronics Quality Control Tech. Telecommunications Electronic Technician
- Field Engineer Test Equipment Technician

### Instructor and Staff Facts

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

# Business – College Parallel/Career Option

The Business Associate of Science degree is intended for those students who wish to specialize in Business. Students must complete the requirements in the core of General Education, Business Core, and Business Elective. 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. Students planning to transfer for a BA degree would normally follow the AA degree requirements.

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.

Students are required to participate in a Business Internship during their final semester. This Business Internship is a supervised work experience in an approved office. Placement depends on the student's skill level and the availability of appropriate training firms. This Business Internship gives students valuable job experience while being paid.

It is strongly recommended that students enrolled have attained a keyboarding competency rate of 30 nwpm.

Transfer plans exist between the business programs and:

Hannibal-LaGrange College  
Northwest Missouri State University  
Upper Iowa University

## Where will this take me?

Accountant Administrative Assistant  
Administrative Service Manager Bookkeeper  
Business Manager Human Resource Manager  
Marketing, Advertising & PR Manager  
Marketing Research Analyst  
Merchandise Manager Office Manager  
Sales Representative/Manager Merchandise Manager  
Wholesale and Retail Buyer Self-Employed  
Business Owner  
Visual Artist

## 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/Career Option Requirements

General Education Core		Lec.	Lab.	Credit
ENG-105	Composition I	3	0	3
ENG-106	Composition II	3	0	3
PSY-111	Intro to Psychology <i>or</i>	3	0	3
SOC-110	Introduction to Sociology	3	0	3
SPC-112	Public Speaking	3	0	3
Elective	Science	3	0	3
Elective	Math	3	0	3
Elective	Humanities (Choose from two different disciplines)	6	0	6
		<u>24</u>	<u>0</u>	<u>24</u>
Business Core		Lec.	Lab	Credit
*ACC-142	Financial Accounting	3	0	3
BUS-185	Business Law I	3	0	3
CSC-110	Introduction to Computers	3	0	3
ECN-120	Principles of Macro-Economics	3	0	3
ECN-130	Principles of Micro-Economics	3	0	3
HUM-287	Leadership Development Studies	3	0	3
MGT-101	Principles of Management	3	0	3
MKT-110	Principles of Marketing	3	0	3
		<u>24</u>	<u>0</u>	<u>24</u>

*\* Students may substitute ACC-131 Principles of Accounting I and ACC-132 Principles of Accounting II for ACC-142 Financial Accounting.*

# Business – Business Administration Option

## 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.

<b>Business Administration Track (required 6 hours)</b>		<b>Lec.</b>	<b>Lab.</b>	<b>Credit</b>
ACC-146	Managerial Accounting	3	0	3
MGT-130	Principles of Supervision	3	0	3
		<u>6</u>	<u>0</u>	<u>6</u>
<b>Electives (choose a minimum of 9 hours)</b>		<b>Lec.</b>	<b>Lab</b>	<b>Credit</b>
BUS-102	Introduction to Business	3	0	3
BUS-121	Business Communications	3	0	3
BUS-180	Business Ethics	3	0	3
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
BUS-949	Special Topics	2--4	0	2--4
CSC-115	Introduction to Computers II	3	0	3
FIN-121	Personal Finance	3	0	3
FIN-130	Principles of Finance	3	0	3
MGT-170	Human Resources Management	3	0	3
<i>Program Total</i> .....				<b>63</b>

The Business Associate of Science degree is intended for those students who wish to specialize in Business. Students must complete the requirements in the core of General Education, Business Core, and Business Elective. 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. Students planning to transfer for a BA degree would normally follow the AA degree requirements.

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.

Students are required to participate in a Business Internship during their final semester. This Business Internship is a supervised work experience in an approved office. Placement depends on the student's skill level and the availability of appropriate training firms. This Business Internship gives students valuable job experience while being paid.

It is strongly recommended that students enrolled have attained a keyboarding competency rate of 30 nwpm.

Transfer plans exist between the business programs and:

Hannibal-LaGrange College  
Northwest Missouri State University  
Upper Iowa University

### Where will this take me?

Accountant Administrative Assistant  
Administrative Service Manager Bookkeeper  
Business Manager Human Resource Manager  
Marketing, Advertising & PR Manager  
Marketing Research Analyst  
Merchandise Manager Office Manager  
Sales Representative/Manager Merchandise Manager  
Wholesale and Retail Buyer Self-Employed  
Business Owner  
Visual Artist

# Chemical Dependency Counselor

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  
Residential Treatment Counselor  
Halfway House Counselor Family Recovery Counselor

## Instructor and Staff Facts

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

## West Burlington Campus

Admission standards apply to this program.

- Reading Scores ASSET of 43; or ACT of 19; or COMPASS of 83
- ASSET writing score of 42; or ACT English score of 17; or COMPASS writing score of 62.
- Must successfully complete HSV-261 Introduction to Chemical Dependency Counseling with a grade of C (2.0) or above.
- 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
*SPC-112	Public Speaking <i>or</i>	3	0	3
*SPC-122	Interpersonal Communications	3	0	3
		<u>15</u>	<u>0</u>	<u>15</u>

## 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 <i>or</i>	3	0	3
*PSY-241	Abnormal Psychology	3	0	3
Elective	Math	3	0	3
		<u>17</u>	<u>2</u>	<u>18</u>

## 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	3	0	3
Elective		3	0	3
		<u>18</u>	<u>0</u>	<u>18</u>

## Spring Semester II

HSV-920	Counseling Practicum	0	40	11
HSV-925	Counseling Practicum Seminar	1	0	1
		<u>1</u>	<u>40</u>	<u>12</u>

**Program Total . . . . . 63**

*\*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. It is recommended that those students take PSY-121 and students not transferring (i.e., directly entering the CD counseling field) take both PSY-121 and PSY-241, one of which can satisfy the free elective requirement. Students can ease their load during the second and third semesters by taking summer classes and/or one night class during practicum.*

*\*\*Only available at the West Burlington campus.*



## Galesburg and Carthage Campuses (Carl Sandburg College Reciprocal Agreement)

### Associate of Applied Science Degree Requirements

First Semester		Credit
CHD 100	Observation & Guidance	3
CHD 101	Intro to Early Childhood Education	3
CHD 102	Child Growth & Development	3
CHD 103	Program Planning/Curriculum	3
PSY 101	General Psychology 1	3
		15
Second Semester		
CHD 104	Play and Creative Activities	3
CHD 105	Child Development Lab 1	4
CHD 108	Infant & Toddler	3
CHD 201	Language-Literature for Children	3
ENG 101	Freshman Composition I	3
		16
Third Semester		
CHD 106	Health, Safety & Nutrition	3
CHD 202	Math & Science for Children	3
CHD 204	Exceptional Child	3
CHD 210	Child Development Lab 2	4
SPE 120	Intro to Public Speaking <i>or</i>	3
SPE 110	Interpersonal Communications	3
		16
Fourth Semester		
CHD 205	Child-Family-Community	3
CHD 207	Supervision & Administration	3
CHD 228	Child Development Practicum	2
CHD 229	Child Development Practicum Seminar	1
*Electives		6
		15
<b>Program Total</b> .....		<b>62</b>

*\*Elective credit must be in General Education course work.*

*Suggested electives:*

- ENG 102 Freshman Comp 2
- BIO 101 General Biology
- MAT 109 General Education Math
- MUS 100 Music Appreciation
- SOC 101 Intro to Sociology
- HTH 130 First Aid & CPR
- BIO 120 Environment & Man
- ART 111 Art Appreciation
- THE 110 Theatre Arts Appreciation
- SOC 203 Dealing with Diversity

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. In addition to a high school diploma, an individual must have emotional maturity, respect for children and adults, good personal hygiene, flexibility and patience, and physical and mental health which will not interfere with child care responsibilities. No individual will be admitted to the program who has any criminal conviction or civil judgments for offenses relating to child abuse, child neglect or child sexual abuse. Prior to enrollment in any course requiring participation in the campus child care center, a student must meet all DCFS requirements, pursuant to the Illinois Child Care Act [225 ILCS 10] Reg. 923, effective 1998. An orientation of the child care center, physical exam, negative TB test, DCFS background check, and electronic fingerprinting are required prior to participation at the center.

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 and their development as well as improved parenting techniques.

This program is offered as part of a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit [www.sandburg.edu](http://www.sandburg.edu).



# Construction Technology – Carpentry Emphasis

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?

- Concrete Finisher Carpenter
- Construction Materials Sales Representative
- Framer
- Construction Materials Supplies Coordinator
- Roofing Coordinator
- Job Site Superintendent Finish

## Instructor and Staff Facts

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

## 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 <u>or</u>	5	0	5
MAT-704	Math Applications	5	0	5
		<u>13</u>	<u>6</u>	<u>16</u>

### Spring Semester I

CAD-172	Introduction to CAD: Auto CAD	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 <u>or</u>	3	0	3
CSC-140	Computer Fundamentals	3	2	4
		<u>9</u>	<u>14-16</u>	<u>16-17</u>

### Summer Session

CON-350	Construction Management Internship	0	20	5
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*Program Total . . . . . 37-38*

### 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 <u>or</u>	3	0	3
ENG-111	Technical Writing	3	0	3
		<u>11</u>	<u>16</u>	<u>19</u>

#### Spring Semester II

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

*Program Total . . . . . 74-75*

\* 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.

The SCC Construction Technology Program combines the Wheels of Learning

# Construction Technology – Construction Management Option

## West Burlington Campus

### Associate of 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
		<u>15</u>	<u>4</u>	<u>17</u>
<b>Spring Semester I</b>				
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
		<u>13</u>	<u>2</u>	<u>14</u>
<b>Fall Semester II</b>				
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
		<u>14</u>	<u>8</u>	<u>18</u>
<b>Spring Semester II</b>				
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
		<u>15</u>	<u>4</u>	<u>17</u>
<b>Program Total . . . . .</b>				<b>66</b>

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

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.

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. Transfer agreements exist with the University of Northern Iowa and Western Illinois University.

#### Where will this take me?

- Concrete Finisher Carpenter
- Construction Materials Sales Representative
- Framer
- Construction Materials Supplies Coordinator
- Roofer
- Job Site Superintendent Finish

#### Instructor and Staff Facts

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

# Criminal Justice – College Parallel/Career Option

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 to allow 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 Police Officer
- Corrections Officer Rehabilitation Counselor
- Federal/State Law Enforcement Agent
- Sheriff's Deputy

## Instructor and Staff Facts

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

## West Burlington Campus, Keokuk Campus and Online

### Associate of Science Degree Requirements

General Education		Credit
ENG-105,		
ENG-106	Composition I and II	6
PSY-111	Introduction to Psychology	3
SOC-110	Introduction to Sociology	3
SPC-112	Public Speaking	3
Electives	Humanities (from 2 different disciplines)	6
Elective	Math	3
Elective	Science <i>or</i> SCI-142	3
		27
<b>Criminal Justice Core</b>		
CRJ-100	Introduction to Criminal Justice	3
CRJ-130	Criminal Law	3
CRJ-132	Constitutional Law	3
CRJ-141	Criminal Investigation	3
POL-111,		
POL-112	American National <i>or</i> American State/Local Government	3
PSY-241	Abnormal Psychology	3
SCI-142,		
CSC-110	Criminalistics <i>or</i> Intro to Computers	3
SOC-115	Social Problems	3
SOC-230	Juvenile Delinquency	3
SOC-240	Criminology	3
Elective	Criminal Justice	3
Elective	Psychology <i>or</i> Sociology	3
		36
	<i>Program Total</i> .....	<b>63</b>

## Galesburg Campus (Carl Sandburg College Reciprocal Agreement)

### Associate of Applied Science Degree Requirements

	Credit
<b>Summer Session</b>	
ENG 101 Freshman Composition 1	3
PSY 101 General Psychology 1	3
*CHM100 Concepts of Chemistry	3
	<u>9</u>
<b>First Semester</b>	
*BIO211 Anatomy & Physiology 1	4
*DHG109 Preclinic Lab †	1.5
*DHG110 Fundamentals of Dental Hygiene	2
*DHG112 Dental Radiology	3
*DHG113 Preventive Dentistry	2
*DHG114 Head, Neck and Oral Anatomy	3
*DHG115 Dental Hygiene Practice I	2
	<u>17.5</u>
<b>Second Semester</b>	
*BIO212 Anatomy & Physiology 2	4
*DHG118 Oral Histology & Embryology	1
*DHG119 Periodontology I	2
*DHG120 Dental Hygiene II	2
*DHG125 Dental Hygiene Practice II	4
SOC101 Introduction to Sociology	3
	<u>16</u>
<b>Summer Session</b>	
*BIO200 General Microbiology	4
*DHG200 Dental Hygiene III	2
*DHG205 Dental Hygiene Practice III	3
	<u>9</u>
<b>Third Semester</b>	
*DHG210 Dental Hygiene IV	2
*DHG211 Community Dental Health	3
*DHG212 Pathology	2
*DHG213 Pharmacology	2
*DHG215 Dental Hygiene Practice IV	5
NUT110 Nutrition	3
	<u>17</u>
<b>Fourth Semester</b>	
*DHG217 Clinical Applications of Pain & Anxiety Control	1
*DHG218 Dental Office Management & Jurisprudence	2
*DHG219 Periodontology II	2
*DHG220 Dental Hygiene V †	2
*DHG225 Dental Hygiene Practice V	5
SPE 120 Intro to Public Speaking	3
	<u>15</u>
<b>Program Total . . . . . 83.5</b>	

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](http://www.sandburg.edu).

\*Courses must be completed with a grade of “C” or better by the end of the scheduled semester. In order to graduate, each student must complete all required courses with a grade of “C” or better.

† Pending ICCB Approval

# Drafting Technology

SCC's Drafting Technology Program 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 will receive a diploma upon successful completion of two semesters and one summer session. By completing two additional semesters, students can complete the requirements for an Associate of Applied Science (AAS) or Associate of Science (AS) Degree. 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

## Instructor and Staff Facts

Larry Shacklett - Instructor, ext. 5258  
 Email: lshacklett@scciova.edu  
 BS, Western Illinois University  
 MS, Western Illinois University

## West Burlington Campus

### Associate of Applied Science Degree Requirements

		Lec.	Lab.	Credit
<b>Fall Semester I</b>				
CAD-172	Introduction to CAD: AutoCAD	1	2	2
CSC-110	Introduction to Computers <i>or</i>	3	0	3
CSC-140	Computer Fundamentals	3	2	4
DRF-113	Fundamentals of Technical Drafting	1	4	3
ENG-105	Composition I <i>or</i>	3	0	3
ENG-111	Technical Writing	3	0	3
MAT-127	College Algebra & Trigonometry <i>or</i>	5	0	5
MAT-704	Math Applications	5	0	5
		13	6-8	16-17
<b>Spring Semester I</b>				
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 <i>or</i>	3	2	4
PHY-160	General Physics I	4	2	5
Elective	*Technical	2-4	0	2-4
		7-10	14	14-17
<b>Summer Session</b>				
SPC-112	Public Speaking	3	0	3
Elective	Humanities <i>or</i> Social Science	3	0	3
		6	0	6
<b>Fall Semester II</b>				
ARC-113	Architectural Drafting I	2	4	4
CAD-180	Introduction to Solidworks <i>or</i>	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
<b>Spring Semester II</b>				
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.*

# Electronics Technology Programs

## West Burlington Campus

### Diploma Requirements

Fall Semester		Lec.	Lab.	Credit
CSC-140	Computer Fundamentals	3	2	4
DRF-113	Fundamentals of Technical Drafting	1	4	3
ELT-116	Principles of Electronics	3	4	5
*MAT-062	Elementary Algebra <i>or</i>	2	2	3
*MAT-702	Intro to Math Applications	2	2	3
		<u>9</u>	<u>12</u>	<u>15</u>
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
		<u>11</u>	<u>10</u>	<u>16</u>
<i>Program Total</i> . . . . .				<b>31</b>

### Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
CSC-140	Computer Fundamentals	3	2	4
DRF-113	Fundamentals of Technical Drafting	1	4	3
ELT-116	Principles of Electronics	3	4	5
*MAT-127	College Algebra & Trigonometry <i>or</i>	5	0	5
*MAT-704	Math Applications	5	0	5
		<u>12</u>	<u>10</u>	<u>17</u>
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
		<u>11</u>	<u>10</u>	<u>16</u>
Fall Semester II				
ELT-357	Electronic Circuits II	3	4	5
ELT-630	Microprocessor/Interfacing	3	4	5
NET-118	Basic Computer Networking/Hardware	2	2	3
	** Technical Elective	3-5	0	3-5
		<u>11-13</u>	<u>10</u>	<u>16-18</u>
Spring Semester II				
ELT-435	Telecommunications	4	2	5
MFG-805	Teamwork & Project Management	2	2	3
PHY-106	Survey of Physics	3	2	4
	**Technical Elective	3-5	0	3-5
Elective	Humanities <i>or</i> Social Science	3	0	3
		<u>15-17</u>	<u>6</u>	<u>18-20</u>
<i>Program Total</i> . . . . .				<b>67-71</b>

\* 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.

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. Or, for those intending to transfer to a four year program, the technical electives may be used to enhance the transfer. Students learn the skills of an electronics technician and in addition, develop skills in mechanical design, construction, analysis and repair of various electronic circuits. Students also have the option of specializing in Electromechanical Technology and Computer Hardware & Network Technology. SCC offers five different options in Electronics Technology.

- Electronics Technology - Diploma
- Electronics Technology - AAS
- Electronics Technology - Biomedical Option

Graduates may apply for a 3rd Class Technician through the National Association of Radio & Telecommunication Engineers (NARTE). No tests are required for this certification. The only requirements include filling out an application plus a small membership fee.

For students interested in receiving a certification, such as the Certified Electronic Technician (CET), tests are administered at Southeastern Community College through the International Society of Certified Electronic Technicians (ISCET).

### Where will this take me?

- Applications Engineer Field Service Technician
- Automation Specialist Fiber & Satellite Installer/Maintainer
- Communications Technician Industrial Engineering Technician
- Customer Systems Engineer Manufacturing Technician
- Electromechanical Technician Network Technician
- Electronics Technologist Prototype Assembler
- Electronics Technician Robotics Technician
- Electronics Quality Control Tech. Telecommunications Electronic

# Elementary Education/AA Emphasis

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## What will I learn?

The course work on this page is designed for seamless transfer to Western Illinois University, 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.

## West Burlington and Keokuk Campuses

### Associated of Arts Degree Requirements and Suggested Sequence of Courses

#### Fall Semester I

ENG 105 English Composition I	3hr
HIS 151 US History to 1877	3hr
MAT 117 Math for Elem Teachers I	3hr
BIO 108 The Living World <i>or</i>	4hr
BIO 109 Concepts of Life	
MUS 100 Music Appreciation	3hr

#### Spring Semester I

HUM 114 Multicultural Perspectives	3hr
PHI 105 Introduction to Ethics	3hr
MAT 113 Math for Elem Teachers II	3hr
CHM 122 Intro to General Chemistry <i>or</i>	4hr
PHY 106 Survey of Physics	
GEO 121 World Regional Geography	3hr

#### Fall Semester II

ENG 106 English Composition II	3hr
ART 101 Art Appreciation	3hr
PSY 111 Introduction to Psychology	3hr
POL 111 American National Government	3hr
SPC 112 Public Speaking	3hr
EDU 920 Field Experience (Observation)	1hr

#### Spring Semester II

PSY 121 Developmental Psychology	3hr
LIT 105 Children's Literature	3hr
EDU 247 Teaching Exceptional Learners	3.5hr
SOC 110 Intro to Sociology	3hr
PEH 102 Health	3hr

*Program Total . . . . . 63.5*

*Further information may be obtained from SCC's website under "Transfer Guides."  
[www.scciowa.edu](http://www.scciowa.edu) or visit with an enrollment specialist.*



# Emergency Medical Technician – Paramedic

## 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

EMT-Paramedic Core		Lec.	Lab.	Other	Credit
*EMS-212	EMT-Basic	5	2	3	7
**EMS-660	Paramedic Specialist I	12	6	4	16
**EMS-661	Paramedic Specialist II	12	3	16	17.5
**EMS-662	Paramedic Specialist III	3	2	8	6
		<u>32</u>	<u>13</u>	<u>31</u>	<u>46.5</u>
General Education Core					
BIO-163	Essentials of Anatomy & Physiology	3	2		4
CSC-110	Introduction to Computers	3	0		3
ENG-105	Composition I	3	0		3
HSC-114	Medical Terminology	2	2		3
HUM-114	Multicultural Perspectives	3	0		3
MAT-062	Elementary Algebra	2	2		3
PHI-105	Introduction to Ethics	3	0		3
PSY-111	Introduction to Psychology	3	0		3
		<u>22</u>	<u>6</u>		<u>25</u>
<b>Program Total</b> .....					<b>71.5</b>

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

*\*\*Courses may not be available every term.*

The Emergency Medical Technician (EMT) - Paramedic curriculum is designed to apply college credit earned from the certification (core) courses toward an Associate of Applied Science Degree. Selected Arts and Sciences courses included as degree requirements are related to the Emergency Medical Technician-Paramedic field and will provide the student with a broad base upon which to make reasoned decisions when giving emergency care.

This program follows the National Highway Traffic Safety Administration, Department of Transportation (DOT) EMT Basic/Paramedic Curriculum.

The program may be taken on a full or part-time basis, with the EMS classes being offered at night. Students enrolled in the Paramedic Specialist program must have a high school diploma or GED and a current Iowa EMT-Basic certification.

## Instructor and Staff Facts

John Cockrell - Instructor, ext. 5253

Email: [jcockrell@sciowa.edu](mailto:jcockrell@sciowa.edu)

Paramedic Specialist, Southeastern Community College

# Fire Science

The Fire Science curriculum is designed to apply college credit earned from certification courses and industry required courses toward an Associate of Applied Science Degree. 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 such as fires, auto accidents and disasters.

## Where will this take me?

- Certified Firefighter Fire Stations
- Ambulance Services Property Protection Systems
- Industry

## Instructor and Staff Facts

Tina Young - Coordinator -  
 Emergency Response Programs, ext. 5101  
 Email: tyoung@scciowa.edu  
 Paramedic Specialist, Southeastern  
 Community College

## West Burlington Campus

### Associate of Applied Science Degree Requirements

		Lec.	Lab.	Credit
<b>Fall Semester I</b>				
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	<u>2</u>	<u>2</u>	<u>3</u>
		17.5	5	20
<b>Spring Semester I</b>				
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	<u>3</u>	<u>0</u>	<u>3</u>
		17	2	18
<b>Fall Semester II</b>				
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 <i>or</i>	3	0	3
PSY-111	Introduction to Psychology	<u>3</u>	<u>0</u>	<u>3</u>
		18	2	19
<b>Spring Semester II</b>				
EMS-212	EMT-Basic	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	<u>3</u>	<u>0</u>	<u>3</u>
		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*

# Graphic Communications – Graphic Design Option

## West Burlington Campus

### Associate of Science/Career Option Requirements

		Lec	Lab.	Credit
<b>Fall Semester I</b>				
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
		<u>16</u>	<u>4</u>	<u>18</u>
<b>Spring Semester I</b>				
*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
		<u>15</u>	<u>6</u>	<u>18</u>
<b>Summer Session</b>				
SPC-112	Public Speaking	3	0	3
Elective	**Social Science	3	0	3
		<u>6</u>	<u>0</u>	<u>6</u>
<b>Fall Semester II</b>				
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
		<u>13</u>	<u>4</u>	<u>15</u>
<b>Spring Semester II</b>				
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
		<u>8</u>	<u>23</u>	<u>15.7</u>
<b>Program Total</b> .....				<b>72.7</b>

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

\*\*Must be from two different disciplines.

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 Graphic Communications Specialist

#### Instructor and Staff Facts

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

# Graphic Communications – Journalism 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.

This option of the Graphic Communications Program is a track for students wishing to pursue a career in Journalism. Students can use the elective courses for writing and English-focused courses.

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

## Associate of Science/Career Option Requirements

		Lec.	Lab.	Credit
<b>Fall Semester I</b>				
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
<b>Spring Semester I</b>				
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
<b>Summer Session</b>				
SPC-112	Public Speaking	3	0	3
Elective	**Social Science	3	0	3
		6	0	6
<b>Fall Semester II</b>				
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
<b>Spring Semester II</b>				
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.*

## Galesburg Campus (Carl Sandburg College Reciprocal Agreement)

The Illinois Health Care Worker Background Check Act (P.A. 89-197) requires a criminal background check and prohibits the employment of individuals with certain prior criminal convictions as health care workers unless a waiver is obtained by the employer. Individuals with prior criminal convictions should investigate this law.

### Diploma Requirements

First Semester		Credit
CHD 204	Exceptional Children	3
ENG 101	Freshman Composition 1	3
PSY 101	General Psychology 1	3
PSY 103	Safety and Well Being	3
SPE 110	Interpersonal Communications	3
		15
Second Semester		
CIS 101	Keyboarding 1 (1st 8 weeks)	2
ENG 120	Report Writing	3
PSY 207	Crisis Intervention	3
PSY 265	Developmental Psychology	3
*Elective		3
		14
Third Semester		
PSY 208	Work Experience	1
<i>Program Total</i> .....		<b>30</b>

This diploma is designed to provide individuals with the necessary background and skill needed to care for the mentally and physically challenged, drug and alcohol abusers, as well as individuals with other abuse problems. This diploma can also provide needed in-service training for those who are already employed in human services positions. This program is offered through a collaborative agreement between SCC and Carl Sandburg College. For more information about this program, visit [www.sandburg.edu](http://www.sandburg.edu)

#### \*Suggested Electives:

- CHD 102 Child Growth and Development 1
- CHD 114 Communication Skills for Child Care Workers
- CIS 102 Keyboarding II
- CIS 122 Computer Information Systems
- ENG 110 College Reading and Study Skills
- PSY 160 Survey of Psychiatric Rehabilitation
- PSY 161 Psychiatric Rehabilitation Skills
- PSY 162 Vocational & Community Living Skills
- PSY 163 Health & Safety Skills for Psychiatric Rehabilitation
- SOC 203 Dealing with Diversity
- SOC 204 Death and Dying

# 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 Facts

Andy Snaadt - Instructor, ext. 1990  
Email: [asnaadt@scciova.edu](mailto:asnaadt@scciova.edu)

Jeron Lindsay - Instructor, ext. 1937  
Email: [jlindsay@scciova.edu](mailto:jlindsay@scciova.edu)

## Keokuk Campus

### Certificates, Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
MFG-186	Plant Safety	1	0	1
ELT-295	AC/DC Fundamentals	1	2	2
ELE-310	Industrial Electricity	1	2	2
ELE-195	Motor Controls	1	4	3
ELT-250	Programmable Logic Controllers	1	4	3
MAT-702	Intro to Math Applications	2	2	3
		<u>7</u>	<u>14</u>	<u>14</u>

### *Electrical Maintenance Technology Certificate Awarded*

Spring Semester I		Lec.	Lab.	Credit
ELE-116	Blueprint Reading	1	0	1
IND-103	Machine Shop	1	2	2
IND-104	Industrial Pumps	0.5	1	1
IND-141	Power Transmission	1	2	2
EGT-142	Fluid Power 1 (Hydraulics)	1	2	2
EGT-143	Fluid Power 2 (Pneumatics)	1	2	2
MFG-520	Predictive Maintenance	1	2	2
CSC-110	Intro to Computers	3	0	3
		<u>9.5</u>	<u>11</u>	<u>15</u>

### *Mechanical Maintenance Technology Certificate Awarded*

*Diploma Total . . . . . 29*

### *Industrial Maintenance Technology Diploma Awarded*

Fall Semester II		Lec.	Lab.	Credit
IND-107	Valves	1	0	1
EGT-147	Hydraulic Power Systems & Troubleshooting	0.5	1	1
IND-106	Machine Shop II	1	2	2
IND-180	Industrial Heating and Cooling	1	2	2
ELT-132	Motor Drives	0.5	1	1
MAT-704	Math Applications	5	0	5
ENG-105	Composition I	3	0	3
SDV-153	Pre-Employment Strategies	2	0	2
		<u>14</u>	<u>6</u>	<u>17</u>

Spring Semester II		Lec.	Lab.	Credit
ELT-176	Instrumentation	1	4	3
IND-179	Boiler Operations and Control	1	2	2
ELE-127	Troubleshooting	0.5	1	1
CAD-172	Intro to CAD	1	2	2
BUS-121	Business Communications	3	0	3
Elective	Humanities/Social Science	3	0	3
		<u>9.5</u>	<u>9</u>	<u>14</u>

*Program Total . . . . . 60*

### *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
BUS-201	Professional Development I	1	0	1
CIS-609	Visual Basic.Net	3	2	4
CSC-110	Introduction to Computers	3	0	3
NET-303	Windows Workstation	2	2	3
NET-309	Virtual Machines	1	2	2
Elective	Math	3	0	3
		<u>13</u>	<u>6</u>	<u>16</u>
Spring Semester I				
BUS-202	Professional Development II	1	0	1
BCA-157	Intermediate Spreadsheets	2	2	3
CIS-233	Web Server Administration	2	2	3
NET-142	Network Essentials	3	0	3
NET-314	Windows Server	2	4	4
NET-442	Linux Operating System	2	2	3
		<u>12</u>	<u>10</u>	<u>17</u>
Summer Session				
CIS-505	Structured Systems Analysis	2	4	4
ENG-105	Composition I	3	0	3
		<u>5</u>	<u>4</u>	<u>7</u>
Fall Semester II				
CFR-100	Introduction to Computer Forensics	2	2	3
NET-122	Computer Hardware Basics	2	2	3
NET-637	Network Intrusion Investigation	2	2	3
Elective	Accounting	3	0	3
Elective	Humanities or Social Science	3	0	3
		<u>12</u>	<u>6</u>	<u>15</u>
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
		<u>8</u>	<u>21</u>	<u>14.7</u>
<i>Program Total</i> .....				<b>69.7</b>

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. Students can begin their degree requirements for the program at the Keokuk campus for the first year. However, they will need to complete the remaining degree requirements (2nd year) at the West Burlington Campus.

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.

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.

For students interested in working with computer hardware and network troubleshooting, a new option is available through the Electronics department. This Computer Hardware and Network Option combines computer skills with electronic skills enabling students to find positions as electronics technicians who can install, maintain and administer PC networks. To learn more, see Electronics Technology - Computer Hardware/Networking Option.

#### Where will this take me?

- PC Support Specialist
- PC Technician
- PC Help Desk

#### Instructor and Staff Facts

Melodie McCandless - Instructor, ext. 5196  
 Email: [mmcandless@scciova.edu](mailto:mmcandless@scciova.edu)  
 AAS, Carl Sandburg College



# 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. Students can begin their degree requirements for the program at the Keokuk campus for the first year. However, they will need to complete the remaining degree requirements (2nd year) at the West Burlington Campus.

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.

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.

For students interested in working with computer hardware and network troubleshooting, a new option is available through the Electronics department. This Computer Hardware and Network Option combines computer skills with electronic skills enabling students to find positions as electronics technicians who can install, maintain and administer PC networks. To learn more, see Electronics Technology - Computer Hardware/Networking Option.

## Where will this take me?

Network Administrator  
Network Installer  
Network Technician

## Instructor and Staff Facts

Melodie McCandless - Instructor, ext. 5196  
Email: mmcandless@scciowa.edu  
AAS, Carl Sandburg College

## West Burlington Campus

### Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
BUS-201	Professional Development I	1	0	1
CIS-609	Visual Basic.Net	3	2	4
CSC-110	Introduction to Computers	3	0	3
GRA-175	Graphic Design Principles	3	0	3
NET-303	Windows Workstation	2	2	3
NET-309	Virtual Machines	1	2	2
		<u>13</u>	<u>6</u>	<u>16</u>

### Spring Semester I

ART-120	2-D Design	2	2	3
BUS-202	Professional Development II	1	0	1
BCA-168	Intermediate Databases	2	2	3
CIS-256	Dreamweaver I	2	2	3
NET-142	Network Essentials	3	0	3
NET-442	Linux Operating System	2	2	3
		<u>12</u>	<u>8</u>	<u>16</u>

### Summer Session

CIS-505	Structured Systems Analysis	2	4	4
ENG-105	Composition I	3	0	3
		<u>5</u>	<u>4</u>	<u>7</u>

### Fall Semester II

BCA-765	Macromedia Flash	2	2	3
CIS-258	Dreamweaver II	2	2	3
GRA-140	Digital Imaging	2	2	3
MKT-110	Principles of Marketing	3	0	3
Elective	Math/Science	3	0	3
		<u>12</u>	<u>6</u>	<u>15</u>

### 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
		<u>9</u>	<u>17</u>	<u>13.7</u>

*Program Total . . . . . 66.7*

**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.

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](http://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
		<u>12</u>	<u>18</u>	<u>21</u>
<b>Spring Semester</b>				
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-401	Medical Law and Ethics	1	0	1
MAP-532	Human Body: Health and Disease	3	0	3
MTR-112	Medical Transcription	1	2	2
		<u>14</u>	<u>14</u>	<u>21</u>
<b>Summer Session</b>				
MAP-602	Clinical Experience Seminar	1	0	1
MAP-615	Clinical Externship	0	20	5
		<u>1</u>	<u>20</u>	<u>6</u>
	<b>Program Total</b> .....			<b>48</b>

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

This program is three semesters in length and is conducted over a period of 11 months.

The program normally begins in the fall and continues through the summer months when students gain supervised clinical experience in a physician's office. Upon completion of the Medical Assistant Program, graduates are eligible to write the national certification examination for Certified Medical Assistants administered by the American Association of Medical Assistants.

The Medical Assistant Program is accredited by the Commission on Accreditation of the Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants' Endowment (AAMAE).

Admissions standards apply for this program. Please contact the Enrollment Services Office for more details.

## Instructor and Staff Facts

Deb Shaffer - Instructor, ext. 5213

Email: [dshaffer@sciowa.edu](mailto:dshaffer@sciowa.edu)

AAS, Mt. St. Clare College

ADN, Southeastern Community College

Gayle Bagwell - Instructor, ext. 5203

Email: [gbagwell@sciowa.edu](mailto:gbagwell@sciowa.edu)

Diploma, Southeastern Community College

# 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. Students in our medical coding classes learn the theory of medical coding, gain an understanding of medical coding fundamentals and incorporate this by using a laboratory practicum to work medical coding reports. The students will be trained in ICD-9, CPT, and HCPCS coding language. The medical billing and coding field continues to grow as new government regulations influence physician reimbursement. 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?

Physician office or group

## Instructor and Staff Facts

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

**West Burlington Campus** (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.

Please contact Enrollment Services for more details.

This program is essentially set up to assist the program student to obtain the necessary skills in medical procedural terminology (CPT coding) for the private medical office or clinic. Each student is prepared to take the next step for certification as a professional coder.

**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

Fall Semester		Lec.	Lab.	Credit
CPC-130	**Medical Insurance & Billing I	2	2	3
HSC-114	Medical Terminology	2	2	3
CPC-120	**Introduction to Medical Procedural Coding	3	3	4.5
MAP-145	Medical Records Management	2	2	3
MAP-431	Human Relations	1	0	1
		<u>10</u>	<u>9</u>	<u>14.5</u>
<b>Spring Semester</b>				
CPC-160	**Applications of Procedural Coding	0	4	2
CPC-150	**Medical Procedural Coding	3	0	3
MAP-401	Medical Law and Ethics	1	0	1
MAP-532	Human Body: Health and Disease	3	0	3
CPC-131	**Medical Insurance & Billing II	2	2	3
		<u>9</u>	<u>6</u>	<u>12</u>
<b>Summer Session</b>				
CPC-810	**Medical Coding and Billing Externship	0	10	2.5
CPC-945	** Medical Coding and Billing Seminar	1	0	1
		<u>1</u>	<u>10</u>	<u>3.5</u>
<b>Program Total</b>				<b>34</b>

\*BIO-163: *Essentials of Anatomy & Physiology (3-2- 4)* is required for admission and counted in program total credits.

\*\*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

		Credit
<b>Summer Session</b>		
ENG 101	Freshman Composition 1	3
PSY 101	General Psychology 1	3
		6
<b>First Semester</b>		
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 and Death	3
		16
<b>Second Semester</b>		
ACC 101	Principles of Accounting I	3
BLA 202	Business Law	3
BUS 201	Management Fundamentals	3
MTS 130	Intro to Microbiology for Mortuary Science	2
MTS 131	Intro to Pathology for Mortuary Science	2
MTS 210	Funeral Service Counseling	4
		17
<b>Summer Session</b>		
CIS 101	Keyboarding 1 ( <i>or</i> other computer course)	2
SOC 101	Introduction to Sociology	3
		5
<b>Third Semester</b>		
MTS 140	Embalming I	5
MTS 160	Funeral Service Administration	4
MTS 170	Restorative Art	4
		13
<b>Fourth Semester</b>		
<b>First 8-week session</b>		
MTS 220	Funeral Directing	3
MTS 230	Embalming II	4
MTS 240	Funeral Service Seminar	1
		8
<b>Second 8-week session</b>		
MTS 250	Funeral Service Practicum	3
MTS 260	Restorative Art/Embalming Practicum	3
MTS 270	Examination Review Seminar	1
		7
Semester Total		15
<b>Program Total</b> . . . . .		<b>72</b>

The Mortuary Science Program prepares students to work within the funeral service profession as funeral directors and embalmers. This program was developed in response to the need for a more centrally located mortuary science school in Illinois. The curriculum follows the criteria and guidelines as outlined by the American Board of Funeral Service Education Inc. and the Illinois Department of Professional Regulation. Upon completion of the program, the student will be eligible to take the National Board Exam for funeral service. Successful completion of this exam will then enable the student to apply for a state license. Some states have additional requirements. It is the responsibility of the student to correspond with the licensing agency of their state regarding requirements and additional studies. In addition to department courses, each student will take several general studies courses. All departmental courses are taught by licensed funeral directors and embalmers. In addition to formal classroom education, there is an eight-week funeral service practicum to be served in a funeral home setting during the second semester of the second year.

This program is offered through a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit [www.sandburg.edu](http://www.sandburg.edu).

# Mortuary Science – Optional Accelerated Program

This optional accelerated program is available to any student who has successfully completed all of the prerequisite courses contained within the Mortuary Science program course of study. All general education requirements must be completed prior to receiving permission to enter this accelerated program of study. This program is designed to meet the needs of those applicants who have already attained the necessary educational requirements in order to complete the required mortuary science major courses in a two-semester sequence. Permission must be received from the Coordinator of the Mortuary Science Program prior to acceptance into this part of the program. The two-semester course outline is listed below. It includes one fall 16-week semester on campus, one eight-week spring semester on campus, with the final eight weeks of the spring semester being spent within a funeral home setting as assigned by the department.

This program is offered through a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit [www.sandburg.edu](http://www.sandburg.edu).

## Galesburg Campus (Carl Sandburg College Reciprocal Agreement)

### Associate of Applied Science Degree Requirements

First Semester		Credit
MTS 110	History of Mortuary Science	3
MTS 120	Mortuary Law	3
MTS 140	Embalming I	5
MTS 150	Psychology of Grief & Death	3
MTS 160	Funeral Service Administration	4
MTS 170	Restorative Art	4
		<hr/>
		22
<b>Second Semester - First 8-week session</b>		
MTS 130	Intro to Microbiology for Mortuary Science	2
MTS 131	Intro to Pathology for Mortuary Science	2
MTS 210	Funeral Service Counseling	4
MTS 220	Funeral Directing	3
MTS 230	Embalming II	4
MTS 240	Funeral Service Seminar	1
		<hr/>
		16
<b>Second 8-week session</b>		
MTS 250	Funeral Service Practicum	3
MTS 260	Restorative Art/Embalming Practicum	3
MTS 270	Examination Review Seminar	1
		<hr/>
		7
Semester total		23
		<hr/>
<i>Program Total</i> . . . . .		<i>45</i>

# Nursing – Associate Degree Nursing (ADN)

## West Burlington Campus day and evening and Keokuk Campus

Admission standards and application deadlines dates apply to this program.

- Reading Scores ASSET of 43; or ACT of 19; or COMPASS of 83
- ASSET numerical score of 42; or ACT mathematical score of 18; or COMPASS pre-algebra score of 50
- ASSET writing score of 42; or ACT English score of 17; or COMPASS writing score of 62.

In addition, successful completion of BIO-177 Human Anatomy with a grade of “C” (2.0) or above is required. Students will be required to pass a mandatory background check and drug screening.

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

- Completed Physical Examination Form\*
- Copy of current Iowa Certification as a Certified Nursing Assistant\*\*
- 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.

\*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 are strongly encouraged to become familiar with computers and gaining access to the Internet. Nursing courses require students to access information from the Internet.

**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

Summer 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
		<u>6</u>	<u>0</u>	<u>0</u>	<u>6</u>
Fall Semester II					
ADN-641	Nursing III	8	1	18	14.5
SOC-110	Introduction to Sociology	3	0	0	3
		<u>11</u>	<u>1</u>	<u>18</u>	<u>17.5</u>
Spring Semester II					
ADN-311	RN Issues & Trends	1	0	0	1
ADN-642	Nursing IV	8	0	18	14
		<u>9</u>	<u>0</u>	<u>18</u>	<u>15</u>
<i>Program Total</i> . . . . .					<b>82</b>

*ADN Degree awarded (Level II)*

There are several levels of credentialing in nursing, but the majority of the workforce today consists of LPNs and RNs. SCC’s Nursing program offers education for each of these levels. Regardless of the level of education, nurses should be caring, sympathetic, responsible, and detail oriented. They must have good written and verbal communication skills. Nurses must be able to direct or supervise others, correctly assess and accurately record patients’ conditions, and determine when consultation is required. Nursing professionals work daytime, evening or overnight hours, with weekend shifts and holiday work being common. They need emotional stability to cope with human suffering, emergencies, and other stresses. Students may also choose the Associate Degree Nurse (RN) option. These students may receive a Diploma in Practical Nursing (PN) at the conclusion of their third semester provided PN graduate requirements have been met. By receiving this PN Diploma and passing their licensure exams, students can work as an LPN while completing the RN option. These students will have another clinical during their second summer session. Upon successful completion of the Associate Degree Nurse curriculum, an Associate of Applied Science Degree will be awarded. These students may then take their licensure exams to become Registered Nurses.

## PREPARATORY NURSING

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

- Chemistry for the Health Sciences (prerequisite)
- Developmental Psychology
- English Composition I
- General Psychology
- Human Anatomy
- Human Physiology
- Humanities Elective
- Introduction to Sociology
- Microbiology

Admissions standards apply for this program. Please contact the Enrollment Services Office for details.

## Instructor and Staff Facts

Cheryl Fye - Instructor, ext. 5206  
Email: cfye@sciowa.edu



# Nursing – Practical Nursing Diploma

There are several levels of credentialing in nursing, but the majority of the workforce today consists of LPNs and RNs. SCC's Nursing program offers education for each of these levels. Regardless of the level of education, nurses should be caring, sympathetic, responsible, and detail oriented. They must have good written and verbal communication skills. Nurses must be able to direct or supervise others, correctly assess and accurately record patients' conditions, and determine when consultation is required. Nursing professionals work daytime, evening or overnight hours, with weekend shifts and holiday work being common. They need emotional stability to cope with human suffering, emergencies, and other stresses. Students who complete the graduation requirements for the Practical Nursing (PN) Program will be awarded a Diploma at the conclusion of one summer session and two semesters. A Clinical is offered during this first summer session, which gives the students hands-on experience. Upon successful completion of the diploma requirements, a student may take his/her licensure exam to become an LPN.

## PREPARATORY NURSING

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

- Chemistry for the Health Sciences (prerequisite)
- Developmental Psychology
- English Composition I
- General Psychology
- Human Anatomy
- Human Physiology
- Humanities Elective
- Introduction to Sociology
- Microbiology

Admissions standards apply for this program. Please contact the Enrollment Services Office for details.

## Instructor and Staff Facts

- Cheryl Fye - Instructor, ext. 5206  
Email: cfye@scciowa.edu  
BSN, Iowa Wesleyan College  
MSN, Clarkson College
- Mary Ann Philp - Instructor, ext. 1979  
Email: mphilp@scciowa.edu  
AAS, Southeastern Community College

## West Burlington Campus day and evening and Keokuk Campus

**Admission standards and application deadlines dates apply to this program and are listed 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 examination for licensure as a nurse at the LPN or RN level.

Cooperating agencies:

Burlington Care Center	Keokuk Area Hospital
Burlington Community Health Center	Mental Health Institute
Crossroads Home Care and Hospice	Montrose Health Center
Donnellson Health Center	Morning Sun Care Center
Fort Madison Community Hospital	River Hills Village
Fort Madison Health Center	River Point Care Center
Great River Medical Center	West Point Care Center
Henry County Health Center	

**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

Summer 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
		<u>7</u>	<u>0</u>	<u>0</u>	<u>7</u>
Fall Semester I					
*BIO-180	Human Physiology <i>or</i>	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
		<u>14</u>	<u>3</u>	<u>12</u>	<u>19.5</u>
Spring Semester I					
*BIO-180	Human Physiology <i>or</i>	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
		<u>12</u>	<u>2</u>	<u>12</u>	<u>17</u>
<i>Program Total</i> . . . . .					<b>43.5</b>

*PN Diploma (Level I) awarded*

*All courses must be passed with a grade of "C".*



# Office Administration – Accounting 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
		<u>14</u>	<u>2</u>	<u>15</u>
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
SPC-112	Public Speaking	3	0	3
Elective	Psychology <i>or</i> Sociology	3	0	3
		<u>15</u>	<u>6</u>	<u>18</u>
Fall Semester II				
ACC-132	Principles of Accounting II	4	0	4
ADM-119	Keyboarding III	1	4	3
BUS-180	Business Ethics	3	0	3
Elective	* General Education	3	0	3
ENG-105	Composition I	3	0	3
		<u>14</u>	<u>4</u>	<u>16</u>
Spring Semester II				
ACC-161	Payroll Accounting	3	0	3
ADM-129	Keyboarding IV	1	4	3
ACC-310	Computer Accounting	2	0	2
BCA-157	Intermediate Spreadsheets	2	2	3
BUS-290	Employment Search & Workplace Success	1	0	1
BUS-932	Business Internship	0	15	3.7
Elective	*General Education	3	0	3
		<u>12</u>	<u>21</u>	<u>18.7</u>
<b>Program Total</b> . . . . .				<b>67.7</b>
Optional Course Work				
FIN-121	Personal Finance	3	0	3

\*General Education – 6 cr. hrs. from two areas—Humanities, Math or Science.

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'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.

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?

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

### Instructor and Staff Facts

- Trisha Hopper - Instructor, ext. 5212  
Email: thopper@scciowa.edu
- Cindy Murphy - Instructor, ext. 5197  
Email: cmurphy@scciowa.edu  
AA, Southeastern Community College  
BA, Western Illinois University  
MBA, Western Illinois University

# Office Administration – 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'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?

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

## Instructor and Staff Facts

- Trisha Hopper - Instructor, ext. 5212  
Email: thopper@scciowa.edu
- Cindy Murphy - Instructor, ext. 5197  
Email: cmurphy@scciowa.edu
- AA, Southeastern Community College
- BA, Western Illinois University
- MBA, Western Illinois University

## 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
		<u>14</u>	<u>2</u>	<u>15</u>

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
SPC-112	Public Speaking	3	0	3
Elective	Psychology <i>or</i> Sociology	3	0	3
		<u>15</u>	<u>6</u>	<u>18</u>

Fall Semester II		Lec.	Lab.	Credit
ADM-119	Keyboarding III	1	4	3
ADM-149	Transcription	2	2	3
BUS-102	Introduction to Business (WB) <i>or</i>	3	0	3
ENG-105	Composition I (K)	3	0	3
BUS-180	Business Ethics	3	0	3
MGT-101	Principles of Management	3	0	3
Elective	*Business Elective	3	0	3
		<u>15</u>	<u>6</u>	<u>18</u>

Spring Semester II		Lec.	Lab.	Credit
ACC-310	Computer Accounting	2	0	2
ADM-129	Keyboarding IV	1	4	3
BUS-102	Introduction to Business (K) <i>or</i>	3	0	3
ENG-105	Composition I (WB)	3	0	3
BUS-290	Employment Search & Workplace Success	1	0	1
BUS-932	Business Internship	0	15	3.7
Elective	*Business Elective	3	0	3
Elective	Humanities <i>or</i> Science	3	0	3
		<u>13</u>	<u>19</u>	<u>18.7</u>

*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

# Office Administration – Legal 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
		<u>14</u>	<u>2</u>	<u>15</u>
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
SPC-112	Public Speaking	3	0	3
Elective	Psychology <u>or</u> Sociology	3	0	3
		<u>15</u>	<u>6</u>	<u>18</u>
Fall Semester II				
ADM-119	Keyboarding III	1	4	3
ADM-149	Transcription	2	2	3
BUS-102	Introduction to Business (WB) <u>or</u>	3	0	3
ENG-105	Composition I (K)	3	0	3
BUS-180	Business Ethics	3	0	3
BUS-185	Business Law I	3	0	3
Elective	Humanities <u>or</u> Science	3	0	3
		<u>15</u>	<u>6</u>	<u>18</u>
Spring Semester II				
ADM-129	Keyboarding IV	1	4	3
ADM-151	Specialized Transcription: Legal	2	2	3
BUS-102	Introduction to Business (K) <u>or</u>	3	0	3
ENG-105	Composition I (WB)	3	0	3
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
		<u>10</u>	<u>21</u>	<u>16.7</u>
<i>Program Total</i> .....				<b>67.7</b>

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'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.

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?

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

#### Instructor and Staff Facts

- Trisha Hopper - Instructor, ext. 5212  
Email: thopper@scciowa.edu
- Cindy Murphy - Instructor, ext. 5197  
Email: cmurphy@scciowa.edu  
AA, Southeastern Community College  
BA, Western Illinois University  
MBA, Western Illinois University

# Office Administration – Medical 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'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.

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 Facts

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

Cindy Murphy - Instructor, ext. 5197  
Email: cmurphy@scciowa.edu  
AA, Southeastern Community College  
BA, Western Illinois University  
MBA, Western Illinois University

## 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
		<u>14</u>	<u>2</u>	<u>15</u>

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
SPC-112	Public Speaking	3	0	3
Elective	Psychology <i>or</i> Sociology	3	0	3
		<u>15</u>	<u>6</u>	<u>18</u>

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
		<u>14</u>	<u>10</u>	<u>19</u>

Spring Semester II		Lec.	Lab.	Credit
ADM-129	Keyboarding IV	1	4	3
ADM-150	Specialized Keyboarding–Medical (WB) <i>or</i>	2	2	3
MTR-112	Medical Transcription (K)	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	Humanities <i>or</i> Math	3	0	3
		<u>11-12</u>	<u>23</u>	<u>18.7-19.7</u>

*Program Total . . . . . 70.7-71.7*

## West Burlington Campus

### Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
MFG-192	Blueprint Reading	2	2	3
MFG-105	Machine Shop Measuring	1	4	3
MFG-258	Lathe Work	2	4	4
MFG-112	Drills and Saws	1	2	2
MFG-186	Plant Safety	1	0	1
MAT-726	Machine Shop Mathematics I	4	0	4
		11	12	17

Spring Semester I		Lec.	Lab.	Credit
MFG-109	Vertical/Horizontal Mills	2	6	5
MFG-277	Surface and Cylindrical Grinding	2	4	4
CSC-110	Introduction to Computers	3	0	3
MAT-730	Machine Shop Mathematics II	3	0	3
Elective	Humanities or Social Science	3	0	3
		13	10	18

*Program Total . . . . . 35*

### *Machine Shop diploma awarded*

Fall Semester II		Lec.	Lab.	Credit
MFG-201	CNC Turning Operator	1	2	2
MFG-151	CNC Fundamentals	1	2	2
MFG-323	MasterCam Design	1	2	2
EGT-116	Continuous Quality Management	3	0	3
PHY-106	Survey of Physics <i>or</i>	3	2	4
PHY-160	General Physics I	4	2	5
		9-10	8	13-14

Spring Semester II		Lec.	Lab.	Credit
MFG-205	Mill Programming	1	2	2
MFG-221	CNC Milling Operator	1	2	2
MFG-224	Coordinate Measuring Machine	0	2	1
MFG-239	Lathe Programming	1	2	2
MFG-315	CNC Project	0	2	1
ENG-111	Technical Writing <i>or</i>	3	0	3
ENG-105	Composition I	3	0	3
Elective	*General Education	3	0	3
		9	10	14

*Program Total . . . . . 62-63*

*\*May choose from Communication, Humanities, Social Science, Math or Science.*

The first-year machine shop program (diploma program) prepares the student to use precision machines, fixtures, attachments, and layout and measurement equipment for building close tolerance tools and mechanisms.

Detailed classroom and shop instruction cover areas such as bench work, layout, drilling, lathe work, milling, shaping, broaching and surface, cylindrical and jig grinding.

Students who wish to progress beyond the diploma will gain advanced training in the areas of metal machining procedures and related technical areas. Close tolerance machining, materials technology, technical writing, numerical controlled machines, and process control are emphasized.

### Where will this take me?

- CNC Programmer Fixture Designer
- Machine Operator Machinist
- Mold Maker Precision Machining Business Owner
- Quality Control Technician Senior
- Materials Technologist
- Tool and Die Apprentice

### Instructor and Staff Facts

Brad Smithburg - Instructor, ext. 5182  
 Email: bsmithburg@scciowa.edu  
 AAS, Southeastern Community College

# Precision Machining Technology – Certificates

The Precision Machining program prepares students to use precision machines, fixtures, attachments, and layout and measurement equipment for building close tolerance tools and mechanisms. Detailed classroom and shop instruction cover areas such as bench work, layout, drilling, lathe work, milling, shaping, broaching and surface, cylindrical and jig grinding.

Certificates are not designed to replace a diploma or degree program but are offered as an alternative for those who may currently be employed and desire to upgrade existing skills.

Three certificates are available:

- CNC Operator
- CNC Programmer
- Mastercam Programmer

## Instructor and Staff Facts

Brad Smithburg - Instructor, ext. 5182  
 Email: bsmithburg@scciova.edu  
 AAS, Southeastern Community College

## West Burlington Campus (Evening)

**The CNC Operator Certificate is awarded upon successful completion of the following core curriculum:**

Core Curriculum - Fall Semester		Lec.	Lab.	Credit
CSC-110	Introduction to Computers	3	0	3
MAT-726	Machine Shop Math I <i>or</i>	4	0	4
MAT-704	Math Applications	5	0	5
		<u>7-8</u>	<u>0</u>	<u>7-8</u>

### Spring Semester

MFG-212	Basic Machine Theory	1	4	3
MFG-328	Program Numerical Controlled Machines	2	4	4
		<u>3</u>	<u>8</u>	<u>7</u>

*Program Total . . . . . 14-15*

**The CNC Programmer Certificate is awarded upon successful completion of the core curriculum plus completion of the following:**

Fall Semester		Lec.	Lab.	Credit
ENG-111	Technical Writing	3	0	3
PHY-106	Survey of Physics	3	2	4
		<u>6</u>	<u>2</u>	<u>7</u>

*Program Total . . . . . 21-22*

**The Mastercam Programmer Certificate is awarded upon successful completion of the CNC Programmer Certificate plus completion of the following:**

Spring Semester		Lec.	Lab.	Credit
MFG-319	Computer Assist Mfg (Mastercam)	2	2	3
		<u>2</u>	<u>2</u>	<u>3</u>

*Program Total . . . . . 24-25*



# Radiography – Radiography Technology

## Galesburg Campus (Carl Sandburg College Reciprocal Agreement)

The AAS degree program is 24 months in length and begins in June of each year. All general education and radiologic technology theory courses are taught at the Galesburg campus. Clinical experience is gained at Cottage Hospital and St. Mary Medical Center, Galesburg; Holy Family Hospital, Monmouth; Mercer County Hospital, Aledo; Hammond Henry Hospital, Geneseo; and Graham Hospital, Canton. Students are assigned to these institutions on a rotational basis.

### Associate of Applied Science Degree Requirements

Summer Session		Credit
BIO 205	Human Biology	4
MAT 109	General Education Math <i>or</i>	3
MAT 110	General Education Statistics	3
MDT 100	Medical Terminology	2
		9
<b>First Semester</b>		
ENG 101	Freshman Composition 1	3
<b>First 8-Week Session</b>		
RDT 100	Fundamentals of Radiologic Technology	3
RDT 101	Fundamentals of Radiologic Technology Practicum	3
<b>Second 8-Week Session</b>		
RDT 110	Radiologic Technology & Physics I	3
RDT 115	Radiologic Technology Practicum I	3.5
		15.5
<b>Second Semester</b>		
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
<b>Summer Session</b>		
RDT 205	Radiologic Technology Practicum 3	6
		6
<b>Third Semester</b>		
PHL 103	Biomedical Ethics	3
RDT 210	Radiologic Technology 3	4
RDT 215	Radiologic Technology Practicum 4	7
		14
<b>Fourth Semester</b>		
RDT 220	Radiologic Technology 4	4
RDT 222	Radiation Biology	1
RDT 225	Radiologic Technology Practicum 5	6
SPE 110	Interpersonal Communications <i>or</i>	3
SPE 120	Introduction to Public Speaking	3
		14
<b>Program Total</b>		<b>74.5</b>

*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.*

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.

The Associate Degree program is 24 months in length and begins in June of each year. All general education and radiologic technology theory courses are taught at the Galesburg campus. Clinical experience is gained at Cottage Hospital and St. Mary Medical Center, Galesburg; Community Memorial Hospital, Monmouth; Mercer County Hospital, Aledo; Hammond Henry Hospital, Geneseo; and Graham Hospital, Canton. Students are assigned to these institutions on a rotational basis.

This program is made available through a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit [www.sandburg.edu](http://www.sandburg.edu).



# Radiography – Advanced Certificates

Diagnostic Medical Sonography is a modality that uses high frequency sound waves to produce images of organs and vascular structures within the body. Sonography is also used extensively in the evaluation of pregnancy and fetal development. Recent advancements in technology have led to increasing use of this imaging specialty as a non-invasive diagnostic tool.

This 16-month program prepares radiographers to perform sonographic examinations in hospitals, clinics, and imaging centers. Graduates are eligible to apply to take the certification examinations offered by the American Registry of Diagnostic Medical Sonographers. Technologists currently employed in Sonography may seek enrollment in the “classroom only” portions of the program, if desired.

This program is made available through a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit [www.sandburg.edu](http://www.sandburg.edu).

Computed Tomography is an imaging modality that combines the use of x-rays and computer technology. Cross-sectional images of the body are produced by an x-ray beam and array of detectors that encircle the patient. These images can be reconstructed in multiple planes to display anatomical structures not otherwise visible on conventional radiographs.

This one-semester program prepares radiographers to perform CT procedures in hospitals and imaging centers. The curriculum covers all subject areas identified in the American Registry of Radiologic Technologists’ “Content Specifications for the Examination in Computed Tomography”. Technologists currently employed in Computed Tomography may seek enrollment in the “classroom only” portions of the program, if desired.

This program is offered through a collaborative agreement between SCC and Carl Sandburg College. For more program information, visit [www.sandburg.edu](http://www.sandburg.edu).

## Galesburg Campus (Carl Sandburg College Reciprocal Agreement)

### Diagnostic Medical Sonography - Advanced Certificate

The following Advanced Certificate are available only to registered radiographers or registry-eligible radiographers.

This 16-month program prepares radiographers to perform sonographic examinations in hospitals, clinics, and imaging centers. Graduates are eligible to apply to take the certification examinations offered by the American Registry of Diagnostic Medical Sonographers. Technologists currently employed in Sonography may seek enrollment in the “classroom only” portions of the program, if desired.

#### First Semester

DMS 250	Ultrasound Physics & Instrumentation 1	3
DMS 252	Abdominal Sonography	3.5
DMS 255	Sonography Practicum 1	5
RDT 262	Sectional Anatomy for Diagnostic Imaging	3
		<u>14.5</u>

#### Second Semester

DMS 260	Ultrasound Physics & Instrumentation 2	2
DMS 262	OB/GYN Sonography	4
DMS 265	Sonography Practicum 2	6
		<u>12</u>

#### Summer Session

DMS 272	Sonography of Superficial Structures	2
DMS 274	Sonography Critique	2
DMS 275	Sonography Summer Practicum	5
		<u>9</u>

#### Third Semester

DMS 280	Vascular Equipment & Instrumentation	2
DMS 282	Vascular Sonography	4
DMS 285	Sonography Practicum 3	6
		<u>12</u>

*Program Total . . . . . 47.5*

### Radiography – Computed Tomography Advanced Certificate

The following Advanced Certificate are available only to registered radiographers or registry-eligible radiographers.

This one-semester program prepares radiographers to perform CT procedures in hospitals and imaging centers. The curriculum covers all subject areas identified in the American Registry of Radiologic Technologists’ Content Specifications for the Examination in Computed Tomography. Technologists currently employed in Computed Tomography may seek enrollment in the “classroom only” portions of the program, if desired.

RDT 250	CT Principles & Instrumentation	3
RDT 252	Computed Tomography Procedures	4
RDT 255	CT Practicum	6
RDT 262	Sectional Anatomy for Diagnostic Imaging	3
		<u>16</u>

*Program Total . . . . . 16*

# Radiography – Advanced Certificates

**Galesburg Campus** (Carl Sandburg College Reciprocal Agreement)

## Radiography – Magnetic Resonance Advanced Certificate

The following Advanced Certificate are available only to registered radiographers or registry-eligible radiographers.

This one-semester program prepares radiographers to perform MRI procedures in hospitals and imaging centers. The curriculum covers all subject areas listed in the American Registry of Radiologic Technologists' Content Specifications for the Examination in Magnetic Resonance Imaging. Technologists currently employed in MRI may seek enrollment in the "classroom only" portions of the program, if desired.

MRI 250	MRI Physics & Instrumentation	4
MRI 252	MR Imaging Procedures	3
MRI 255	MRI Practicum	6
RDT 262	Sectional Anatomy for Diagnostic Imaging	3
<i>Program Total</i> . . . . .		<u>16</u>

## Radiography – Nuclear Medicine Technology Advanced Certificate

The following Advanced Certificate are available only to registered radiographers or registry-eligible radiographers.

This 12-month program prepares students to perform diagnostic nuclear medicine procedures in hospitals, clinics, and imaging centers. Graduates are eligible to apply to take the certification examinations offered by either the American Registry of Radiologic Technologists or the Nuclear Medicine Technology Certification Board.

### Fall Semester

NMT 250	Physics of Nuclear Medicine Technology	2
NMT 252	Nuclear Medicine Procedures I	3
NMT 254	Nuclear Medicine Instrumentation I	2
NMT 255	Nuclear Medicine Practicum 1	5
		<u>12</u>

### Spring Semester

NMT 260	Radiopharmacology	2.5
NMT 262	Nuclear Medicine Procedures 2	3
NMT 264	Nuclear Medicine Instrumentation 2	2
NMT 265	Nuclear Medicine Practicum 2	5
		<u>12.5</u>

### Summer Session

NMT 272	Advanced Nuclear Medicine Procedures & Techniques	4.5
NMT 275	Nuclear Medicine Practicum 3	5
		<u>9.5</u>

*Program Total* . . . . . **34**

### What will I learn?

Magnetic Resonance Imaging is a special modality that utilizes computer technology in conjunction with magnetic fields and radio frequency signals to obtain sectional images in any body plane. MRI's ability to distinguish differences in tissue composition has made it the modality of choice in imaging the central nervous system and a variety of soft tissue structures.

### Contact Information

Contact an Enrollment Specialist at SCC for more information.

### What will I learn?

As one of the advanced certificate programs in diagnostic imaging, Nuclear Medicine employs the administration of small quantities of radiopharmaceuticals in order to evaluate the structure and function of an organ.

### Contact Information

Contact an Enrollment Specialist at SCC for more information.

# Respiratory Care Program

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](http://www.coarc.com)). Commission on Accreditation for Respiratory Care 1248 Harwood Road Bedford, Texas 76021-4244, (817) 283-2835

## Instructor and Staff Facts

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

Suellen Carmody-Menzer - Instructor,  
ext. 5214  
Email: [scarmody-menzer@scciova.edu](mailto:scarmody-menzer@scciova.edu)  
AAS, Kirkwood Community College  
BBA, American InterContinental University

Students may also earn an Associate of Science in Respiratory Care by completing the following additional general education requirements **in addition to the AAS requirements.**

ENG-106 and SPC-112	6.0 sem. hrs
Humanities	6.0 sem. Hrs
52 (Must be from two different disciplines)	
Social Science	3.0 sem. Hrs
(Not Psychology)	

## West Burlington Campus

Admission standards apply to this program.

- Reading Scores ASSET of 43; or ACT of 19; or COMPASS of 83
- Numerical Scores ASSET of 42; or ACT of 18; or COMPASS of 50
- 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.
- 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

Prerequisites		Lec.	Lab.	Clinical	Credit
HSC-114	Medical Terminology	2	2	0	3
BIO-252	Biomolecular Processes	2	2	0	3
		4	4	0	6
<b>Fall Semester I</b>					
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
<b>Spring Semester I</b>					
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
<b>Summer Session</b>					
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
<b>Fall Semester II</b>					
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
<b>Spring Semester II</b>					
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

## 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
<i>Program Total</i> .....	<i>63</i>

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

### What will I learn?

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  
lmenke@scciowa.edu

# Technical Studies Degree

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## What will I learn?

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  
lmenke@scciowa.edu

## 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	<u>4</u>
	64
<i>Program Total . . . . .</i>	<i>64</i>

*\*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.*

**West Burlington Campus** (West Burlington Campus evening, year one only.)

## Diploma and Associate of Applied Science Degree Requirements

Fall Semester I		Lec.	Lab.	Credit
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
MAT-702	Introduction to Math Applications	2	2	3
		<u>9</u>	<u>18</u>	<u>18</u>
Spring Semester I				
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
ENG-111	Technical Writing	3	0	3
		<u>8</u>	<u>18</u>	<u>17</u>
<i>Program Total</i> .....				<b>35</b>

### *Diploma awarded*

Fall Semester II				
WEL-198	Adv. Gas Metal Arc Welding-Aluminum	1	2	2
WEL-182	FCAW	1	2	2
WEL-292	Pipe Welding/SMAW-Uphill	1	6	4
DRF-113	Fundamentals of Technical Drafting	1	4	3
SDV-153	Pre-employment Strategies	2	0	2
MAT-704	Math Applications	5	0	5
		<u>11</u>	<u>14</u>	<u>18</u>
Spring Semester II				
WEL-720	Introduction to Robotic Arc Welding	1	2	2
WEL-235	Layout & Fabrication	0	8	4
PSY-102	Human and Work Relations	3	0	3
MGT-130	Principles of Supervision	3	0	3
		<u>7</u>	<u>10</u>	<u>12</u>
<i>Program Total</i> .....				<b>65</b>

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 Facts

Bill White, Day Instructor, ext. 5181  
Email: bwhite@scciowa.edu  
Mike Kaczinski, Evening Instructor, ext. 5207  
Email: mkaczinski@scciowa.edu





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

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## **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. Students will create documents using Word 2007.

## **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. Students may choose to spend their time on one of either machine. The course may be repeated.

## **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. Students are required to reach a keying speed and accuracy of 40 net words a minute upon completion of the course. Open to students entering the Office Administration program

## **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-150 Specialized Transcription: Medical**

Lec. 2 Lab. 2 Credit 3

A specialized course in which medical keyboarding is emphasized. Emphasis is on keyboarding medical correspondence, documents, and reports with understanding of medical terminology. Prerequisite: ADM-149, ADM-119.

### **ADM-151 Specialized Transcription: Legal**

Lec. 2 Lab. 2 Credit 3

A specialized course in which legal keyboarding is emphasized. Emphasis is on keying legal correspondence and documents with understanding of legal terminology. Prerequisites: ADM-149, ADM-119.

### **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.

## **ADN Associate Degree Nursing**

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### **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**

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### **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. Corequisite: AGA-158.

### **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. Corequisite: AGA-154.

### **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

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## **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.

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## **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

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## **AGM-100 Commercial Driver's License**

Lec. 0 Lab. 1 Credit 0.5

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. 0.5 Lab. 2.5 Credit 1.7

A shop course dealing with welding.

## **AGP Agriculture - Precision Ag**

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### **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**

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### **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.

## **ARC Architectural**

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### **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

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## **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-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-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**

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### **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.

### **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.

### **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**

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### **BCA-055 Developing Computer Literacy**

Lec. 0 Lab. 1 Credit 0.5

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 provides students with a realistic view of information processing procedures. Major emphases are on formatting and text-editing concepts. Prerequisite: BCA-055 or equivalent.

### **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, 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, 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**

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### **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-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 sys-

tem. 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-201 Professional Development I**

Lec. 1 Lab. 0 Credit 1

This course is designed to build student skills in setting goals, conversation, meetings, parliamentary procedure, business meals and business travel. It also requires attendance at leadership, civic and cultural events. The course may be repeated for a maximum of two credits with permission of instructor.

### **BUS-202 Professional Development II**

Lec. 1 Lab. 0 Credit 1

This course is designed to build student skills in customer service, giving presentations, presenting a professional image, and writing cover letters and resumes. Interview skills will be emphasized. The course also requires attendance at leadership, civic and cultural events. The course may be repeated for a maximum of two credits with permission of instructor.

### **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-932 and BUS-290. Students enrolled in the Office Administration Program must have completed ADM-162 and ADM-119 before enrolling in BUS-932 and BUS-290. Corequisite: BUS-290.

## **BUS-949 Special Topics**

Lec. 2-4 Lab. 0 Credit 2-4

This course offers a learning experience in conjunction with a structured work situation. Instruction and readings will relate to and supplement the particular job experience. Prerequisite: Permission of instructor.

# **CAD Computer Aided Drafting**

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## **CAD-172 Introduction to CAD: AutoCAD**

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**

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## **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**

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## **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**

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## **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. Corequisite: NET-142.

**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. Utilize 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**

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### **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.

### **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**

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### **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**

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### **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. Corequisite :CPC-130.

### **CPC-130 Medical Insurance & Billing I**

Lec 2 Lab 2 Credit 3

This course is designed to assist students in understanding the complexities of current insurance procedures encountered in medical offices. The students will be familiarized with claims submission for major medical insurance/reimbursement programs. Students will also be introduced to ICD-9-CM coding. Corequisite :CPC-120.

### **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-130 and CPC-120. 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, HIT-211, 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, HIT-211, 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-130, 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-130, CPC-120, CPC-150, CPC-131, CPC-160, MAP-401 and MAP-532. Corequisite :CPC-810.

## **CRJ Criminal Justice**

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### **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.

### **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.

### **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 study of social casework methodology as applied to the juvenile and adult offender. Included are the theories of personality, therapeutic techniques and simulated application and the practicality of modern treatment.

### **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**

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### **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 corro-

sion 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-115 Introduction to Computers II**

Lec. 3 Lab. 0 Credits 3

This course will cover software applications including advanced spreadsheet, word processing, and database concepts; microcomputer system configuration, and intermediate operating systems commands; graphical operating environment concepts; graphics and desktop publishing applications; and introduction to the Internet. Computer concepts covered may include computer communication, information system management, security and ethics. Microcomputer lab time outside of class time is required to complete software lab assignments. Prerequisites: Grade of B- or better in CSC-110 or BCA-216.

### **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**

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### **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-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.

### **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.

### **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**

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### **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**

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### **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**

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### **ECN-110 Introduction to Economics**

Lec. 3 Lab. 0 Credit 3

An introductory economics course. Lessons will include both micro and macro economics. 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

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## **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.

## **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. Prerequisite EDU-210 (may be taken concurrently).

# EGR Engineering

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## **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

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## **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. 0.5 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

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## **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. 0.5 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**

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### **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. 0.5 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 to 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-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**

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### **EMS-110 First Responder**

Lec. 1 Lab. 2 Credit 2

This course will cover the objective of the First responder curriculum as identified by the United States Department of Transportation (USDOT) and prepare the student for testing in order to receive Iowa EMS Certification and the National Registry of Emergency Medical Technicians (NREMT) as a First Responder. Prerequisites: Health-care Provider CPR card.

### **EMS-212 EMT-Basic**

Lec. 5 Lab. 2 Clinical 3 Credit 7

This course is designed to instruct a student to the level of emergency medical technician-basic 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-Basic 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-basic certification. Prerequisites: Current basic life support certification (health care providers module). Corequisite: Twenty hours of clinical experience at a health care facility and twenty hours ride time with an established ambulance.

### **EMS-660 Paramedic Specialist I**

Lec. 12 Lab. 6 OJT 4 Credit 16

This course prepares the student in the knowledge and skills needed in the pre-hospital environment. Department of Transportation (D.O.T.), National Standard Paramedic Curriculum topics covered include: Well Being of the EMT, Illness and Injury Prevention, Ethics, EMS System, Roles and Responsibilities, Medical Legal Issues, Pathophysiology, Therapeutic Communications, Life Span Development, Airway Management and Ventilation, Patient Assessment, Communications, Documentation, Medication Administration, Pharmacology and Cardiology. This course also includes 64 hours of 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 patient assessment, development of airway management skills, IV fluid management skills, communication skill development, and cardiac monitoring skills. Prerequisites: Current Iowa EMT-Basic Certification. Corequisite: Sixty-four hours hospital clinical internship.

### **EMS-661 Paramedic Specialist II**

Lec. 12 Lab. 3 OJT 16 Credit 17.5

This course prepares the student in the knowledge and skills needed in the pre-hospital environment. Department of Transportation (D.O.T.) National Standard Paramedic Curriculum topics covered include: Medication Administration and Medical and Trauma Emergencies of various body systems. This course has 256 hours of 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-660. Corequisite: Two hundred fifty-six hours hospital clinical internship.

### **EMS-662 Paramedic Specialist III**

Lec. 3 Lab. 2 OJT 8 Credit 6

This course prepares the student in the knowledge and skills needed in the pre-hospital environment. Department of Transportation (DOT) 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 128 hours of 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. Prerequisites: EMS-661. Corequisite: 128 hours clinical/field internship.

### **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

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## 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 is by independent study in the SuCCess Center.

## 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.

## ENG-061 College Preparatory Writing II

Lec. 2 Lab. 2 Credit 3

Basic Writing Skills 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. Prerequisite: (1) Appropriate ASSET and writing sample score of (2) A "C-" or above in ENG-060, College Preparatory Writing I, plus a score of "2" or above on the institutional writing sample taken at the end of the semester in ENG-060, College Preparatory Writing I.

## 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.

## 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. Prerequisite: C- or above in ENG-061 or appropriate placement test score.

## 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.

## 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. Prerequisite: Placement Test required.

## 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

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## 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

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## 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 continues 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**

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### **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 regu-

lated 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**

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### **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 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**

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### **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**

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### **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**

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### **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**

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### **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**

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### **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**

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### **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**

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### **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**

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### **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. 0.5 Lab. 0 Credit 0.5

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.

## **HSV Human Services**

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### **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. 0.5 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 for the first decade of the 21st century and beyond. 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 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**

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### **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 and administration of various forms of medication. Dosage calculations and the physiological actions of drugs on the human body are addressed. Students are acquainted with basic theory and techniques required to perform an electrocardiogram. Information regarding mandatory abuse reporting for health care providers is covered in this course. Students also will gain knowledge of selected hematological tests, perform venipuncture and use quality control. 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. 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. Corequisite: HIT-235.

## **MAT Mathematics**

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### **MAT-006 Quick Review Math**

Lec. 1.5 Lab. 0.5 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

Elementary Algebra is a beginning level course for students needing a start, or fresh start, in algebra. It covers signed numbers, linear equations, polynomials, factoring, square roots, quadratic equations, and graphing. Although these topics are similar to those topics covered in Intermediate Algebra, Elementary Algebra will cover them at a slower pace. This course is designed at a level well below Intermediate Algebra. Credit earned in this class will not count toward the A.A. or A.S. degree requirements. Prerequisites: Completion of MAT-052 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 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 or COMPASS Algebra score of 20 or higher or ACT Math score of 20-21 or math faculty approval.

### **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-117.

### **MAT-117 Math for Elementary Teachers**

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-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 or equivalent.

### **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 definition of derivative. Application problems are taken from Business Management and Social Science areas. Prerequisite: MAT-102 or equivalent.

### **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 a continuation of Finite Math, 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, separable differential equations, growth and decay, and applications of above to Business Management and Social Sciences. Prerequisite: MAT-140 or equivalent.

### **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 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.

### **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-109 Vertical/Horizontal Mills**

Lec. 2 Lab. 6 Credit 5

Upon completion of this course, students will be able to demonstrate competency in all facets of manual milling operations. Special consideration will be given to the set up and safe operation of all milling machines. Prerequisites: MFG-186, MFG-105, MFG-726, or Instructor's approval.

### **MFG-112 Drills and Saws**

Lec. 1 Lab. 2 Credit 2

This course will develop the skills and knowledge necessary to use basic drill presses and saws in a lab setting. Students will be able to properly operate manual and automatic drilling operation using simple drill presses, as well as cutting metals and materials to length for further machining operations by operating both horizontal and vertical band saws. Various drill and saw projects will strengthen the proper use of these tools. Prerequisites: MFG-186 or Instructor's approval.

### **MFG-151 CNC Fundamentals**

Lec. 1 Lab. 2 Credit 2

This course introduces students to the Cartesian Coordinate System. Students will concentrate on the use of G & M codes for tool movements and will make the calculations necessary to identify correct tool locations. A basic knowledge of geometry and trigonometry is necessary to be successful. Prerequisites: MAT-730, MFG-186.

### **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-192 Blueprint Reading**

Lec. 2 Lab. 2 Credit 3

This course covers the creation and reading of engineering drawings through mechanical sketching techniques as a means of communication. Emphasis is placed on developing the perceptual skills that require the student to think in three-dimensional space. This course also provides the necessary range of topics to ensure that the student will know how to interpret engineering drawings.

### **MFG-201 CNC Turning Operator**

Lec. 1 Lab. 2 Credit 2

This course introduces students to the proper use of Computer Numeric Control (CNC) turning centers in the Manufacturing setting. Topics covered include programming codes/manual codes, reading Electrical Industrial Association (EIA) and International Organization for Standardization (ISO) part programs, reading conversational part programs. Loading/storing/activating part programs, tool offsets/tool data entry, machine start up, program restarting process planning for new jobs, work holding devices, installing new tools and entering tool life data, establishing program zero and entering tool offset data and establishing the safe index point will be covered. Various projects will strengthen the proper use and troubleshooting of this equipment in the manufacturing setting. Prerequisite: MFG-186.

### **MFG-205 Mill Programming**

Lec. 1 Lab. 2 Credit 2

This course will introduce students to Computer Numeric Control (CNC) programming concepts in manufacturing settings. Topics covered include circular interpolation, manual program units, drilling, tapping, boring canned cycles, conversational programming units for milling operations, as well as verifying new programs and understanding advanced programming techniques. Various projects will strengthen the proper

use, programming and troubleshooting of the equipment in the manufacturing setting. Prerequisites: MFG-113, MFG-323, MFG-151, MFG-192, MFG-105, MFG-186 or Instructor's approval.

### **MFG-206 Manufacturing Processes I**

Lec. 2 Lab. 2 Credit 3

Basic course in measurements related to manufacturing, material removal, hard mold casting, powder metallurgy, plastics and rubber, material shearing, material forming, the use and manufacture of screw threads, abrasive removal methods, automation and introduction to numerical control. Lab sections demonstrate and give hands-on experiences in reading simple blue prints, layout, measurements and machining on tool room quality machine tools. Corequisite: MAT-704 or equivalent.

### **MFG-207 Manufacturing Processes II**

Lec. 2 Lab. 2 Credit 3

Advanced course in measurements related to manufacturing, material removal, economics of process planning, economics of metal cutting, principles of machine tool design, foundry processes, hard mold casting, powder metallurgy, plastics and rubber, material shearing, material forming, welding, chemical and electrical removal methods and automation. Lab classes are used to demonstrate and give hands on experiences in problem solving, measurements, machining, foundry practices, welding, EDM machining. Prerequisite: MFG-206.

### **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-221 CNC Milling Operator**

Lec. 1 Lab. 2 Credit 2

This course introduces students to the proper use of Computer Numeric Control (CNC) machining centers in the Manufacturing setting. Topics covered include programming codes/manual codes, reading Electrical Industrial Association (EIA) and International Organization for Standardization (ISO) part programs, reading conversational part programs. Loading/storing/activating part programs, tool offsets/tool data entry, machine start up, program restarting process

planning for new jobs, work holding devices, installing new tools and entering tool life data, establishing program zero and entering tool offset data and establishing the safe index point. Various projects will strengthen the proper use and troubleshooting of this equipment in the manufacturing setting. Prerequisites: MFG-113, MFG-323, MFG-151, MFG-192, MFG-105, MFG-186 or Instructor's approval.

### **MFG-224 Coordinate Measuring Machine**

Lec. 0 Lab. 2 Credit 1

This course will emphasize the proper use of Coordinate Measuring Machine (CMM) to qualify and inspect parts for various manufacturing processes. Various CMM hands-on projects will strengthen the proper use of this equipment. Prerequisites: MFG-192, MFG-105, MFG-186.

### **MFG-239 Lathe Programming**

Lec. 1 Lab. 2 Credit 2

This course will introduce students to Computer Numeric Control (CNC) programming concepts in manufacturing settings. Topics covered include calculating and entering program units, understanding advanced programming techniques, drilling/grooving/boring canned cycles, turning, threading, facing canned cycles, machining the first piece for a new program for lathe operations. Various projects will strengthen the proper use, programming, troubleshooting of this equipment in the manufacturing setting. Prerequisites: MFG-105, MFG-258, MFG-151, MFG-186, MFG-192, MFG-323, or Instructor's approval.

### **MFG-258 Lathe Work**

Lec. 2 Lab. 4 Credit 4

Students will develop the theoretical and hands on skills necessary to efficiently and productively operate all types of engine lathes. Students will progress from the basic manual lathes through the larger industrial DRO lathes in preparation for CNC lathe programming and operation. Corequisites: MFG-192, MFG-105, MFG-186, MAT-726 or Instructors approval.

### **MFG-267 Advanced Precision Machining I**

Lec. 2 Lab. 8 Credit 6

In this course, students will manufacture more complicated projects from prints, with closer tolerances, more intricate design or where several components fit together. These

projects are specially selected for or designed by the students. Prerequisite: First year Machine Shop.

### **MFG-268 Advanced Precision Machining II**

Lec. 2 Lab. 6 Credit 5

During this last semester, student will manufacture either a molding die, a blanking die or a simple machine. These projects will be designed or selected by the student to best complement their capabilities. The use of the CNC mill and/or CNC lathe will be required. Prerequisite: First year Precision Machine, Mech. Technology, or MFG-267.

### **MFG-277 Surface & Cylindrical Grinding**

Lec. 2 Lab. 4 Credit 4

Students will develop basic off-hand and flat stock grinding techniques in both wet and dry applications and will progress to more complex techniques used in grinding. Special attention will be placed on jigs and fixtures applications. Students will be introduced to the proper use and application of cylindrical grinders in manufacturing settings. Topics in cylindrical grinding will include parallel grinding and external/internal tapers methods. Prerequisites: MFG-105, MFG-186.

### **MFG-315 CNC Project**

Lec. 0 Lab. 2 Credit 1

This course will provide the student with the opportunity to integrate all skills gained in CNC programming and machining courses to design, build, and produce a variety of parts using the equipment and tools in the manufacturing setting. Special attention and emphasis will be placed on accuracy and proper use of equipment and tools and following safe work practices in the lab situation. Prerequisites: MFG-239, MFG-205, MFG-186.

### **MFG-319 Computer Assisted Manufacturing (MasterCam)**

Lec. 2 Lab. 2 Credit 3

Selected projects are used to give students experience in drawing control and check surfaces on work pieces. Student selects the type of tool path, tooling, stock material and program sequence. Dedicated software, Mastercam, is used to draw the machining parameters of piece parts. Tool paths are then selected by the student and produced by the software. The student selects and debugs the postprocessor and data communica-

tion required for the particular machine tool control. The software uses the control and check surfaces, tooling, materials, processes and postprocessor selected by the student to produce an NC code for the particular machine tool. Several of these programs are then downloaded to the machine tool to produce the part(s). Prerequisites: MFG-328 and experience using machine tools and calculation of speeds and feeds, e.g., MFG-206, MFG-212 or permission of instructor.

### **MFG-323 MasterCam Design**

Lec. 1 Lab. 2 Credit 2

This course provides an introduction to computer aided design and drafting. Actual hands-on experience in designing, drawing, and dimensioning, surface and solid modeling using Mastercam Design software will be provided. The course presents logical step-by-step instruction about the Mastercam commands, drawing aids, shortcuts and other valuable characteristics of Mastercam. This course will also feature 2D geometry and dimensioning, creating 3D surface geometry and 3D solids geometry and using Mastercam Software to create Solid models using wireframe geometry. Finished copies of the students' work will be made on a printer or plotter.

### **MFG-328 Programming Numerical Controlled Machines**

Lec. 2 Lab. 4 Credit 4

Manual writing of programs for Computer Numerical Controlled (CNC) machines is covered. Application toward machine tools is stressed. Operation of 3 and 4 axis vertical CNC machining centers and CNC turret lathe is covered in the lab. Knowledge of machine tool operations is helpful.

### **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-535 Automated Manufacturing/Robotics**

Lec. 2 Lab. 0 Credit 2

This course will give the student basic guidelines in selecting, installing, programming, and maintaining automated robotics systems

and is a study of industrial robotics from its original development to future trends and application. Various types will be examined with applications in different environments. Pendant operation, off-line programming, interfacing, PLC's, end-of-arm-tooling, machine vision, and robotics safety using industry standards will be covered. Prerequisites: CSC-140, ELT-329, ELT-232, MFG-206.

### **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-550 Fluid Power**

Lec. 3 Lab. 2 Credit 4

A course offering a balance of theory and practice which supports the accepted role of the technologist in industry. The theory and measurement of liquid properties at rest and in motion is covered. The labs are used to draw schematics and the set up of practical basic working circuits. Applications in the following fields will be covered: automotive (brakes, including ABS, transmissions and steering); agriculture, (power cylinders, hydrostatic coolers, valves, accumulator and sensors). Those applications which cannot be demonstrated in the lab will be observed by video or on-site visitation. Maintenance, repair, and trouble-shooting of hydraulics, pneumatic and fluid logic systems will be covered. The study of the sensors used to control fluid power systems by PLC's and computer programs will also be covered. Prerequisite: PHY-106 or PHY-160.

### **MFG-800 Prototype Development and Construction**

Lec. 2 Lab. 0 Credit 2

In this course, students will research a project on their own and present the reasons why the rest of the class should help develop and construct a prototype. When all students have presented their research, the class will vote on which prototype(s) will be completely developed and built. The development phase will take into account a timeline to completion, method of completion, financing, labor inputs, manufacturing resources, etc. The actual construction will take place in the lab times set aside in the concurrent

courses MFG-212 and MFG-805. Prerequisites: DRF-113, MFG-546, MFG-206. Corequisites: MFG-212 and MFG-805. Students selecting three-year option are to take MFG-212 as a prerequisite instead of corequisite.

### **MFG-805 Teamwork and Project Management**

Lec. 2 Lab. 2 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**

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### **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**

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### **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.

## **MTR Medical Transcription**

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### **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

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## Applied Music

Private instrumental and vocal instruction is available through SCC's music department. Students will be expected to perform in a public recital at the end of the term. Credit is granted for the specific area studied, based on the amount of work, time and involvement as specified by the music faculty before enrollment. An additional fee is charged for each applied music area selected.

### 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 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-106 Class Voice

Lec. 0 Lab. 2 Credit 1

Class study in voice. Fundamentals of techniques of vocal production: resonance, phonation, respiration, and performance. Basic harmony. Maximum of 4 semester hours may be earned. Prerequisite: consent of voice faculty.

## 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

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## 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 participates in state community college music activities. Maximum of 4 semester hours may be earned.

## 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. 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.

### **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**

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### **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. Prerequisite: CSC-110 or CSC-140 or BCA-190.

### **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 operation system will be emphasized. The student will also receive exposures to other advanced technologies. These technologies may include: switch/router configuration, computer forensics, computer ethics and cryptography. Prerequisites: NET-142, NET-304, NET-314. Prerequisite OR Corequisite: 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-142 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.

### **NET-656 Microsoft Server Applications**

Lec. 2 Lab. 2 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**

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### **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**

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### **PEC-101 Introduction to Coaching**

Lec. 3 Lab. 0 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**

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### **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

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## 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 OJT 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

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## 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

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## 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

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## 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**

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### **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**

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### **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**

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### **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**

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### **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**

Clinical 0 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**

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### **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-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-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**

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### **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: SOC-110 or CRJ-100.

### **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-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.

## **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-131 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.

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