



# COLLEGE CATALOG

2014-2015



EASTERN IOWA COMMUNITY COLLEGES  
CLINTON ♦ MUSCATINE ♦ SCOTT

**LEARN MORE. EARN MORE.**

# TABLE OF CONTENTS

---



## EASTERN IOWA COMMUNITY COLLEGES CLINTON ♦ MUSCATINE ♦ SCOTT

<b>Academic Calendar</b> .....	<b>2</b>
<b>Locations</b> .....	<b>3</b>
<b>Message from the Chancellor</b> .....	<b>5</b>
<b>Student Information</b> .....	<b>7</b>
<b>The Colleges</b> .....	<b>17</b>
Clinton Community College .....	18
Muscatine Community College .....	20
Scott Community College .....	22
Continuing Education .....	24
Business & Industry Center .....	25
Economic Development .....	26
<b>Programs of Study</b> .....	<b>27</b>
By Career Cluster .....	28
By Degree Awarded .....	32
By Alphabetical Order .....	36
<b>Arts and Sciences/A.A. &amp; A.S.</b> .....	<b>39</b>
Concentration Listing .....	40
General Education Requirements .....	41
Concentration Descriptions .....	47
<b>Career Technology/A.A.S., Diploma, Certificate</b> .....	<b>69</b>
Career Technology Listing .....	70
General Education Requirements .....	72
Program Descriptions .....	73
<b>Course Descriptions</b> .....	<b>125</b>
<b>Personnel Directory</b> .....	<b>223</b>
<b>Index</b> .....	<b>239</b>

The information in this catalog applies to Clinton, Muscatine and Scott Community Colleges for the 2012-2014 academic years and is current as of the date of publication. The District reserves the right to change any of the programs without prior notice, but will make reasonable efforts to notify students of changes. Please consult the Admissions Office or your advisor before making academic decisions.

Eastern Iowa Community Colleges endorses the principle of equal educational opportunities for all people, regardless of race, color, creed, marital status, national origin, sex, sexual orientation, religion, ancestry, age or handicap or disability in the educational programs or activities it operates. Inquiries concerning the colleges' compliance with Title VI, Title IX, Section 504, the Americans With Disabilities Act and the Age Discrimination Act should be directed to the Dean of Student Development at the appropriate college or the District Affirmative Action Officer at 306 West River Drive, Davenport, IA 52801, 563-336-3000.

# ACADEMIC CALENDAR

## Fall Semester 2014

August 11	Fall Tuition and Fees Due
August 25	Fall Classes Begin
August 26	Last Day for 75% Tuition Refund/To Adjust Fall First Eight Week Classes
August 29	Fall 2014 Graduation Applications Due
August 29	Last Day for 50% Tuition Refund for First Eight Week Classes
August 29	Last Day for 75% Tuition Refund/To Adjust Fall 16 Week Classes
September 1	Labor Day (College Closed)
September 5	Last Day for 50% Tuition Refund for 16 Week Classes
September 22	12 Week Classes Begin
September 23	Last Day for 75% Refund/to Adjust 12 Week Classes
September 26	District Staff Development Day – College CLOSED
September 29	Last Day for 50% Refund for 12 Week Classes
October 10	Last Day to Withdraw from First Eight Week Classes
October 17	Mid-Term
October 17	First Eight Week Classes End
October 20	Second Eight Week Classes Begin
October 21	Last Day for 75% Tuition Refund/To Adjust Fall Second Eight Week Classes
October 24	Last Day for 50% Tuition Refund for Second Eight Week Classes
November 4	Advising Day
December 1	Last Day to Withdraw from 16 Week Classes
November 26 – 28	Thanksgiving - College CLOSED
December 9	Last Day to Withdraw from Second Eight & 12 Week Classes
December 12, 15 & 16	Final Exams
December 16	Fall Term Ends
December 16	Grades Due by 5 p.m.

## Spring Semester 2015

December 24 –	College Closed
January 2	
January 6	Spring Tuition and Fees Due
January 19	Martin Luther King Day - College CLOSED
January 20	Spring Classes Begin
January 21	Last Day for 75% Tuition Refund/To Adjust First Eight Week Classes
January 26	Spring/Summer 2015 Graduation Applications Due
January 26	Last Day for 50% Tuition Refund for First Eight Week Classes
January 26	Last Day for 75% Tuition Refund/To Adjust Spring 16 Week Classes
February 2	Last Day for 50% Tuition Refund for 16 Week Classes
February 16	12 Week Classes Begin
February 17	Last Day for 75% Tuition Refund/To Adjust 12 Week Classes
February 20	District Staff Development Day – College CLOSED
February 23	Last Day for 50% Tuition Refund for 12 Week Classes
March 6	Last Day to Withdraw from First Eight Week Classes
March 13	Mid-Term
March 13	First Eight Week Classes End
March 16 - 20	Spring Break
March 23	Second Eight Week Classes Begin
March 24	Last Day for 75% Tuition Refund/To Adjust Spring Second Eight Week Classes
March 27	Last Day for 50% Tuition Refund for Second Eight Week Classes
April 9	Advising Day
April 30	Last Day to Withdraw from 16 Week Classes
May 13	Last Day to Withdraw from Second Eight & 12 Week Classes
May 15, 18 & 19	Final Exams
May 18	Commencement-Clinton Community College 6:00pm
May 19	Commencement-Muscatine Community College 7:00pm
May 20	Commencement-Scott Community College 6:00pm
May 20	Spring Term Ends
May 20	Grades Due by 5 p.m.
May 25	Memorial Day – College CLOSED

## Summer Term 2015

May 19 Summer Tuition and Fees Due

### First Four Week & Eight Week Summer Sessions

June 1	First Four Week & Eight Week Summer Sessions Begin
June 2	Last Day for 75% Tuition Refund/To Adjust Classes to First Four Week & Eight Week Summer Sessions
June 5	Last Day for 50% Tuition Refund for First Four Week & Eight Week Summer Sessions
June 19	Last Day to Withdraw from First Four Week Session
June 26	First Four Week Session Ends
June 29	First Four Week Session Grades Due by 5 p.m.
July 3	College CLOSED
July 17	Last Day to Withdraw from Eight Week Session
July 24	Eight Week Session Ends
July 27	Eight Week Session Grades Due by 5 p.m.

### Second Four Week Session

June 29	Second Four Week Session Begins
June 30	Last Day for 75% Tuition Refund/To Adjust Second Four Week Classes
July 3	College CLOSED
July 6	Last Day for 50% Tuition Refund for Second Four Week Classes
July 17	Last Day to Withdraw from Second Four Week Classes
July 24	Second Four Week Session Ends
July 27	Second Four Week Session Grades Due by 5 p.m.

## MAIN CAMPUSES

**Clinton Community College**  
1000 Lincoln Boulevard • Clinton, IA 52732  
\*1-800-637-0559 • 563-244-7001

**Muscatine Community College**  
152 Colorado Street • Muscatine, IA 52761  
1-800-351-4669 • 563-288-6001

**Scott Community College**  
500 Belmont Road • Bettendorf, IA 52722  
1-800-895-0811 • 563-441-4001

## ATTENDANCE SITES

**Clinton Community College  
Maquoketa Center**  
501 West Washington Street  
Maquoketa, IA 52060  
563-652-5000

**Clinton Community College  
Technology Center**  
1951 Manufacturing Drive  
Clinton, IA 52732  
\*1-800-637-0559  
563-244-7010

**Columbus Junction Center**  
1208 Colton Street  
Columbus Junction, IA 52738

**John T. Blong Technology Center**  
8500 Hillandale Road  
Davenport, IA 52806  
1-800-895-0811  
563-441-4360

**MCC Outreach Center**  
1208 Colton Street  
Columbus Junction, IA 52737

**Midwest Center for Public  
Safety Training**  
8228 N. Fairmount Street  
Davenport, IA 52806  
563-299-3637

**Muscatine Agricultural  
Learning Center**  
3200 Lucas Street  
Muscatine, IA 52761  
563-263-2645

**Scott Community College/  
Kahl Educational Center**  
326 West Third Street  
Davenport, IA 52801  
1-800-895-0811  
563-336-5200

**EICC Administrative Offices/  
Scott Community College  
Urban Center**  
306 West River Drive  
Davenport, IA 52801  
1-800-462-3255  
563-336-3300

**Scott Community College  
West Davenport Center**  
2950 Fairmount Street  
Davenport, IA 52806  
1-800-895-0811  
563-326-5319

**Wilton Center**  
1215 Cypress  
Wilton, IA 52778  
563-732-2038

**New student information  
toll free (from anywhere):  
1-888-336-3907**

\* Toll free for calls made within area code 563

Eastern Iowa Community Colleges are registered with the Minnesota Office of Higher Education pursuant to Minnesota Statutes, sections 136A.61 to 136A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.

\* Please Print  
 \* Fill out Completely

**EASTERN IOWA COMMUNITY COLLEGES  
 SAMPLE COURSE SCHEDULING CARD**

Today's Date \_\_\_\_\_

Name \_\_\_\_\_ Social Security or ID# \_\_\_\_\_  
 (last) (first) (middle)

Address \_\_\_\_\_ Concentration/Program \_\_\_\_\_ Code # \_\_\_\_\_  
 \_\_\_\_\_ Semester/Year \_\_\_\_\_  
 (city) (state) (zip) (For which you are scheduling) New Student

Telephone Number (\_\_\_\_\_) \_\_\_\_\_ Assessed \_\_\_\_\_ Returning Student

Email Address \_\_\_\_\_

COMPUTER #	CATALOG #	COURSE NAME	TIME	DAY	BLDG/ROOM	SEM. HRS

Students who withdraw from the class(es) and complete the necessary procedure will be entitled to a refund of tuition according to the following schedule:

75% Refund - prior to the end of the first week of classes (2nd class day of summer and short-term sessions)

50% Refund - prior to the end of the second week of classes (5th class day of summer and short-term sessions)

Students who are receiving financial assistance and completely withdraw are subject to the current refund policy regarding the return of funds to the applicable programs.

Any changes made to your original schedule may affect your Academic Plan. Contact your Academic Advisor.

**TOTAL SEMESTER HOURS**

--

\_\_\_\_\_  
**STUDENT SIGNATURE**

\_\_\_\_\_  
**ADVISOR SIGNATURE**

# WELCOME TO YOUR COMMUNITY COLLEGE

---

## Mission Statement

The Eastern Iowa Community Colleges deliver high-quality education and training that prepare a skilled workforce, provide affordable access to higher education, and build and strengthen our communities.

## Quality Vision

The Eastern Iowa Community Colleges will be the first choice for education, training, and partnerships that strengthen Eastern Iowa.

## Accreditation

EICC is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The HLC address is 230 South LaSalle Street, Suite 7-500, Chicago, Illinois 60604. Phone: (800)621-7440 / (312) 263-0456  
FAX: (312) 263-7462

EICC is an Academic Quality Improvement Program (AQIP) college. Accreditation means our programs meet or exceed the standards for academic excellence set for every public and private college in the 19-state North Central region. The colleges are approved by the Iowa Department of Education and the Board of Regents. Individual programs are accredited by associations within their respective fields.



## *A Message from the Chancellor*

Welcome to the Eastern Iowa Community Colleges. I am pleased you have chosen Clinton, Muscatine or Scott Community College as your partner in furthering your education.

We have a long tradition of excellence and commitment to the success of our students. We continue to invest in our facilities and support resources to serve you better – something you can see when you visit our campuses and facilities.

We have updated our classrooms, technology and hands-on learning labs to make our campuses great places to learn. We've also designed new course delivery methods because we understand that each of you has unique needs and learning styles.

What may not be as visible is our passionate commitment to help you achieve your goals. We hope you will aspire to great things, just as we aspire to be the best colleges we can be. We have high expectations of you, and we hope to achieve the high expectations of quality and service that you have of us.

Our faculty and staff are dedicated to your success, whether your goal is to prepare for a great career or for successful transfer to a four-year college or university. Our goal is to help you meet your goals, whatever they might be.

I encourage you to visit our website at [www.eicc.edu](http://www.eicc.edu) for more information – including virtual tours of our campuses. Please call on us for assistance with class registration, financial aid planning, career guidance, campus life questions or with any other questions you might have.

Again, thank you for choosing the Eastern Iowa Community Colleges.

Sincerely,

A handwritten signature in black ink, which appears to read "Don Doucette". The signature is fluid and cursive, with a long horizontal stroke at the end.

Don Doucette  
Chancellor





# Student Information



EASTERN IOWA COMMUNITY COLLEGES  
CLINTON ♦ MUSCATINE ♦ SCOTT

**LEARN MORE. EARN MORE.**

# STUDENT INFORMATION

---

## ADMISSIONS

### General Policy

Eastern Iowa Community Colleges believe in equal educational opportunities for all qualified individuals, regardless of race, color, creed, sex, marital status, religion, ancestry, national origin, sexual orientation, age, handicap or disability in the educational programs and activities it operates. The colleges reserve the right to deny admission, re-admission or re-enrollment to anyone who may pose a risk to the best interests of the college community.

Clinton, Muscatine and Scott Community Colleges have an open admission policy, which means that anyone 16 years of age may apply, even without a high school diploma. Admission to the college does not automatically guarantee admission to all programs of study; you will need to meet the specific requirements for your chosen program. The colleges reserve the right to guide our placement based on assessment interviews and past academic experience.

All new students must complete a Bridge Experience, orientation session prior to registration

You may take up to six credit hours without providing transcripts from high school or other colleges you have attended, submitting ACT scores or taking the COMPASS Assessment. But to be officially admitted to a degree or certificate program, you must meet the total admission requirements of the college and the program.

### Concurrent Enrollments

You may enroll in classes at more than one of our colleges or at one of our colleges and any other institution. If you are receiving financial aid, you must notify the financial aid officers at all institutions in which you are enrolled.

### High School Students

Eligible high school students may be accepted for admission to EICC under Iowa's Senior Year Plus. Approval by your high school is mandatory before you may be accepted under this program. EICC offers the opportunity for high school students to enroll in credit classes. High school applicants requesting admission must:

1. Complete an Admission Application
2. Students must submit the written approval form signed by a parent/guardian and the high school counselor or principal.
3. Complete COMPASS Assessment testing or submit ACT scores. Course placement will be mandatory based on COMPASS or ACT scores.
4. Meet with EICC advisor/high school counselor prior to registration.

### Pre-High School Students-Special Status Admission

EICC will consider the admission of a Pre-High School student to credit classes as long as the student is currently enrolled in public or private schools. Enrollment may be considered as enrichment, but is not intended to substitute for the public or private school experience.

Students may apply to the college for "special status" consideration for admittance.

Completion of all the steps below is necessary before an admission decision and enrolling a student who is not at least a freshman in high school is determined.

1. Complete an Admission Application
2. Students must provide a current copy of a signed permission agreement by the appropriate school system and the authorizing parent or guardian. Such documentation must be provided to the Dean of Student Development prior to admission to the College.
3. Prior to admission, an applicant who does not have a high school diploma will be required to demonstrate that they possess specific pre-requisite skills by taking the COMPASS Assessment or submitting ACT scores.
4. The College reserves the right to limit the number to two courses and which type of courses a student may take. Additionally the student will be required to meet with a college advisor when selecting courses for registration. "Special Status" admissions must be approved by the Dean of Student Development.

### Home School Students-Special Status Admissions

EICC will consider the admission of a student to credit classes who are not attending a public or private school, and are currently enrolled as home school students. Students may apply to the college for special status consideration for admittance. Enrollment may be considered as enrichment to the home school program, but is not intended to substitute for the home school experience. The following policies and procedures will apply to the enrollment of home school students:

1. Complete an Admission Application
2. Students who are home schooled must provide a current copy of a signed home school permission agreement between the appropriate school system and the authorizing parent or guardian. Such documentation must be provided to the Dean of Student Development prior to admission to the College.
3. Prior to admission, an applicant who does not have a high school diploma will be required to demonstrate that they possess specific pre-requisite skills by taking the COMPASS Assessment or submitting ACT scores.
4. The College reserves the right to limit the number of courses and which type of courses a student may take. Additionally the student will be required to meet with a college advisor when selecting courses for registration. "Special Status" admissions must be approved by the Dean of Student Development.

### Transition to College

All first-time, full-time, degree-seeking students assessing into two or more developmental education content area(s) will be required to complete SDV:129 Transition to College, 1 credit hour.

### Application Procedures

To apply for admission to Clinton, Muscatine or Scott Community College, you will need to:

1. Submit an application for admission. If you are applying to more than one EICC college, you only need to submit one application.

2. Send official transcripts from any other college you have attended, if you have previous college credit. Direct your requests for evaluation of transfer credit to the College Registrar.
3. Provide assessment scores from ACT, or COMPASS (computerized testing) taken within the last three years.

Please contact the Admissions Office for more information.

## **International Student Admissions**

In addition to following application procedures, International students will need to supply:

1. Provide evidence of proficiency in the English language (in the form of Test of English as a Foreign Language, TOEFL; EICC schools require a score of 500 or better on the paper test, 173 on the CBT, 61 on the IBT).
2. A complete Statement of Financial Support. Forms are available from the Admissions Office.

If you do not qualify for admission as an international student under these requirements, contact the Admissions Office. You may be admitted to ESL (English as a Second Language) classes for credit.

## **Guest International Student Admissions**

If you are an international student on an I-20 with another college, you will need to provide the following:

- 1) Current class schedule from home college
- 2) Copy of I-20
- 3) Copy of VISA/Passport
- 4) Unofficial home school transcript

## **Re-enrollment**

To be re-admitted, you must meet all applicable admission requirements. You may be re-admitted to a Career and Technical Education program subject to availability of space in the program and an evaluation of your previous progress.

## **Transfer Credit**

### **From Other Colleges to EICC**

We accept transfer credit from colleges and universities accredited by the North Central Association of Schools or its regional affiliates. Credit for equivalent courses will be accepted to satisfy specific course requirements for graduation. The transfer credit you receive may vary depending on the academic program you choose, and college registrars will decide on elective credit or course substitutions on an individual basis. Transfer credit will be recorded on your EICC transcript after you have requested a transcript evaluation.

Transfer grades are not used in your EICC grade point average.

### **From Career and Technical to Arts and Sciences Programs**

If you earn credit in career and technical courses at EICC or other accredited institutions, a maximum of 16 hours of that credit may be accepted as elective credit for an Arts and Sciences degree. See the College Registrar for complete details.

We reserve the right to refuse credit earned more than 10 years before your proposed program completion date. All credit you earn at one of our colleges will transfer to another EICC college, with the limitations outlined above.

## **Admission on Restricted Status**

If you have been dismissed from another institution or were not in good standing when you left, you still may be admitted on a restricted status. The college may limit your class load and course selection if you want to enroll for more than six credits while you are on restricted status. We may also require supplemental assessment, counseling and other forms of assistance to help promote your academic success.

## **Special Student Admission**

### **Veterans**

All of our programs are approved by the Iowa Department of Education for veterans benefits for students eligible under the GI and Post 9/11 Bills. If you are a veteran of the Armed Forces, National Guard or Reserve, contact the VA Certifying Official early in the application process to certify your status and benefits. If you have earned credit through civilian or military

education, the College Registrar may evaluate that credit for transfer evaluation.

To receive educational assistance from the Veterans Administration, you must meet "pursuit of education and academic standards" established by the VA and college policy. You are responsible for knowing and following policies that apply to you as a veteran. For information about these policies, including pursuit of education, satisfactory progress, verification, benefit and other questions about veteran students, see the VA Certifying Official.

If you are the widow, widower or child of a veteran, you may also be eligible for educational benefits. The VA Certifying Official can help answer your questions.

### **Military Personnel**

We are a Servicemembers Opportunity College (SOC) and participate in the Concurrent Admissions Program (ConAP). This program allows enlistees to enroll in college at the same time they are serving in the military.

### **Residency Status for Military Personnel and Veterans**

Active duty military personnel and military service veterans residing within a 50 mile radius of an EICC college, as well as their spouses and dependent children, are considered to be Iowa residents for admission, tuition and fee purposes.

### **Senior Citizens**

If you are 62 years or older and live in our service area, you may register for credit courses on a space available basis at a cost of \$10.00 per credit hour plus fees. Special registration for seniors is the first five days of classes.

### **Audit or CEU**

You may choose to audit a credit course if space is available in the class. To audit a class, register as usual; tuition and fees will be the same as if you were taking the course for credit. You won't receive credit for the course, but your transcript will reflect the audit with an "N" grade. Participation in class activities is expected, but you won't have to take exams. Some credit courses may also be taken for non-credit Continuing Education Units (CEUs). You cannot receive financial aid if you choose to audit a class.

# STUDENT INFORMATION

---

## REGISTRATION

### Registration Procedures

To enroll in classes you must meet with an advisor for your first two semesters and complete the appropriate forms. After successful completion of two semesters you may log on to [www.eicc.edu](http://www.eicc.edu) and follow the link to enroll online. Students may enroll in a maximum of 6 hours before meeting with an advisor.

### Early Registration

Early registration allows you to choose courses and establish your schedule for the next term if your tuition and fees are paid by the designated due date. For some programs, a non-refundable fee (which will be applied toward tuition) may be required when you register or are admitted.

### Changing Your Registration

#### Adding a Class

To add a class you may meet with an advisor and complete the appropriate form or log on to EICConnect and follow the ebridge link to add the class. Classes may be added during the first week of classes for a full semester class. Summer or short term sessions have two days to add a class.

#### Dropping a Class

To drop a class you may meet with an advisor and complete the appropriate form or log on to EICConnect and follow the ebridge link to drop the class. You may drop a class with a grade of "W" until two weeks prior to the first day of final examinations for a full semester class. You have one week prior to the end of the term during the summer or short term sessions. Failure to follow the above procedures will result in your earned grade for the course.

#### Withdrawing from College

You may meet with an advisor and complete the appropriate form or log on to EICConnect and follow the ebridge link to withdraw from all of your classes. NOTE: Check the Tuition and Fees Refund policy for a possible refund.

### Course Repeats

Courses must be taken within EICC to be considered repeat courses. The grade and credits earned in the most recent course repeat will be used to calculate your grade point average and will be applied to your degree or program requirements. Once a degree is awarded, if you choose to repeat a course both grades will be calculated in your GPA.

### Academic Load

A full-time academic load is 12-18 credit hours per term. You are considered a part-time student if you take 11 or fewer credit hours.

If you'd like to take more than 18 credits in the fall or spring terms or more than 12 credits during the summer term, you'll need permission from the Dean of Student Development. Usually the Dean will grant permission only to students who maintain a 3.0 cumulative GPA and plan to carry no more than 21 credit hours. If you are enrolled in a program that requires more than 18 credit hours per term, you may register without special permission.

### Class Attendance

Faculty members determine attendance requirements for their classes. As a student, you are responsible for knowing and following class attendance guidelines.

### Graduation

Applications for graduation are due by the fifth day of classes of the semester in which you plan to graduate. For summer graduates, the applications are due by the fifth day of classes of the spring semester.

You are responsible for making sure that all of your financial obligations to the college are paid before you can graduate.

## EDUCATIONAL COSTS

We work hard to provide the highest quality instruction at the lowest possible cost. Costs at Clinton, Muscatine or Scott Community College will vary based on your state of residence, fees, books and materials for your program. All costs are subject to change. Please contact the Business Office for a current tuition and fee schedule.

### Tuition

Tuition is based on residence and class load. For non-Iowa residents, tuition is 1.5 times the rate for Iowa residents.

### Books and Supplies

Your costs will vary depending on the program you choose, but you should expect this to be a significant expense. Career and Technical Education programs may also require tools or uniforms. Contact the Barnes and Noble bookstore or the Admissions Office for more detailed information.

### Transcript Recording Fees

The college charges \$9 per credit hour to record credit you have earned through tests and other types of non-traditional credit. For example, if you take a CLEP test and earn three hours of credit in English, you would pay \$27 to have that credit recorded on your transcript.

### Early Registration Fee

Early registration is required for many career and technical programs. A non-refundable fee, which will be applied to your tuition, may be required to guarantee your registration.

### Tuition Refunds

If you withdraw from the college, be sure to complete the necessary withdrawal forms to make sure you do not jeopardize your academic standing. If you are eligible for a refund, tuition dollars will be refunded according to the following scale:

Courses that are 16 weeks in length:	
100%	Prior to the beginning of the term
75%	First week of term
50%	Second week of term

Courses that meet for one week or less:  
100% Prior to the official start date of the course\*

No refund after the course has begun

For all other courses:

100% Prior to official start date of the session\*

75% During the first two days of the session\*

50% During the third through fifth day of the session\*

\*See Registration Center for specific course dates.

If classes are cancelled by the college, tuition and fees will be refunded.

The same refund policy applies to official withdrawal from individual courses. Your refund will be the appropriate percentage between the tuition for your new load and the tuition for your original load. If you are officially enrolled and receiving Title IV funds (federal financial aid such as SEOG, Pell Grant), your refund will be determined using the return of Title IV Funds calculation. Contact the Financial Aid Office for details. Contact the Business Office or College Registrar for refund deadlines for short-term programs.

## RESIDENCY

You are considered an Iowa resident for tuition purposes if your legal residence is in Iowa and you have lived in the state for no less than 90 days prior to the start of the term for which residency is being requested. You are responsible for proving your in-state status. If you would like to apply to be reclassified from non-resident to resident status, fill out a Request for Residency Status form in the College Registrar's office and provide the following support documents: rent receipts, or evidence of ownership of property in Iowa, and two of the following documents: Iowa income tax return, Iowa vehicle registration, Iowa driver's license, Iowa voter registration card. The request for residency status must be filed prior to the end of the first week of classes during the fall and spring terms; by the second day of the summer and shortened class sessions.

If you are reclassified as a resident, that reclassification becomes effective immediately and does not cover any term for which you previously have been enrolled. International students cannot establish residency while studying in this country on a temporary student visa. Contact the Admissions Office or College Registrar for more information.

## STUDENT HEALTH INSURANCE

We encourage you to have health/accident insurance, and optional insurance coverage is available. If you choose to buy student health insurance, see the Dean of Student Development for the form. Any medical costs for treatment of illness or accident which are not covered by personal insurance are your responsibility.

## FINANCIAL AID

Your college education is an investment in your future. We are pleased to provide financial assistance to students who might otherwise not be able to attend college. If you are in need of financial assistance to attend school, please contact the Financial Aid Office. No student should ever withdraw from school for financial reasons without first talking to our financial aid staff to see if help is available.

Financial aid programs are constantly being reviewed by the state and federal government. The outline below is meant to be a general overview. Please contact the Financial Aid Office for more information.

### General Policy

If you previously attended, or are currently attending, another institution you must notify the Financial Aid Office. You cannot receive financial aid from two institutions during the same semester. For specific information about satisfactory academic progress or other financial aid policies, see the current student handbook or contact the Financial Aid Office.

To apply for federal and state financial aid, all students must complete a Free Application for Federal Student Aid (FAFSA) at [www.fafsa.ed.gov](http://www.fafsa.ed.gov)

## Federal Assistance

**Federal Pell Grant** - a federally funded program based on financial need and enrollment status. Students must not have a bachelor's or higher degree.

**Federal Supplemental Educational Opportunity Grant** - a federally funded program administered by the colleges; priority must be given to Pell Grant recipients with the lowest family contribution. Students must not have a bachelor's or higher degree. Funding is limited.

**Federal College Work Study** - Federally funded part-time employment opportunities that allow students to work at an EICC site or at designated off campus locations. Students working at off campus locations will have the opportunity to work in community service positions or at elementary schools through the America Reads/America Counts programs. The amount a student may earn is based on financial need. Funding is limited.

**William D. Ford Direct Loan Program** - long-term, low interest loans available to students and parents. These are also known as Federal Stafford Loans (Subsidized and Unsubsidized) and Federal Parent Loans for Undergraduate Students (PLUS). To apply, complete a Master Promissory Note (MPN), a Loan Authorization Form (LAF), and an Entrance Counseling Form. Links to these applications are available online at [www.eicc.edu/staffordloanapp](http://www.eicc.edu/staffordloanapp).

# STUDENT INFORMATION

## State Assistance

### Iowa Vocational - Technical Tuition Grant

- a state funded grant for Iowa residents enrolled in Iowa community college vocational-technical programs who show financial need and meet the state's priority deadline.

**Iowa Grant** - grants to Iowa residents who attend Iowa colleges and universities and who demonstrate exceptional financial need. Funding is limited.

### Iowa Skilled Workforce Shortage Tuition Grant (Kibbie Grant)

- a state funded program for students enrolled in specified career and technical programs.

**All Iowa Opportunity Scholarship** - a state funded scholarship program available to Iowa residents who begin their initial enrollment at an eligible college or university within two years of graduation from high school. Students must file a FAFSA application and the Iowa Financial Aid application by the state's priority deadlines.

### All Iowa Opportunity Foster Care Grant

- grants available to Iowa residents who resided in a foster care living arrangement as defined by the Iowa College Student Aid Commission. Students must file a FAFSA application and the Iowa Financial Aid application by the state's priority deadlines.

### Education and Training Voucher (ETV) Grant

- grants available to Iowa residents aging out of the Iowa foster care system. Students must file a FAFSA application and the Iowa Financial Aid application by the state's priority deadlines.

**Veterans Educational Benefits** - financial assistance for veterans of the Armed Forces, National Guard or Reserves, or widows, widowers and children of disabled or deceased veterans. Contact your Commanding Officer or the College Registrar for eligibility and application information.

## EICC Programs

**EICC Tuition Grant** - funded by EICC, assists students who meet certain criteria. Funding is limited.

**College Foundation Scholarships** - each college provides scholarships from local resources. Contact the Financial Aid or Foundation Office for information.

**Other Forms of Assistance** - many employers or area organizations (civic, ethnic, religious, etc.) offer financial assistance. Contact the organization or your employer for more information.

## GRADUATION AND GENERAL EDUCATION REQUIREMENTS

At Clinton, Muscatine and Scott Community Colleges, you can earn a degree, diploma or certificate. The Associate in Arts and Associate in Science degrees are designed for transfer to four-year colleges and universities, while the Associate in Applied Science degree will prepare you to enter a specific occupational field.

### Associate in Arts (A.A.) Degree

To earn an Associate in Arts degree, you must complete at least 62 credit hours with a 2.0 GPA or better. The minimum general education requirements for the Associate in Arts degree are listed below.

Area	Credits
Communications	
Written Composition	6
Speech	3
Arts and Humanities	
Literature	3
Humanities	3
Arts	3
Cultural/Historical Perspectives	
Western Perspectives	3
International Perspectives & Language	3
Social Science	
Economics or Political Science	3
Psychology or Sociology	3
Natural Sciences	
Life Sciences	4
Physical Sciences	3-4
Mathematics	3
Computer Skills (1)	3
Concentration Courses and Electives (2,3,4)	18-19
<b>TOTAL</b>	<b>.62</b>

Courses that satisfy specific requirements for A.A. concentration areas are listed on pages 41-42.

1. You may choose to demonstrate proficiency in computer skills.
2. A maximum of 16 credit hours of career and technical credit may be accepted as electives.
3. A maximum of four credit hours of Student Development courses may be counted toward the A.A. degree.
4. All course work for the A.A. degree must be numbered at the 100 level or higher.

### Associate in Science (A.S.) Degree

To earn an Associate in Science degree, you must complete at least 62 credit hours with a 2.0 GPA or better. The minimum general education requirements for the Associate in Science degree is listed below.

Area	Credits
Communications	
Written Composition	6
Speech	3
Arts and Humanities	6
Literature	
Humanities	
Arts	
Cultural/Historical Perspectives	3
Western Perspectives	
International Perspectives & Language	
Social Science	3
Economics or Political Science	
Psychology or Sociology	
Mathematics & Natural Sciences	24
Life Sciences	
Physical Sciences	
Mathematics	
Computer Skills	
Demonstrate Proficiency	
Concentration Courses and Electives (1,2,3)	17
<b>TOTAL</b>	<b>.62</b>

Courses that satisfy requirements for specific A.S. concentration areas are listed on pages 43-46.

1. A maximum of 16 credit hours of career and technical credit may be accepted as electives.
2. A maximum of four credit hours of Student Development courses may be counted toward the A.S. degree.
3. All course work for the A.S. degree must be numbered at the 100 level or higher.

## Associate in Science in Pre-Engineering (A.S.) Degree

The Associate in Science in Pre-Engineering degree is offered to address the unique needs of students who plan to transfer to a 4-year university or college and pursue a B.S. in engineering. To earn this degree, you must complete at least 62 credit hours with a 2.0 GPA or better. The minimum general education requirements for the Associate in Science in Pre-Engineering degree is listed below.

Area	Credits
Communications	
Written Composition . . . . .	.6
Speech . . . . .	.3
Arts and Humanities . . . . .	.0 - 9
Literature	
Humanities	
Arts	
Cultural/Historical Perspectives . . .	.0 - 9
Western Perspectives	
International Perspectives & Language	
Social Science . . . . .	.3
Economics or Political Science	
Psychology or Sociology	
Natural Sciences . . . . .	.18 - 20
Life Sciences	
Physical Sciences	
Mathematics . . . . .	.21
Mathematics	
Computer Skills . . . . .	.3 - 6
Electives (1,2,3) . . . . .	.0 - 11
<b>TOTAL . . . . .</b>	<b>.62</b>

1. A maximum of 11 credit hours of vocational-technical credit may be accepted as electives.
2. A maximum of four credit hours of Student Development courses may be counted toward the A.S. degree.
3. All course work for the A.S. degree must be numbered at the 100 level or higher.

## Associate in Applied Science (A.A.S.) Degree

To earn an Associate in Applied Science (A.A.S.) degree, a student must complete the general educational and technical competency requirements of a two-year technical program with a GPA of 2.0 or better in your award major. These programs are designed to prepare you for skilled employment in your chosen area; they are not designed for transfer to a four-year college or university. A.A.S. degree requirements include a minimum of 12 credit hours of general education, including one course each in Communications, Humanities or Social Sciences, and Math or Science. A.A.S. degrees vary by program in the number of credit hours required for completion and range between 62-86 total credits. All course work must be at the 100 level or above.

### Diploma Programs

Diplomas are awarded to students who successfully complete a program with fewer than 49 but more than 31 credit hours and maintain a GPA of 2.0 or better in your award major. These programs will prepare you for entry-level employment in a specific field. Diploma programs emphasize technical skills and related general education courses that will give you the skills necessary to succeed in the working world.

Minimum general education requirements for a diploma include three credit hours in Communications and 3 credit hours in Social Sciences, Humanities, Math or Science. All course work must be at the 100 level or above. See specific requirements listed for your program later in this catalog.

### Certificate Programs

When you successfully complete a designated program with fewer than 32 credit hours with a GPA of 2.0 or better in your award major, you will earn a Certificate of Completion. The Certificate means you have the minimum competence in your chosen area. All course work must be at the 100 level or above. See specific requirements listed for your program later in this catalog.

## ACADEMIC REQUIREMENTS

### Academic Standing

At the end of each term your instructors will assign grades to assess your performance and encourage you to do your best work. The college will determine term and cumulative grade point averages (GPA) and record those on a grade record you may access online. GPA is determined using this formula:

- A 4.00 x number of credit hours of A credit received
- A- 3.67 x number of credit hours of A- credit received
- B+ 3.33 x number of credit hours of B+ credit received
- B 3.00 x number of credit hours of B credit received
- B- 2.67 x number of credit hours of B- credit received
- C+ 2.33 x number of credit hours of C+ credit received
- C 2.00 x number of credit hours of C credit received
- C- 1.67 x number of credit hours of C- credit received
- D+ 1.33 x number of credit hours of D+ credit received
- D 1.00 x number of credit hours of D credit received
- D- 0.67 x number of credit hours of D- credit received
- F 0.00 x number of credit hours of F credit received

To determine the GPA, divide your total grade points by the number of your total credit hours. A cumulative GPA of 2.0 in your award major is required to earn any degree, diploma or certificate.

If you receive Veterans Educational Benefits or other types of financial aid, you must meet any academic progress and attendance requirements determined by college policy and the agency that has granted your financial assistance.

### Grading and Transcript Designations

Our grades and transcript designations conform to the Iowa Department of Education's "Common Master List of Grade Symbols and Definitions for Merged Area Schools."

# STUDENT INFORMATION

---

## Marking System

---

- A** excellent performance
- B** above average performance
- C** average performance
- D** below average performance
- F** failure, no credit granted or grade points awarded, but credits attempted are figured into GPA as zeroes. "F" grades are given for poor performance, poor attendance, failure to officially withdraw or failure to meet makeup requirements for an Incomplete grade.
- I** failure to complete required work due to justifiable extenuating circumstances. An "I" grade means you have asked for and received permission from your instructor to complete the required course work no later than mid-term of the following academic term, not including summer sessions. Failure to complete the work in that time frame will result in an "F" grade.
- W** official withdrawal from a course. To qualify for a "W" grade, you must complete the withdrawal form two weeks prior to the first day of final exams. Contact the College Registrar for summer and short-term withdrawal dates. If you leave a course without officially withdrawing, you will receive an "F" or the grade that reflects your course performance.
- N** audit. Audit is a "no credit/no pass" grade that you can use for several purposes: you may choose it during registration instead of a course grade or in place of withdrawal with instructor permission if you are already enrolled in a course; OR the college may award the "N" grade to students in developmental courses who do not make sufficient progress to move into credit courses. When you audit a course, you and your instructor will agree on your attendance and participation in class activities. The audit option is offered only on a space-available basis. You must complete the audit form by the end of the 10th day prior to the first day of final exams.
- P** given when you pass a course and earn credit without grade points being awarded. Courses transferred into EICC with a "P" grade are considered to be credit without being calculated into your GPA.
- X** course has been repeated.

- O** Fresh Start grade
- R** Course has been repeated. This notation will be listed in the column to the right of the grade. The term GPA will not reflect a course repeat. This will be reflected in the cumulative GPA.

## Prerequisite Course Grade Recommendation

---

Faculty members recommend a minimum grade of C in all prerequisite courses. Please consult your advisor or department chair if you receive a D in a prerequisite course.

## Satisfactory Progress

---

We encourage you to maintain satisfactory academic progress while a student at EICC. The minimum satisfactory academic progress is a cumulative grade point average of 2.00. At any point in your career that your cumulative grade point average falls below 2.00, you may be placed on academic probation. An academic advisor will help you develop a plan of action to improve your grades. That plan may include a restriction on the number of credit hours you may take, and additional assistance and other developmental requirements.

If you are an official full-time student after the add-drop period and on financial aid, you must successfully complete at least eight credit hours of credit. If you are enrolled for six to eleven credit hours, you will need to successfully complete at least six credit hours. You may be placed on academic probation if you do not meet these requirements.

When the requirements of your program are higher than the minimum standards listed here, your program requirements will apply. It is your responsibility to know and follow your program requirements.

If, at the end of your probationary term, you are unable to meet the minimum standards, we may recommend additional corrective steps or academic suspension. After a one-term absence for academic suspension (not including the summer session), you may be re-admitted on probation.

## Types of Credit

---

Any credit you receive in an Arts and Sciences course with a course number of 100 or above is considered transferable. Credit received in vocational-technical courses with course numbers 100 or above is generally not transferable, although some four-year colleges and universities may choose to award credit. Credit from courses numbered below 100 is generally not transferable, nor is credit for continuing education contact hours or continuing education units (CEUs).

## Credit Transfer

---

Clinton, Muscatine and Scott Community Colleges are accredited by the Higher Learning Commission of the North Central Association, the same organization that accredits the major colleges and universities in the United States, so your Arts and Sciences credits from here will normally transfer to any of these institutions. Your A.A. degree from an EICC college will satisfy the general education requirements at many four-year institutions.

## Articulation

---

We have articulation agreements with local high schools and regional four-year colleges and universities so that you are assured of being prepared to transfer successfully. If you are planning to transfer to a four-year institution, talk to your academic advisor and the transfer admissions office of the college you plan to attend to make sure you meet all the requirements for transferring your course work from EICC.

## Transfer Guarantee

---

Our Transfer Guarantee is a written contract completed at the beginning of your academic career at Clinton, Muscatine or Scott Community College. It outlines your plan of transfer and provides a tuition refund for any credits in your Associate in Arts degree that will not transfer to any of seven participating colleges and universities. These institutions are Iowa State University, Iowa Wesleyan College, Ashford University, St. Ambrose University, University of Iowa, University of Northern Iowa, and Western Illinois University. Talk to the Dean of Student Development for more details, or go to EICCConnect.

## **Joint Admission**

EICC has signed Joint Admission Agreements or Admission Partnership Programs with the University of Iowa, Iowa State University, St. Ambrose University, Iowa Wesleyan College, Palmer College of Chiropractic, University of Northern Iowa, Western Illinois University and Trinity College of Nursing and Health Sciences. By applying for joint admission, you may be admitted to both EICC and the transfer institution at the same time. Advisors from both colleges will help you plan your course work to ensure a smooth transfer process. For more information, see the Dean of Student Development.

## **Class Standing**

Freshmen are students who have completed no more than 29 credit hours; students with 30 to 62 credits are classified as sophomores.

## **Academic Honors**

Each term we recognize students who have achieved outstanding academic success. If you complete six or more credit hours during a term with a 4.0 GPA, you'll be named to the President's List; the Dean's List includes students with a 3.5 or better GPA for six or more credit hours during a term. Incomplete or blank grades at the time lists are calculated will disqualify you from the list.

## **Honor Graduates**

Honor Graduates are those with a final cumulative GPA of 3.5 or better for all course work completed toward graduation.

## **Incomplete Grades**

Incomplete grades (I) are given for work that is not completed during an academic term due to justifiable extenuating circumstances. To qualify for an "I" grade, you will need to sign an Incomplete Contract Agreement with the class instructor and submit it to the College Registrar. Work must be completed and turned in to the instructor no later than mid-term of the following semester (not including summer sessions). Courses not completed by that time will receive an "F" grade.

## **Withdrawal from College**

If you need to withdraw from the college for any reason, please see the Student Services office for the appropriate paperwork. Deadlines and conditions for withdrawal are the same as those for withdrawal from an individual course (see Addition of and Withdrawal from Courses section).

Be sure to follow the proper procedures when withdrawing or you may forfeit your rights to any refund to which you may be entitled and receive grades of "F" in your courses.

## **Catalog Program Requirements**

You may choose to graduate under the requirements of a prior EICC catalog as long as you were enrolled under that catalog and have been continuously enrolled in the college. Continuous enrollment means you have earned credit during an academic year (each semester). When program requirements change, course substitutions may be considered for the student at the discretion of the academic dean. It is best to graduate under the most current catalog requirements, especially if you plan to transfer to a four-year college or if you are enrolled in a program requiring specialized accreditation.

## **Program Discontinuation**

If EICC determines a Career and Technical Education Program (AAS award) is to be discontinued, it will be announced prior to the ending of the program. Students enrolled in the program will have one year from the time of the announcement to complete program graduation requirements.

## **Fresh Start**

If you are a student returning to EICC to pursue a degree or diploma after an absence of three or more consecutive years, you may request permission to remove one or more entire academic terms from future degree and GPA considerations. Contact the Dean of Student Development for additional information.

## **Graduation GPA and Residency Requirements**

You are considered a candidate for graduation when you have completed specific course requirements for an A.A. or A.S. degree with a minimum cumulative GPA of 2.0 or better. You are considered a candidate for graduation when you have completed specific course requirements for an A.A.S. degree, diploma or certificate with a minimum GPA of 2.0 in the award major. Sixteen of your final 32 credit hours or half of the final 50 percent of credit hours - whichever is the lesser number - must be taken at Clinton, Muscatine or Scott Community College.

## **Credit for Prior Learning**

You may have gained knowledge from work, military or life experiences that could be considered for college credit. Contact the college's Prior Learning Coordinator for more information concerning Credit for Prior Learning.

## **Alternative Delivery**

Clinton, Muscatine and Scott Community Colleges offer many options for course delivery. Visit [www.eicc.edu](http://www.eicc.edu) for information about these options.

Our colleges also offer opportunities for study abroad. Please contact the Student Development Department or your advisor for more information.

## **Student Handbook**

For additional information about policies, procedures and services at Clinton, Muscatine and Scott Community Colleges, please refer to the online Student Handbook at [www.eicc.edu/students/help/handbook](http://www.eicc.edu/students/help/handbook). The Handbook includes information on student rights and responsibilities, student conduct and discipline policies, academic policies and appeal processes, financial aid policies, campus security and more.

# STUDENT INFORMATION

---

## **Student Learning Assessment**

In addition to traditional classroom assessments such as grades, you may be asked to participate in program assessments throughout your college experience. While faculty use classroom assessment to determine an individual student's progress in a course, the District uses other tools to measure the effectiveness of its programs. Examples of program assessment include the Collegiate Assessment of Academic Proficiency (CAAP) and vocational-technical program pre- and post-tests of critical employment skills. You will receive your academic testing results.

You may also be surveyed regarding your satisfaction level with college programs and services through the Student Satisfaction Inventory (SSI), Student Perception of Teaching (SPOT) surveys and graduate/alumni surveys. These assessments help the District target areas to improve student services and also ensure the colleges comply with state and Higher Learning Commission/AQIP accreditation requirements.

## **CONFIDENTIALITY OF STUDENT RECORDS**

Our faculty and staff use records to meet the needs of individual students and help develop ways to improve programs, services and academic success. Student records are regarded as confidential. EICC will not provide names and addresses to outside agencies for commercial use or any information about academic records without your written consent or under specific guidelines set out in the Family Educational Rights and Privacy Act of 1974.

The college may release the following types of information to the public as the college sees fit, keeping in mind the privacy of the student and the totality of the surrounding circumstances: name, address, telephone listing, e-mail address, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, academic honor rolls, degrees and awards received, full-time/part-time status, most recent previous school or institution attended by the student and photograph and likeness, artwork, or writing.

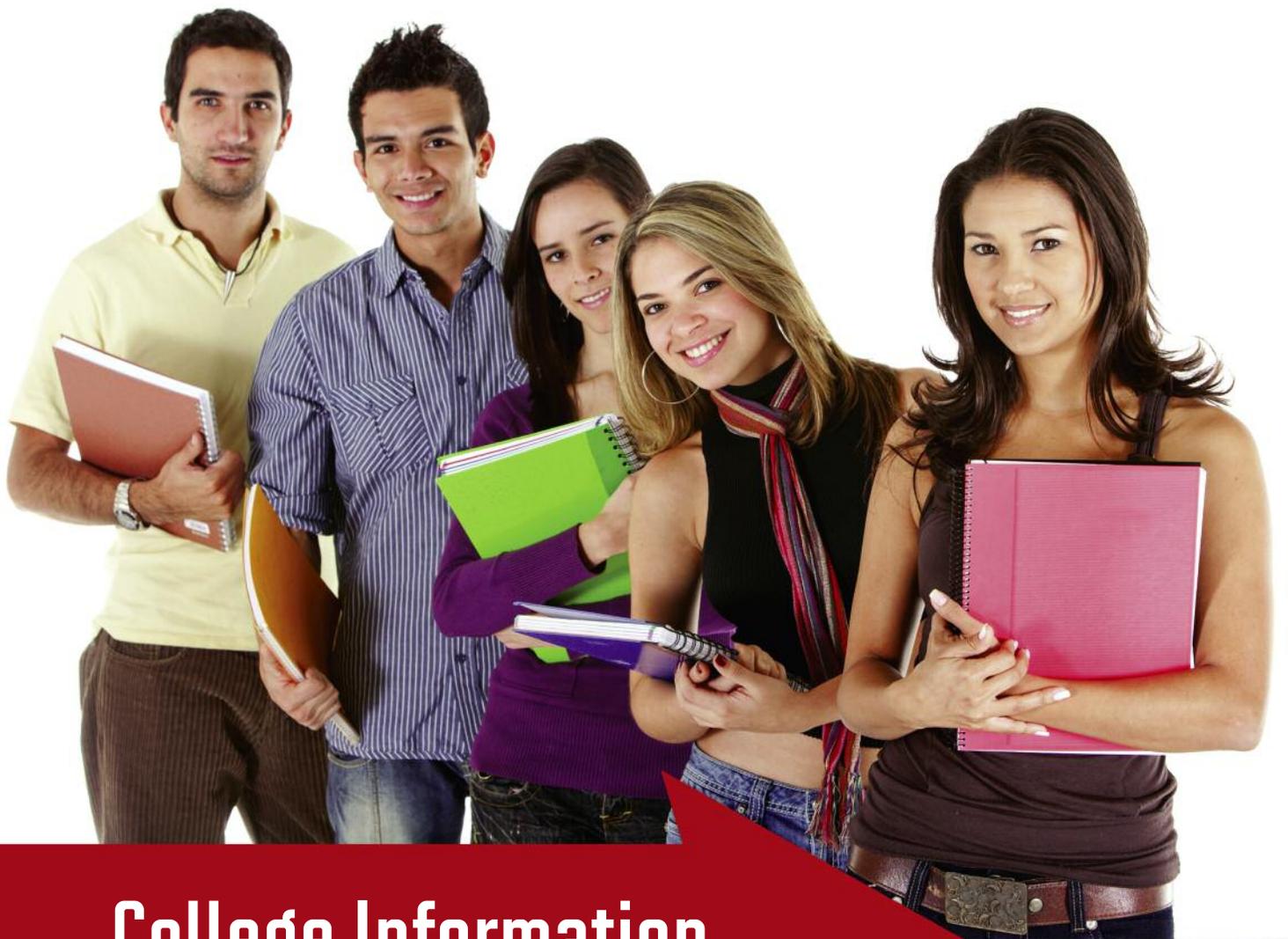
Any student objecting to the public release of such information must file a written objection with the Registrar's Office within 30 calendar days of the beginning of the term in which he or she first enrolls during that year. It is necessary for the student to renew his or her objection at the beginning of each school year.

A student wishing to review the entire district policy on student rights may request the district policy from the Dean of Student Development.

Please consult your current online Student Handbook for more detailed information about confidentiality of student records.

## **Online Voter Registration**

[www.sos.state.ia.us/elections](http://www.sos.state.ia.us/elections)



# College Information



EASTERN IOWA COMMUNITY COLLEGES  
CLINTON ♦ MUSCATINE ♦ SCOTT

**LEARN MORE. EARN MORE.**

# CLINTON COMMUNITY COLLEGE

## THE COMMUNITY

Clinton is located in the extreme eastern part of Iowa, 157 miles west of Chicago. The picturesque Mississippi River town was originally called New York, but was renamed in 1885 after DeWitt Clinton, a former governor of New York.

Clinton offers many recreational facilities including five beautiful parks, swimming pools, beaches along the river and nearby lakes. It also has many softball diamonds and tennis courts, two golf courses and a modern baseball park. Clinton is home to the Class A professional baseball Clinton Lumber Kings.

The community's public library offers services via two community locations, and the fine arts are well-represented through the Clinton Community Concert Association, the Clinton Symphony Orchestra Association, the Clinton Showboat professional theatre, Gateway Contemporary Ballet and the Clinton Art Association.

## THE COLLEGE

Clinton Community College offers many college transfer programs and career technology options. The college's faculty offer quality, personalized education with a student-instructor ratio of just 20 to 1. Over 90 percent of the college's arts and sciences faculty have earned either their master's or doctorate degree.

Approximately two-thirds of Clinton Community College students are enrolled on a part-time basis, and the college has a large number of both traditional and non-traditional students. The average age of the student body is 27.

## CCC Alumni Association

Clinton Community College maintains a strong Alumni Association. Almost 80 percent of the college's graduates continue to live in Iowa, with an additional 10 percent living in nearby Illinois communities such as Fulton, Savanna, Thomson and Morrison.

The Alumni Association is an active supporter of the college and hosts many annual events such as the Student Leader Luncheon and the Outstanding Awards that highlight those that give outstanding support to CCC. In addition, the Alumni

Association supports four different scholarships for CCC students ranging from \$200 to a full-time Alumni Honor Scholarship.

To become a member of the CCC Alumni Association, or for more information, visit the Web Site at [www.eicc.edu/ccc/sharar/alumni/index.html](http://www.eicc.edu/ccc/sharar/alumni/index.html)

## STUDENT PROGRAMS

### Intercollegiate and Intramural Athletics

Clinton Community College is a member of the National Junior College Athletic Association (NJCAA). The college has a women's volleyball team. Competition and eligibility are governed by the Iowa College Conference Athletic Codes and the NJCAA. To participate, a student must be enrolled at Clinton Community College, passing work at all times in at least 12 credit hours of course work, must have passed 12 credits of course work in the previous semester of college attendance and maintain a minimum 2.0 GPA.

To be eligible for a second session of competition, a student must pass 24 credit hours with a minimum 2.0 GPA. Contact the Athletic Director with questions.

The college also offers student intramural programs throughout the year.

### Clubs and Organizations

Students are invited to join the many clubs and organizations at Clinton Community College. Club information is available in the Student Development office.

### Phi Theta Kappa

Phi Theta Kappa is the international honor society for two-year college students. Phi Theta Kappa recognizes and encourages the academic achievement of community college students and provides opportunities for individual growth and development through participation in honors, leadership, service and fellowship programming. Students invited to join must have accumulated a minimum of 12 credit hours and have a cumulative 3.5 or higher GPA.

## Student Senate

The Student Senate plans the yearly social calendar and all college activities. Organizations chartered by the Student Senate are journalism, nursing, graphic arts, computers, Phi Theta Kappa, and fine arts/drama. The Senate also supports a tutoring program that provides academic and computer assistance to students through one-on-one tutoring.

## Student Newspaper

*The Gallery* is published throughout the academic year and includes college news as well as community and national news. Students are invited to become a part of this publication. Activities include newswriting, photography, layout, editing and advertising.

## STUDENT SERVICES

### Housing

A list of community housing is available in the Admissions Office.

### Library

The Clinton College library provides access to quality information sources in traditional and electronic formats to support the information needs of students, staff, and community patrons. Through the college's participation in RiverShare Libraries, patrons have access to over 2 million items available in area academic and public libraries. The library Web site is [www.eicc.edu/library](http://www.eicc.edu/library) and our phone number is 563-244-7046.

### Career Services

The college's staff offers interest assessments and career services in setting educational and career goals, assistance in preparing for a job search and help in finding a job. Advisors are also available to help students identify concerns, make important educational decisions, adjust to college, improve personal relationships and set goals.

## Success Center

The Success Center provides resources for students who need individual assistance to brush up, catch up or accelerate their skills to achieve college success. Peer tutoring is available free of charge for registered students in reading, grammar, basic math, writing skills and current college courses. Computers with internet and other audio/visual equipment are available in the Success Center for student use.

## Student Success

CCC offers classes to help students learn time management and study skills and to achieve their maximum potential. Check the schedule or ask your advisor for more information.

## Internet

Internet access, including the World Wide Web, is available to students, staff and faculty at several campus computer lab locations. There is also wireless access in each of the college buildings. The college's Web Site includes an online credit class schedule database, general college information and links to other EICC sites. The address is: [www.eicc.edu](http://www.eicc.edu).

## **PAUL B. SHARAR FOUNDATION**

---

*The Paul B. Sharar Foundation supports the students, programs, faculty and staff of Clinton Community College. The 28-member board is responsible for encouraging, receiving and administering all contributions.*

*Each year the Sharar Foundation awards scholarships to deserving Clinton Community College students. These scholarships are awarded to recent high school graduates as well as non-traditional-age students who are returning to college after being away from school for a number of years. All students are urged to apply for scholarships by contacting the Financial Aid office or the Sharar Foundation office.*

*The Sharar Foundation also places priority on supporting college programs through equipment purchases and funding for staff development. In addition, a Sharar Foundation grant program helps make it possible for faculty and staff to further their own education.*

**The Paul B. Sharar Foundation office is located on the college campus. For more information, visit the Web Site at [www.eicc.edu/cc/sharar/index.html](http://www.eicc.edu/cc/sharar/index.html)**

## THE COMMUNITY

With its long history and Mississippi River traditions, Muscatine enjoys a new spirit of progress that makes it a thriving modern community of more than 23,000 in the heart of agricultural/industrial mid-America. Early French explorers established the first settlement in 1832. In 1849 the original name, Bloomington, was changed to Muscatine after the Musquitine Indians living along the river.

Muscatine is home to 96 diversified industries, including two Fortune 500 companies. The area boasts numerous recreational activities, including water sports on the Mississippi and nearby Cedar and Iowa rivers, and a park system offering swimming, picnic areas, baseball, tennis, cycling, soccer complex, horseshoes and golf. Many entertainment opportunities are available, as well as cultural enrichment through the Musser Museum and Art Gallery.

## THE COLLEGE

Muscatine Community College offers an arts and sciences transfer program and numerous career technology curricula. The college has an annual enrollment of more than 2,700 full- and part-time students in credit programs. An additional 6,500 people are served by continuing education programs. Although many students attending Muscatine Community College enroll directly out of high school, the average age of students is 25, with more than 57 percent of students attending part-time.

Alumni association records show that almost 80 percent of Muscatine Community College graduates remain in Iowa, with others finding employment opportunities in every state and several foreign countries.

Well-qualified, experienced and dedicated instructors guide the educational experiences of students in small, personalized classes. Almost all faculty members have master's degrees, and all are specialists in their fields.

## STUDENT PROGRAMS

### Clubs and Organizations

Muscatine Community College offers many student clubs, organizations and activities ranging from special interest groups to campus-wide picnics and outings. Music, drama, athletics and numerous other activities are available to all interested students. The Student Services division also sponsors a series of special activities designed to appeal to older students and their families.

### Phi Theta Kappa

Phi Theta Kappa is a national honorary scholastic organization for community, junior and technical colleges. Students invited to join must have accumulated 12 credit hours and have a 3.5 or better GPA.

### Student Government

The Student Senate, elected annually by the general student body, is open to all students. In addition to planning college activities, the Senate manages the student activities budget, recommends policy and provides a forum for student issues and concerns.

### Intercollegiate and Intramural Athletics

Muscatine Community College is a member of the Iowa Community College Athletic Conference and offers intercollegiate competition in men's baseball and women's softball. To participate, a student must be enrolled at Muscatine Community College.

The college also offers a variety of intramural activities ranging from volleyball, basketball to pool table, bowling and flag football.

### Student Newspaper

The award-winning *Calumet* is published throughout the academic year and includes college, community and national news and features. All students are invited to join the staff as writers, photographers, editors or advertising and layout specialists.

## College/Community Activities

Activities sponsored jointly with community and service organizations provide students with an opportunity to hear nationally known speakers. The college also has an excellent Visiting Artist Series, co-sponsored by the Quad City Arts.

## STUDENT SERVICES

### Success Center

The Success Center provides an individualized environment for students in need of personal assistance in areas such as study skills, reading, grammar, basic math, writing skills and general classwork. Through the tutoring program, students requesting a tutor can be matched to an individual tutor at no charge.

### Disability Accommodations

The College helps students with difficulties due to physical or learning disabilities, limited English skills or reading, math, spelling and writing problems. The program is also a resource for students who need help in academic classes. Students learn strategies for note taking, study and listening skills, reading, time management, math, spelling and writing. Taped textbooks, test alternatives, taped class lectures, and vocational and transitional services are also available.

### Housing

The MCC Villas is an amenity rich community located on campus just minutes away from the classrooms. Spacious two and four bedroom apartments with multilayered security systems and WiFi are available. Information is available from the MCC Registration or Admissions Office.

### Test Center

Make-up testing is given upon instructor request. Special testing such as CLEP, COMPASS, online and other forms of testing are also given by appointment.

## Advising Center

Appointments are encouraged, but not required. Advisors are listeners who can help students make educational decisions, solve personal problems, adjust to college, improve personal relationships, set goals and change career goals.

The Advising Center offers human development courses to help students deal with typical student concerns. Advisors can also interpret test results, analyze academic records, give interest inventories, provide information about careers, educational programs and colleges, and help with job placement after graduation.

## Study Skills

Muscatine Community College offers classes designed to help students learn time management and study skills and to achieve their maximum potential. Check the class schedule or see your advisor for more information.

## Career Assistance

Career assistance is available to people of all ages through the Advising Center. Career exploration opportunities are provided by a variety of resources, including a career information library, the Occupational Outlooks handbook, governmental publications and MCC's own Graduate Survey. Other resources available are the I Have a Plan computerized career exploration program and Cooperative Education work experience placements.

## Child Care

The Learning Tree Preschool is an on-campus, licensed facility providing quality child care and educational experiences for the three- to six-year-old children of college students, faculty and the general public. The program includes preschool education, creative play, field trips, art activities, hot noon meals and morning and afternoon snacks. The Learning Tree Preschool also serves as a laboratory for the college's early childhood education students.

The preschool is staffed by a supervisor, teachers, aides and a cook. A parent advisory group helps formulate policies, plans special activities and publishes a parent newsletter. Contact the head teacher for more information.

## Library

The library is a place to find help from staff who are knowledgeable about the information students and faculty need for classes. Print resources and DVDs are available for borrowing. Electronic resources are available 24/7 and include: RiverShare (a way to access over 2 million books, DVDs, and CDs) and databases giving access to millions of full text online articles through EBSCO, Academic One File, Films on Demand, Ovid and others. The Library and Computer Labs have 38 computers, 2 B&W printers, a color printer, a scanner and a copier for student use.

## Lounge

The Muscatine Community College lounge, featuring wireless Internet access, is a place to relax, watch TV, play pool and enjoy time with friends. The lounge is open during all school hours and offers a food area for a quick lunch or snack between classes.

## Internet

Internet access, including the World Wide Web, is available to students, staff and faculty at several campus computer lab locations. There is also wireless access in each of the college buildings. The college's Web Site includes an online credit class schedule database, general college information and links to other EICC sites. The address is: [www.eicc.edu](http://www.eicc.edu)

## MUSCATINE COMMUNITY COLLEGE FOUNDATION

*Founded in 1961 as a non-profit steward of gifts to the college, the Foundation strives to provide a "margin of excellence" in the college's programs and facilities. The Foundation supports educational programs, student and staff development, facilities improvement and alumni development, but the emphasis is on student scholarships and loans. More than \$280,000 is awarded annually to deserving Muscatine Community College students for tuition, fees and books. Scholarship applications are due April 1.*

**For more information, write:  
Muscatine Community  
College Foundation,  
Lisa Wiegel,  
Scholarship Coordinator,  
152 Colorado Street,  
Muscatine, IA 52761.  
(563)288-6005  
[lwiegel@eicc.edu](mailto:lwiegel@eicc.edu)**

## THE COMMUNITY

Scott Community College has campuses in Bettendorf and Davenport, Iowa. These two cities make up a major portion of a metropolitan area called the "Quad Cities." The Quad Cities, comprised of towns located on the Iowa and Illinois banks of the Mississippi, is home to several major industries including Alcoa, Inc. (Aluminum Company of America) and Deere & Company. Another major employer is the Rock Island Arsenal.

The area has many parks, and the Mississippi River offers ideal recreational opportunities. A rich cultural environment has been created through the Quad City Symphony, Visiting Artist Series, Figge Art Museum, Putnam Museum of Natural History and the Family Museum of Arts and Science. Each July, Davenport is host to thousands of runners and music enthusiasts who come from all over the United States and the world to participate in the annual Bix Beiderbeck Jazz Festival and the Bix 7 mile run. The area is home to the John Deere Golf Classic PGA Tournament, Class A Quad Cities River Bandits baseball team, the IHL Quad City Mallards hockey team, and the Arena Football League 2 Quad City Steamwheelers.

## THE COLLEGE

Scott Community College has grown from 240 students in 1966 to more than 8,700 students. The campus was built in 1968 on 181 acres of land donated by Alcoa, Inc. The main campus is in Bettendorf. In downtown Davenport is the Kahl Educational Center, which houses the community college's business programs and graduate-level courses through the Quad Cities Graduate Center, and also features the historic Capitol Theatre. At the SCC/West Davenport Center, English as a Second Language, Adult Basic Education and GED preparatory courses are taught. Also downtown Davenport is the Urban Center, which houses the district's administrative offices and short-term training labs. In August 2001, the John T. Blong Technology Center in northwest Davenport opened its doors, providing a state-of-the-art training facility for short-term, certificate, diploma and degree programs in manufacturing-related areas.

Scott Community College serves approximately 8,700 students in college transfer and career technology programs, and another 40,000 people in continuing education each year. The college also enrolls a number of international students who come to participate in credit English as a Second Language courses or international exchange programs.

## STUDENT PROGRAMS

### Student Government

All students are eligible to be elected or appointed to the Student Government. The group allocates student activities funds, assists with campus improvements and acts as a student voice on policies and issues.

### Clubs and Organizations

Students are invited to join the many clubs and organizations at Scott Community College. There are more than 30 clubs and organizations available for student participation. More information is available in the Student Life Center.

### Phi Theta Kappa

Phi Theta Kappa is a national honorary scholastic organization for community, junior and technical college students. Students invited to join must have accumulated 12 credit hours and have a 3.5 or better G.P.A.

### Honors Program

Scott Community College has an Honors program for qualifying students. The program consists of meetings, activities and projects to be completed for credit. Students in Arts and Sciences or Career and Technical Education programs are invited to participate.

### Athletics

Students can participate in these intercollegiate sports at Scott Community College: women's soccer, men's soccer, women's golf and men's cross country. More information is available in the Campus Activities Office. To participate, a student must be enrolled full-time at Scott Community College.

## STUDENT SERVICES

### Disability Accommodations

Scott Community College is committed to making its services, programs and activities accessible to students with disabilities. A Learning Skills Specialist provides assistance in the form of accommodations such as note-taking assistance, readers, test accommodations, computer-assistive technology, text taping resources, adaptive equipment and sign language interpreters. Appropriate accommodations are identified on an individual basis. It is the student's responsibility to self identify and to provide documentation of their disability. Persons with disabilities are encouraged to complete this first step as early as possible before the start of the semester by calling 563-441-4027.

### Guidance

Student Services staff can help students with educational, personal and career-related concerns. Choices, a computerized career guidance system, and other career guidance inventories are available by appointment; staff members are available to help students use these resources. The staff is committed to student success and can help set realistic academic and personal goals. For more information, call 441-4010 or go to Room 2204.

### Advising

Professional staff advisors and faculty advise students on appropriate courses for their educational programs. Contact the Student Services Offices, room 2204, for more information.

### Housing

Located one (1) mile from the Scott Community College Belmont campus is the Villas at Devils Glen. Owned and managed by the Oxbow Development Student Focused Housing Division, the Villas is a living community consisting of a combination of four-bedroom/four bath suites and two bedroom/two bath suites. For leasing information, contact The Villas at Devils Glen, (563) 499-5511.

## Student Success

Scott Community College offers classes designed to help students learn time management and study skills and to achieve their maximum potential. We strongly encourage students to take either SDV:114 Strategies for Academic Success or SDV:108 The College Experience which address these issues in-depth. (See page 228) Check the class schedule or ask your adviser for more information.

Additionally, Scott Community College provides tutoring assistance for a variety of courses through a Writing Center, a Math Center and a Student Success Center (at no cost to students). Students may access NovaNet at the Student Success Center to further develop their reading, writing and math skills.

TRIO Student Support Services, a federally funded program, offers intensive academic support services to students with the goals of earning an associate degree and transferring to a four-year school. To participate in the program, students must meet eligibility requirements, such as being first generation college students, having limited income and/or having a disability. Services provided to students include academic advising, coaching in study and learning strategies, career exploration and decision-making, progress monitoring, one-on-one-tutoring with tutorial

specialists, financial awards to supplement the Pell Grant and visits to four-year schools. For more information or to apply to participate in this program, students may call 563-441-4074.

## Job Placement

The Career Planning/Transfer Center (Room 3110) maintains an occupational resources library including information on specific careers, resume development and job search techniques. The office periodically offers workshops in resume writing and interviewing skills, and also compiles on-campus and off-campus job listings. Students looking for employment should register for job placement services at the office.

## Library Services

The SCC Library provides access to quality information sources in traditional and electronic formats that support the information needs of students, faculty and staff. A major component of the library staff's responsibilities is to help patrons learn how to use these resources. Through SCC's participation in RiverShare, library patrons have access to over 2 million books, DVDs and CDs from the region; EBSCO and Academic One File, ways to access over 10,000 magazines, journals, and newspapers online. The library Web Site is [www.eicc.edu/library](http://www.eicc.edu/library) and the phone number is 563-441-4150.

## Events Publications

Calendars are published monthly by the Campus Activities Office. Forms for activity approval and publication are available in the Student Life Center.

## Class Schedules

Summer, fall and spring semester schedules are available on campus soon after mid-term and prior to the college's scheduled Advising Day for current students. Contact the Admissions Office or the Registration Center for more information.

## College Bookstore

Textbooks and course materials are available in the college bookstore, along with a variety of Scott Community College items, including sweatshirts, t-shirts, shorts, etc.

## Internet

Internet access, including the World Wide Web, is available to students, staff and faculty at several campus computer lab locations. There is also wireless access in each of the college buildings. The college's Web Site includes an online credit class schedule database, general college information and links to other EICC sites. The address is: [www.eicc.edu](http://www.eicc.edu).

## SCOTT COMMUNITY COLLEGE FOUNDATION

*The Scott Community College Foundation is an important link in the life of the college. Through gifts from faculty, staff, alumni, organizations and friends, the Foundation is able to provide scholarships, emergency grants and classroom equipment to assist students with their studies. The Foundation also supports faculty and staff through the Distinguished Teacher and Outstanding Staff Awards.*

*The Scott Community College Foundation is committed to supporting the college with the development of its programs and services. This commitment is best demonstrated by the college's faculty and staff who have contributed more than \$175,000 to support the Foundation's projects and the community that has made it possible to remodel a downtown landmark building into the multi-million dollar Kahl Educational Center.*

**For more information, contact the Foundation office at 563-441-4063.**

# CONTINUING EDUCATION

**E**astern Iowa Community College's Continuing Education division offers a wide array of personal and professional lifelong learning opportunities. Our training professionals develop and implement programs at the three colleges, community sites and workplaces for more than 61,000 people each year.

EICC Continuing Education also plays an active role in economic development by responding to employer needs and developing customized training and retraining opportunities. The colleges are pleased to design courses or workshops for groups or businesses interested in a particular subject.

**For more information about the programs and services available through Continuing Education, call Iowa toll-free 1-888-336-3907 or one of the numbers below:**

**Continuing Education District Office**  
563-336-3444

**Clinton Community College**  
563-244-7100

**Muscatine Community College**  
563-288-6100

**Scott Community College**  
563-441-4100

**Business and Industry Center**

Davenport	563-441-4360
Clinton	563-244-7020
Muscatine	563-288-6162
Small Business Development Center	563-336-3401

## COSTS

Continuing education tuition and fees are determined for each activity to assure quality programs at the lowest possible cost to the participants. Program fees are published with each activity announcement. Fees must be paid in full at the time of registration and will be refunded if notification of cancellation is received three business days (Monday - Friday) prior to the scheduled class date. Employers may contact the college to arrange billing for employee training.

## ADMISSION

Although there may be specific admission requirements for a few programs, generally anyone 16 years of age or older who is not enrolled as a full-time high school student may enroll in classes designed for adults. High school students 16 or older may enroll with written permission from their guidance counselor or principal. For those special classes designed for youth, age is not a consideration for enrollment.

Because admissions procedures differ by program, consult the college Continuing Education Office for specific information.

## REGISTRATION

Advanced registration is taken for all classes. You may enroll by phone, fax, mail or online. Registration phone and fax numbers and a registration form are included in Continuing Education class schedules.

## Cancelled Classes

Classes without sufficient registration may be cancelled, in which case we will refund fees already collected.

## Late Enrollment

You may not enroll in a continuing education class after the second class meeting or after the second week of classes for those activities that meet more than once a week.

## Class Limits

Class limits help us ensure quality instruction. We will keep a waiting list with individuals listed in order of the date of their contact with the college, and this list will be used to fill classes if a space becomes available. If enough students are interested and an instructor is available, a second class may be organized.

## ACCREDITATION AND MEMBERSHIPS

Eastern Iowa Community Colleges Continuing Education programs are accredited, certified and approved when necessary to meet appropriate agency and licensure requirements within the respective professional disciplines. Additionally, the Colleges hold memberships in several organizations including the National Council of Continuing Education and Training (NCCET), the Iowa Association of Lifelong Learning (IALL), the National Coalition of Advanced Technology Centers (NCATC), the National Council for Workforce Education (NCWE), Iowa EMS Association, National Association of EMS Educators and American Heart Association Cardiac Care.

## PROGRAMS

### Professional Development

The Continuing Education staff design, develop and deliver education and training programs, with the primary focus on short-term, flexible skill training. Content areas include:

**Microcomputers** - Novice to advanced classes in Windows, Word, Excel, Access, PowerPoint, Internet and many others. Enrollments are limited to enable everyone to have hands-on training. We also offer a series of online classes.

**Management and Supervision** - Programs include Learning to Lead by Achieve Global, as well as online management courses.

## **Professional Relicensure/Certification -**

Professional continuing education is available to those professionals requiring Continuing Education Units (CEUs). EICC Continuing Education offers CEUs in a myriad of areas, including but not limited to dietitians, nurses, emergency medical service personnel, counselors, social workers, child care providers, morticians, real estate professionals, insurance personnel and many more.

**Sales Training** - highly interactive basic and advanced sales programs for people entering the sales profession and for those wanting to polish their selling skills.

**Technical Training** - Emphasis is on new skill development and/or retraining. EICC has two advanced manufacturing technology centers - in Davenport and Muscatine - provide state-of-the-art, hands-on training in such areas as welding, statistical process control, lean manufacturing, basic and advanced electricity, boiler operations, mechanical design, programmable logic control, basic and advanced CNC, industrial math and measurement, and hazardous materials/industrial safety. Individualized classes are available, offering learning at a flexible and convenient pace.

## **Customized Training**

EICC's Continuing Education division works with companies of all sizes to deliver training specifically designed to meet their individual educational needs. Training can be offered at the college or on-site at the employer's facility. Customized training is available in many areas, including computers, business, sales and marketing, administration, management and supervision, industrial and technical fields, quality and productivity, lean business practices, and environmental and industrial safety. Online classes are also available.

## **Short-Term Skills Training**

We offer short-term training in preparation for various occupations, including Nurse Aide, Homemaker/Home Health Aide, Medication Manager, Activity Director, Child Development Associate, institutional food service, CNC Operator, Logistics Technician, Production Welder, Pharmacy Technician, Medical Billing and Coding, Phlebotomy Technician and many more.

Students meeting eligibility requirements may be eligible for financial assistance for select short-term training programs leading to immediate employment.

## **ABE/HSC/ESL**

At no cost, Adult Basic Education (ABE) provides programs and learning experiences in reading, writing, math and other basic skills. Regardless of level, small classes and personalized attention let you progress at your own rate to meet your goals.

The High School Completion (HSC) program prepares individuals to pass the High School Equivalency Diploma and serves as a brush-up prior to entering college or the job market.

English as a Second Language (ESL) is a program to help refugees and immigrants with limited English skills learn to live and function in the United States.

## **General Interest**

General interest courses and activities provide the opportunity to explore subjects that enhance quality of life. Topic areas include community resource development, environmental education and leisure time activities.

## **Mandatory Programs**

The State of Iowa requires EICC to offer certain courses they deem in the best interest of citizenry. Some are court mandated or court referred and may be offered in conjunction with other public service entities.

## **Continuing Education Unit (CEU)**

Approved Continuing Education programs offer classes to prepare for and maintain license or certification in professional areas. Classes are approved by appropriate governing agencies and transcripts are maintained. Some areas approved include health, emergency medical services, insurance, real estate, cosmetology and food services.

CEUs will be made available for selected courses in accordance with the guidelines established by the licensing board for the specific profession.

## **BUSINESS AND INDUSTRY CENTER**

Established by EICC in 1987, the Business and Industry Center provides companies with a one-stop shop for the colleges' programs and services. The Business and Industry Center offers expert assessment of training needs and delivers a customized, hands-on, state-of-the-art program tailored to an organization's unique needs. Both non-credit and credit programs in a variety of fields are available, in addition to on-site training and flexible scheduling to make efficient use of equipment and employees' time.

The Business and Industry Center offices are located at Clinton and Muscatine Community Colleges and at the John T. Blong Technology Center in northwest Davenport.

## **Small Business Development Center**

The Small Business Development Center (SBDC) provides confidential counseling for owners and would-be owners of small businesses in a wide range of areas, including how to start a business, accounting and record-keeping, seeking financing, marketing and advertising, organization and management, computers and software, and any other areas appropriate for small business needs.

The SBDC is jointly sponsored by EICC, the State of Iowa and the U.S. Small Business Administration. There are 15 centers throughout Iowa.

# CONTINUING EDUCATION

IowaWORKS is the One-Stop for employment services in Region 9, which includes Clinton, Jackson, Muscatine, and Scott Counties. IowaWORKS houses services provided by Iowa Workforce Development and the Eastern Iowa Community Colleges' former Iow@Work Workforce Investment Act Program, which will become the Workforce Innovation Opportunity (WIOA) program in July of 2016. The one-stop office was developed in 2013 in order to provide job seekers with a wide range of services and supports in one location.

## WHAT SERVICES ARE AVAILABLE FOR JOB SEEKERS?

IowaWORKS offers a wide array of services. Items marked (\*) are available only to eligible WIA participants who are selected for enrollment in intensive and training services.

- Career Planning
- Career Counseling
- Job Search Assistance
- Assessment of Skills and Interests
- Labor Market Information
- Job Search Workshops
- Skills Lab for Job Search
- Short Term Training\*
- Assistance with Transportation, Child Care, and other Support Service Needs\*
- Case Management and On-going Support\*
- Work Experience\*
- On-the-Job Training\*
- Financial Assistance for Career Training Programs\*

## WHAT WIA SERVICES ARE AVAILABLE FOR BUSINESSES?

In addition to providing services for job seekers, IowaWORKS provides services to businesses in our communities in order

to meet ever-changing workforce needs and to assist with hiring and employment services such as:

- Assistance with hiring processes
- Candidate screening
- Interview assistance
- Coordination with local media
- On-site recruitment and interviews
- Coordination of job fairs for new and expanding companies
- Labor market information
- Referral of skilled candidates
- National Career Readiness Certification testing
- Customized training for eligible individuals
- Work Experience and Internship opportunities

What Services Are Available at the IowaWORKS office?

At IowaWORKS, it is our job to provide you with the resources you need to get a job. We offer a wide range of services to meet your individual job search needs including:

### Pre-Employment Training

Each month, IowaWORKS offers pre-employment training workshops on a variety of topics. These workshops are free and open to all job seekers. Topics include job search assistance, computer training, customer service, and much more. For more information, stop by any IowaWORKS office and ask for a workshop schedule. To find out about workshops and register, stop by an IowaWORKS office or call 563.445.3200 X43310. Pre-registration is required.

### National Career Readiness (NCRC)

Register to take the NCRC test. See if you qualify for a certificate that tells employers about your work-related skills. Many employers are requesting NCRC

from applicants. Free for Iowa residents and veterans. NCRC testing offered in all Region 9 counties every month. To register, call 563.445.3200, X 43310. Pre-registration is required.

### Resource Assistance

Need help with a resume, on-line job applications, or interview preparation? Need to write a cover letter or thank you? Maybe you just need a few tips or someone to proof your resume. Stop in and check out the IowaWORKS Skills Lab. Staff is on-hand to assist job seekers.

#### • IowaWORKS

902 W. Kimberly Road, Suite 51  
Davenport IA 52806  
563-445-3200

#### • Clinton Community College

1000 Lincoln Blvd.  
Room 170  
Clinton IA 52732  
563-244-7141

#### • Clinton Community College

Maquoketa Center  
501 W. Washington  
Maquoketa IA 52060  
563-244-7193

#### • Muscatine Community College

152 Colorado Street  
Room 102 Student Center  
Muscatine IA 52761  
563-288-6177

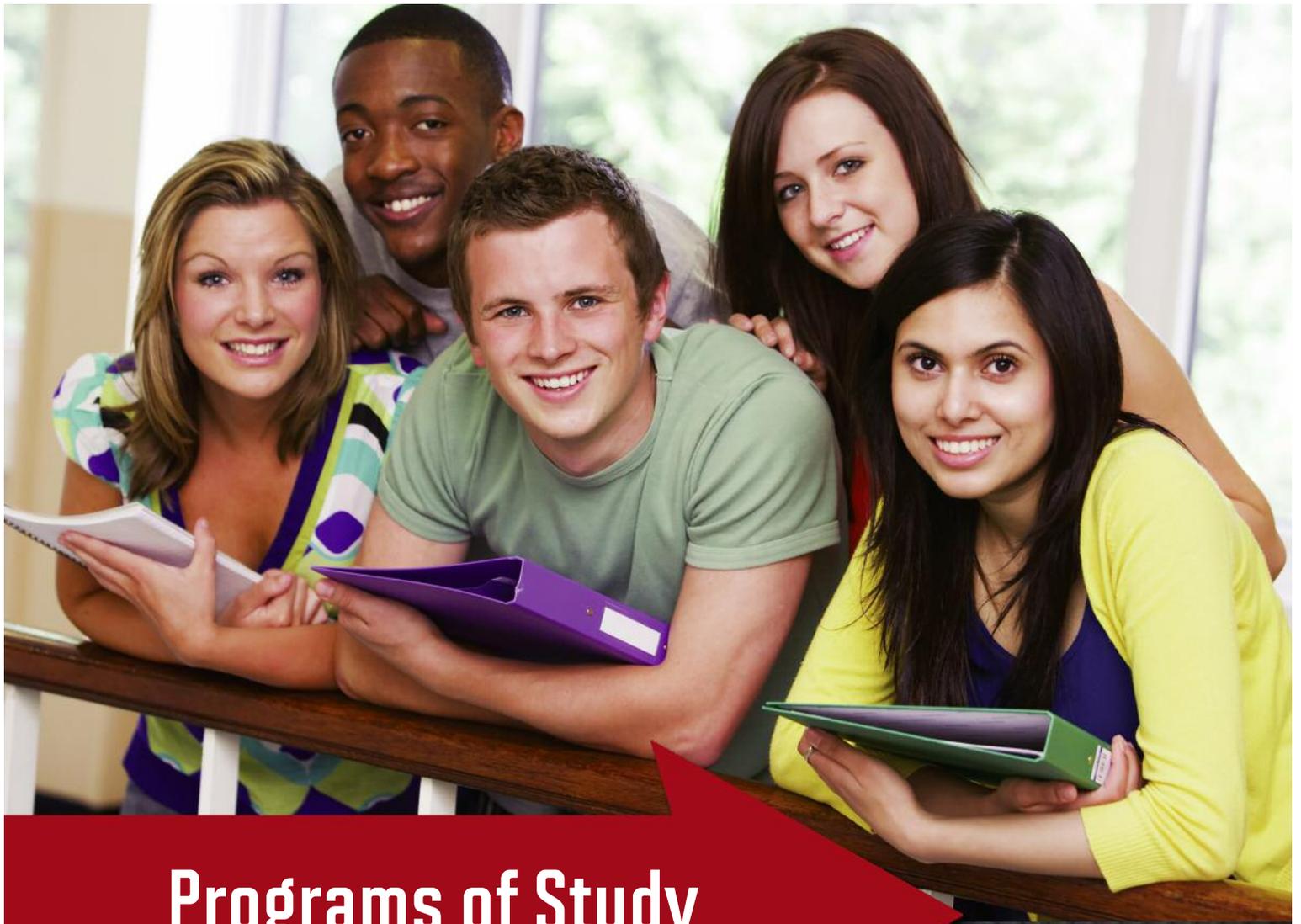
#### • Scott Community College

500 Belmont Rd.  
Career and Technical Education Bldg.  
Bettendorf, IA 52722  
563-441-4020

## EICC FOUNDATION

*The Eastern Iowa Community College District Foundation builds awareness, friendships and financial support to further EICC's mission of delivering quality education and services to strengthen our community. The Foundation seeks monetary and in-kind resources for district-wide projects, with an emphasis on support for our Continuing Education programming. Focus areas include Adult Basic Education/High School Completion, the Midwest Center for Public Safety Training, the Eastern Iowa Small Business Development Center, and the Advanced Technology Environmental & Energy Center.*

**For more information about the EICCD Foundation, call 563-336-3302.**



# Programs of Study



EASTERN IOWA COMMUNITY COLLEGES  
CLINTON ♦ MUSCATINE ♦ SCOTT

**LEARN MORE. EARN MORE.**

# PROGRAM OF STUDY BY CAREER CLUSTER

## Program of Study by Career Cluster

Note that programs of study followed by the word Transfer are intended to prepare students for transfer to a 4 - year college to complete a bachelor's degree. All other programs of study are intended to prepare students for employment in the field.

Program of Study	Degree Awarded	Location
<b>AGRICULTURE, FOOD &amp; NATURAL RESOURCES</b>		
Agribusiness Management	AAS	MCC
Agriculture, Transfer	AA, AS	MCC
Conservation, Transfer	AS	MCC
Farm Management	AAS	MCC
Health, Safety and Environmental Technology (HSET)	AAS, Certificate	CCC, MCC, SCC
Horticulture	AAS	MCC
Renewable Energy Systems	AAS	SCC
<b>ARCHITECTURE &amp; CONSTRUCTION</b>		
Heating, Ventilation & Air Conditioning (HVAC)	AAS, Diploma, Certificate	SCC
<b>ARTS, A/V TECHNOLOGY AND COMMUNICATIONS</b>		
English, Transfer	AA	CCC, MCC, SCC
Fine Arts - Art, Transfer	AA	CCC, MCC, SCC
Fine Arts - Drama, Transfer	AA	MCC, SCC
Fine Arts - Music, Transfer	AA	MCC
Graphic Arts Technology	AAS, Diploma	CCC
Journalism/Communication, Transfer	AA	CCC, MCC, SCC
Speech, Transfer	AA	CCC, MCC, SCC
<b>BUSINESS, MANAGEMENT AND ADMINISTRATION</b>		
Administrative & Office Support	AAS, Diploma, Certificate	CCC, MCC, SCC
Apparel Merchandising	Diploma, Certificate	SCC
Business Administration/Accounting, Transfer	AA	CCC, MCC, SCC
Business Management	AAS	CCC, MCC, SCC
Entrepreneurship	Certificate	CCC, MCC, SCC
Interior Design	AAS	SCC
Management/Supervision	Certificate	CCC, MCC, SCC
Management, Transfer	AA	CCC, MCC, SCC
Small Business Management	Certificate	CCC, MCC, SCC
Software Applications Specialist	Certificate	CCC, MCC, SCC
<b>EDUCATION AND TRAINING</b>		
Early Childhood Education	AAS	SCC
Education, Transfer (Secondary, Elementary or Early Childhood)	AA	CCC, MCC, SCC
Physical Education & Recreation, Transfer	AA	CCC, MCC, SCC
<b>FINANCE</b>		
Accounting Assistant	Certificate	CCC, MCC, SCC
Accounting Management	AAS, Diploma	CCC, MCC, SCC
Banking, Transfer	AA	CCC, MCC, SCC
Business Administration/Accounting, Transfer	AA	CCC, MCC, SCC

# PROGRAM OF STUDY BY CAREER CLUSTER

Program of Study	Degree Awarded	Location
<b>GOVERNMENT AND PUBLIC ADMINISTRATION</b>		
History, Transfer	AA	CCC, MCC, SCC
Political Science, Transfer	AA	CCC, MCC, SCC
<b>HEALTH SCIENCE</b>		
Cancer Information Management	AAS, Diploma	SCC
Dental Assisting	AAS <sup>1</sup> , Diploma	SCC
Dental Hygiene	AAS	CCC, MCC, SCC/CSC***
Electroneurodiagnostic Technology	AAS	SCC
Emergency Medical Services	AAS	CCC, MCC, SCC
EMT	Certificate	CCC, MCC, SCC
EMT, Advanced	Certificate	CCC, MCC, SCC
Health Information Technology	AAS, Diploma	SCC
Nursing, Associate Degree	AAS	CCC, SCC
Practical Nursing	Diploma	CCC, MCC, SCC
Physical Therapist Assistant	AAS	CCC, MCC, SCC
Pre-Chiropractic, Transfer	AA, AS	CCC, MCC, SCC
Pre-Health Professional, Transfer	AA, AS	CCC, MCC, SCC
Pre-Nursing, Trinity Transfer	AA	CCC, MCC, SCC
Radiologic Technology	AAS	SCC
Respiratory Care	AAS	CCC, MCC, SCC/NICC**
Surgical Technology	AAS, Diploma	SCC
Sterile Processing & Distribution	Certificate	SCC
Veterinary Technician	AAS	MCC
<sup>1</sup> Pending Department of Education approval		
<b>HOSPITALITY AND TOURISM</b>		
Baking	Certificate	SCC
Culinary Arts Apprenticeship	AAS	SCC
Culinary Arts Degree	AAS	SCC
Culinary Arts Assistant	Certificate	SCC
Event Management	Certificate	SCC
Hospitality Management	AAS	SCC
Physical Education & Recreation, Transfer	AA	CCC, MCC, SCC
<b>HUMAN SERVICES</b>		
Early Childhood Education	AAS	SCC
Early Childhood Education	Diploma, Certificate	MCC, SCC
Interpreter, American Sign Language	AAS	SCC
Psychology, Transfer	AA	CCC, MCC, SCC
Social Work, Transfer	AA	CCC, MCC, SCC
Sociology, Transfer	AA	CCC, MCC, SCC

# PROGRAM OF STUDY BY CAREER CLUSTER

Program of Study	Degree Awarded	Location
<b>INFORMATION TECHNOLOGY</b>		
A+ Preparation	Certificate	CCC, MCC, SCC
CISCO Networking - CCNA	Certificate	SCC
CISCO Networking (CCNA)	Certificate	CCC, MCC
Computer Repair & Help Desk Support	Certificate	CCC, MCC, SCC
Game Development	AAS	SCC
Network+ Preparation	Certificate	CCC, MCC, SCC
Networking	AAS	CCC, MCC, SCC
Oracle Database Design & Programming with SQL	Certificate	MCC
Software Development	AAS	CCC, MCC, SCC
Web Design	Certificate	MCC, SCC
Web Game Development	Certificate	SCC
Wireless LAN	Certificate	CCC, MCC, SCC
<b>LAW, PUBLIC SAFETY AND SECURITY</b>		
Criminal Justice, Transfer	AA	CCC, MCC, SCC
Pre-Law, Transfer	AA	CCC, MCC, SCC
<b>MANUFACTURING</b>		
CAD/PRO Engineer	AAS, Diploma, Certificate	CCC, MCC, SCC
CNC Programming	Certificate	SCC
CNC/Machining	AAS	SCC
Electrical Systems	Certificate	SCC
Manual Machining	Certificate	SCC
PRO Engineer/Solid Modeling	Certificate	CCC, MCC, SCC
Process Control	Certificate	MCC
Technical Studies	AAS	CCC, MCC, SCC
Welding	AAS, Diploma	SCC
Welding, Basic	Certificate	MCC, SCC
Welding, General Maintenance	Certificate	SCC
Welding, Production	Certificate	CCC, SCC
Welding, Structural	Certificate	SCC
<b>MARKETING, SALES AND SERVICE</b>		
Interior Design	AAS	SCC
Marketing	Certificate	CCC, MCC, SCC
Marketing, Transfer	AA	CCC, MCC, SCC

# PROGRAM OF STUDY BY CAREER CLUSTER

Program of Study	Degree Awarded	Location
<b>SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS</b>		
Biology, Transfer	AA, AS	CCC, MCC, SCC
Chemistry, Transfer	AA, AS	CCC, MCC, SCC
Engineering Technology	AAS	CCC, MCC, SCC
Environmental Science, Transfer	AA, AS	CCC, MCC, SCC
Mathematics, Transfer	AA, AS	CCC, MCC, SCC
Physical Science, Transfer	AA, AS	CCC, MCC, SCC
Physics, Transfer	AA, AS	CCC, MCC, SCC
Pre-Engineering, Transfer	AS	CCC, MCC, SCC
<b>TRANSPORTATION, DISTRIBUTION AND LOGISTICS</b>		
Auto Collision Repair Technology	AAS, Diploma, Certificate	SCC
Automotive Technology	AAS, Diploma	SCC
Automotive Technology, Basic Service	Certificate	SCC
Automotive Technology, General Service	Certificate	SCC
Diesel Technology	AAS	SCC
Logistics	AAS, Diploma, Certificate	CCC, MCC, SCC
Radio Frequency Identification	Certificate	MCC, SCC
Truck Driving	Certificate	SCC
<b>UNDECIDED</b>		
Transfer	AA	CCC, MCC, SCC
Transfer, Interest in Science or Math	AS	CCC, MCC, SCC

\* CCC, MCC, SCC/BHC are programs offered cooperatively with Black Hawk College in Moline, Illinois.

\*\* CCC, MCC, SCC/NICC is a program offered cooperatively with Northeast Iowa Community College in Peosta, Iowa.

\*\*\* CCC, MCC, SCC/CSC is a program offered cooperatively with Carl Sandburg College in Galesburg, Illinois.

# PROGRAM OF STUDY BY AWARD

## Program of Study by Award

### Associate of Arts (A.A.) - Concentration Areas

An Associate of Arts degree is a two year program of coursework that is intended for the student who plans to transfer to a 4 -year college to complete a bachelor's degree.

Program of Study	Location
Agriculture	MCC
Banking	CCC, MCC, SCC
Biology	CCC, MCC, SCC
Business Administration/Accounting	CCC, MCC, SCC
Chemistry	CCC, MCC, SCC
Criminal Justice	CCC, MCC, SCC
Education (Secondary, Elementary or Early Childhood)	CCC, MCC, SCC
English	CCC, MCC, SCC
Environmental Science	CCC, MCC, SCC
Fine Arts - Art	CCC, MCC, SCC
Fine Arts - Drama	MCC, SCC
Fine Arts - Music	MCC
History	CCC, MCC, SCC
Journalism/ Communication	CCC, MCC, SCC
Liberal Arts	CCC, MCC, SCC
Management	CCC, MCC, SCC
Marketing	CCC, MCC, SCC
Mathematics	CCC, MCC, SCC
Physical Education & Recreation	CCC, MCC, SCC
Physical Science	CCC, MCC, SCC
Physics	CCC, MCC, SCC
Pre-Chiropractic	CCC, MCC, SCC
Pre-Health Professional	CCC, MCC, SCC
Pre-Law	CCC, MCC, SCC
Psychology	CCC, MCC, SCC
Social Work	CCC, MCC, SCC
Sociology	CCC, MCC, SCC
Speech	CCC, MCC, SCC
Undecided	CCC, MCC, SCC

### Associate of Science (A.S.) - Concentration Areas

An Associate of Science degree is a two year program of coursework with an emphasis on math and science, and is intended for the student who plans to transfer to a 4 -year college to complete a bachelor's degree in mathematics, natural sciences or a pre-professional degree that emphasizes math & science.

Program of Study	Location
Agriculture	MCC
Biology	CCC, MCC, SCC
Chemistry	CCC, MCC, SCC
Conservation	MCC
Environmental Science	CCC, MCC, SCC
Mathematics	CCC, MCC, SCC
Physical Science	CCC, MCC, SCC
Physics	CCC, MCC, SCC
Pre-Chiropractic	CCC, MCC, SCC
Pre-Engineering	CCC, MCC, SCC
Pre-Health Professional	CCC, MCC, SCC
Undecided, Interest in Science and Math	CCC, MCC, SCC

# PROGRAM OF STUDY BY AWARD

## Associate of Applied Science (A.A.S.)

An Associate of Applied Science degree is a two year program of coursework to prepare the student for employment.

Program of Study	Location
Accounting Management	CCC, MCC, SCC
Administrative & Office Support	CCC, MCC, SCC
Agribusiness Management	MCC
Auto Collision Repair Technology	CCC, MCC, SCC
Automotive Technology	SCC
Business Management	CCC, MCC, SCC
CAD/PRO Engineer	CCC, MCC, SCC
Cancer Information Management	SCC
CNC/Machining	SCC
Culinary Arts Apprenticeship	SCC
Culinary Arts Degree	SCC
Dental Assisting <sup>1</sup>	SCC
Dental Hygiene	CCC, MCC, SCC/CSC***
Diesel Technology	SCC
Early Childhood Education	SCC
Electromechanical Studies	SCC
Electroneurodiagnostic Technology	SCC
Emergency Medical Services	CCC, MCC, SCC
Farm Management	MCC
Game Development	SCC
Graphic Arts Technology	CCC
Health Information Technology	SCC
Health, Safety and Environmental Technology (HSET)	CCC, MCC, SCC
Heating, Ventilation & Air Conditioning (HVAC)	SCC
Horticulture	MCC
Hospitality Management	SCC
Interior Design	SCC
Interpreter, American Sign Language	SCC
Logistics	CCC, MCC, SCC
Networking	CCC, MCC, SCC
Nursing, Associate Degree	CCC, SCC
Physical Therapist Assistant	CCC, MCC, SCC
Radiologic Technology	SCC
Respiratory Care	CCC, MCC, SCC/NICC**
Software Development	CCC, MCC, SCC
Surgical Technology	SCC
Technical Studies	CCC, MCC, SCC
Veterinary Technician	MCC
Welding	SCC

<sup>1</sup>Pending Department of Education approval

# PROGRAM OF STUDY BY AWARD

---

## Diploma

A diploma is a program of coursework which may be completed within 18 months. It prepares the student for employment in the field.

Program of Study	Location
Accounting Management	CCC, MCC, SCC
Administrative and Office Support	CCC, MCC, SCC
Auto Collision Repair Technology	SCC
Automotive Technology	SCC
CAD/PRO Engineer	CCC, MCC, SCC
Cancer Information Management	SCC
Dental Assisting	SCC
Early Childhood Education	MCC, SCC
Graphic Arts Technology	CCC
Health Information Technology	CCC, MCC, SCC
Heating, Ventilation & Air Conditioning (HVAC)	SCC
Logistics	CCC, MCC, SCC
Practical Nursing	CCC, MCC, SCC
Surgical Technology	SCC
Welding	SCC

# PROGRAM OF STUDY BY AWARD

## Certificate

A certificate is a program of coursework which may be completed within 12 months. It prepares the student for employment in the field.

Program of Study	Location
A+ Preparation	CCC, MCC, SCC
Accounting Assistant	CCC, MCC, SCC
Administrative and Office Support	CCC, MCC, SCC
Agribusiness Management	MCC
Apparel Merchandising	SCC
Auto Collision Repair Technology	SCC
Automotive Technology, Basic Service	SCC
Automotive Technology, General Service	SCC
Baking	SCC
CAD/PRO Engineer	CCC, MCC, SCC
CISCO Networking - CCNA	SCC
CISCO Networking (CCNA)	CCC, MCC
CNC Programming	SCC
Computer Repair & Help Desk Support	CCC, MCC, SCC
Culinary Arts Assistant	SCC
Early Childhood Education	MCC, SCC
Electrical Systems	SCC
EMT	CCC, MCC, SCC
EMT, Advanced	CCC, MCC, SCC
Entrepreneurship	CCC, MCC, SCC
Event Management	SCC
Health, Safety, & Environmental Technology	CCC, MCC, SCC
Heating, Ventilation and Air Conditioning	SCC
Heating, Ventilation and Air Conditioning Apprenticeship	SCC
Logistics	CCC, MCC, SCC
Management/Supervision	CCC, MCC, SCC
Manual Machining	SCC
Marketing	CCC, MCC, SCC
Network+ Preparation	CCC, MCC, SCC
Oracle Database Design & Programming with SQL	MCC
PRO Engineer/Solid Modeling	CCC, MCC, SCC
Radio Frequency Identification	MCC, SCC
Small Business Management	CCC, MCC, SCC
Sterile Processing & Distribution	SCC
Truck Driving	SCC
Web Design	MCC, SCC
Web Game Development	SCC
Welding, Basic	MCC, SCC
Welding, General Maintenance	SCC
Welding, Production	CCC, SCC
Welding, Structural	SCC
Wireless LAN	CCC, MCC, SCC

\*\* CCC, MCC, SCC/NICC is a program offered cooperatively with Northeast Iowa Community College in Peosta, Iowa.

\*\*\* CCC, MCC, SCC/CSC is a program offered cooperatively with Carl Sandburg College in Galesburg, Illinois.

# PROGRAM OF STUDY BY ALPHABETICAL ORDER

## Program of Study by Alphabetical Order

Note that programs of study followed by the word Transfer are intended to prepare students for transfer to a 4 - year college to complete a bachelor's degree. All other programs of study are intended to prepare students for employment in the field.

Program of Study	Degree Awarded	Location
A+ Preparation	Certificate	CCC, MCC, SCC
Accounting Assistant	Certificate	CCC, MCC, SCC
Accounting Management	AAS, Diploma	CCC, MCC, SCC
Administrative and Office Support	AAS, Diploma, Certificate	CCC, MCC, SCC
Agribusiness Management	AAS	MCC
Agriculture, Transfer	AA, AS	MCC
Apparel Merchandising	Diploma, Certificate	SCC
Auto Collision Repair Technology	AAS, Diploma, Certificate	SCC
Automotive Technology	AAS, Diploma	SCC
Automotive Technology Basic Service	Certificate	SCC
Automotive Technology General Service	Certificate	SCC
Baking	Certificate	SCC
Banking, Transfer	AA	CCC, MCC, SCC
Biology, Transfer	AA, AS	CCC, MCC, SCC
Business Administration/Accounting, Transfer	AA	CCC, MCC, SCC
Business Management	AAS	CCC, MCC, SCC
CAD/PRO Engineer	AAS, Diploma, Certificate	CCC, MCC, SCC
Cancer Information Management	AAS, Diploma	SCC
Chemistry, Transfer	AA, AS	CCC, MCC, SCC
CISCO Networking - CCNA	Certificate	SCC
CISCO Networking (CCNA)	Certificate	CCC, MCC
CNC Programming	Certificate	SCC
CNC/Machining	AAS	SCC
Computer Repair & Help Desk Support	Certificate	CCC, MCC, SCC
Conservation, Transfer	AS	MCC
Criminal Justice, Transfer	AA	CCC, MCC, SCC
Culinary Arts Apprenticeship	AAS	SCC
Culinary Arts Assistant	Certificate	SCC
Culinary Arts Degree	AAS	SCC
Dental Assisting	AAS <sup>1</sup> , Diploma	SCC
Dental Hygiene	AAS	CCC, MCC, SCC/CSC***
Diesel Technology	AAS	SCC
Early Childhood Education	AAS	SCC
Early Childhood Education	Diploma, Certificate	MCC, SCC
Education, Transfer (Secondary, Elementary or Early Childhood)	AA	CCC, MCC, SCC
Electrical Systems	Certificate	SCC
Electroneurodiagnostic Technology	AAS	SCC
Emergency Medical Services	AAS	CCC, MCC, SCC
EMT	Certificate	CCC, MCC, SCC
EMT, Advanced	Certificate	CCC, MCC, SCC
Engineering Technology	AAS	CCC, MCC, SCC
English, Transfer	AA	CCC, MCC, SCC
Entrepreneurship	Certificate	CCC, MCC, SCC
Environmental Science, Transfer	AA, AS	CCC, MCC, SCC

# PROGRAM OF STUDY BY ALPHABETICAL ORDER

Program of Study	Degree Awarded	Location
Event Management	Certificate	SCC
Farm Management	AAS	MCC
Fine Arts - Art, Transfer	AA	CCC, MCC, SCC
Fine Arts - Drama, Transfer	AA	MCC, SCC
Fine Arts - Music, Transfer	AA	MCC
Game Development	AAS	SCC
Graphic Arts Technology	AAS, Diploma	CCC
Health Information Technology	AAS, Diploma	SCC
Health, Safety and Environmental Technology (HSET)	AAS, Certificate	CCC, MCC, SCC
Heating, Ventilation & Air Conditioning (HVAC)	AAS, Diploma, Certificate	SCC
History, Transfer	AA	CCC, MCC, SCC
Horticulture	AAS	MCC
Hospitality Management	AAS	SCC
Interior Design	AAS	SCC
Interpreter, American Sign Language	AAS	SCC
Journalism/Communication, Transfer	AA	CCC, MCC, SCC
Liberal Arts	AA	CCC, MCC, SCC
Liberal Arts, Interest in Science and Math	AS	CCC, MCC, SCC
Logistics	AAS, Diploma, Certificate	CCC, MCC, SCC
Management/Supervision	Certificate	CCC, MCC, SCC
Management, Transfer	AA	CCC, MCC, SCC
Manual Machining	Certificate	SCC
Marketing	Certificate	CCC, MCC, SCC
Marketing, Transfer	AA	CCC, MCC, SCC
Mathematics, Transfer	AA, AS	CCC, MCC, SCC
Network+ Preparation	Certificate	CCC, MCC, SCC
Networking	AAS	CCC, MCC, SCC
Nursing, Associate Degree	AAS	CCC, SCC
Oracle Database Design & Programming with SQL	Certificate	MCC
Physical Education & Recreation, Transfer	AA	CCC, MCC, SCC
Physical Science, Transfer	AA, AS	CCC, MCC, SCC
Physical Therapist Assistant	AAS	CCC, MCC, SCC
Physics, Transfer	AA, AS	CCC, MCC, SCC
Political Science, Transfer	AA	CCC, MCC, SCC
Practical Nursing	Diploma	CCC, MCC, SCC
Pre-Chiropractic, Transfer	AA, AS	CCC, MCC, SCC
Pre-Engineering, Transfer	AS	CCC, MCC, SCC
Pre-Health Professional, Transfer	AA, AS	CCC, MCC, SCC
Pre-Law, Transfer	AA	CCC, MCC, SCC
Pre-Nursing, Trinity	AA	CCC, MCC, SCC
PRO Engineer/Solid Modeling	Certificate	CCC, MCC, SCC
Process Control	Certificate	MCC
Psychology, Transfer	AA	CCC, MCC, SCC
Radio Frequency Identification	Certificate	MCC, SCC
Radiologic Technology	AAS	SCC
Renewable Energy Systems	AAS	SCC
Respiratory Care	AAS	CCC, MCC, SCC/NICC**
Small Business Management	Certificate	CCC, MCC, SCC

# PROGRAM OF STUDY BY ALPHABETICAL ORDER

Program of Study	Degree Awarded	Location
Social Work, Transfer	AA	CCC, MCC, SCC
Sociology, Transfer	AA	CCC, MCC, SCC
Software Development	AAS	CCC, MCC, SCC
Speech, Transfer	AA	CCC, MCC, SCC
Sterile Processing & Distribution	Certificate	SCC
Surgical Technology	AAS, Diploma	SCC
Technical Studies	AAS	CCC, MCC, SCC
Truck Driving	Certificate	SCC
Veterinary Technician	AAS	MCC
Web Design	Certificate	MCC, SCC
Web Game Development	Certificate	SCC
Welding	AAS, Diploma	SCC
Welding, Basic	Certificate	MCC, SCC
Welding, General Maintenance	Certificate	SCC
Welding, Production	Certificate	SCC
Welding, Structural	Certificate	SCC
Wireless LAN	Certificate	CCC, MCC, SCC

<sup>1</sup> Pending Department of Education Approval

\* CCC, MCC, SCC/BHC are programs offered cooperatively with Black Hawk College in Moline, Illinois.

\*\* CCC, MCC, SCC/NICC is a program offered cooperatively with Northeast Iowa Community College in Peosta, Iowa.

\*\*\* CCC, MCC, SCC/CSC is a program offered cooperatively with Carl Sandburg College in Galesburg, Illinois.



# Arts & Sciences



EASTERN IOWA COMMUNITY COLLEGES  
CLINTON ♦ MUSCATINE ♦ SCOTT

**LEARN MORE. EARN MORE.**

# ARTS AND SCIENCES

## Arts & Sciences Concentration Listing

Concentration Areas	Award	College(s)	Page
Agriculture	AA/AS Degree	MCC	47
Banking	AA Degree	CCC,MCC,SCC	48
Biology	AA/AS Degree	CCC,MCC,SCC	49
Business Administration/Accounting	AA Degree	CCC,MCC,SCC	50
Chemistry	AA/AS Degree	CCC,MCC,SCC	51
Conservation	AS Degree	MCC	52
Criminal Justice	AA Degree	CCC,MCC,SCC	52
Education	AA Degree	CCC,MCC,SCC	53
English	AA Degree	CCC,MCC,SCC	53
Environmental Science	AA/AS Degree	CCC,MCC,SCC	54
Fine Arts-Art	AA Degree	CCC,MCC,SCC	55
Fine Arts-Drama	AA Degree	MCC, SCC	55
Fine Arts-Music	AA Degree	MCC	56
History	AA Degree	CCC,MCC,SCC	57
Journalism/Communication	AA Degree	CCC,MCC,SCC	57
Liberal Arts	AA Degree	CCC,MCC,SCC	58
Management	AA Degree	CCC,MCC,SCC	60
Marketing	AA Degree	CCC,MCC,SCC	60
Mathematics	AA/AS Degree	CCC,MCC,SCC	61
Physical Education/Recreation	AA Degree	CCC,MCC,SCC	61
Physical Science	AA/AS Degree	CCC,MCC,SCC	62
Physics	AA/AS Degree	CCC,MCC,SCC	63
Political Science	AA Degree	CCC,MCC,SCC	64
Pre-Chiropractic	AA/AS Degree	CCC,MCC,SCC	65
Pre-Engineering	AS Degree	CCC,MCC,SCC	65
Pre-Health Professional	AA/AS Degree	CCC,MCC,SCC	66
Pre-Bachelor of Science in Nursing	AA/AS Degree	CCC,MCC,SCC	
Pre-Dentistry	AA/AS Degree	CCC,MCC,SCC	
Pre-Dental Hygiene	AA/AS Degree	CCC,MCC,SCC	
Pre-Medical Technology	AA/AS Degree	CCC,MCC,SCC	
Pre-Medical	AA/AS Degree	CCC,MCC,SCC	
Pre-Mortuary Science	AA/AS Degree	CCC,MCC,SCC	
Pre-Nursing-Trinity	AA Degree	CCC,MCC,SCC	
Pre-Pharmacy	AA/AS Degree	CCC,MCC,SCC	
Pre-Physical Therapy	AA/AS Degree	CCC,MCC,SCC	
Pre-Veterinary	AA/AS Degree	CCC,MCC,SCC	
Pre-Law	AA Degree	CCC,MCC,SCC	66
Psychology	AA Degree	CCC,MCC,SCC	67
Social Work	AA Degree	CCC,MCC,SCC	67
Sociology	AA Degree	CCC,MCC,SCC	68
Speech	AA Degree	CCC,MCC,SCC	68

**Note:** If your area of interest is not listed in the Concentration Areas, the Liberal Arts Concentration Area provides a solid foundation for successful transfer to four-year educational institutions. If you are undecided about a program of study, an academic advisor can assist you in your decision.

### Study Abroad

Clinton, Muscatine and Scott Community Colleges offer a number of opportunities for study abroad, through a variety of consortia. Credit may be given toward a Liberal Arts degree and may be transferred to other colleges and universities. Students should inquire about current study abroad opportunities at each college's academic advising office.

# GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges

A.A. Degree

All students pursuing an A.A. degree must fulfill general education requirements as outlined on page 12. The courses that will fulfill these requirements are listed below.

## Communications (9 credits required)

	<b>Credits</b>
<b>Select one of these courses:</b>	
ENG:105    Composition I	3
ENG:107    Composition I: Technical Writing	3
<b>Select one of these courses:</b>	
ENG:106    Composition II	3
ENG:108    Composition II: Technical Writing	3
<b>Select one of these courses:</b>	
SPC:112    Public Speaking	3
SPC:170    Professional Communication	3

## Arts and Humanities (9 credits required)

<b>Select one Literature course:</b>	
LIT:101    Introduction to Literature	3
LIT:111    American Literature since Mid-1800's	3
LIT:183    Masterpieces: Neoclassical to Modern	3
LIT:185    Contemporary Literature	3
<b>Select one Humanities course:</b>	
DRA:110*    Introduction to Film	3
HUM:110    Changes and Choices	3
HUM:183    Living with Space, Time and Technology	3
PHI:101    Introduction to Philosophy	3
PHI:105    Introduction to Ethics	3
PHI:110    Introduction to Logic	3
REL:101    Survey of World Religions	3
<b>Select one course in the Fine Arts:</b>	
ART:101    Art Appreciation	3
DRA:101    Introduction to Theatre	3
DRA:110*    Introduction to Film	3
HUM:135    Humanities of the Early World	3
HUM:136    Humanities of the Renaissance	3
HUM:137    Humanities of the Modern World	3
MUS:100    Music Appreciation	3

\*DRA:110 may be counted as either Humanities or Fine Arts, but not both.

## Cultural/Historical Perspectives (6 credits required)

**Select one course from the Western perspective:**

HIS:117    Western Civilization: Ancient and Medieval	3
HIS:118    Western Civilization II: Early Modern	3
HIS:119    Western Civilization III: The Modern Period	3
HIS:151    U.S. History to 1877	3
HIS:152    U.S. History since 1877	3

**Select one course from an International perspective or language:**

ANT:105    Cultural Anthropology	3
CLS:150    Latin American History and Culture	3
FL:_____ One Semester of an International Language	3/4
GEO:121    World Regional Geography	3
GLS:100    Contemporary World Issues	3
HIS:211    Modern Asia History	3
HIS:231    Contemporary World Affairs	3

## Social Sciences (6 credits required)

**Select one Economics or Political Science course:**

ECN:120    Principles of Macroeconomics	3
ECN:130    Principles of Microeconomics	3
POL:111    American National Government	3

**Select one Psychology or Sociology course:**

PSY:111    Introduction to Psychology	3
SOC:110    Introduction to Sociology	3

Note: Requirements continue on next page.

# GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges

A.A. Degree

## Natural Sciences (8 credits required)

### Select one course in the Life Sciences:

BIO:105	Introductory Biology	4
BIO:114	General Biology IA	4
BIO:125	Plant Biology	4
BIO:157	Human Biology	4
BIO:163	Essentials of Anatomy and Physiology	4
BIO:168	Human Anatomy and Physiology I	4
ENV:111*	Environmental Science	4
ENV:145	Conservation Biology	4

### Select one course in the Physical Sciences:

CHM:122	Introduction to General Chemistry	4
CHM:165/166	General Chemistry I	4-5
CHM:179	Principles of General Chemistry	6
ENV:111*	Environmental Science	4
ENV:139	Energy and the Environment	4
PHS:120	Exploring Physical Science	4
PHS:152	Astronomy	4
PHS:166	Meteorology: Weather and Climate	4
PHS:172	Physical Geology	4
PHY:110	Survey of Physics I	3
PHY:162	College Physics I	4
PHY:212	Classical Physics I	5

\*ENV:111 may be counted as either Life Sciences or Physical Sciences, but not both.

## Mathematics (3 credits required)

MAT:110	Math for Liberal Arts	3
MAT:117	Math for Elementary Teachers*	3
MAT:128	PreCalculus	4
MAT:140	Finite Mathematics	3
MAT:156	Statistics	3
MAT:165	Business Calculus	3
MAT:210	Calculus I	4

\* Only students majoring in elementary education may select this course option.

## Computer Skills (3 credits or demonstrated proficiency required)

CSC:110	Introduction to Computers	3
---------	---------------------------	---

## Electives (Up to 19 credits required)

Students choose electives according to their needs and interests and the requirements of their intended transfer college to complete the 62 credit hours required of an Associate in Arts degree. While electives generally are chosen from any Arts and Science course numbered above 100, a maximum of 16 credit hours in career technical courses may be applied toward an A.A. A maximum of 4 credit hours of Human Development courses may be applied toward an A.A. degree.

## Concentration Electives

To complete an Associate Degree within a specific concentration, choose electives from at or above the 100 level courses in one of the following areas: Agriculture; Aviation; Banking; Biology; Business Administration/Accounting; Chemistry; Computer Science; Conservation; Criminal Justice; Education; English; Fine Arts - Art, Drama and Music; History; Journalism; Management and Supervision; Marketing/Sales/Retailing; Mathematics; Physical Education/Recreation; Physics; Political Science; Pre-Chiropractic; Pre-Engineering; Pre-Health Professional; Pre-Law; Psychology; Social Work; Sociology; Speech.

# GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges

A.S. Degree

All students pursuing an Associates in Science degree must fulfill general education requirements as outlined on page 12. The courses that will fulfill these requirements are listed below.

## Communications (9 credits required)

	<b>Credits</b>
<b>Select one course in English:</b>	
ENG:105    Composition I	3
ENG:107    Composition I: Technical Writing	3
<b>Select one course in English:</b>	
ENG:106    Composition II	3
ENG:108    Composition II: Technical Writing	3
<b>Select one course in Speech:</b>	
SPC:112    Public Speaking	3
SPC:170    Professional Communication	3

## Arts and Humanities (6 credits required)

Select one course from two of the following categories:

### Literature:

LIT:101    Introduction to Literature	3
LIT:111    American Literature since the Mid-1800's	3
LIT:183    Masterpieces: Neoclassical to Modern	3
LIT:185    Contemporary Literature	3

### Humanities:

DRA:110*    Introduction to Film	3
HUM:110    Changes and Choices	3
HUM:183    Living with Space, Time & Tech.	3
PHI:101    Introduction to Philosophy	3
PHI:105    Introduction to Ethics	3
PHI:110    Introduction to Logic	3
REL:101    Survey of World Religions	3

### Fine Arts:

ART:101    Art Appreciation	3
DRA:101    Introduction to Theatre	3
DRA:110*    Introduction to Film	3
HUM:135    Humanities of the Early World	3
HUM:136    Humanities of the Renaissance	3
HUM:137    Humanities of the Modern World	3
MUS:100    Music Appreciation	3

\*DRA:110 Introduction to Film can fulfill either the Humanities or the Fine Arts requirement, but not both.

## Cultural/Historical Perspectives (3 credits required)

Select one course:

ANT:105    Cultural Anthropology	3
CLS:150    Latin Am. History and Culture	3
FL _____    Foreign Language - 1 Semester	3-4
GEO:121    World Regional Geography	3
GLS:100    Contemporary World Issues	3
HIS:117    West. Civ. I: Ancient and Medieval	3
HIS:118    West. Civ. II: Early Modern	3
HIS:119    West. Civ. III: Modern Period	3
HIS:151    U.S. History to 1877	3
HIS:152    U.S. History since 1877	3
HIS:211    Modern Asian History	3
HIS:231    Contemporary World Affairs	3

## Social Sciences (3 credits required)

Select one course:

ECN:120    Principles of Macroeconomics	3
ECN:130    Principles of Microeconomics	3
POL:111    American National Government	3
PSY:111    Introduction to Psychology	3
SOC:110    Introduction to Sociology	3

## Mathematics & Natural Sciences (24 credits required)

Select at least two Natural Sciences courses:

BIO:105    Introductory Biology	4
BIO:114    General Biology IA	4
BIO:115    General Biology IIA	4
BIO:125    Plant Biology	4
BIO:157    Human Biology	4
BIO:163    Ess.of Anatomy and Phys.	4
BIO:168    Human Anatomy and Phys. w/Lab I	4
BIO:173    Human Anatomy and Phys. w/Lab II	4
BIO:186    Microbiology	4
BIO:255    Neuroanatomy	3
CHM:122    Intro. to General Chemistry	4
CHM:132    Intro. to Organic and Biochemistry	4
CHM:165/166    General Chemistry I w/ Lab	4-5
CHM:175/176    General Chemistry II w/Lab	4-5
CHM:179    Principles of General Chemistry	6

# GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges

A.S. Degree

CHM:261/263	Organic Chemistry I	4-5
CHM:271/273	Organic Chemistry II	4-5
ENV:111	Environmental Science	4
ENV:139	Energy and the Environment	4
ENV:145	Conservation Biology	4
PHS:120	Exploring Physical Science	4
PHS:152	Astronomy	4
PHS:166	Meteorology: Weather & Climate	4
PHS:172	Physical Geology	4
PHY:110	Survey of Physics I	3
PHY:111	Survey of Physics II	3
PHY:162	College Physics I	4
PHY:172	College Physics II	4
PHY:212	Classical Physics I	5
PHY:222	Classical Physics II	5
<b>Select at least one Mathematics course:</b>		
MAT:128	Precalculus	4
MAT:140	Finite Mathematics	3
MAT:156	Statistics	3
MAT:165	Business Calculus	3
MAT:210	Calculus I	4
MAT:216	Calculus II	4
MAT:219	Calculus III	4
MAT:227	Differential Equations	4

## Computer Skills (Demonstrated proficiency required)

**To demonstrate proficiency, students may select one of the following options:**

Complete the Computer Skills Proficiency Exam with a passing score, OR

Complete CSC:110 Introduction to Computers with a passing grade.

## Electives (Up to 17 credits required)

Students choose electives according to their needs, interests and the requirements of their intended transfer college, to complete the 62 credit hours required of an Associate in Science degree.

While electives generally are chosen from any Arts and Science course numbered above 100, a maximum of 16 career technical education credit hours may be applied toward an A.S.

Additionally, no more than 4 credit hours of Human Development courses may be applied toward an A.S. degree.

## Concentration Electives

To complete an Associates in Science Degree within a specific concentration, choose electives at or above the 100 level courses in one of the following areas: Agriculture, Biology, Chemistry, Computer Science, Conservation, Mathematics, Physics, Pre-Chiropractor, Pre-Health Professional.

# GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges

A.S. in Pre-Engineering

Students pursuing an Associate in Science in Pre-Engineering degree must fulfill general education requirements as outlined on page 13. The courses that will fulfill these requirements are listed below.

## Communications (9 credits required)

	<b>Credits</b>
<b>Select one of these courses:</b>	
ENG:105    Composition I	3
ENG:107    Composition I: Technical Writing	3
<b>Select one of these courses:</b>	
ENG:106    Composition II	3
ENG:108    Composition II: Technical Writing	3
<b>Select one of these courses:</b>	
SPC:112    Public Speaking	3
SPC:170    Professional Communication	3

## Arts and Humanities (0-9 credits required)

Select one course from two of the following categories:

### Literature course:

LIT:101    Introduction to Literature	3
LIT:111    American Literature since Mid-1800's	3
LIT:183    Masterpieces: Neoclassical to Modern	3
LIT:185    Contemporary Literature	3

### Humanities course:

DRA:110*    Introduction to Film	3
HUM:110    Changes and Choices	3
HUM:183    Living with Space, Time and Technology	3
PHI:101    Introduction to Philosophy	3
PHI:105    Introduction to Ethics	3
PHI:110    Introduction to Logic	3
REL:101    Survey of World Religions	3

### Fine Arts:

ART:101    Art Appreciation	3
DRA:101    Introduction to Theatre	3
DRA:110*    Introduction to Film	3
HUM:135    Humanities of the Early World	3
HUM:136    Humanities of the Renaissance	3
HUM:137    Humanities of the Modern World	3
MUS:100    Music Appreciation	3

\*DRA:110 may be counted as either Humanities or Fine Arts, but not both.

## Cultural/Historical Perspectives (0-9 credits required)

ANT:105    Cultural Anthropology	3
CLS:150    Latin Am. History and Culture	3
FL _____    Foreign Language - 1 Semester	3-4
GEO:121    World Regional Geography	3
GLS:100    Contemporary World Issues	3
HIS:117    West. Civ. I: Ancient and Medieval	3
HIS:118    West. Civ. II: Early Modern	3
HIS:119    West. Civ. III: Modern Period	3
HIS:151    U.S. History to 1877	3
HIS:152    U.S. History since 1877	3
HIS:211    Modern Asian History	3
HIS:231    Contemporary World Affairs	3

## Social Sciences (3 credits required)

Select one course:

ECN:120    Principles of Macroeconomics	3
ECN:130    Principles of Microeconomics	3
POL:111    American National Government	3
PSY:111    Introduction to Psychology	3
SOC:110    Introduction to Sociology	3

## Natural Sciences (18-20 credits required)\*

BIO:105    Introductory Biology	4
BIO:114    General Biology IA	4
BIO:115    General Biology IIA	4
BIO:125    Plant Biology	4
BIO:157    Human Biology	4
BIO:163    Essentials of Anatomy and Physiology	4
BIO:168    Human Anatomy and Physiology w/Lab I	4
BIO:173    Human Anatomy and Physiology w/Lab II	4
CHM:122    Intro. to General Chemistry	4
CHM:132    Intro. to Organic and Biochemistry	4
CHM:165/166    General Chemistry I w/ Lab	4-5
CHM:175/176    General Chemistry II w/Lab	4-5
CHM:179    Principles of General Chemistry	6
CHM:261/263    Organic Chemistry I	4-5
CHM:271/273    Organic Chemistry II	4-5
ENV:111    Environmental Science	4
ENV:139    Energy and the Environment	4
ENV:145    Conservation Biology	4
PHS:120    Exploring Physical Science	4
PHS:152    Astronomy	4
PHS:166    Meteorology: Weather & Climate	4
PHS:172    Physical Geology	4

# GENERAL EDUCATION REQUIREMENTS

Clinton, Muscatine & Scott Community Colleges

A.S. in Pre-Engineering

PHY:110	Survey of Physics I	3
PHY:111	Survey of Physics II	3
PHY:162	College Physics I	4
PHY:172	College Physics II	4
PHY:212	Classical Physics I	5
PHY:222	Classical Physics II	5

## Mathematics (21 credits required)\*

MAT:128	Precalculus	4
MAT:140	Finite Mathematics	3
MAT:156	Statistics	3
MAT:165	Business Calculus	3
MAT:210	Calculus I	4
MAT:216	Calculus II	4
MAT:219	Calculus III	4
MAT:227	Differential Equations	4

\*Note that Engineering courses (course prefix EGR) can be applied to fulfill credit requirements of the Natural Sciences and Mathematics categories.

## Computer Skills (3 - 6 credits)

CSC:110	Introduction to Computers	3
---------	---------------------------	---

## Electives (Up to 11 credits required)

Students choose electives according to their needs, interests and the requirements of their intended transfer college, to complete the 62 credit hours required of an Associate in Science in Pre-Engineering degree. While electives generally are chosen from any Arts and Science course numbered above 100, a maximum of 11 career technical education credit hours may be applied toward this A.S. degree.

Additionally, no more than 4 credit hours of Human Development courses may be applied toward an A.S. degree.

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Communications:</b>	
SPC:112 Public Speaking	3
<b>Social Sciences:</b>	
ECN:130 Principles of Microeconomics	3
<b>Natural Sciences:</b>	
BIO:114 General Biology IA	4
CHM:122 Introduction to General Chemistry	4
<b>Mathematics:</b>	
MAT:140 Finite Math	3

## Concentration Electives

Agriculture requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Strongly Recommended Electives

AGA:285 Crop Protection	3.0
AGA:349 Fertilizers	1.5
AGA:351 Soil Science	1.5
AGA:881 Grain Science	1.75
AGB:231 Futures and Options	1.5
AGB:232 Livestock and Grain Marketing	3
AGS:119 Livestock Management	2
AGS:180 Sheep Production	1.5
AGS:315 Principles of Animal Nutrition	3
AGS:401 Swine Production	3
AGS:410 Swine Production II	1.5
AGS:554 Beef Production	3
AGS:881 Feeds	1.75

# BANKING

Clinton, Muscatine, & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

### Social Sciences:

	Credits
ECN:120 Principles of Macroeconomics	3
ECN:130 Principles of Microeconomics	3

### Math:

MAT:156 Statistics	3
--------------------	---

## Concentration Electives

Banking requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

ACC:142 Financial Accounting	3
ACC:146 Managerial Accounting	3
ACC:221 Cost Accounting	3
BUS:180 Business Ethics	3
BUS:185 Business Law I	3
FIN:106 AIB Principles of Banking	3
FIN:121 Personal Finance	3
FIN:130 Principles of Finance	3

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Natural Sciences: Life</b>	
BIO:114 Biology IA	4
<b>Natural Sciences: Physical</b>	
CHM:165/166 General Chemistry I	4-5
<b>Mathematics:</b>	
MAT:210 Calculus I	4
<b>Computer Skills:</b>	
CSC:110 Introduction to Computers	3

## Concentration Electives

Biology requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
BIO:115	Biology IIA	4
CHM:175/176	General Chemistry II	4-5
CHM:132	Introduction to Organic & Biochemistry	4
	OR	
CHM:261/263	Organic Chemistry I	4
PHY:162	College Physics I	4
PHY:172	College Physics II	4
MAT:156	Statistics	3

## General Education Requirements

Choose from the General Education Curriculum listed on pages 43-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Natural Sciences</b>	
BIO:114 Biology IA	4
BIO:115 Biology IIA	4
CHM:165/166 General Chemistry I	4-5
CHM:175/176 General Chemistry II	4-5
CHM:261/263 Organic Chemistry I	4-5
<b>Mathematics:</b>	
MAT:210 Calculus I	4
<b>Computer Skills:</b>	
CSC:110 Introduction to Computers	3

## Concentration Electives

Biology requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
MAT:156	Statistics	3
PHY:162	College Physics I	4
	AND	
PHY:172	College Physics II	4
	OR	
PHY:212	Classical Physics I	5
	AND	
PHY:222	Classical Physics II	5

# BUSINESS ADMINISTRATION/ACCOUNTING

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

### Mathematics:

	<b>Credits</b>
MAT:156 Statistics	3

### Social Sciences:

ECN:120 Principles of Macroeconomics	3
--------------------------------------	---

ECN:130 Principles of Microeconomics	3
--------------------------------------	---

## Concentration Electives

Business Administration/Accounting requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

ACC:142 Financial Accounting	3
------------------------------	---

ACC:146 Managerial Accounting	3
-------------------------------	---

ACC:221 Cost Accounting	3
-------------------------	---

BUS:102 Introduction to Business	3
----------------------------------	---

BUS:180 Business Ethics	3
-------------------------	---

BUS:185 Business Law I	3
------------------------	---

MGT:101 Principles of Management	3
----------------------------------	---

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Natural Sciences: Physical</b>	
CHM:165/166 General Chemistry I	4-5
<b>Mathematics:</b>	
MAT:210 Calculus I	4
<b>Computer Skills:</b>	
CSC:110 Introduction to Computers	3

## Concentration Electives

Chemistry requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

	<b>Credits</b>
<b>Recommended Electives</b>	
CHM:175/176 General Chemistry II	4-5
CHM:261/263 Organic Chemistry I	4-5
CHM:271/273 Organic Chemistry II	4-5
MAT:216 Calculus II	4
MAT:219 Calculus III	4
PHY:162 College Physics I	4
AND	
PHY:172 College Physics II	4
OR	
PHY:212 Classical Physics I	5
AND	
PHY:222 Classical Physics II	5

## General Education Requirements

Choose from the General Education Curriculum listed on pages 43-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Natural Sciences: Physical</b>	
CHM:165/166 General Chemistry I	4-5
CHM:175/176 General Chemistry II	4-5
CHM:261/263 Organic Chemistry I	4-5
CHM:271/273 Organic Chemistry II	4-5
<b>Mathematics:</b>	
MAT:210 Calculus I	4
MAT:216 Calculus II	4
MAT:219 Calculus III	4
<b>Computer Skills:</b>	
CSC:110 Introduction to Computers	3

## Concentration Electives

Chemistry requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

	<b>Credits</b>
<b>Recommended Electives</b>	
PHY:162 College Physics I	4
AND	
PHY:172 College Physics II	4
OR	
PHY:212 Classical Physics I	5
AND	
PHY:222 Classical Physics II	5

# CONSERVATION

Muscatine Community College

(A.S.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 43-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Natural Sciences:</b>	
BIO:114    General Biology IA	4
BIO:115    General Biology IIA	4
BIO:133    Ecology	3
BIO:137    Field Ecology	2
CHM:122    Introduction to General Chemistry	4
ENV:111    Environmental Science	4
PHS:172    Physical Geology	4
<b>Mathematics:</b>	
MAT:140    Finite Math OR	3
MAT:156    Statistics	

## Concentration Electives

Conservation requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and

your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

## Recommended Electives

BIO:125    Plant Biology	4
CNS:105    Conservation	2
CNS:131    Wildlife Habitat Management	2
CNS:132    Wildlife Management	2
CNS:137    Fisheries Management	2
CNS:150    Conservation Occupations	1
CNS:901    Wilderness Experience	2
CNS:930    Employment Experience	2

# CRIMINAL JUSTICE

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Cultural/Historical Perspectives:</b>	
HIS:152    U.S. History since 1877	3
<b>Social Sciences:</b>	
POL:111    American National Government	3
SOC:110    Introduction to Sociology	3
<b>Mathematics:</b>	
MAT:156    Statistics	3

## Concentration Electives

Criminal Justice requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

## Recommended Electives

CRJ:100    Introduction to Criminal Justice	3
CRJ:118    Law Enforcement	3
CRJ:120    Introduction to Corrections	3
CRJ:130    Criminal Law	3
CRJ:141    Criminal Investigation	3
CRJ:142    Criminalistics	3
CRJ:200    Criminology	3
CRJ:201    Juvenile Delinquency	3
CRJ:230    Evidence	3
CRJ:295    Contemporary Issues in Criminal Justice	3
SOC:115    Social Problems	3

## Clinton, Muscatine & Scott Community Colleges

(A.A.)

### General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Communications:</b>	
ENG:105    Composition I	3
ENG:106    Composition II	3
SPC:112    Public Speaking	3
<b>Cultural/Historical Perspectives:</b>	
GEO:121    World Regional Geography	3
HIS:151    U.S. History to 1877    OR	3
HIS:152    U.S. History since 1877	3
<b>Social Sciences:</b>	
POL:111    American National Government	3
PSY:111    Introduction to Psychology	3
<b>Science:</b>	
Biology lab course	4

### Math:

MAT:110	Math for Liberal Arts    OR	3
MAT:117	Math for Elementary Teachers*	3

**\* Only students majoring in elementary education may select this course option.**

### Concentration Electives

Education requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

EDU:110	Exploring Teaching	3
EDU:212	Educational Foundations	3
EDU:220	Human Relations for the Classroom	3
EDU:245	Exceptional Learner	3
EDU:255	Technology in the Classroom	3
LIT:105	Children's Literature	3
PSY:121	Developmental Psychology	3
PSY:222	Child Psychology    OR	3
PSY:224	Adolescence Psychology	3
PSY:281	Educational Psychology	3

# ENGLISH

## Clinton, Muscatine & Scott Community Colleges

(A.A.)

### General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Communications:</b>	
ENG:105    Composition I	3
ENG:106    Composition II	3
SPC:112    Public Speaking	3
<b>Arts and Humanities:</b>	
LIT:101    Introduction to Literature	3
PHI:101    Introduction to Philosophy	3
<b>Cultural/Historical Perspectives:</b>	
HIS:117    Western Civilization: Ancient and Medieval	3
OR	
HIS:118    Western Civilization II: Early Modern	3
OR	
HIS:119    Western Civilization III: The Modern Period	3
<b>Computer Skills:</b>	
CSC:110    Introduction to Computers	3

### Concentration Electives

English requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

Choose a minimum of three courses

ENG:221	Creative Writing	3
ENG:230	Creative Writing: Fiction	3
ENG:238	Creative Writing: Non-Fiction	3
LIT:110	American Literature to Mid-1800's	3
LIT:111	American Literature since Mid-1800's	3
LIT:183	Masterpieces: Neoclassical to Modern	3
LIT:185	Contemporary Literature	3
LIT:200	Studies in Literary Form	3
FLX: ___	Two Semesters of Foreign Language	8

# ENVIRONMENTAL SCIENCE

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

<b>Natural Sciences: Life</b>		<b>Credits</b>
ENV:111	Environmental Science	4
<b>Natural Sciences: Physical</b>		
CHM:165/166	General Chemistry I	4-5
<b>Mathematics:</b>		
MAT:210	Calculus I	4
<b>Computer Skills:</b>		
CSC:110	Introduction to Computers	3

## Concentration Electives

Environmental Science requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
BIO:114	General Biology IA	4
CHM:132	Introduction to Organic & Biochemistry	4
PHS:172	Physical Geology	4
PHY:162	College Physics I	4
OR		
PHY:212	Classical Physics I	5
MAT:156	Statistics	3
MAT:216	Calculus II	4

# ENVIRONMENTAL SCIENCE

Clinton, Muscatine & Scott Community Colleges

(A.S.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 43-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

<b>Natural Sciences:</b>		<b>Credits</b>
BIO:114	General Biology IA	4
CHM:132	Introduction to Organic & Biochemistry	4
CHM:165/166	General Chemistry I	4-5
ENV:111	Environmental Science	4
PHS:172	Physical Geology	4
<b>Mathematics:</b>		
MAT:210	Calculus I	4
<b>Computer Skills:</b>		
CSC:110	Introduction to Computers	3

## Concentration Electives

Environmental Science requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
PHY:162	College Physics I	4
OR		
PHY:212	Classical Physics I	5
MAT:156	Statistics	3
MAT:216	Calculus II	4

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Arts and Humanities:</b>	
ART:101 Art Appreciation	3
PHI:101 Introduction to Philosophy	3
<b>Cultural/Historical Perspectives:</b>	
HIS:117 Western Civilization: Ancient and Medieval	3
OR	
HIS:118 Western Civilization II: Early Modern	3
OR	
HIS:119 Western Civilization III: The Modern Period	3

## Concentration Electives

Fine Arts requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

ART:120 2-D Design	3
ART:133 Drawing	3
ART:143 Painting	3
ART:157 Printmaking	3
ART:163 Sculpture	3
ART:173 Ceramics	3
ART:203 Art History I	3
ART:204 Art History II	3

# FINE ARTS - DRAMA

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Communications:</b>	
SPC:112 Public Speaking	3
<b>Arts and Humanities:</b>	
PHI:101 Introduction to Philosophy	3
ART:101 Art Appreciation	3
DRA:101 Introduction to Theatre	3

## Concentration Electives

Fine Arts requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

DRA:130 Acting I	3
DRA:131/132 Acting II, III	2-3
DRA:136/137 Rehearsal and Performance	1-2
DRA:172/173 Theatre Practicum	1-2
DRA:237 Acting Lessons	1
DRA:250 Directing	3
SPC:122 Interpersonal Communication	3

# FINE ARTS - MUSIC

Muscatine Community College

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

### Arts and Humanities:

	Credits
PHI:101 Introduction to Philosophy	3
MUS:100 Music Appreciation	3

## Concentration Electives

Fine Arts requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

MUA:101 Applied Voice	1
MUA:120 Applied Piano I	1
MUA:147 Applied Instrumental	1
MUS:102 Music Fundamentals	3
MUS:120 Music Theory I	4
MUS:123 Music Theory II	4
MUS:151 Pop Singers	1
MUS:154 Chorus	1
MUS:222 Music Theory III	4

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Cultural/Historical Perspectives:</b>	
HIS:151 U.S. History to 1877	3
<b>Social Sciences:</b>	
POL:111 American National Government	3
SOC:110 Introduction to Sociology	3

## Concentration Electives

History requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

FLX:___ Two Semesters of Foreign Language	8
ECN:110 Introduction to Economics	3
HIS:117 Western Civilization: Ancient and Medieval	3
HIS:118 Western Civilization II: Early Modern	3
HIS:119 Western Civilization III: The Modern Period	3
HIS:152 U.S. History since 1877	3

# JOURNALISM/COMMUNICATION

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Communications:</b>	
SPC:112 Public Speaking	3
<b>Social Sciences:</b>	
POL:111 American National Government	3
PSY:111 Introduction to Psychology	3
SOC:110 Introduction to Sociology	3
<b>Computer:</b>	
CSC:110 Introduction to Computers	3

## Concentration Electives

Journalism/Communication requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

COM:140 Introduction to Mass Media	3
JOU:120 Beginning Newswriting	3
JOU:123 Intermediate Newswriting	3
JOU:941 Practicum in Communication	1-3

# LIBERAL ARTS

Clinton, Muscatine & Scott Community Colleges

(A.A.)

The Liberal Arts Concentration Area provides a solid foundation for successful transfer to four-year educational institutions. If you are undecided about a program of study, an academic advisor or counselor can assist you in your decision.

## General Education Requirements

Choose from the General Education Curriculum listed below according to your goals and interests and the requirements of your intended transfer institution.

## Communications (9 credits required)

### Select one of these courses:

	Credits
ENG:105 Composition I	3
ENG:107 Composition I: Technical Writing	3

### Select one of these courses:

ENG:106 Composition II	3
ENG:108 Composition II: Technical Writing	3

### Select one of these courses:

SPC:112 Public Speaking	3
SPC:170 Professional Communication	3

## Arts and Humanities (9 credits required)

### Select one Literature course:

LIT:101 Introduction to Literature	3
LIT:111 American Literature since Mid-1800's	3
LIT:183 Masterpieces: Neoclassical to Modern	3
LIT:185 Contemporary Literature	3

### Select one Humanities course:

DRA:110* Introduction to Film	3
HUM:110 Changes and Choices	3
HUM:183 Living with Space, Time and Technology	3
PHI:101 Introduction to Philosophy	3
PHI:105 Introduction to Ethics	3
PHI:110 Introduction to Logic	3
REL:101 Survey of World Religions	3

### Select one course in the Fine Arts:

ART:101 Art Appreciation	3
DRA:101 Introduction to Theatre	3
DRA:110* Introduction to Film	3
HUM:135 Humanities of the Early World	3
HUM:136 Humanities of the Renaissance	3
HUM:137 Humanities of the Modern World	3
MUS:100 Music Appreciation	3

\*DRA:110 may be counted as either Humanities or Fine Arts, but not both.

## Cultural/Historical Perspectives (6 credits required)

### Select one course from the Western perspective:

HIS:117 Western Civilization: Ancient and Medieval	3
HIS:118 Western Civilization II: Early Modern	3
HIS:119 Western Civilization III: The Modern Period	3
HIS:151 U.S. History to 1877	3
HIS:152 U.S. History since 1877	3

### Select one course from an International perspective or language:

ANT:105 Cultural Anthropology	3
CLS:150 Latin American History and Culture	3
FLX:_____ One Semester of a Foreign Language	3/4
GEO:121 World Regional Geography	3
GLS:100 Contemporary World Issues	3
HIS:211 Modern Asia History	3
HIS:231 Contemporary World Affairs	3

## Social Sciences (6 credits required)

### Select one Economics or Political Science course:

ECN:120 Principles of Macroeconomics	3
ECN:130 Principles of Microeconomics	3
POL:111 American National Government	3

### Select one Psychology or Sociology course:

PSY:111 Introduction to Psychology	3
SOC:110 Introduction to Sociology	3

Note: Requirements continue on next page.

## Natural Sciences (8 credits required)

### Select one course in the Life Sciences:

BIO:105	Introductory Biology	4
BIO:114	General Biology IA	4
BIO:125	Plant Biology	4
BIO:157	Human Biology	4
BIO:163	Essentials of Anatomy and Physiology	4
BIO:168	Human Anatomy and Physiology I	4
ENV:111*	Environmental Science	4
ENV:145	Conservation Biology	4

### Select one course in the Physical Sciences:

CHM:122	Introduction to General Chemistry	4
CHM:165/166	General Chemistry I	4-5
CHM:179	Principles of General Chemistry	6
PHY:110	Survey of Physics I	3
PHY:162	College Physics I	4
PHY:212	Classical Physics I	5
PHS:120	Exploring Physical Science	4
PHS:152	Astronomy	4
PHS:166	Meteorology: Weather and Climate	4
PHS:172	Physical Geology	4
ENV:111*	Environmental Science	4
ENV:139	Energy and the Environment	4

\* ENV:111 may be counted as either Life Sciences or Physical Sciences, but not both.

## Mathematics (3 credits required)

MAT:110	Math for Liberal Arts	3
MAT:117	Math for Elementary Teachers*	3
MAT:128	PreCalculus	4
MAT:140	Finite Math	3
MAT:156	Statistics	3
MAT:165	Business Calculus	3
MAT:210	Calculus I	4

\* Only students majoring in elementary education may select this course option.

## Computer Skills (3 credits or demonstrated proficiency required)

CSC:110	Introduction to Computers	3
---------	---------------------------	---

## Electives (Up to 19 credits required)

Students choose electives according to their needs and interests and the requirements of their intended transfer college to complete the 62 credit hours required of an Associate in Arts degree. While electives generally are chosen from any Arts and Science course numbered above 100, a maximum of 16 credit hours in career technical courses may be applied toward an A.A. A maximum of 4 credit hours of Human Development courses may be applied toward an A.A. degree.

# MANAGEMENT

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Social Sciences:</b>	
ECN:120 Principles of Macroeconomics	3
ECN:130 Principles of Microeconomics	3
<b>Mathematics:</b>	
MAT:156 Statistics	3

## Concentration Electives

Management and Supervision requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Strongly Recommended Electives

ACC:142 Financial Accounting	3
ACC:146 Managerial Accounting	3
BUS:102 Introduction to Business	3
BUS:180 Business Ethics	3
BUS:185 Business Law I	3
MGT:101 Principles of Management	3
MGT:110 Small Business Management	3
MKT:110 Principles of Marketing	3

# MARKETING

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Social Sciences:</b>	
ECN:120 Principles of Macroeconomics	3
ECN:130 Principles of Microeconomics	3
<b>Mathematics:</b>	
MAT:156 Statistics	3

## Concentration Electives

Marketing/Sales/Retailing requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Strongly Recommended Electives

ACC:142 Financial Accounting	3
ACC:146 Managerial Accounting	3
BUS:102 Introduction to Business	3
BUS:180 Business Ethics	3
BUS:185 Business Law I	3
MKT:110 Principles of Marketing	3
MKT:140 Principles of Selling	3
MKT:150 Principles of Advertising	3

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Natural Sciences:</b>	
PHY:212    Classical Physics I	5
<b>Mathematics:</b>	
MAT:156    Statistics	3
MAT:210    Calculus I	4

## Concentration Electives

Mathematics requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
MAT:216	Calculus II	4
MAT:219	Calculus III	4
MAT:227	Differential Equations	4

# PHYSICAL EDUCATION/RECREATION

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Cultural/Historical Perspectives:</b>	
HIS:151    U.S. History to1877	3
<b>Social Sciences:</b>	
POL:111    American National Government	3
PSY:111    Introduction to Psychology	3
<b>Natural Sciences:</b>	
BIO:168    Human Anatomy and Physiology I w/Lab	4

## Concentration Electives

Physical Education/Recreation requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
EDU:110	Exploring Teaching	3
EDU:212	Educational Foundations	3
PSY:281	Educational Psychology	3

# PHYSICAL SCIENCE

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

<b>Natural Sciences: Physical</b>		<b>Credits</b>
CHM:165/166	General Chemistry I	4-5
<b>Mathematics:</b>		
MAT:128	Precalculus	4
OR		
MAT:210	Calculus I	4
<b>Computer Skills:</b>		
CSC:110	Introduction to Computers	3

## Concentration Electives

Physical Science requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
CHM:175/176	General Chemistry II	4-5
MAT:216	Calculus II	4
PHS:152	Astronomy	4
PHS:166	Meteorology Weather and Climate	4
PHS:172	Physical Geology	4
PHY:162	College Physics I	4
PHY:172	College Physics II	4

# PHYSICAL SCIENCE

Clinton, Muscatine & Scott Community Colleges

(A.S.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 43-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

<b>Natural Sciences: Physical</b>		<b>Credits</b>
CHM:165/166	General Chemistry I	4-5
CHM:175/176	General Chemistry II	4-5
PHS:172	Physical Geology	4
PHY:162	College Physics I	4
PHY:172	College Physics II	4
<b>Mathematics:</b>		
MAT:210	Calculus I	4
<b>Computer Skills:</b>		
CSC:110	Introduction to Computers	3

## Concentration Electives

Physical Science requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
MAT:216	Calculus II	4

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

<b>Natural Sciences: Physical</b>		<b>Credits</b>
PHY:212	Classical Physics I	5
<b>Mathematics:</b>		
MAT:210	Calculus I	4
<b>Computer Skills:</b>		
CSC:110	Introduction to Computers	3

## Concentration Electives

Physics requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
CHM:165/166	General Chemistry I	4-5
CHM:175/176	General Chemistry II	4-5
MAT:216	Calculus II	4
MAT:219	Calculus III	4
PHY:222	Classical Physics II	5

## General Education Requirements

Choose from the General Education Curriculum listed on pages 43-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

<b>Natural Sciences:</b>		<b>Credits</b>
CHM:165/166	General Chemistry I	4-5
PHY:212	Classical Physics I	5
PHY:222	Classical Physics II	5
<b>Mathematics:</b>		
MAT:210	Calculus I	4
MAT:216	Calculus II	4
MAT:219	Calculus III	4
<b>Computer Skills:</b>		
CSC:110	Introduction to Computers	3

## Concentration Electives

Physics requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

<b>Recommended Electives</b>		
CHM:175/176	General Chemistry II	4-5

# POLITICAL SCIENCE

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Cultural/Historical Perspectives:</b>	
HIS:152 U.S. History since 1877	3
<b>Social Sciences:</b>	
POL:111 American National Government	3
SOC:110 Introduction to Sociology	3
<b>Mathematics:</b>	
MAT:156 Statistics	3

## Concentration Electives

Political Science requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

HIS:117 Western Civilization: Ancient and Medieval	3
HIS:118 Western Civilization II: Early Modern	3
HIS:119 Western Civilization III: The Modern Period	3
HIS:151 U.S. History to 1877	3
ECN:120 Principles of Macroeconomics	3
POL:112 American State and Local Government	3
PSY:111 Introduction to Psychology	3

Through a Joint 2 + 2 Transfer Program agreement between EICC and Palmer College of Chiropractic, students complete the coursework necessary to meet the admission requirements established by the Palmer College of Chiropractic while earning an Associate of Arts degree. For more information and to complete a 2 + 2 Joint Admission Program application, please see an academic advisor at Clinton, Muscatine or Scott Community Colleges.

### General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 or 43-44 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Natural Sciences:</b>	
BIO:114      General Biology IA	4
CHM:165/166 General Chemistry I	4-5
OR	
CHM:179      Principles of General Chemistry	6
<b>Mathematics:</b>	
MAT:156      Statistics	3

### Concentration Electives

Pre-Chiropractic requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

#### Recommended Electives

BIO:163	Essentials of Anatomy and Physiology	4
BIO:168	Human Anatomy and Physiology I w/Lab	4
BIO:173	Human Anatomy and Physiology II w/Lab	4
BIO:255	Neuroanatomy	3
CHM:175/176	General Chemistry II (if not CHM:179)	4-5
CHM:261/263	Organic Chemistry I	4-5
AND		
CHM:271/273	Organic Chemistry II	4-5
PHY:110	Survey of Physics I	3
AND		
PHY:111	Survey of Physics II	3
OR		
PHY:162	College Physics I	4
AND		
PHY:172	College Physics II	4

# PRE-ENGINEERING

Note that engineering requirements vary considerably, depending on both the specialty and the transfer institution you select. It is important to plan your selection carefully with both an Eastern Iowa Community Colleges advisor and your intended transfer institution.

### General Education Requirements

Choose from the General Education Curriculum listed on pages 45-46 according to your goals and interests and the requirements of your intended transfer institution.

MAT:210	Calculus I	4
MAT:216	Calculus II	4
MAT:219	Calculus III	4
MAT:227	Differential Equations	4
CHM:165/166	General Chemistry I	4-5
PHY:212	Classical Physics I	5
PHY:222	Classical Physics II	5

### Concentration Electives

Pre-Engineering requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

EGR:180	Engineering Statics	3
EGR:280	Dynamics	3
EGR:285	Introduction to Electrical Science	3
EGR:290	Thermodynamics	3
EGR:380	Mechanics of Deformable Bodies	3
PSY:111	Introduction to Psychology	3
SOC:115	Social Problems	3

# PRE-HEALTH PROFESSIONAL

Clinton, Muscatine & Scott Community Colleges

(A.A./A.S.)

*(Pre-Bachelor of Science in Nursing, Pre-Dental Hygiene, Pre-Dentistry, Pre-Medical Technology, Pre-Medical, Pre-Mortuary Science, Trinity Pre-Nursing, Pre-Pharmacy, Pre-Physical Therapy, Pre-Veterinary)*

## General Education Requirements

Choose from the General Education Requirements listed on pages 41-42 or 43-44 according to your goals and interests and the requirements of your intended transfer institution.

The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Natural Sciences:</b>	
BIO:114 General Biology IA	4
CHM:165/166 General Chemistry I	4-5
<b>Mathematics:</b>	
MAT:140 Finite Math	3
OR	
MAT:156 Statistics	3

## Concentration Electives

Pre-Health Professional requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

BIO:115	General Biology IIA	4
BIO:151	Nutrition	3
BIO:168	Human Anatomy and Physiology I w/Lab	4
BIO:173	Human Anatomy and Physiology II w/Lab	4
BIO:186	Microbiology	4
CHM:175/176	General Chemistry II	4-5
CHM:261/263	Organic Chemistry I	4-5
CHM:271/273	Organic Chemistry II	4-5
MAT:156	Statistics	3
PHY:162	College Physics I	4
PHY:172	College Physics II	4

# PRE-LAW

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Cultural/Historical Perspectives:</b>	
HIS:151 U.S. History to 1877	3
<b>Social Sciences:</b>	
POL:111 American National Government	3
SOC:110 Introduction to Sociology	3

## Concentration Electives

Pre-Law requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

ECN:120	Principles of Macroeconomics	3
HIS:117	Western Civilization: Ancient and Medieval	3
HIS:118	Western Civilization II: Early Modern	3
HIS:119	Western Civilization III: The Modern Period	3
HIS:152	U.S. History since 1877	3
PSY:111	Introduction to Psychology	3

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Social Sciences:</b>	
PSY:111 Introduction to Psychology	3
<b>Natural Sciences:</b>	
BIO:114 General Biology IA	4
OR	
BIO:105 Introduction to Biology	4
<b>Mathematics:</b>	
MAT:156 Statistics	3

## Concentration Electives

Psychology requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

BIO:114 General Biology IA	4
OR	
BIO:157 Human Biology	4
PSY:121 Developmental Psychology	3
SOC:110 Introduction to Sociology	3

Other Psychology or Sociology electives as recommended by advisors.

# SOCIAL WORK

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Cultural/Historical Perspectives:</b>	
HIS:117 Western Civilization: Ancient and Medieval	3
OR	
ANT:105 Cultural Anthropology	3
<b>Social Sciences:</b>	
POL:111 American National Government	3
SOC:110 Introduction to Sociology	3
<b>Mathematics:</b>	
MAT:156 Statistics	3

## Concentration Electives

Social Work requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

### Recommended Electives

ECN:120 Principles of Macroeconomics	3
HIS:118 Western Civilization II: Early Modern	3
HIS:119 Western Civilization III: The Modern Period	3
HIS:152 U.S. History since 1877	3
PSY:111 Introduction to Psychology	3
SOC:115 Social Problems	3
SOC:160 Introduction to Social Work	3

# SOCIOLOGY

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Cultural/Historical Perspectives:</b>	
HIS:117 Western Civilization I: Ancient and Medieval OR	3
ANT:105 Cultural Anthropology	3
<b>Social Sciences:</b>	
POL:111 American National Government	3
SOC:110 Introduction to Sociology	3
<b>Mathematics:</b>	
MAT:156 Statistics	3

## Concentration Electives

Sociology requirements vary depending on the transfer

institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

## Recommended Electives

ECN:120	Principles of Macroeconomics	3
HIS:118	Western Civilization II: Early Modern	3
HIS:119	Western Civilization III: The Modern Period	3
HIS:152	U.S. History since 1877	3
PSY:111	Introduction to Psychology	3
SOC:115	Social Problems	3

# SPEECH

Clinton, Muscatine & Scott Community Colleges

(A.A.)

## General Education Requirements

Choose from the General Education Curriculum listed on pages 41-42 according to your goals and interests and the requirements of your intended transfer institution. The recommended General Education courses for this concentration include the following:

	<b>Credits</b>
<b>Communications:</b>	
SPC:112 Public Speaking	3
<b>Arts and Humanities:</b>	
PHI:101 Introduction to Philosophy OR	3
PHI:110 Introduction to Logic OR	3
REL:101 Survey of World Religions	3
<b>Cultural/Historical Perspectives:</b>	
CLS:150 Latin American History and Culture	3
<b>Social Sciences:</b>	
POL:111 American National Government	3

## Concentration Electives

Speech requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

## Recommended Electives

DRA:101	Introduction to Theatre	3
SPC:114	Advanced Public Speaking	2
SPC:122	Interpersonal Communication	3
SPC:170	Professional Communication	3



# Career Technology



EASTERN IOWA COMMUNITY COLLEGES  
CLINTON ♦ MUSCATINE ♦ SCOTT

**LEARN MORE. EARN MORE.**

# CAREER TECHNOLOGY AREAS

Career Technology Concentration Areas	Award	College(s)	Pages
Accounting Management*	.AAS Degree, Diploma	.CCC, MCC, SCC	.73
Administrative and Office Support	.AAS Degree, Diploma, Certificate	.CCC, MCC, SCC	.75
Accounting Assistant	.Certificate	.CCC, MCC, SCC	
Software Applications Specialist	.Certificate	.CCC, MCC, SCC	
Agribusiness Management	.AAS Degree	.MCC	.76
Auto Collision Repair Technology	.AAS Degree, Diploma, Certificate	.SCC	.78
Automotive Technology	.AAS Degree, Diploma, Certificate	.SCC	.80
Basic Service	.Certificate	.SCC	
General Service	.Certificate	.SCC	
Business Management*	.AAS Degree, Certificates	.CCC, MCC, SCC	.82
Entrepreneurship	.Certificate	.CCC, MCC, SCC	
Management/Supervision	.Certificate	.CCC, MCC, SCC	
Marketing	.Certificate	.CCC, MCC, SCC	
Small Business Management	.Certificate	.CCC, MCC, SCC	
Cancer Information Management*	.AAS Degree, Diploma	.SCC	.84
CNC/Machining	.AAS Degree	.SCC	.85
CNC Programming	.Certificate	.SCC	
Manual Machining	.Certificate	.SCC	
Culinary Arts Apprenticeship	.AAS Degree	.SCC	.87
Culinary Arts Degree	.AAS Degree	.SCC	
Culinary Arts Assistant	.Certificate	.SCC	
Baking	.Certificate	.SCC	
Dental Assisting	.A.A.S., Diploma	.SCC	.89
Dental Hygiene	.AAS Degree	.CCC, MCC, SCC/CSC**	.90
Diesel Technology	.AAS Degree	.SCC	.91
Early Childhood Education	.AAS Degree, Diploma, Certificate	.SCC	.92
Diploma, Certificate		.MCC	
Electroneurodiagnostic Technology	.AAS Degree	.SCC	.93
Emergency Medical Services	.AAS Degree	.CCC, MCC, SCC	.94
EMT	.Certificate	.CCC, MCC, SCC	
Advanced EMT	.Certificate	.CCC, MCC, SCC	
Engineering TEchnology	.AAS Degree, Diploma, Certificate	.CCC, MCC, SCC	.95
Farm Management	.AAS Degree,	.MCC	.97
Graphic Arts Technology	.AAS Degree, Diploma	.CCC	.98
Health Information Technology*	.AAS Degree, Diploma	.CCC, MCC, SCC	.99
Health, Safety and Environmental Technology*	.AAS Degree, Certificate	.CCC, MCC, SCC	.100
Heating, Ventilation and Air Conditioning	.AAS Degree, Diploma, Certificate	.SCC	.101
Horticulture	.AAS Degree	.MCC	.103
Hospitality Management	.AAS Degree	.SCC	.104

# CAREER TECHNOLOGY AREAS

Event Management . . . . .	Certificate . . . . .	SCC . . . . .	
Information Technology . . . . .	AAS Degree, Certificate . . . . .	CCC, MCC, SCC . . . . .	105
Networking . . . . .	AAS Degree . . . . .	CCC, MCC, SCC . . . . .	
Software Development . . . . .	AAS Degree . . . . .	MCC, SCC . . . . .	
Game Development . . . . .	AAS Degree . . . . .	SCC . . . . .	
A+ Preparation . . . . .	Certificate . . . . .	CCC, MCC, SCC . . . . .	
CISCO Networking (CCNA) . . . . .	Certificate . . . . .	CCC, MCC . . . . .	
CISCO Networking (CCNA) . . . . .	Certificate . . . . .	SCC . . . . .	
Computer Repair and Help Desk Support . . . . .	Certificate . . . . .	CCC, MCC, SCC . . . . .	
Network+ Preparation . . . . .	Certificate . . . . .	CCC, MCC, SCC . . . . .	
Oracle Database Design & Programming with SQL . . . . .	Certificate . . . . .	MCC . . . . .	
Web Design . . . . .	Certificate . . . . .	MCC, SCC . . . . .	
Web Game Development . . . . .	Certificate . . . . .	SCC . . . . .	
Wireless LAN . . . . .	Certificate . . . . .	CCC, MCC, SCC . . . . .	
Interior Design . . . . .	AAS Degree . . . . .	SCC . . . . .	109
Interpreter Training Program . . . . .	AAS Degree . . . . .	SCC . . . . .	110
Logistics . . . . .	AAS Degree, Diploma, Certificate . . . . .	CCC, MCC, SCC . . . . .	111
Radio Frequency Identification (RFID) . . . . .	Certificate . . . . .	CCC, MCC, SCC . . . . .	
Mechanical Design Technology . . . . .	AAS Degree, Diploma, Certificate . . . . .	CCC, MCC, SCC . . . . .	113
CAD/PRO Engineer . . . . .	AAS Degree, Diploma, Certificate . . . . .	CCC, MCC, SCC . . . . .	
PRO Engineer/Solid Modeling . . . . .	Certificate . . . . .	CCC, MCC, SCC . . . . .	
Nursing . . . . .	AAS Degree, Diploma . . . . .	CCC, MCC, SCC . . . . .	114
Associate Degree Nursing . . . . .	AAS Degree . . . . .	CCC, SCC . . . . .	
Practical Nursing . . . . .	Diploma . . . . .	CCC, MCC, SCC . . . . .	
Physical Therapist Assistant . . . . .	AAS Degree, Diploma, Certificate . . . . .	CCC, MCC, SCC . . . . .	115
Radiologic Technology . . . . .	AAS Degree . . . . .	SCC . . . . .	116
Respiratory Care . . . . .	AAS Degree . . . . .	CCC/MCC/SCC/NICC*** . . . . .	117
Surgical Technology . . . . .	AAS Degree, Diploma . . . . .	SCC . . . . .	118
Sterile Processing and Distribution . . . . .	Certificate . . . . .	SCC . . . . .	
Technical Studies . . . . .	AAS Degree . . . . .	CCC, MCC, SCC . . . . .	119
Truck Driving . . . . .	Certificate . . . . .	SCC . . . . .	
Veterinary Technician . . . . .	AAS Degree . . . . .	MCC . . . . .	120
Welding . . . . .	AAS Degree, Diploma . . . . .	SCC . . . . .	121
Basic Welding . . . . .	Certificate . . . . .	MCC, SCC . . . . .	122
General Maintenance . . . . .	Certificate . . . . .	SCC . . . . .	
Production Welding . . . . .	Certificate . . . . .	CCC, SCC . . . . .	
Structural Welding . . . . .	Certificate . . . . .	SCC . . . . .	

\* Available 100% online

\*\* Carl Sandburg College Cooperative Program, Galesburg, Illinois

\*\*\* Northeast Iowa Community College Cooperative Program, Peosta, Iowa

# GENERAL EDUCATION REQUIREMENTS

---

## Clinton, Muscatine & Scott Community Colleges

### **Associate in Applied Science**

A minimum of 12 credit hours of general education is required for the Associate in Applied Science degree, with at least one course in Communications, one course in Humanities or Social Science and one course in Math or Science. Specific general education courses required in each program are listed under the program's curriculum.

### **Diploma**

A minimum of 6 credit hours of general education is required for the diploma with at least one course in Communications and one course in Humanities, Social Science, Math or Science. Specific general education courses required in each program are listed under the program's curriculum.

### **Certificate**

There are no specific general education requirements for certificates.

# ACCOUNTING MANAGEMENT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Diploma

## A.A.S. DEGREE

### FIRST SEMESTER

ACC:121	Principles of Accounting I	3.00
ADM:157	Business English OR	3.00
COM:102	Communication Skills OR	
ENG:105	Composition I	
BUS:102	Introduction to Business	3.00
SPC:170	Professional Communication	3.00
	Technical or Business Skill Elective	<u>3.00</u>
	(See list, select minimum of 3 credit hours)	
		<b>15.00</b>

### SECOND SEMESTER

ACC:146	Managerial Accounting	3.00
BUS:110	Business Math and Calculators OR	3.00
MAT:110	Math for Liberal Arts OR	
MAT:121	College Algebra	
BUS:185	Business Law	3.00
HUM:105	Working in America OR	3.00
HUM:110	Changes & Choices OR	
SOC:110	Introduction to Sociology	
MKT:110	Principles of Marketing	3.00
	Technical or Business Skill Elective	<u>3.00</u>
	(See list, select minimum of 3 credit hours)	
		<b>18.00</b>

### SUMMER SEMESTER

	Accounting Elective	
	(Recommend ACC:312)	<u>4.00</u>
	(See list, select minimum of 3 credit hours)	
		<b>4.00</b>

### THIRD SEMESTER

ACC:237	Intermediate Accounting	4.00
CSC:110	Introduction to Computers	3.00
ECN:110	Introduction to Economics	3.00
MGT:101	Principles of Management	3.00
	Accounting Elective	<u>3.00</u>
		<b>16.00</b>

### FOURTH SEMESTER

ACC:221	Cost Accounting	3.00
BUS:106	Employment Strategy	2.00
BUS:161	Human Relations	3.00
BUS:180	Business Ethics	3.00
	Accounting Elective	<u>3.00</u>
	(See list, select minimum of 3 credit hours)	
		<b>14.00</b>

**A.A.S. TOTAL .....67.00**

### Technical or Business Skill electives

(Must select a minimum of 6 credit hours)

ADM:105	Introduction to Keyboarding	1.00
ADM:122	Document Formatting	2.00
ADM:179	Records Management	3.00
BCA:129	Word Processing	2.00
BCA:130	Advanced Word Processing	2.00
BCA:147	Basic Spreadsheets	2.00
BCA:148	Advanced Spreadsheets	2.00
BCA:165	Basic Databases	2.00
BCA:220	Integrated Computer Business Applications	2.00
BCA:250	Desktop Publishing	3.00
BCA:711	Introduction to Microsoft PowerPoint	1.00
BCA:732	Getting Organized with Outlook	1.00
MKT:181	Customer Service Strategies	2.00

### Accounting Electives

(Must select minimum of 7 credit hours)

ACC:161	Payroll Accounting	3.00
ACC:265	Income Tax Accounting	4.00
ACC:312	Computer Accounting	4.00
ACC:332	Computer Accounting - QuickBooks I	2.00
BUS:908	Cooperative Education	1-3.00

# ACCOUNTING MANAGEMENT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Diploma

## ACCOUNTING MANAGEMENT DIPLOMA

### FIRST SEMESTER

ACC:121	Principles of Accounting I	3.00
BUS:185	Business Law I	3.00
CSC:110	Introduction to Computers	3.00
BUS:110	Business Math and Calculators OR	3.00
MAT:110	Math for Liberal Arts OR	
MAT:121	College Algebra	
ACC:332	Computer Accounting-QuickBooks I	<u>2.00</u>
		<b>14.00</b>

### SECOND SEMESTER

ACC:146	Managerial Accounting	3.00
ACC:161	Payroll Accounting	3.00
ACC:265	Income Tax Accounting	4.00
SPC:170	Professional Communication	3.00
ADM:157	Business English OR	<u>3.00</u>
COM:102	Communication Skills OR	
ENG:105	Composition I	
		<b>16.00</b>

### SUMMER SESSION

ACC:312	Computer Accounting	<u>4.00</u>
		<b>4.00</b>

**DIPLOMA TOTAL** .....**34.00**

# ADMINISTRATIVE AND OFFICE SUPPORT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Diploma, Certificate

## A.A.S. DEGREE

### FIRST SEMESTER

		CREDITS
ADM:105	Introduction to Keyboarding	1
ADM:122	Document Formatting	2
ADM:157	Business English	3
ADM:179	Records Management	3
BCA:120	Computer Orientation	1
BCA:129	Basic Word Processing	2
BCA:147	Basic Spreadsheets	2
MKT:181	Customer Service Strategies	<u>2</u>
<b>CERTIFICATE AWARDED .....</b>		<b>16</b>

### SECOND SEMESTER

BCA:130	Advanced Word Processing	2
BCA:148	Advanced Spreadsheets	2
BCA:165	Basic Databases	2
BCA:711	PowerPoint	1
BCA:732	Outlook	1
BUS:106	Employment Strategies	2
BUS:110	Business Math and Calculators	3
MGT:151	Management Communications	<u>3</u>
		<b>16</b>
<b>DIPLOMA AWARDED .....</b>		<b>32</b>

### THIRD SEMESTER

ACC:111	Introduction to Accounting OR	3
ACC:121	Principles of Accounting I	
ADM:149	Transcription	3
ADM:254	Business Professionalism I AND	2
ADM:255	Business Professionalism II OR	
ADM:940	Leadership Seminar OR	
MGT:130	Principles of Supervision	
BCA:220	Integrated Computer Business Applications	2
BUS:161	Human Relations	3
ECN:130	Principles of Microeconomics OR	3
HUM:110	Changes and Choices OR	
SOC:110	Introduction to Sociology	—
		<b>16</b>

### FOURTH SEMESTER

ACC:332	Quickbooks	2
ADM:222	Capstone OR	3
ADM:936	Occupational Experience	
BCA:250	Desktop Publishing	3
SPC:170	Professional Communication	3
	Approved AOS Electives*	<u>3</u>
		<b>14</b>
<b>A.A.S. TOTAL .....</b>		<b>62</b>

#### \*Approved AOS Electives (minimum of three credit hours)

ACC:161	Payroll Accounting	3
BCA:722	Introduction to the Internet	1
BUS:102	Introduction to Business	3
BUS:130	Introduction to Entrepreneurship	3
BUS:180	Business Ethics	3
BUS:185	Business Law I	3
FIN:121	Personal Finance	3
FLS:141	Elementary Spanish I	4
GEO:121	World Regional Geography	3
HSC:113	Medical Terminology	2
MGT:165	Principles of Quality	3
MKT:100	Principles of Marketing	3

# AGRIBUSINESS MANAGEMENT

Muscatine Community College

A.A.S., Diploma

## A.A.S. DEGREE

### FIRST SEMESTER

AGA:154	Fundamentals of Soil Science (optional course)	(3.00)
AGA:270	Principles of Crop Production (optional course)	(3.00)
AGA:881	Grain Science	1.75
AGB:103	Agricultural Economics	1.50
AGB:105	Business Principles for Agriculture I	1.75
AGB:108	Human Relations I	1.50
AGB:141	Applied Agribusiness Accounting I	1.25
AGB:191	Agricultural Sales I	1.50
AGC:910	Alpha Mu Sigma I	0.50
AGC:941	Employment Experience I	3.00
AGM:423	Equipment & Diesel Performance (optional course)	(2.00)
AGS:109	Introduction to Animal Science (optional course)	(3.00)
AGS:315	Principles of Animal Nutrition	3.00
COM:102	Communication Skills	<u>3.00</u>
		<b>18.75</b>

### SECOND SEMESTER

AGA:210	Corn and Soybean Production	3.00
AGA:285	Crop Protection	3.00
AGB:112	Human Relations II	1.75
AGB:192	Agricultural Sales II	1.75
AGC:911	Alpha Mu Sigma II	0.50
AGC:942	Employment Experience II	3.50
MAT:104	Applied Math Topics	3.00
SPC:111	Public Speaking (optional course)	<u>(2.00)</u>
		<b>16.50</b>

### SUMMER SESSION

AGA:373	Integrated Crop Management (optional course)	(2.00)
AGB:142	Applied Agribusiness Accounting II	1.00
AGB:357	Agribusiness Marketing & Retailing	3.00
AGS:119	Livestock Management	<u>2.00</u>
		<b>6.00</b>

### THIRD SEMESTER

AGA:351	Soil Science	1.50
AGA:890	Soil Chemistry	1.50
AGA:901	Seed Science	1.50
AGB:106	Business Principles for Agriculture II	2.00
AGB:231	Futures and Options	1.50
AGB:280	Business Law for Agriculture	1.50
AGC:912	Alpha Mu Sigma III	0.50
AGC:943	Employment Experience III	3.00
AGS:318	Feed Formulation (optional course)	(1.75)
AGS:352	Genetics	<u>1.50</u>
		<b>14.50</b>

### FOURTH SEMESTER

AGA:349	Fertilizers	1.50
AGB:193	Agricultural Sales III	1.25
AGC:913	Alpha Mu Sigma IV	0.50
AGC:944	Employment Experience IV	3.50
AGP:243	Precision Agricultural Applications	3.00
CSC:110	Introduction to Computers	3.00
ENV:115	Environmental Science	<u>3.00</u>
		<b>15.75</b>

**A.A.S. TOTAL .....71.50**

# AGRIBUSINESS MANAGEMENT

Muscatine Community College

A.A.S., Diploma

## SUSTAINABLE AGRICULTURE DIPLOMA

### FIRST SEMESTER

AGA:351	Soil Science	1.50
AGA:890	Soil Chemistry	1.50
AGB:108	Human Relations I	1.50
AGB:301	Applied Accounting for Farm Management	1.50
AGB:304	Agricultural Finance	1.50
AGB:305	Agricultural Law	1.50
AGH:235	Plant Genetics	2.00
BUS:130	Introduction to Entrepreneurship	3.00
COM:102	Communication Skills	3.00
GIS:111	Introduction to Geographical Information Systems (optional course)	<u>3.00</u>

**17.00**

### SECOND SEMESTER

AGA:378	Sustainable Pest Management	3.00
AGF:120	Plant Identification & Care I	2.00
AGF:299	Sustainable Market Farming	3.00
AGH:131	Greenhouse Management	3.00
AGH:222	Plant Propagation I	2.00
MAT:104	Applied Math Topics	3.00
SPC:111	Public Speaking	<u>2.00</u>

**18.00**

**Diploma Total .....35.00**

## SALES AND SERVICE DIPLOMA

### FIRST SEMESTER

AGA:351	Soil Science	1.50
AGB:103	Agricultural Economics	1.50
AGB:105	Business Principles I	1.75
AGB:108	Human Relations I	1.50
AGB:141	Applied Agribusiness Accounting I	1.25
AGB:191	Agricultural Sales I	1.50
AGB:231	Futures and Options	1.50
AGB:304	Agricultural Finance	2.00
AGC:910	Alpha Mu Sigma I	0.50
AGC:941	Employment Experience I	3.00
COM:102	Communication Skills I	<u>3.00</u>

**19.00**

### SECOND SEMESTER

AGA:285	Crop Protection	3.00
AGB:112	Human Relations II	1.75
AGB:193	Agricultural Sales II	1.25
AGC:942	Employment Experience II	3.50
AGC:911	Alpha Mu Sigma II	0.50
MAT:104	Applied Math Topics	3.00
SPC:111	Public Speaking	<u>2.00</u>

**15.00**

**Diploma Total .....34.00**

## AGRONOMY DIPLOMA

### FIRST SEMESTER

AGA:351	Soil Science	1.50
AGA:890	Soil Chemistry	1.50
AGA:901	Seed Science	1.50
AGB:103	Agricultural Economics	1.50
AGB:105	Business Principles I	1.75
AGB:108	Human Relations I	1.50
AGC:910	Alpha Mu Sigma I	0.50
AGC:941	Employment Experience I	3.00
AGS:352	Genetics	1.50
COM:102	Communication Skills I	<u>3.00</u>

**17.25**

### SECOND SEMESTER

AGA:210	Corn & Soybean Production	3.00
AGA:285	Crop Protection	3.00
AGC:942	Employment Experience II	3.50
AGP:243	Precision Ag Applications	3.00
MAT:104	Applied Math Topics	3.00
SPC:111	Public Speaking	<u>2.00</u>

**17.50**

**Diploma Total .....34.75**

# AUTO COLLISION REPAIR TECHNOLOGY

Scott Community College

A.A.S., Diploma, Certificate

## A.A.S. DEGREE

### Fall Start

#### FIRST SEMESTER - FALL

	CREDITS
COM:102 Communication Skills OR	
ENG:105 Composition I	3.00
CRR:103 Survey of Auto Collision Repair (optional)	3.00
CRR:113 Welding Survey	2.00
CRR:140 Orientation and Safety	3.00
CRR:322 Basic Metal Bumping and Repair	5.00
CRR:452 Trim and Component Panel Services	2.00
CRR:801 Refinishing I	<u>3.00</u>
	<b>18.00</b>

#### SECOND SEMESTER - SPRING

CRR:114 Welding Systems and Techniques	2.00
CRR:200 Plastic Repair	1.00
CRR:405 Non-Structural Panel Repair and Replacement	5.00
CRR:825 Refinishing Principles	5.00
MAT:104 Applied Math Topics OR	
MAT:110 Math for Liberal Arts	<u>3.00</u>
	<b>16.00</b>

#### SUMMER SESSION

CRR:799 Spray Techniques & Surface Coatings II	1.00
CRR:842 Color Matching Concepts	5.00
	<u>6.00</u>

**DIPLOMA AWARDED TOTAL .....40.00**

#### THIRD SEMESTER - FALL

BCA:188 Computer Fundamentals for Technicians OR	
BUS:102 Introduction to Business	3.00
CRR:115 Advanced Welding Techniques	1.00
CRR:507 Structural Panel Repair and Replacement	5.00
CRR:612 Steering/Suspension	3.00
CRR:878 Advanced Refinishing Techniques	2.00
HUM:105 Working in America OR	
PSY:213 Industrial & Organizational Psychology	<u>3.00</u>
	<b>17.00</b>

#### FOURTH SEMESTER - SPRING

CRR:605 Mechanical Service	3.00
CRR:674 Electrical Service	4.00
CRR:743 Estimating	3.00
CRR:908 Cooperative Education*	<u>3.00</u>
	<b>13.00</b>

**A.A.S. TOTAL .....70.00**

\*A student may register for Co-op. Education during the Summer Session, Third or Fourth Semester.

### Spring Start

#### FIRST SEMESTER - SPRING

CRR:140 Orientation and Safety	3.00
CRR:452 Trim and Component Panel Services	2.00
CRR:605 Mechanical Service	3.00
CRR:674 Electrical Service	4.00
CRR:743 Estimating	<u>3.00</u>
	<b>15.00</b>

#### SUMMER SESSION 1

CRR:113 Welding Survey	2.00
CRR:322 Basic Metal Bumping and Repair	<u>5.00</u>
	<b>7.00</b>

#### SECOND SEMESTER - FALL

BCA:188 Computer Fundamentals for Technicians OR	
BUS:102 Introduction to Business	3.00
CRR:115 Advanced Welding Techniques	1.00
CRR:507 Structural Panel Repair and Replacement	5.00
CRR:612 Steering/Suspension	3.00
CRR:801 Refinishing I	<u>3.00</u>
	<b>15.00</b>

#### THIRD SEMESTER - SPRING

CRR:114 Welding Systems and Techniques	2.00
CRR:200 Plastic Repair	1.00
CRR:405 Non-Structural Panel Repair and Replacement	5.00
CRR:825 Refinishing Principles	5.00
MAT:104 Applied Math Topics OR	
MAT:110 Math for Liberal Arts	<u>3.00</u>
	<b>16.00</b>

#### SUMMER SESSION 2

CRR:799 Spray Techniques & Surface Coatings II	1.00
CRR:842 Color-Matching	<u>5.00</u>
	<b>6.00</b>

#### FOURTH SEMESTER - FALL

COM:102 Communication Skills OR	
ENG:105 Composition I	3.00
CRR:878 Advanced Refinishing Techniques	2.00
CRR:908 Cooperative Education*	3.00
HUM:105 Working in America OR	
PSY:213 Industrial & Organizational Psychology	<u>3.00</u>
	<b>11.00</b>

**A.A.S. TOTAL .....70.00**

\*A student may register for Co-op. Education during the Summer Session, Third or Fourth Semester.

# AUTO COLLISION REPAIR TECHNOLOGY

Scott Community College

A.A.S., Diploma, Certificate

## CERTIFICATE

---

### FIRST SEMESTER

CRR:113	Welding Survey	2.00
CRR:140	Orientation and Safety	3.00
CRR:322	Basic Metal Bumping and Repair	5.00
CRR:452 T	rim and Component Panel Services	2.00
CRR:801	Refinishing I	<u>3.00</u>
		<b>15.00</b>

### SECOND SEMESTER

CRR:114	Welding Systems and Techniques	2.00
CRR:200	Plastic Repair	1.00
CRR:405	Non-Structural Panel Repair and Replacement	5.00
CRR:799	Spray Techniques & Surface Coatings II	1.00
CRR:825	Refinishing Principles	<u>5.00</u>
		<b>14.00</b>

**CERTIFICATE TOTAL .....29.00**

Gainful employment information for the Auto Collision Repair program is located at [www.eicc.edu/gainfulemployment](http://www.eicc.edu/gainfulemployment)

# AUTOMOTIVE TECHNOLOGY

Scott Community College

A.A.S., Diploma, Certificate

## A.A.S. DEGREE

### Fall Start

#### FIRST SEMESTER - Fall

AUT:103	Survey of Automotive Technology (Optional)	(3)	
AUT:115	Automotive Shop Safety	1	
AUT:164	Automotive Engine Repair	4	
AUT:606	Basic Automotive Electricity/Electronics	3	
AUT:614	Automotive Electrical I	3	
COM:102	Communication Skills OR		
ENG:105	Composition I	3	
MAT:104	Applied Math Topics OR		
MAT:110	Math for Liberal Arts	<u>3</u>	
		<b>17</b>	

#### SECOND SEMESTER - Spring

AUT:232	Automotive Transmissions I	3	
AUT:304	Automotive Manual Drive Train and Axles	4	
AUT:524	Automotive Brake Systems and Service	4	
AUT:802	Engine Performance I	<u>3</u>	
		<b>14</b>	

#### SUMMER SESSION

AUT:404	Automotive Suspension and Steering	4	
AUT:704	Automotive Heating and Air Conditioning	<u>4</u>	
		<b>8</b>	

### AUTOMOTIVE TECHNOLOGY

**DIPLOMA AWARDED TOTAL 39**

#### THIRD SEMESTER - Fall

AUT:233	Automotive Transmissions II	3	
AUT:811	Engine Performance II	4	
BCA:188	Computer Fundamentals for Technicians OR		
BUS:102	Introduction to Business	3	
HUM:105	Working in America OR		
PSY:213	Industrial & Organizational Psychology	<u>3</u>	
		<b>13</b>	

#### FOURTH SEMESTER - Spring

AUT:656	Automotive Electrical II	4	
AUT:817	Automotive Engine Performance III	3	
AUT:911	Cooperative/Internship	4	
WEL:331	Welding Fundamentals	<u>2</u>	
		<b>13</b>	

**A.A.S. TOTAL .....65**

### Spring Start

#### FIRST SEMESTER - SPRING

AUT:115	Automotive Shop Safety	1	
AUT:232	Automotive Transmissions I	3	
AUT:606	Basic Automotive Electricity/Electronics	3	
AUT:614	Automotive Electrical I	3	
AUT:802	Engine Performance I	<u>3</u>	
		<b>13</b>	

#### SUMMER SESSION 1

AUT:811	Engine Performance II	4	
AUT:817	Automotive Engine Performance III	<u>3</u>	
		<b>7</b>	

#### SECOND SEMESTER - Fall

AUT:164	Automotive Engine Repair	4	
AUT:233	Automotive Transmissions II	3	
COM:102	Communication Skills OR		
ENG:105	Composition I	3	
MAT:104	Applied Math Topics OR		
MAT:110	Math for Liberal Arts	<u>3</u>	
		<b>13</b>	

#### THIRD SEMESTER - Spring

AUT:304	Automotive Manual Drive Train and Axles	4	
AUT:524	Automotive Brake Systems and Service	4	
AUT:656	Automotive Electrical II	<u>4</u>	
		<b>12</b>	

#### SUMMER SESSION 2

AUT:404	Automotive Suspension and Steering	4	
AUT:704	Automotive Heating and Air Conditioning	<u>4</u>	
		<b>8</b>	

#### FOURTH SEMESTER - Fall

AUT:911	Cooperative/Internship	4	
BCA:188	Computer Fundamentals for Technicians OR		
BUS:102	Introduction to Business	3	
HUM:105	Working in America OR		
PSY:213	Industrial & Organizational Psychology	3	
WEL:331	Welding Fundamentals	<u>2</u>	
		<b>12</b>	

**A.A.S. TOTAL .....65**

# AUTOMOTIVE TECHNOLOGY

Scott Community College

A.A.S., Diploma, Certificate

## AUTOMOTIVE TECHNOLOGY BASIC SERVICE CERTIFICATE

### FALL START COURSE SEQUENCE

#### FIRST SEMESTER - FALL

AUT:115	Automotive Shop Safety	1
AUT:606	Basic Automotive Electricity/Electronics	3
AUT:614	Automotive Electrical I	3
COM:102	Communication Skills OR	
ENG:105	Composition I	<u>3</u>
		<b>10</b>

#### SECOND SEMESTER - SPRING

AUT:524	Automotive Brake Systems and Service	4
---------	--------------------------------------	---

#### SUMMER SESSION

AUT:404	Automotive Suspension and Steering	<u>4</u>
		<b>8</b>

**CERTIFICATE TOTAL .....18**

### SPRING START COURSE SEQUENCE

#### FIRST SEMESTER - SPRING

AUT:115	Automotive Shop Safety	1
AUT:524	Automotive Brake Systems and Service	4
AUT:606	Basic Automotive Electricity/Electronics	3
AUT:614	Automotive Electrical I	3
BCA:188	Computer Fundamentals for Technicians OR	
BUS:102	Introduction to Business	<u>3</u>
		<b>14</b>

#### SUMMER SESSION - FALL

AUT:404	Automotive Suspension and Steering	<u>4</u>
		<b>4</b>

**CERTIFICATE TOTAL .....18**

## AUTOMOTIVE TECHNOLOGY GENERAL SERVICE CERTIFICATE

#### FIRST SEMESTER - FALL

AUT:115	Automotive Shop Safety	1
AUT:164	Automotive Engine Repair	4
AUT:606	Basic Automotive Electricity/Electronics	3
AUT:614	Automotive Electrical I	3
COM:102	Communication Skills OR	
ENG:105	Composition I	<u>3</u>
		<b>14</b>

#### SECOND SEMESTER - SPRING

AUT:232	Automotive Transmissions I	3
AUT:304	Automotive Manual Drive Train and Axles	4
AUT:524	Automotive Brake Systems and Service	4
AUT:802	Engine Performance I	<u>3</u>
		<b>14</b>

#### SUMMER SESSION

AUT:404	Automotive Suspension and Steering	4
AUT:704	Automotive Heating and Air Conditioning	<u>4</u>
		<b>8</b>

**CERTIFICATE TOTAL .....36**

Gainful employment information for the  
Auto Technology program is located at  
<http://www.eicc.edu/highschool/programs/career/gainful/>

# BUSINESS MANAGEMENT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificate

## FIRST SEMESTER

ADM:157	Business English OR	3.00
COM:102	Communication Skills OR	
ENG:105	Composition I	
BUS:102	Introduction to Business	3.00
CSC:110	Introduction to Computers	3.00
MGT:101	Principles of Management	3.00
	Business Specialty Course**	<u>3.00</u>
		<b>15.00</b>

## SECOND SEMESTER

BUS:110	Business Math & Calculators OR	3-4.00
MAT:110	Math for Liberal Arts OR	
MAT:121	College Algebra	
BUS:161	Human Relations	3.00
BUS:180	Business Ethics	3.00
MKT:110	Principles of Marketing	3.00
	Business Specialty Course**	<u>3.00</u>
		<b>15.00</b>

## SUMMER SEMESTER

	Business Specialty Course**	<u>3.00</u>
		<b>3.00</b>

## THIRD SEMESTER

ACC:121	Principles of Accounting I	3.00
ECN:110	Introduction to Economics	3.00
SPC:170	Professional Communication	3.00
	Business Specialty Course **	3.00
	Business Skill Course***	<u>3.00</u>
		<b>15.00</b>

## FOURTH SEMESTER

ACC:146	Managerial Accounting	3.00
BUS:106	Employment Strategy	2.00
BUS:185	Business Law	3.00
HUM:105	Working in America OR	3.00
HUM:110	Changes and Choices OR	
SOC:110	Introduction to Sociology	
	Business Specialty Course**	3.00
	Business Skill Course***	<u>3.00</u>
		<b>17.00</b>

**A.A.S. TOTAL . . . . .65.00**

## \*\*Business Specialty Courses

(must select a minimum of 15 credit hours)

BUS:130	Introduction to Entrepreneurship	3.00
BUS:135	Managing the Entrepreneurial Venture	3.00
BUS:147	The Successful Entrepreneur	3.00
BUS:186	Business Law II	3.00
BUS:908	Cooperative Education	1.00-3.00
FIN:121	Personal Finance	3.00
MGT:110	Small Business Management	3.00
MGT:130	Principles of Supervision	3.00
MGT:151	Management Communication I	3.00
MGT:165	Principles of Quality	3.00
MGT:170	Human Resource Management	3.00
MGT:210	Management Decision Making	3.00
MKT:140	Principles of Selling	3.00
MKT:150	Principles of Advertising	3.00
MKT:160	Principles of Retailing	3.00

## \*\*\*Business Skill Electives

(must select a minimum of 6 credit hours)

ACC:332	Computer Acct-QuickBooks I	2.00
ADM:105	Introduction to Keyboarding	1.00
ADM:122	Document Formatting	2.00
ADM:179	Records Management	3.00
BCA:129	Word Processing	2.00
BCA:130	Advanced Word Processing	2.00
BCA:147	Basic Spreadsheets	2.00
BCA:148	Advanced Spreadsheets	2.00
BCA:165	Basic Databases	2.00
BCA:220	Integrated Computer Business Applications	2.00
BCA:250	Desktop Publishing	3.00
BCA:711	Introduction to Microsoft PowerPoint	1.00
BCA:732	Getting Organized with Outlook	1.00
MKT:181	Customer Service Strategies	2.00

# BUSINESS MANAGEMENT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificate

## MANAGEMENT SUPERVISION CERTIFICATE

---

MGT:101	Principles of Management	3.00
MGT:130	Principles of Supervision	3.00
MGT:165	Principles of Quality	3.00
MGT:210	Management Decision Making	3.00
	Business Specialty Course**	<u>3.00</u>
<b>CERTIFICATE TOTAL</b>		<b>15.00</b>

## MARKETING CERTIFICATE

---

MKT:110	Principles of Marketing	3.00
MKT:140	Principles of Selling	3.00
MKT:150	Principles of Advertising	3.00
MKT:160	Principles of Retailing	3.00
	Business Specialty Course**	<u>3.00</u>
<b>CERTIFICATE TOTAL</b>		<b>15.00</b>

## SMALL BUSINESS MANAGEMENT CERTIFICATE

---

ACC:121	Principles of Accounting I	3.00
BUS:102	Introduction to Business	3.00
BUS:185	Business Law I	3.00
MGT:110	Small Business Management	3.00
	Business Specialty Course **	<u>3.00</u>
<b>CERTIFICATE TOTAL</b>		<b>15.00</b>

## ENTREPRENEURSHIP CERTIFICATE

---

BUS:130	Introduction to Entrepreneurship	3.00
BUS:135	Managing the Entrepreneurship Venture	3.00
BUS:147	The Successful Entrepreneur	<u>3.00</u>
<b>CERTIFICATE TOTAL</b>		<b>9.00</b>

# CANCER INFORMATION MANAGEMENT

Scott Community College

A.A.S., Diploma

## A.A.S. DEGREE

### FIRST SEMESTER

BIO:168	Human Anatomy & Physiology I w/Lab	4
CSC:110	Introduction to Computers	3
ENG:105	Composition I	3
HIT:139	Math for Healthcare Professions	3
HIT:370	Health Records in Acute Care	3
HSC:113	Medical Terminology	<u>2</u>
		<b>18</b>

### SECOND SEMESTER

BIO:173	Human Anatomy & Physiology II w/Lab	4
CIM:205	Cancer Pathophysiology	3
HIT:120	Pharmacology for HIT	1
HIT:150	Principles of Disease I	2
HIT:312	Health Informatics & Information Management Systems	3
PSY:111	Introduction to Psychology OR	<u>3</u>
SOC:110	Introduction to Sociology	
		<b>16</b>

### SUMMER

ART:101	Art Appreciation OR	3
HUM:110	Changes & Choices OR	
PHI:101	Introduction to Philosophy OR	
PHI:110	Introduction to Logic	
SPC:112	Public Speaking	<u>3</u>
		<b>6</b>

### THIRD SEMESTER

CIM:200	Registry Organization & Operation	3
CIM:210	Oncology Coding & Staging System	4
CIM:240	Cancer Patient Follow-Up	2
CIM:250	Cancer Statistics & Epidemiology	3
HIT:422	Medico-Legal Ethics	<u>3</u>
		<b>15</b>

### FOURTH SEMESTER

CIM:215	Abstracting Principles & Practices I	2
CIM:220	Abstracting Principles & Practices II	2
CIM:260	CIM Seminar	1
CIM:270	Cancer Registry Practicum	4
HIT:440	Quality Management	<u>3</u>
		<b>12</b>

**AAS Total** ..... **67**

## DIPLOMA

### FIRST SEMESTER

BIO:168	Human Anatomy & Physiology I w/Lab	4
CSC:110	Introduction to Computers	3
ENG:105	Composition I	3
HIT:139	Math for Healthcare Professions	3
HSC:113	Medical Terminology	2
HIT:120	Pharmacology for HIT	1
HIT:150	Principles of Disease I	<u>2</u>
		<b>18</b>

### SECOND SEMESTER

BIO:173	Human Anatomy & Physiology II w/Lab	4
CIM:200	Registry Organization & Operation	3
CIM:205	Cancer Pathophysiology	3
CIM:210	Oncology Coding & Staging System	4
CIM:215	Abstracting Principles & Practices I	2
CIM:240	Cancer Patient Follow-Up	2
CIM:250	Cancer Statistics & Epidemiology	<u>3</u>
		<b>21</b>

### SUMMER

CIM:220	Abstracting Principles & Practices II	2
CIM:260	CIM Seminar	1
CIM:270	Cancer Registry Practicum	<u>4</u>
		<b>7</b>

**Diploma Total** ..... **46**

The application process and admission requirements for the Cancer Information Management program can be found at [http://www.eicc.edu/highschool/programs/career/health\\_careers/cim/index.html](http://www.eicc.edu/highschool/programs/career/health_careers/cim/index.html)

Graduates of the one-year Cancer Information Management Diploma and the two-year A.A.S. are eligible to take the CTR examination under Route A, Options 1 and 2, given by the National Cancer Registrar's Association (NCRA).

Gainful employment information for the Cancer Information Management program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

## CNC MACHINING A.A.S. DEGREE

### FIRST TERM

#### Session I

CSC:112	Computer Fundamentals for Technology I/A	2.00
MAT:733	Math for Manufacturing Technologies A	1.50
MFG:186	Plant Safety	1.00

#### Session II

CSC:113	Computer Fundamentals for Technology I/B	2.00
MAT:734	Math for Manufacturing Technologies B	1.50
MFG:105	Machine Shop Measuring	3.00
MFG:192	Blueprint Reading	3.00

**Term Total** **14.00**

### SECOND TERM

#### Session I

IND:222	Geometric Tolerancing and Dimensioning	3.00
MFG:112	Drills and Saws	2.00
MFG:116	Carbide Tooling	1.00
MFG:140	Geometric Dimensioning and Tolerances (optional course)	(1.00)

#### Session II

MFG:113	Vertical/Horizontal Mills	5.50
MFG:115	Lathe Work	<u>4.50</u>

**Term Total** **16.00**

### THIRD TERM (SUMMER)

ECN:120	Principles of Macroeconomics OR	3.00
ECN:130	Principles of Microeconomics OR	
HUM:105	Working in America OR	
HUM:110	Changes and Choices OR	
POL:111	American National Government OR	
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	
MFG:111	Machinery Handbook	1.00
MFG:117	Cylindrical Grinding	1.50
MFG:190	Metallurgy	<u>2.00</u>

**Term Total** **7.50**

### FOURTH TERM

#### Session I

ENG:105	Composition I OR	3.00
ENG:107	Composition I: Technical Writing	
MFG:151	CNC Fundamentals	2.00
PHY:185	Conceptual Physics Fundamentals I	2.00

#### Session II

MFG:114	Surface Grinding	2.50
MFG:118	Machine Tool Project	4.00
PHY:186	Conceptual Physics Fundamentals II	2.00

**Term Total** **15.50**

### FIFTH TERM

#### Session I

MFG:201	CNC Lathe Operator	2.00
MFG:221	CNC Milling Operator	2.00
MFG:223	CAD/CAM	2.00
MFG:224	Coordinate Measuring Machine	1.00

#### Session II

MFG:205	Mill Programming	2.00
MFG:239	Lathe Programming	2.00
MFG:372	SolidWorks/MasterCam Applications	<u>3.00</u>

**Term Total** **14.00**

### SIXTH TERM

#### Session I

MFG:229	CNC Project	<u>4.00</u>
---------	-------------	-------------

**Term Total** **4.00**

**AAS Total** ..... **71.00**

# CNC MACHINING

Scott Community College

A.A.S., Certificate

## CNC PROGRAMMING CERTIFICATE

### FIRST TERM

IND:222	Geometric Tolerancing and Dimensioning	3.00
MAT:733	Math for Manufacturing Technologies A	1.50
MAT:734	Math for Manufacturing Technologies B	1.50
MFG:105	Machine Shop Measuring	3.00
MFG:116	Carbide Tooling	1.00
MFG:186	Plant Safety	1.00
MFG:192	Blueprint Reading	3.00
<b>Term Total</b>		<b>14.00</b>

### SECOND TERM

MFG:151	CNC Fundamentals	2.00
MFG:201	CNC Turning Operator	2.00
MFG:205	Milling Programming	2.00
MFG:221	CNC Milling Operator	2.00
MFG:223	CAD/CAM	2.00
MFG:224	Coordinate Measuring Machine	1.00
MFG:239	Lathe Programming	<u>2.00</u>
<b>Term Total</b>		<b>13.00</b>

### THIRD TERM (SUMMER)

MFG:229	CNC Project	4.00
<b>Term Total</b>		<b>4.00</b>
<b>Certificate Total</b>		<b>31.00</b>

## MANUAL MACHINING CERTIFICATE

### FIRST TERM

<b>Session I</b>		
MAT:733	Math for Manufacturing Technologies A	1.50
MFG:116	Carbide Tooling	1.00
MFG:186	Plant Safety	1.00
MFG:192	Blueprint Reading	3.00
<b>Session II</b>		
MAT:734	Math for Manufacturing Technologies B	1.50
MFG:105	Machine Shop Measuring	<u>3.00</u>
<b>Term Total</b>		<b>11.00</b>

### SECOND TERM

<b>Session I</b>		
MFG:112	Drills and Saws	2.00
<b>Session II</b>		
MFG:113	Vertical/Horizontal Mills	5.50
MFG:115	Lathe Work	<u>4.50</u>
<b>Term Total</b>		<b>12.00</b>

### THIRD TERM

<b>Session I</b>		
MFG:114	Surface Grinding	2.50
MFG:117	Cylindrical Grinding	1.50
<b>Session II</b>		
MFG:118	Machine Tool Project	<u>4.00</u>
<b>Term Total</b>		<b>8.00</b>
<b>Certificate Total</b>		<b>31.00</b>

## CULINARY ARTS - APPRENTICESHIP A.A.S. DEGREE

### FIRST SEMESTER (FALL OR SPRING START)

	<b>CREDITS</b>
HCM:100 Sanitation and Safety	2
HCM:154 Basic Food Preparation	2
HCM:180 Food Fundamentals	2
HCM:501 Culinary Practicum I	<u>3</u>
	<b>9</b>

### SECOND SEMESTER

CSC:110 Introduction to Computers OR	3
HCM:328 Conversational Spanish for Hospitality	
HCM:233 Menu Planning and Nutrition	3
HCM:502 Culinary Practicum II	3
MAT:104 Applied Math Topics OR	<u>3</u>
HCM:265 Mathematics for Hospitality	
	<b>12</b>

### SUMMER

HCM:255 Purchasing	3
HCM:503 Culinary Practicum III	<u>1.5</u>
	<b>4.5</b>

### THIRD SEMESTER

HCM:156 Intermediate Food Preparation	3
HCM:280 Food Cost Accounting	3
HCM:301 Beverage Control	3
HCM:504 Culinary Practicum IV	<u>3</u>
	<b>12</b>

### FOURTH SEMESTER

HCM:116 Fundamentals of Baking	3
HCM:160 Advanced Food Preparation	3
HCM:241 Menu Planning and Sales Promotion	3
HCM:505 Culinary Practicum V	<u>3</u>
	<b>12</b>

### SUMMER

HCM:155 Garde Manger	3
HCM:212 Industry Management	3
HCM:506 Culinary Practicum VI	<u>1.5</u>
	<b>7.5</b>

### FIFTH SEMESTER

HCM:507 Culinary Practicum VII	3
HUM:105 Working in America OR	
HUM:110 Changes and Choices	<u>3</u>
	<b>6</b>

### SIXTH SEMESTER

HCM:508 Culinary Practicum VIII	3
COM:102 Communication Skills OR	
SPC:112 Public Speaking	<u>3</u>
	<b>6</b>

### SUMMER

HCM:509 Culinary Practicum IX	<u>1.5</u>
	<b>1.5</b>

**A.A.S. TOTAL .....70.5**

# CULINARY ARTS

Scott Community College

A.A.S., Certificate

## CULINARY ARTS - APPRENTICESHIP A.A.S. DEGREE

### FIRST SEMESTER (FALL OR SPRING START)

	<b>CREDITS</b>
HCM:100 Sanitation and Safety	2
HCM:154 Basic Food Preparation	2
HCM:180 Food Fundamentals	2
HCM:501 Culinary Practicum I	<u>3</u>
	<b>9</b>

### SECOND SEMESTER

CSC:110 Introduction to Computers OR	3
HCM:328 Conversational Spanish for Hospitality	
HCM:233 Menu Planning and Nutrition	3
HCM:502 Culinary Practicum II	3
MAT:104 Applied Math Topics OR	<u>3</u>
HCM:265 Mathematics for Hospitality	
	<b>12</b>

### SUMMER

HCM:255 Purchasing	3
HCM:503 Culinary Practicum III	<u>1.5</u>
	<b>4.5</b>

### THIRD SEMESTER

HCM:156 Intermediate Food Preparation	3
HCM:280 Food Cost Accounting	3
HCM:301 Beverage Control	3
HCM:504 Culinary Practicum IV	<u>3</u>
	<b>12</b>

### FOURTH SEMESTER

HCM:116 Fundamentals of Baking	3
HCM:160 Advanced Food Preparation	3
HCM:241 Menu Planning and Sales Promotion	3
HCM:505 Culinary Practicum V	<u>3</u>
	<b>12</b>

### SUMMER

HCM:155 Garde Manger	3
HCM:212 Industry Management	3
HCM:506 Culinary Practicum VI	<u>1.5</u>
	<b>7.5</b>

### FIFTH SEMESTER

HCM:507 Culinary Practicum VII	3
--------------------------------	---

HUM:105 Working in America OR	
HUM:110 Changes and Choices	<u>3</u>
	<b>6</b>

### SIXTH SEMESTER

HCM:508 Culinary Practicum VIII	3
COM:102 Communication Skills OR	
SPC:112 Public Speaking	<u>3</u>
	<b>6</b>

### SUMMER

HCM:509 Culinary Practicum IX	<u>1.5</u>
	<b>1.5</b>

**A.A.S. TOTAL .....70.5**

## CULINARY ARTS DEGREE A.A.S. DEGREE

### FIRST SEMESTER (FALL OR SPRING START)

HCM:100 Sanitation and Safety	2
HCM:154 Basic Food Preparation	2
HCM:180 Food Fundamentals	2
HCM:212 Industry Management	3
HUM:110 Changes and Choices	<u>3</u>
	<b>12</b>

### SECOND SEMESTER

CSC:110 Introduction to Computers	3
HCM:197 Introduction to Catering	2
HCM:199 Batch Cooking	2
HCM:233 Menu Planning and Nutrition	3
HCM:265 Mathematics for Hospitality	<u>3</u>
	<b>13</b>

### SUMMER

HCM:255 Purchasing	3
HCM:932 Culinary Internship	<u>2</u>
	<b>5</b>

### THIRD SEMESTER

HCM:156 Intermediate Food Prep	3
HCM:280 Food Cost Accounting	3
HCM:301 Beverage Control	3
HCM:589 Introduction to Restaurant Management	<u>3</u>
	<b>12</b>

### FOURTH SEMESTER

HCM:116 Fundamentals of Baking	3
HCM:160 Advanced Food Preparation	3
HCM:241 Menu Planning and Sales Promotion	3
SPC:112 Public Speaking	<u>3</u>
	<b>12</b>

### SUMMER

## DIPLOMA

---

### FALL START OPTION:

#### FIRST SEMESTER

DEA:202	Head and Neck Anatomy	2.00
DEA:257	Dental Anatomy	3.00
DEA:293	Microbiology and Infection Control	2.00
DEA:334	Dental Radiography I	2.50
DEA:405	Dental Materials	4.00
DEA:507	Principles of Dental Assisting	<u>6.00</u>

**Semester Total** **19.50**

#### SECOND SEMESTER

DEA:111	Preventive Dentistry	1.00
DEA:336	Dental Radiography II	2.50
DEA:605	Dental Specialties	4.00
DEA:615	Dental Assisting Clinical Practicum	5.00
DEA:616	Dental Assisting Clinical Practicum Seminar	1.00
ENG:105	Composition I OR	<u>3.00</u>
COM:102	Communications Skills OR	
SPC:122	Interpersonal Communication	

**Semester Total** **16.50**

#### THIRD SEMESTER (SUMMER)

DEA:211	Nutrition for Dental Assisting	1.00
DEA:268	Pharmacology & Emergency Procedures	2.00
DEA:285	Oral Pathology for Dental Assisting	1.00
DEA:297	Ethics/Jurisprudence for Dental Assisting	1.00
DEA:702	Dental Office Procedures	2.00
PSY:111	Introduction to Psychology	<u>3.00</u>

**Summer Total** **10.00**

**Diploma Total** **46.00**

### SPRING START OPTION

#### FIRST SEMESTER - SPRING

DEA:202	Head and Neck Anatomy	2.00
DEA:257	Dental Anatomy	3.00
DEA:293	Microbiology and Infection Control	2.00
DEA:334	Dental Radiography I	2.50
DEA:405	Dental Materials	4.00
DEA:507	Principals of Dental Assisting	<u>6.00</u>

**Semester Total** **19.50**

#### SECOND SEMESTER (SUMMER)

DEA:211	Nutrition for Dental Assisting	1.00
DEA:605	Dental Specialties	4.00
DEA:702	Dental Office Procedures	2.00
PSY:111	Introduction to Psychology	<u>3.00</u>

**Semester Total** **10.00**

#### THIRD SEMESTER

DEA:111	Preventive Dentistry	1.00
DEA:336	Dental Radiography II	2.50
DEA:268	Pharmacology & Emergency Procedures	2.00
DEA:285	Oral Pathology for Dental Assisting	1.00
DEA:297	Ethics/Jurisprudence for Dental Assisting	1.00
DEA:615	Dental Assisting Clinical Practicum	5.00
DEA:616	Dental Assisting Clinical Practicum Seminar	1.00
ENG:105	Composition I OR	<u>3.00</u>
COM:102	Communications Skills OR	
SPC:122	Interpersonal Communication	

**Semester Total** **16.50**

**Diploma Total** **46.00**

## DENTAL ASSISTING EXPANDED FUNCTIONS CERTIFICATE

---

Student must be certified by the Dental Assistant National Board or possess two years of documented clinical Iowa registered dental assisting experience and complete a written assessment at 75% competency.

#### FIRST SEMESTER

DEA:810	RDA Expanded Functions I	2.00
DEA:820	RDA Expanded Functions II	1.00
DEA:830	RDA Nitrous Oxide Monitoring	1.00

**Certificate Total** **4.00**

The application process, admission requirements and gainful employment information for the Dental Assisting program can be found at [www.eicc.edu/gainfulemployment](http://www.eicc.edu/gainfulemployment). Successful completion of the Dental Assisting Diploma program entitles graduates to take the Dental Assistant National Board examination and the Iowa Board of Dental Examiners Radiography, Infection Control, Hazardous Waste and Jurisprudence examination.

# DENTAL HYGIENE

Clinton, Muscatine & Scott Community College/Carl Sandburg College

A.A.S.

Through a unique partnership with Carl Sandburg College located in Galesburg, Illinois, students can complete some of their courses at Clinton, Muscatine or Scott Community College and transfer them to the Dental Hygiene program at Carl Sandburg College. Students attend dental hygiene courses in Galesburg and pay the Carl Sandburg in-district tuition rate for these courses. Additional information about the Carl Sandburg College Dental Hygiene program and the application process can be found at <http://www.sandburg.edu/academics/CareerTechHealthEd/dentalHygiene.aspx>

The following courses taken at Clinton, Muscatine or Scott Community College will fulfill course requirements for admission to the Dental Hygiene Program.

*Note that Carl Sandburg College requires a grade of C or higher in these courses.*

BIO:114	General Biology I/A*	4
CHM:122	Introduction to General Chemistry	4
HSC:113	Medical Terminology	2

\*OR two years of high school biology with a grade of B for each semester or BIO:168 with a minimum grade of C or BIO:186 with a minimum grade of C.

The following additional courses can also be completed at Clinton, Muscatine or Scott Community College and will fulfill course requirements of the Dental Hygiene Program.

*Note that Carl Sandburg College requires a grade of C or higher in these courses.*

BIO:151	Nutrition	3
BIO:168	Human Anatomy & Physiology I	4
BIO:173	Human Anatomy & Physiology II	4
BIO:186	Microbiology	4
ENG:105	English Composition I	3
PSY:111	Introduction to Psychology	3
SOC:110	Introduction to Sociology	3
SPC:112	Public Speaking	3
		27

## A.A.S.

### PRIOR TO ADMISSION

BIO:114	General Biology IA	4
CHM:122	Introduction to General Chemistry	4
HSC:113	Medical Terminology	2
		<b>10</b>

### FIRST SEMESTER – FALL

BIO:168	Anatomy & Physiology I w/Lab	4
DHY:109	Preclinic Lab	1.5
DHY:112	Head, Neck, & Oral Anatomy	3
DHY:115	Dental Hygiene Practice I	2
DHY:161	Oral Radiology	3
DHY:170	Principles of Dental Hygiene	2
DHY:228	Clinical Preventive Dentistry	2
		<b>17.5</b>

### SECOND SEMESTER - SPRING

BIO:173	Anatomy & Physiology II w/Lab	4
DHY:118	Oral Histology & Embryology	1
DHY:125	Dental Hygiene Practice II	4
DHY:211	Periodontology	2
DHY:281	Dental Hygiene II	2
ENG:105	Composition I	3
SOC:110	Introduction to Sociology	3
		<b>19</b>

### THIRD SEMESTER - PRE SUMMER

DHY:291	Dental Hygiene III	2
		<b>2</b>

### FOURTH SEMESTER - SUMMER

BIO:186	Microbiology	4
DHY:205	Dental Hygiene Practice III	3
		<b>7</b>

### FIFTH SEMESTER - FALL 2

BIO:151	Nutrition	3
DHY:131	Pharmacology	2
DHY:140	General & Oral Pathology	2
DHY:215	Dental Hygiene Practice IV	5
DHY:257	Community Dental Health	2
DHY:301	Dental Hygiene IV	2
		<b>16</b>

### SIXTH SEMESTER - SPRING

DHY:212	Periodontology II	2
DHY:218	Dental Office Management & Jurisprudence	2
DHY:225	Dental Hygiene Practice V	5
DHY:270	Local Anesthesia for Dental Hygienists	1
DHY:311	Dental Hygiene V	2
PSY:111	Intro to Psychology	3
SPC:112	Public Speaking	3
		<b>18</b>

**A.A.S. TOTAL .....79.5**

Graduates of the Dental Hygiene program are eligible to take the National Dental Hygiene Board Examination, the respective clinical dental hygiene board examination and the examination for registration as a dental hygienist in the respective state.

## A.A.S. DEGREE

### FALL START:

#### FIRST TERM

AUT:115	Automotive Shop Safety	1.00
AUT:164	Engine Repair	4.00
COM:102	Communication Skills OR	3.00
ENG:105	Composition I	
DSL:103	Survey of Diesel Technology (optional course)	(1.50)
DSL:505	Heavy Duty Drive Train I	3.00
DSL:507	Heavy Duty Drive Train II	3.00
DSL:603	Hydraulics	2.00
MAT:104	Applied Math Topics OR	<u>3.00</u>
MAT:110	Math for Liberal Arts	

**Term Total** **19.00**

**Heavy Duty Train Certificate Awarded** .....**19.00**

#### SECOND TERM

AUT:606	Basic Automotive Electricity/Electrn	3.00
AUT:614	Automotive Electrical I	3.00
DSL:151	Truck Electrical Systems	2.00
DSL:435	Diesel Fuel Systems I	3.00
DSL:437	Diesel Fuel Systems II	4.00
DSL:815	Preventative Maintenance	<u>1.00</u>

**Term Total** **16.00**

**Truck Electrical Certificate Awarded** .....**17.00**

#### THIRD TERM (SUMMER)

DSL:340	Diesel Engine Repair	5.00
DSL:625	Heavy Duty Alignment	3.00

**Term Total** **8.00**

**Diesel Technology Diploma Awarded** .....**43.00**

#### FOURTH TERM

DSL:201	Basic Gas Engine Performance	2.00
DSL:629	Heavy Duty Brakes and Service	3.00
DSL:905	Cooperative Experience	2.00
HUM:105	Working in America OR	3.00
PSY:213	Industrial & Organizational Psychology	
WEL:331	Welding Fundamentals	<u>2.00</u>

**Term Total** **12.00**

#### FIFTH TERM

BCA:188	Computer Fundamentals for Technicians OR	3.00
BUS:102	Introduction to Business	
DSL:519	Automatic Drive Train	4.00
DSL:710	Heating, Air Conditioning and Refrigeration	4.00
DSL:905	Cooperative Experience	<u>2.00</u>

**Term Total** **13.00**

**AAS Total** .....**68.00**

## DIESEL TECHNOLOGY AAS –

### SPRING START:

#### FIRST TERM

AUT:115	Automotive Shop Safety	1.00
AUT:606	Basic Automotive Electricity/Electrn	3.00
AUT:614	Automotive Electrical I	3.00
DSL:151	Truck Electrical Systems	2.00
DSL:435	Diesel Fuel Systems I	3.00
DSL:437	Diesel Fuel Systems II	4.00
DSL:815	Preventative Maintenance	<u>1.00</u>

**Term Total** **17.00**

**Truck Electrical Certificate Awarded** .....**17.00**

#### SECOND TERM (SUMMER)

DSL:340	Diesel Engine Repair	5.00
DSL:625	Heavy Duty Alignment	<u>3.00</u>

**Term Total** **8.00**

#### THIRD TERM

AUT:164	Engine Repair	4.00
COM:102	Communication Skills OR	3.00
ENG:105	Composition I	
DSL:505	Heavy Duty Drive Train I	3.00
DSL:507	Heavy Duty Drive Train II	3.00
DSL:603	Hydraulics	2.00
MAT:104	Applied Math Topics OR	<u>3.00</u>
MAT:110	Math for Liberal Arts	

**Term Total** **18.00**

**Heavy Duty Train Certificate Awarded** **19.00**

**Diesel Technology Diploma Awarded** .....**43.00**

#### FOURTH TERM

BCA:188	Computer Fundamentals for Technicians OR	3.00
BUS:102	Introduction to Business	
DSL:519	Automatic Drive Train	4.00
DSL:710	Heating, Air Conditioning and Refrigeration	4.00
DSL:905	Cooperative Experience	<u>2.00</u>

**Term Total** **13.00**

#### FIFTH TERM (SUMMER)

DSL:201	Basic Gas Engine Performance	2.00
DSL:629	Heavy Duty Brakes and Service	3.00
DSL:905	Cooperative Experience	2.00
HUM:105	Working in America OR	3.00
PSY:213	Industrial & Organizational Psychology	
WEL:331	Welding Fundamentals	<u>2.00</u>

**Term Total** **12.00**

**AAS Total** .....**68.00**

# EARLY CHILDHOOD EDUCATION

## Muscatine & Scott Community Colleges

## A.A.S., Diploma, Certificate

### A.A.S. DEGREE

#### FIRST SEMESTER

ECE:103	Intro to Early Childhood Education*	3
ECE:133	Child Health, Safety and Nutrition*	3
ECE:158	Early Childhood Curriculum I*	3
ECE:170	Child Growth and Development*	3
ECE:243	Early Childhood Guidance *	3
ENG:105	Composition I OR	
COM:102	Communication Skills	<u>3</u>
		<b>18</b>

#### CERTIFICATE AWARDED (MCC & SCC)

#### SECOND SEMESTER

ECE:159	Early Childhood Curriculum II*	3
EDU:220	Human Relations for the Classroom Teacher	3
EDU:245	Exceptional Learner	3
LIT:105	Children's Literature	3
General Education Course - Select one:		
HUM:105	Working in America OR	
HUM:287	Leadership Development Studies OR	
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	<u>3</u>
		<b>15</b>

#### DIPLOMA AWARDED TOTAL (MCC & SCC) ...33

#### SUMMER SESSION:

ECE:920	Field Experience/ ECE**	<u>2</u>
		<b>2</b>

#### THIRD SEMESTER

ECE:169	Art and Music Activities for Young Children	3
ECE:193	Dynamics of the Family	3
ECE:920	Field Experience/ ECE**	2
SDV:174	Critical and Creative Thinking	3
BUS:110	Business Math & Calculators OR	
ENV:111/115	Environmental Science	3-4
CSC:110	Introduction to Computers OR	
SPC:170	Professional Communication	<u>3</u>
		<b>17-18</b>

#### FOURTH SEMESTER:

ECE:221	Infant/Toddler Care and Education	3
ECE:290	Early Childhood Program Administration	3
ECE:920	Field Experience/ ECE**	2
Approved	Early Childhood Electives	<u>6</u>
		<b>14</b>

#### A.A.S. (SCC) .....66-67

\*CDA Certification Coursework

\*\*Students may be subject to release of information and criminal background check by each cooperative site prior to beginning their work cooperative experience.

#### Approved Early Childhood Elective Courses:

BUS:102	Introduction to Business	3
ECE:168	Math and Science for Young Children	3
EDU:125	Making a Difference	3
EDU:212	Educational Foundations	3
EDU:255	Technology in the Classroom	3
PSY:121	Developmental Psychology	3
SDV:114	Strategies for Academic Success	3

Gainful employment information for the Early Childhood Education program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

# ELECTRONEURODIAGNOSTIC TECHNOLOGY (END)

Scott Community College

A.A.S.

## A.A.S. DEGREE

### FIRST SEMESTER

BIO:168	Human Anatomy & Physiology I w/Lab	4
CSC:112	Computer Fundamentals for Technicians I/A	2
END:111	Introduction to Electroneurodiagnostics	6
HSC:113	Medical Terminology	2
SPC:112	Public Speaking OR	3
ENG:105	Composition I	
		<b>17</b>

### SECOND SEMESTER

BIO:173	Human Anatomy & Physiology II w/Lab	4
END:301	Electroneurodiagnostics I	6
END:330	Electroneurodiagnostic Clinical Science	2
END:800	Clinical Practicum I	2
PSY:111	Introduction to Psychology	3
		<b>17</b>

### SUMMER

END:320	Electroneurodiagnostics II	2
END:820	Clinical Practicum II	4
		<b>6</b>

### THIRD SEMESTER

END:331	Neuroanatomy for END	2
END:340	Electroneurodiagnostics III	3
END:341	Long-Term Monitoring	2
END:401	Nerve Conduction Studies	2
END:410	Evoked Potentials	2
END:840	Clinical Practicum III	4
HIT:422	Medico-Legal Ethics	3
		<b>18</b>

### FOURTH SEMESTER

END:510	Polysomnography	4
END:860	Clinical Practicum IV	8
		<b>12</b>

**A.A.S. Total** ..... **70**

**NOTE:** Enrollment is limited and entrance is restricted to the fall semester. In addition to the general admission requirements of the college, applicants must meet specific program admission criteria.

The application process and admission requirements for the END program can be found at

<http://www.eicc.edu/highschool/programs/career/>

END graduates are eligible to sit for the national examination given by the American Board of Registry of Electroneurodiagnostic Technologists (ABRET) and the Board of Registered Polysomnographic Technologists (BRPT).

# EMERGENCY MEDICAL SERVICES

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificates

## A.A.S. DEGREE

### FIRST SEMESTER

	CREDITS
EMS:202    Emergency Medical Technician	9.5
ENG:105    Composition I OR	3
ENG:107    Composition I: Technical Writing	
HSC:113    Medical Terminology	2
MAT        Elective (Above 100 level)	<u>3</u>
	<b>17.5</b>

### SECOND SEMESTER

BIO:168    Human Anatomy & Physiology I w/Lab	4
BUS:102    Introduction to Business	3
BUS:161    Human Relations	3
PNN:210    Principles of Pharmacology-Module A	1
PNN:211    Principles of Pharmacology-Module B	1
PSY:121    Developmental Psychology	<u>3</u>
	<b>15</b>

### THIRD SEMESTER

EMS:238    Advanced Emergency Medical Technician	<u>15</u>
	<b>15</b>

### FOURTH SEMESTER

CSC:110    Introduction to Computers	3
EMS:810    Advanced Cardiac Life Support	1
EMS:815    Advanced Pediatric Life Support	1
EMS:816    Pediatric Education for Pre-Hospital Professionals	1
EMS:817    BLS Instructor	1
EMS:818    Neonatal Resuscitation	1
EMS:820    Pre-Hospital Trauma Life Support	1
SOC:110    Introduction to Sociology	3
SPC:112    Public Speaking	<u>3</u>
	<b>15</b>

**A.A.S. TOTAL** .....**62.5**

## EMT CERTIFICATE

EMS:202    Emergency Medical Technician	<u>9.5</u>
<b>CERTIFICATE TOTAL</b> .....	<b>9.5</b>

## ADVANCED EMERGENCY MEDICAL TECHNICIAN CERTIFICATE

EMS:202    Emergency Medical Technician	9.5
EMS:238    Advanced Emergency Medical Technician	<u>15</u>

**CERTIFICATE TOTAL** .....**24.5**

Upon completion of the EMT Certificate, the student is eligible to sit for the National Emergency Medical Technician certifying exam. Upon completion of the Advanced Emergency Medical Technician Certificate, the student is eligible to sit for the National Advanced Emergency Medical Technician certifying exam.

Gainful employment information for the Emergency Medical Technology program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

## A.A.S. DEGREE

### TERM 1 - ALL TRACKS

#### Session I

ELE:101	Industrial Safety	1.00
ELE:216	DC Circuit Analysis	3.00
MAT:705	Industrial Math & Measurement I	2.00

(Note: MAT:128 PreCalculus or MAT:210 Calculus I should be substituted for MAT:705 and MAT:706 if planning Bachelor's Degree transfer)

#### Session II

ELE:217	AC Circuit Analysis	3.00
IND:134	Industrial Print Reading	2.00
MAT:706	Industrial Math & Measurement II	<u>2.00</u>

**Term Total** **13.00**

**Basic Electricity Certificate Awarded** .....**13.00**

### TERM 2 – ALL TRACKS

#### Session I

CSC:112	Computer Fundamentals for Technicians I/A	2.00
---------	---	------

(Note: CSC:110 may be substituted for CSC:112 and CSC:113)

ELE:225	Electrical Motor Control & Power Distribution	3.00
ELT:312	Solid State Devices & Systems	3.00

#### Session II

CSC:113	Computer Fundamentals for Technicians I/B	2.00
ELE:229	Industrial Codes & Specifications (optional course)	(3.00)
ELT:309	Digital Circuits & Systems	3.00
PHY:185	Conceptual Physics Fundamentals I	<u>2.00</u>

**Term Total** **15.00**

**Basic Electronics Certificate Awarded** .....**28.00**

### TERM 3 – ALL TRACKS

ECN:120	Principles of Macroeconomics OR	3.00
ECN:130	Principles of Microeconomics OR	
HUM:105	Working in America OR	
HUM:110	Changes and Choices OR	
POL:111	American National Government OR	
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	
ENG:105	Composition I OR	3.00
ENG:107	Composition I: Technical Writing	
PHY:186	Conceptual Physics Fundamentals II	<u>2.00</u>

**Term Total** **8.00**

**Engineering Technology Diploma** .....**36.00**

### TERM 4 – ALL TRACKS

CSC:110	Introduction to Computers (continued from prior term) OR	3.00
CSC:113	Computer Fundamentals for Technicians I/B	2.00
ELT:123	Programmable Logic Controllers	3.00
ELT:309	Digital Circuits & Systems	3.00

### TERM 5 – ALL TRACKS (EXCEPT RENEWABLE ENERGY)

HUM:105	Working in America OR	3.00
HUM:110	Changes and Choices OR	3.00
PSY:111	Introduction to Psychology	3.00
ENG:105	Composition I OR	3.00
ENG:107	Composition I: Technical Writing	3.00

### TERM 6 – ALL TRACKS (EXCEPT RENEWABLE ENERGY)

ELT:125	Advanced PLC	3.00
PHY:185	Conceptual Physics Fundamentals I	2.00
MFG:505	Lean Manufacturing	1.00

### TERM 7 – ALL TRACKS (EXCEPT RENEWABLE ENERGY)

EGT:117	Fluid Power Fundamentals	2.00
PHY:186	Conceptual Physics Fundamentals II**	2.00
IND:143	Motors and Drives	3.00

### TERM 8 – TRACKS DIVERGE! (SEE NEXT PAGE)

# ENGINEERING TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges

A.A.S.

## AUTOMATION

### TERM 8

ATR:105	Industrial Robotics	3.00
ATR:106	Motion Control	3.00
ELT:177	Microcontrollers	3.00

### TERM 9

Must select two from below for at least six hours:

EGT:135	Fluid Power Design & Application OR	3.00
EGT:137	Fluid Power Control OR	4.00
CHM:122	Introduction to General Chemistry** OR	4.00
IND:136	Process Control I OR	3.00
IND:137	Process Control II	3.00

## ELECTROMECHANICAL

### TERM 8

ATR:106	Motion Control	3.00
EGT:135	Fluid Power Design & Application	3.00
EGT:137	Fluid Power Control	4.00

### TERM 9

Must select two from below for at least six hours:

ATR:105	Industrial Robotics	3.00
ELT:177	Microcontrollers OR	3.00
CHM:122	Introduction to General Chemistry** OR	4.00
IND:136	Process Control I** OR	3.00
IND:137	Process Control II	3.00

## PROCESS CONTROL

### TERM 8

CHM:122	Introduction to General Chemistry**	4.00
IND:136	Process Control I	3.00

### TERM 9

IND:137	Process Control II	3.00
---------	--------------------	------

Must select two from below for at least six hours:

ATR:105	Industrial Robotics OR	3.00
ATR:106	Motion Control OR	3.00
EGT:135	Fluid Power Design & Application OR	3.00
EGT:137	Fluid Power Control OR	4.00
ELT:177	Microcontrollers	3.00

## RENEWABLE ENERGY

### TERM 5

HUM:105	Working in America OR	3.00
HUM:110	Changes and Choices OR	3.00
ENG:105	Composition 1 OR	3.00
ENG:107	Composition 1 Technical Writing	3.00
SER:100	Intro to Renewable Energy	2.00

### TERM 6

PHY:185	Conceptual Physics Fundamentals I	2.00
EGT:117	Fluid Power Fundamentals	2.00
SER:102	History of Power Generation	3.00

### TERM 7

IND:136	Process Control I	3.00
PHY:186	Conceptual Physics Fundamentals II	2.00
SER:103	RE Site Assessment	3.00

### TERM 8

SER:105	Res. RE Mounting / Tower Systems	3.00
SER:108	Inverters, Chargers & Storage Devices	3.00
SER:104	Residential RE Power Systems	3.00

### TERM 9

SER:109	Monitoring & Maintenance	3.00
SER:306	Sustainable Energy Capstone	3.00

The Engineering Technology Program is funded in part by the Trade Adjustment Assistance Community College and Career Training (TAACCT) Grant program which is in partnership with the Department of Labor and the Department of Education. Through these multi-year grants, the Department of Labor is helping to ensure that our nation's institutions of higher education are helping adults succeed in acquiring the skills, degrees, and credentials needed for high-wage, high-skill employment while also meeting the needs of employers for skilled workers.

## A.A.S. DEGREE

### FIRST SEMESTER

AGB:108	Human Relations I (optional)	(1.50)
AGB:231	Futures and Options	1.50
AGB:301	Applied Accounting for Farm Management I	1.50
AGC:861	Farm Experience I	3.00
AGC:901	Seminar I	0.50
AGS:315	Principles of Animal Nutrition	3.00
AGS:352	Genetics	1.50
AGS:401	Swine Production	3.00 <sup>1</sup>
AGA:881	Grain Science	1.75 <sup>2</sup>
AGB:103	Agricultural Economics	1.50 <sup>2</sup>
COM:102	Communication Skills	<u>3.00</u>
	1 Swine Option; 2 No Swine Option	

**17.00-17.25**

### SECOND SEMESTER

AGA:210	Corn and Soybean Production	3.00
AGA:285	Crop Protection	3.00
AGB:302	Applied Accounting for Farm Management II	1.50
AGC:862	Farm Experience II	3.50
AGC:902	Seminar II	0.50
MAT:104	Applied Math Topics	3.00
SPC:111	Public Speaking	<u>2.00</u>

**16.50**

### SUMMER

AGA:336	Forage Production	1.50
AGA:373	Integrated Crop Management	2.00
AGM:160	Farm Structures (optional course)	(1.50)
CSC:110	Introduction to Computers	<u>3.00</u>

**6.50**

### THIRD SEMESTER

AGA:351	Soil Science	1.50
AGA:890	Soil Chemistry	1.50
AGA:901	Seed Science	1.50
AGB:299	Farm Record Analysis	1.50
AGB:304	Agricultural Finance	1.50
AGB:305	Agricultural Law	1.50
AGC:864	Farm Experience III	3.00
AGC:903	Seminar III	0.50
AGM:423	Diesel & Equipment Performance (optional)	(2.00)
AGS:324	Dairy Production (optional)	(1.50)
AGS:410	Swine Production II (optional)	(1.50)
AGS:554	Beef Production (optional)	<u>(3.00)</u>

**12.50**

### FOURTH SEMESTER

AGA:349	Fertilizers (optional)	(1.50)
AGB:232	Livestock and Grain Marketing	3.00
AGB:306	Risk Management	1.50
AGC:865	Farm Experience IV	3.50
AGC:904	Seminar IV	0.50
AGM:130	Farm Electrification (optional)	(1.25)
AGM:157	Machinery Management	3.00
AGP:243	Precision Agricultural Applications	3.00
AGS:180	Sheep Production (optional)	(1.50)
ENV:115	Environmental Science	<u>3.00</u>

**17.50**

**A.A.S. Total ..... 70.00-70.25**  
**(Swine/No Swine)**

# GRAPHIC ARTS TECHNOLOGY

Clinton Community College

A.A.S., Diploma

## A.A.S. DEGREE

### FIRST TERM

ART:120	2-D Design	3.00
GRA:103	Introduction to Macintosh	1.00
GRA:173	Typography	3.00
GRT:108	Introduction to Graphic Arts Technology	3.00
GRT:169	Color Theory	2.00
GRD:463	Photoshop	3.00
GRA:134	Digital Photography (optional course)	(3.00)

**Term Total 15.00**

### SECOND TERM

ENG:105	Composition I OR	3.00
ENG:107	Composition I: Technical Writing	
GRD:415	InDesign I	3.00
GRD:459	Illustrator	3.00
GRT:110	Calculations and Measurements for Graphic Arts	3.00
WDV:101	Introduction to HTML and CSS	3.00
ART:161	Digital Art OR	3.00
CIS:140	Introduction to Game Design OR	
CSC:110	Introduction to Computers OR	
JOU:172	Intermediate Photography OR	
JOU:941	Practicum in Communication OR	
NET:303	Windows Workstation Operating Systems OR	
WDV:155	Web Prototyping	

**Term Total 18.00**

**Diploma Total 33.00**

### THIRD TERM

ART:101	Art Appreciation OR	3.00
ART:133	Drawing OR	
MUS:100	Music Appreciation	
GRT:245	Issues in Graphic Arts Technology	3.00
PSY:111	Introduction to Psychology OR	3.00
SOC:110	Principles of Sociology	

### Select two of the following:

**6.00**

CIS:606	Visual Basic.NET I	
GRA:134	Digital Photography	
GRD:430	InDesign II	
GRT:230	Color Correction	
GRT:237	Packaging Design	
JOU:120	Beginning Newswriting	
JOU:941	Practicum in Communication	
NET:167	Computer Systems and Networking	
WDV:261	Flash	
WDV:245	Content Management Systems	
WDV:221	JavaScript	

**Term Total 15.00**

### FOURTH TERM

BUS:102	Introduction to Business OR	3.00
MKT:110	Principles of Marketing OR	
MKT:150	Principles of Advertising	
GRA:900	Special Projects in Graphic Arts Technology	3.00
GRT:266	Technology Changes in the Graphic Arts	2.00
GRT:805	Graphic Arts Process Production Co-op	5.00
CIS:140	Introduction to Game Design OR	3.00
CSC:110	Introduction to Computers OR	
WDV:155	Web Prototyping OR	
GRT:222	Acrobat OR	
NET:303	Windows Workstation Operating Systems	

**Term Total 16.00**

**AAS Total 64.00**

Gainful employment information for the Graphic Arts Technology program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

# HEALTH INFORMATION TECHNOLOGY

Scott Community Colleges

A.A.S., Diploma

## A.A.S. DEGREE

### FIRST SEMESTER

		CREDITS
BIO:168	Human Anatomy and Physiology I w/Lab	4
CSC:110	Introduction to Computers	3
ENG:105	Composition I	3
HIT:139	Math for Healthcare Professions	3
HIT:370	Health Records in Acute Care	3
HSC:113	Medical Terminology	<u>2</u>
		<b>18</b>

### SECOND SEMESTER

BIO:173	Human Anatomy and Physiology II w/Lab	4
HIT:120	Pharmacology for HIT	1
HIT:150	Principles of Disease I	2
HIT:250	Coding I OR	3
HIT:253	ICD-10 - CM Diagnosis Coding AND	1.5
HIT:254	ICD-10 - PCS/Procedure Coding	1.5
HIT:380	Health Records in Alternate Care Settings	3
HIT:601	Medical Transcription (Optional)	(2)
PSY:111	Introduction to Psychology OR	
SOC:110	Introduction to Sociology	<u>3</u>
		<b>16</b>

### SUMMER

HIT:160	Principles of Disease II	3
HIT:596	Health Information Technology Practicum	2
HIT:620	Advanced Medical Transcription (Optional)	<u>(1)</u>
		<b>5</b>

**DIPLOMA TOTAL ..... 39**

### THIRD SEMESTER

HIT:251	Coding II	3
HIT:312	Health Informatics and Information Management Systems	3
HIT:422	Medico-Legal Ethics	3
HIT:451	Allied Health Statistics	3
HIT:485	Medical Billing and Reimbursement Systems	<u>3</u>
		<b>15</b>

### FOURTH SEMESTER

HIT:252	Coding III	3
HIT:400	Clinical Documentation Improvement	2
HIT:440	Quality Management	3
HIT:597	Health Information Technology Practicum II	4
HIT:946	Seminar	1
ART:101	Art Appreciation OR	
HUM:110	Changes and Choices OR	
PHI:101	Introduction to Philosophy OR	
PHI:110	Introduction to Logic	<u>3</u>
		<b>16</b>

**A.A.S. TOTAL .....70**

The Health Information Technology Associate degree program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

Graduates of the two year program are eligible to write for the national certification exam (Registered Health Information Technician-RHIT) given by the American Health Information Management Association.

# HEALTH, SAFETY AND ENVIRONMENTAL TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificate

HSET courses are delivered via the Internet:  
<http://www.eicc.edu/environmentalcareers>

## A.A.S. DEGREE

### FIRST SEMESTER

	<b>CREDITS</b>
CHM:122 Introduction to General Chemistry	4
ENG:105 Composition I OR	
ENG:107 Composition I: Technical Writing	3
HSE:100 Occupational Safety	3
HSE:200 Waste & Remediation	3
MAT:104 Applied Math Topics OR Any 100 level or higher math	<u>3</u>
	<b>16</b>

### SECOND SEMESTER

CHM:132 Introduction to Organic and Biochemistry	4
ENG:106 Composition II OR	
ENG:108 Composition II: Technical Writing	3
ENV:111 Environmental Science	4
HSE:110 Industrial Processes	3
SPC:112 Public Speaking	<u>3</u>
	<b>17</b>

### THIRD SEMESTER

HSE:105 Characteristics of Hazardous Materials	3
HSE:205 Air and Water Quality	3
HSE:225 Legal Aspects of Occupational Safety and Health	3
HSE:230 Transportation of Hazardous Materials	3
HUM:110 Changes and Choices OR	
PSY:111 Introduction to Psychology OR	
SOC:110 Introduction to Sociology	<u>3</u>
	<b>15</b>

### FOURTH SEMESTER

HSE:211 Contingency Planning/Incident Mgt.	4
HSE:250 Special Topics (Fire Prevention/ Ergonomics) OR	3-4
HSE:251 Ergonomics AND	2
HSE:252 Fire Prevention	
HSE:270 Sampling and Monitoring Procedures OR	
HSE:290 Electrical Safety	
HSE:275 Worker Compensation / Incident Investigation	3
HSE:280 Hazardous Materials Health Effects	3
HSE:285 Industrial Hygiene	<u>3</u>
	<b>17</b>

**A.A.S. TOTAL** .....64-65

## HEALTH, SAFETY & ENVIRONMENTAL TECHNOLOGY CERTIFICATE

The HSET Certificate program is appropriate for students who have prior education and experience in a related field. The most likely candidates for the certificate program are those with an industrial background and a college degree.

Students may choose certificates with either an environmental or a safety emphasis with the assistance from their advisor to reach the required 18 semester hours for their personalized certificate; or choose a combination of courses that meets the student's needs.

### CORE COURSES (Required)

	<b>CREDITS</b>
HSE:100 Occupational Safety	3
HSE:225 Legal Aspects of Occupational Safety and Health	3
HSE:285 Industrial Hygiene	<u>3</u>
	<b>9</b>

### SAFETY EMPHASIS (9 Hours Required)

HSE:105 Characteristics of Hazardous Materials	3
HSE:211 Contingency Planning / Incident Management	4
HSE:230 Transportation of Hazardous Materials	3
HSE:250 Special Topics (Fire Prevention/Ergonomics)	4
HSE:275 Worker Compensation/ Incident Investigation	3

### ENVIRONMENTAL EMPHASIS (9 Hours Required)

HSE:110 Industrial Processes	3
HSE:200 Waste and Remediation	3
HSE:205 Air and Water Quality	3
HSE:270 Sampling and Monitoring Procedures	4
HSE:280 Hazardous Materials Health Effects	3

### GENERAL EMPHASIS CERTIFICATE .....18

Must complete 9 hours of Core Courses and 9 hours of electives listed above. At least 3 courses of the electives need to come from the Safety Emphasis category and at least three courses from the Environmental Emphasis category.

Students may automatically receive the certificates they earn as they complete the requirements for an A.A.S. degree.

Gainful employment information for the Health, Safety and Environmental Technology program is located at  
<http://www.eicc.edu/highschool/programs/career/gainful/>

# HEATING, VENTILATION AND AIR CONDITIONING

Scott Community College

A.A.S., Diploma, Certificate

## A.A.S. DEGREE

### FIRST SEMESTER

		CREDITS
HCR:260	HVAC Trade Skills (I)	3
HCR:308	Refrigeration Fundamentals	5
HCR:405	Basic Electricity for HVAC Technicians	5
HCR:851	HVAC-R Industrial Safety	2
COM:102	Communication Skills OR	
ENG:105	Composition I OR	
SPC:122	Interpersonal Communication	<u>3</u>
		<b>18</b>

### SECOND SEMESTER

CSC:110	Introduction to Computers OR	3 <sup>1</sup>
HCR:525	Welding for HVAC/R Trades (fall term only) OR	
HCR:261	HVAC Trade Skills II (spring term only) OR	
CON:170	Building Construction Techniques I OR	
EGT:400	PLTW – Introduction to Engineering Design	
HCR:116	Domestic Heating	5
HCR:441	HVAC Controls and Circuitry	5
MAT:104	Applied Math Topics OR	3
MAT:110	Math for Liberal Arts OR	
MAT:121	College Algebra	
		<b>16</b>

<sup>1</sup> Elective course can be taken in the first spring or second fall term.

### SUMMER SESSION

HCR:271	Advanced Domestic Heating and Air Conditioning	5
HCR:880	Industry Competency Exam (ICE)- Residential	<u>1</u>
		<b>6</b>

**DIPLOMA TOTAL .....37**

### THIRD SEMESTER

HCR:291	Commercial Systems	3
HCR:802	Control Systems for HVAC	4
HCR:860	HVAC Management and Business Fundamentals	3
	HVAC Elective*	3
HUM:105	Working in America OR	
HUM:110	Changes and Choices	<u>3</u>
		<b>16</b>

### FOURTH SEMESTER

HCR:320	Light Commercial Refrigeration	6
HCR:805	Environmental Controls and Equipment	5
HCR:811	Computer-Aided Control System Design	3
HCR:885	Light Commercial Competency Exam	1
SOC:110	Introduction to Sociology OR	
PSY:111	Introduction to Psychology	<u>3</u>
		<b>18</b>

**A.A.S. TOTAL .....71**

\*HVAC Electives: (3 credit hours required):

CSC:110	Introductions to Computers	3
HCR:525	Welding for HVAC (Fall Course Only)	3
HCR:261	HVAC Trade Skills II (Spring Course Only)	3
CON:170	Building Construction Techniques	6
EGT:400	Introduction to Engineering Design	3

## HEATING, VENTILATION AND AIR CONDITIONING DIPLOMA

### FIRST SEMESTER

HCR:260	HVAC Trade Skills (I)	3
HCR:308	Refrigeration Fundamentals	5
HCR:405	Basic Electricity for HVAC Tech	5
HCR:851	HVAC-R Industry Safety	2
COM:102	Communication Skills OR	3
ENG:105	Composition OR	
SPC:122	Interpersonal Communication	
		<b>18</b>

### SECOND SEMESTER

HCR:116	Domestic Heating	5
HCR:441	HVAC Controls and Circuitry	5
MAT:104	Applied Math Topics OR	3
MAT:110	Math for Liberal Arts OR	
MAT:121	College Algebra	
		<b>13</b>

### THIRD SEMESTER (SUMMER)

HCR:271	Advanced Domestic Heating and Air Conditioning	5
HCR:880	Industry Competency Exam (ICE) - Residential	<u>1</u>
		<b>6</b>

**Diploma Total .....37**

# HEATING, VENTILATION AND AIR CONDITIONING

Scott Community College

A.A.S., Diploma, Certificate

## HEATING, VENTILATION AND AIR CONDITIONING CERTIFICATE

### FIRST SEMESTER

HCR:308	Refrigeration Fundamentals	5
HCR:405	Basic Electricity for HVAC Technicians	5
HCR:851	HVAC-R Industrial Safety	<u>2</u>
		<b>12</b>

### SECOND SEMESTER

HCR:116	Domestic Heating	5
HCR:441	HVAC Controls and Circuitry	<u>5</u>
		<b>10</b>

**CERTIFICATE TOTAL ..... 22**

Note: Elective course HCR:525 is only offered in the Fall. Complete the HVAC elective in the second semester when selecting this course option.

Gainful employment information for the Heating, Ventilation and Air Conditioning program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

## HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION APPRENTICESHIP CERTIFICATE

### FIRST YEAR

HCR:406	Basic Electricity /Apprenticeship	3
HCR:442	HVAC Controls and Circuitry / Apprenticeship	3
HCR:851	HVAC/R Industry Safety	<u>2</u>
		<b>8</b>

### SECOND YEAR

HCR:118	Domestic Heating/Apprenticeship	3
HCR:309	Refrigeration Fundamentals/ Apprenticeship	<u>3</u>
		<b>6</b>

### THIRD YEAR

HCR:804	Controls for HVAC/Apprenticeship	3
HCR:812	Environmental Controls & Equipment / Apprenticeship	<u>3</u>
		<b>6</b>

### FOURTH YEAR

HCR:292	Commercial Systems / Apprenticeship	2
HCR:321	Light Commercial Refrigeration/ Apprenticeship	<u>4</u>
		<b>6</b>

**CERTIFICATE TOTAL .....26**

## Muscatine Community College

A.A.S.

### A.A.S. DEGREE

#### FIRST SEMESTER

	<b>CREDITS</b>	
AGB:105	1.75	Business Principles for Agriculture I
AGB:108	1.5	Human Relations I
AGB:191	1.5	Agricultural Sales I
AGF:120	2	Floral Plant Identification and Care I
AGF:139	2	Floral Design I
AGH:221	(3)	Principles of Horticulture (Optional)
AGH:235	2	Plant Genetics
AGH:294	2	Small Business for Horticulture
AGH:450	.75	Horticulture Leadership I
COM:102	<u>3</u>	Communication Skills

**16.5**

#### SECOND SEMESTER

AGH:131	3	Greenhouse Management
AGH:143	3	Equipment Repair
AGH:237	2.5	Plant Identification and Care II
AGH:452	.5	Horticulture Leadership II
AGH:805	2.5	Horticulture Internship I
MAT:104	3	Applied Math Topics
SPC:111	<u>2</u>	Public Speaking

**16.5**

#### SUMMER SEMESTER

AGH:815	<u>4</u>	Horticulture Internship II
---------	----------	----------------------------

**4**

#### THIRD SEMESTER

AGA:351	1.5	Soil Science
AGA:890	1.5	Soil Chemistry
AGH:115	2	Turf Management
AGH:152	3	Landscape Design Techniques
AGH:254	2	Pest Management
AGH:274	2	Nursery Management
AGH:339	1	Athletic Field Maintenance
AGH:454	.75	Horticulture Leadership III
CSC:110	<u>3</u>	Intro to Computers

**16.75**

#### FOURTH SEMESTER

AGA:349	1.5	Fertilizers
AGB:112	1.75	Human Relations II
AGB:192	1.75	Agricultural Sales II
AGH:149	2	Drawing and Design
AGH:405	3	Golf Course Maintenance
AGH:455	.5	Horticulture Leadership IV
AGH:827	3.5	Horticulture Employment Experience III
BIO:125	<u>4</u>	Plant Biology

**18**

**A.A.S. TOTAL .....71.75**

### TURF MANAGEMENT CERTIFICATE

#### FIRST SEMESTER

AGA:351	1	Soil Science
AGA:890	1	Soil Chemistry
AGH:115	2	Turf Management
AGH:405	<u>3</u>	Golf Course Management

**8**

#### SECOND SEMESTER

AGA:349	1	Fertilizers
AGF:120	2	Floral Plant Identification & Care
AGH:235	2	Plant Genetics
AGH:254	2	Pest Management
AGH:339	<u>1</u>	Athletic Field Maintenance

**8.5**

**CERTIFICATE TOTAL .....16.5**

**NOTE: Program no longer accepting new students as of Spring 2014.**

# HOSPITALITY MANAGEMENT

Scott Community College

A.A.S., Diploma, Certificate

## A.A.S. DEGREE

### FIRST SEMESTER

		CREDITS
CSC:110	Introduction to Computers	3.00
HCM:100	Sanitation and Safety	2.00
HCM:319	Introduction to Hospitality Field or	3.00
HCM:589	Introduction to Restaurant Management	
HCM:957	Hospitality Lab I	2.00
HCM:931	Hospitality Internship	2.00
COM:102	Communication Skills or	3.00
SPC:112	Public Speaking or	
SPC:170	Professional Communication	
Elective Course—See List of Approved Electives		2.00-3.00
		<b>Semester Total 17.00</b>

**Hospitality Skills Certificate Awarded (new academic award)**

### SECOND SEMESTER

HCM:331	Workplace Human Relations or	3.00
BUS:161	Human Relations	
HCM:265	Mathematics for Hospitality or	3.00
BUS:110	Business Math & Calculators or	
MAT:140	Finite Mathematics	
HCM:606	Hospitality Management Practices	3.00
HCM:958	Hospitality Lab II	2.00
HCM:931	Hospitality Internship	2.00
		<b>Semester Total 13.00</b>

### THIRD SEMESTER (SUMMER)

HUM:105	Working in America or	3.00
HUM:110	Changes and Choices	
Elective Course—See List of Approved Electives		2.00-3.00
		<b>Summer Total 5.00</b>

**Hospitality Skills Diploma Awarded (new academic award)**

### FOURTH SEMESTER

ACC:121	Principles of Accounting I	3.00
HCM:330	Hospitality Personnel Management	3.00
HCM:931	Hospitality Internship	3.00
MKT:110	Principles of Marketing	3.00
Elective Course—See List of Approved Electives		2.00-3.00
		<b>Semester Total 15.00</b>

### FIFTH SEMESTER

HCM:310	Hospitality Law	3.00
HCM:328	Conversational Spanish for Hospitality	3.00
HCM:931	Hospitality Internship	3.00
HCM:959	Hospitality Lab III	3.00
		<b>Semester Total 12.00</b>
		<b>AAS Total 62.00</b>

### ELECTIVE CHOICES

BUS:106	Employment Strategies	2.00
MKT:181	Customer Service Strategies	2.00
HCM:212	Industry Management	3.00
HCM:241	Menu Planning & Sales Promotion	3.00
HCM:280	Food Cost Accounting	3.00
HCM:301	Beverage Control	3.00
HCM:335	Introduction to Event Planning	3.00
HCM:589	Introduction to Restaurant Management	3.00
PSY:213	Industrial & Organizational Psychology	3.00

## EVENT MANAGEMENT CERTIFICATE PROGRAM

### FIRST SEMESTER

HCM:100	Sanitation and Safety	2.00
HCM:335	Introduction to Event Planning	3.00
HCM:932	Event Management Internship	1.00
		<b>Semester Total 6.00</b>

### SECOND SEMESTER

COM:102	Communication Skills	3.00
HCM:265	Mathematics for Hospitality	3.00
HCM:932	Event Management Internship	1.00
HCM:958	Hospitality lab II	2.00
		<b>Semester Total 9.00</b>

### THIRD SEMESTER

HCM:932	Event Management Internship	1.00
PSY:213	Industrial and Organizational Psychology	3.00
		<b>Summer Total 5.50</b>
		<b>Certificate Total 20.50</b>

Gainful employment information for the Hospitality Management program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

## DATABASE CONCENTRATION

### A.A.S.

#### TERM 1

CIS:121	Introduction to Programming Logic	3
CIS:606	Visual Basic Net I	3
CSC:110	Introduction to Computers	3
MAT:110	Math for Liberal Arts OR	3
MAT:210	Calculus I	4
NET:303	Windows Workstation Operating Systems	<u>3</u>
		<b>15</b>

#### TERM 2

CIS:169	C#	3
CIS:185	Oracle Academy: Database Design	5
CIS:210	Web Development I	3
ENG:107	Composition I: Technical Writing	3
HUM:183	Living with Space, Time and Technology	<u>3</u>
		<b>17</b>

#### TERM 3

BUS:167	Leadership and Professionalism	1
CIS:149	Advanced MS Access	3
CIS:186	Oracle Academy: Database Development with SQL	5
CIS:353	Database Models and Design Strategies	3
CIS:504	Structured Systems Analysis	3
CIS:750	Project Management	<u>3</u>
		<b>18</b>

#### TERM 4

BUS:168	Leadership and Professionalism II	1
CIS:196	Oracle Database Programming with PL/SQL	5
CIS:331	Microsoft SQL Server	3
NET:860	Information Technology Specialist Capstone OR	3
NET:932	Internship	<u>3</u>
		<b>12</b>

**A.A.S. TOTAL .....62**

## GAMES AND SIMULATIONS CONCENTRATION

#### TERM 1

			Credit
CIS:121	Introduction to Programming Logic	3	
CIS:606	Visual Basic Net I	3	
CSC:110	Introduction to Computers	3	
MAT:110	Math for Liberal Arts OR	3	
MAT:210	Calculus I	4	
NET:303	Windows Workstation Operating Systems	<u>3</u>	
			<b>15</b>

#### TERM 2

CIS:169	C#	3
CIS:185	Oracle Academy: Database Design	5
CIS:210	Web Development I	3
ENG:107	Composition I: Technical Writing	3
HUM:183	Living with Space, Time and Technology	<u>3</u>
		<b>17</b>

#### TERM 3

BUS:167	Leadership and Professionalism	1
CIS:140	Introduction to Game Design	3
CIS:222	Games and Simulations	3
CIS:148	3D Modeling and Character Animation	3
CIS:280	Client Side Scripting	3
CIS:750	Project Management	<u>3</u>
		<b>16</b>

#### TERM 4

BUS:168	Leadership and Professionalism II	1
CIS:248	3D Modeling and Character Animation II	3
CIS:322	Games and Simulations II	3
CIS:711	Audio Programming for Games	3
NET:860	Information Technology Specialist Capstone OR	3
NET:932	Internship	3
WDV:132	Mobile Application Development	<u>3</u>
		<b>16</b>

**A.A.S. TOTAL .....64**

# INFORMATION TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificate

## NETWORKING CONCENTRATION

### TERM 1

BUS:167	Leadership and Professionalism	1
CSC:110	Introduction to Computers	3
NET:114	Foundation of Information Technology	3
NET:198	Networking I	5
NET:303	Windows Workstation Operating Systems	3
NET:679	TCP/IP and Subnetting	<u>1</u>
		<b>16</b>

### TERM 2

BUS:168	Leadership and Professionalism II	1
ENG:107	Composition I: Technical Writing	3
NET:107	Hardware/Software Installation and Troubleshooting	3
NET:261	Virtualization/Cloud Operations	3
NET:280	Copper, Fiber and Wireless Connectivity	3
NET:298	Networking II	5
NET:305	Introduction to Network Operating Systems	<u>3</u>
		<b>21</b>

### TERM 3

MAT:110	Math for Liberal Arts OR	3
MAT:210	Calculus I	4
NET:155	Introduction to Wireless Networks	3
NET:300	IP Telephony (VoIP)	3
NET:302	Health Information Networking	3
NET:398	Networking III	<u>5</u>
		<b>17</b>

### TERM 4

HUM:183	Living with Space, Time and Technology	3
NET:474	Certification Preparation	1
NET:498	Networking IV	5
NET:860	Information Technology Specialist Capstone	3
NET:932	Internship	3
		<b>15</b>

### TERM 3

CIS:704	UNIX/LINUX	3
MAT:110	Math for Liberal Arts OR	3
MAT:210	Calculus I	4
NET:313	Windows Server	3
NET:612	Fundamentals of Network Security	3
NET:639	SANs and Data Arrays	<u>3</u>
		<b>15</b>

### TERM 4

CIS:750	Project Management	3
HUM:183	Living with Space, Time and Technology	3
NET:474	Certification Preparation	1
NET:652	Microsoft Exchange Server	3
NET:860	Information Technology Specialist Capstone	3
NET:932	Internship	<u>3</u>
		<b>16</b>

### TERM 3

CIS:653	Operating System and User Software Support	3
MAT:110	Math for Liberal Arts OR	3
MAT:210	Calculus I	4
NET:167	Computer Systems and Troubleshooting	4
NET:619	Network Attacks: Detection, Analysis & Countermeasures	3
NET:785	Fundamentals of Desktop Support	3
		<b>16</b>

### TERM 4

CIS:750	Project Management	3
HUM:183	Living with Space, Time and Technology	3
NET:105	Printer Maintenance and Repair	3
NET:474	Certification Preparation	1
NET:860	Information Technology Specialist Capstone	3
NET:932	Internship	3
		<b>16</b>

### TERM 2

BUS:168	Leadership and Professionalism II	1
ENG:107	Composition I: Technical Writing	3
NET:280	Copper, Fiber and Wireless Connectivity	3
NET:298	Networking II	5
NET:305	Introduction to Network Operating Systems	3
NET:474	Certification Preparation	1
		<b>16</b>

**A.A.S. TOTAL ..... 63**

# INFORMATION TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificate

## PROGRAMMING CONCENTRATION

### TERM 1

CIS:121	Introduction to Programming Logic	3
CIS:606	Visual Basic Net I	3
CSC:110	Introduction to Computers	3
MAT:110	Math for Liberal Arts OR	3
MAT:210	Calculus I	4
NET:303	Windows Workstation Operating Systems	3
		<b>15</b>

### TERM 2

CIS:169	C#	3
CIS:185	Oracle Academy: Database Design	5
CIS:210	Web Development I	3
ENG:107	Composition I: Technical Writing	3
HUM:183	Living with Space, Time and Technology	3
		<b>17</b>

### TERM 3

BUS:167	Leadership and Professionalism	1
CIS:171	Java	3
CIS:211	Web Development II	3
CIS:280	Client Side Scripting	3
CIS:624	.NET Programming II	3
CIS:504	Structured Systems Analysis	3
		<b>16</b>

### TERM 4

BUS:168	Leadership and Professionalism II	1
CIS:626	.NET Programming III	3
CIS:750	Project Management	3
NET:860	Information Technology Specialist Capstone OR	3
NET:932	Internship	3
CIS:140	Introduction to Game Design OR	3
CIS:148	3D Modeling and Character Animation OR	3
CIS:149	Advanced MS Access OR	3
CIS:186	Oracle Academy: Database Development with SQL OR	5
CIS:222	Games and Simulations OR	3
CIS:251	Fundamentals of Web Design I OR	3
CIS:353	Database Models and Design Strategies OR	3
CIS:504	Structured Systems Analysis OR	3
WDV:132	Mobile Application Development	3
WDV:233	Web Servers OR	3
WDV:245	Content Management Systems	3
		<b>16</b>

**CERTIFICATE TOTAL .....64**

## SECURITY AND FORENSICS CONCENTRATION

### TERM 1

BUS:167	Leadership and Professionalism	1
CSC:110	Introduction to Computers	3
NET:114	Foundation of Information Technology	3
NET:198	Networking I	5
NET:303	Windows Workstation Operating Systems	3
NET:679	TCP/IP and Subnetting	<u>1</u>
		<b>16</b>

### TERM 2

BUS:168	Leadership and Professionalism II	1
ENG:107	Composition I: Technical Writing	3
NET:107	Hardware/Software Installation and Troubleshooting	3
NET:261	Virtualization/Cloud Operations	3
NET:280	Copper, Fiber and Wireless Connectivity	3
NET:298	Networking II	5
NET:305	Introduction to Network Operating Systems	<u>3</u>
		<b>21</b>

### TERM 3

CFR:100	Introduction to Computer Forensics	3
CIS:274	E-Commerce Design	3
MAT:110	Math for Liberal Arts OR	3
MAT:210	Calculus I	4
NET:612	Fundamentals of Network Security	3
NET:619	Network Attacks: Detection, Analysis & Countermeasures	<u>3</u>
		<b>15</b>

### TERM 4

CIS:750	Project Management	3
HUM:183	Living with Space, Time and Technology	3
NET:474	Certification Preparation	1
NET:635	Ethical Hacking	3
NET:860	Information Technology Specialist Capstone	3
NET:932	Internship	<u>3</u>
		<b>16</b>

**CERTIFICATE TOTAL .....68**

# INFORMATION TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges

A.A.S., Certificate

## WEB DEVELOPMENT CONCENTRATION

### TERM 1

CIS:121	Introduction to Programming Logic	3
CIS:606	Visual Basic Net I	3
CSC:110	Introduction to Computers	3
MAT:110	Math for Liberal Arts OR	3
MAT:210	Calculus I	4
NET:303	Windows Workstation Operating Systems	<u>3</u>

**21**

### TERM 2

CIS:169	C#	3
CIS:185	Oracle Academy: Database Design	5
CIS:210	Web Development I	3
ENG:107	Composition I: Technical Writing	3
HUM:183	Living with Space, Time and Technology	<u>3</u>

**21**

### TERM 3

BUS:167	Leadership and Professionalism	1
CIS:251	Fundamentals of Web Design I	3
CIS:280	Client Side Scripting	3
CIS:750	Project Management	3
WDV:233	Web Servers	3
WDV:245	Content Management Systems	<u>3</u>

**21**

### TERM 4

BUS:168	Leadership and Professionalism II	1
CIS:224	Server Side Scripting	4
CIS:626	.NET Programming III	3
NET:932	Internship	3
NET:860	Information Technology Specialist Capstone	3
WDV:132	Mobile Application Development	<u>3</u>

**21**

**CERTIFICATE TOTAL ..... 65**

\*\* Select from approved IT elective courses for networking found on page 107.

Gainful employment information for the Information Technology program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

## INTERIOR DESIGN

### FIRST SEMESTER

	<b>CREDITS</b>
INT:120 Materials II	3
INT:301 Design Fundamentals	3
INT:310 Architectural Graphics	4
General Education Course:	
COM:102 Communication Skills OR	
ENG:105 Composition I	3
Business Elective**	<u>3</u>
	<b>16</b>

### SECOND SEMESTER

INT:116 Materials I	4
INT:127 History of Decorative Arts I	3
INT:302 Color Theory	3
INT:140 Presentation Graphics	3
MAT:110 Math for Liberal Arts OR	
MAT:156 Statistics OR	
BUS:110 Business Math & Calculators	<u>3</u>
	<b>17</b>

### SUMMER SESSION

INT:170 Retail Job Skills	3
Business Elective**	2-3
SPC:112 Public Speaking OR	
SPC:170 Professional Communication	<u>3</u>
	<b>8-9</b>

### THIRD SEMESTER

INT:131 Interiors I	4
INT:205 Kitchen and Bath Design and Lighting	4
INT:209 CAD for Interior Designers	3
INT:228 History of Decorative Arts II	<u>3</u>
	<b>14</b>

### FOURTH SEMESTER

INT:920 Field Experience	3
INT:211 Interiors II	4
INT:215 History of 20th Century Art and Architecture	4
General Education Course:	
PSY:111 Introduction to Psychology OR	
SOC:110 Introduction to Sociology OR	
ART:110 Art Appreciation	<u>3</u>
	<b>14</b>
<b>A.A.S. TOTAL</b>	<b>68-69</b>

\*\* Approved IT Elective Courses for interior design:  
Student must take 1 (3 cr.) for Certificate, 2 for diploma/degree (6 cr.)

BUS:130 Introduction to Entrepreneurship	3
BUS:161 Human Relations	3
MGT:110 Small Business Management	3
MKT:110 Principles of Marketing	3
MKT:140 Principles of Selling	3
MKT:181 Customer Service Strategies	2
CSC:110 Introduction to Computers	3

Gainful employment information for the Interior Design and Apparel Merchandising program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

**NOTE: Program no longer accepting new students as of Spring 2014.**

# INTERPRETER TRAINING PROGRAM

(Also Known as American Sign Language Interpreting)

Scott Community College

## A.A.S. DEGREE

### PREREQUISITE YEAR

#### FIRST SEMESTER

	CREDITS
ASL:151 ASL I	5
DRA:130 Acting I	3
ITP:129 Deaf Studies	<u>4</u>
	<b>12</b>

#### SECOND SEMESTER

ASL:181 ASL II	5
ITP:131 Social Aspects of Deaf Culture	4
PHI:105 Introduction To Ethics OR	
ANT:105 Cultural Anthropology	<u>3</u>
	<b>12</b>

### INTERPRETER TRAINING

#### THIRD SEMESTER

ASL:251 ASL III	5
ENG:105 English Composition I	3
ITP:141 English Vocabulary/Grammar for Interpreters	<u>4</u>
	<b>12</b>

#### FOURTH SEMESTER

ASL:281 ASL IV	4
ITP:121 Introduction to Interpreting	4
ITP:135 Introduction to Language	3
ITP:209 Interpreting Skills Lab	<u>1</u>
	<b>12</b>

#### SUMMER SESSION

MAT:110 Math for Liberal Arts	3
PSY:121 Developmental Psychology	<u>3</u>
	<b>6</b>

#### FIFTH SEMESTER

ASL:296 ASL V	4
ITP:124 Introduction to Interpreting II	3
ITP:209 Interpreting Skills Lab	1
ITP:230 Transliteration I	4
ITP:253 Practical Issues	<u>3</u>
	<b>15</b>

#### SIXTH SEMESTER

ASL:297 ASL VI	4
ITP:209 Interpreting Skills Lab	1
ITP:231 Transliteration II	3
ITP:256 Interpreting Certification Preparation	2
ITP:941 Practicum	<u>2</u>
	<b>12</b>

**A.A.S. TOTAL .....81**

# LOGISTICS & SUPPLY CHAIN MANAGEMENT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Diploma, Certificate

## LOGISTICS A.A.S. DEGREE

### SESSION I

BUS:293	Principles of Workforce Competitive Advantage	3
MAT:142	Technical Math I	1.5
MGT:260	Introduction to Business Logistics	<u>3</u>
		<b>7.5</b>

### SESSION II

HSE:261	Regulation and Compliance - Warehousing & Distribution	3
MAT:143	Technical Math II	1.5
MGT:261	Principles of Transportation Management	<u>3</u>
		<b>7.5</b>

### SESSION III

CSC:112	Computer Fundamentals for Technicians I/A	2
ENG:107	Composition I: Technical Writing	3
MAT:144	Technical Math III	1.5
MGT:265	International Transportation & Logistics	<u>3</u>
		<b>9.5</b>

### SESSION IV

CSC:113	Computer Fundamentals for Technicians I/B	2
ENG:107	Composition I: Technical Writing (Cont.) Technical Elective*	3
MAT:145	Technical Math IV	<u>1.5</u>
		<b>6.5</b>

### SESSION V

BUS:300	Introduction to Radio Frequency Identification (RFID)	3
MGT:267	Principles of Cargo Security Technical Elective*	<u>3</u>
		<b>9</b>

### SESSION VI

BUS:301	The Impact of RFID on the Supply Chain	3
BUS:302	RFID Software Technical Elective*	<u>3</u>
		<b>9</b>

### SESSION VII

MGT:269	Introduction to Inventory Management Humanities/Social Sciences General Education Required Technical Elective*	<u>3</u>
		<b>9</b>

Gainful employment information for the Logistics program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

### SESSION VIII

MGT:268	Principles of Logistics Operations Management	3
MGT:928	Independent Study: Special Projects in Logistics & the Supply Chain	<u>3</u>
		<b>6</b>
<b>A.A.S. TOTAL</b> .....		<b>64</b>

## LOGISTICS DIPLOMA

### SESSION I

BUS:293	Principles of Workforce Competitive Advantage	3
ENG:107	Composition I: Technical Writing	3
MAT:142	Technical Math I	1.5
MGT:260	Introduction to Business Logistics	<u>3</u>
		<b>10.5</b>

### SESSION II

ENG:107	Composition I: Technical Writing (Cont.)	3
MAT:143	Technical Math II	1.5
MGT:261	Principles of Transportation Management	<u>3</u>
		<b>4.5</b>

### SESSION III

BUS:300	Introduction to Radio Frequency Identification (RFID)	3
MGT:265	International Transportation & Logistics	3
MGT:269	Introduction to Inventory Management	<u>3</u>
		<b>9</b>

### SESSION IV

BUS:301	The Impact of RFID on the Supply Chain	3
BUS:302	RFID Software	3
HSE:261	Regulation and Compliance - Warehousing & Distribution	<u>3</u>
		<b>9</b>

**DIPLOMA TOTAL** .....**33**

#### \* Approved Technical Elective Courses

ACC:142	Financial Accounting	3
ACC:146	Managerial Accounting	3
BUS:102	Introduction to Business	3
BUS:161	Human Relations	3
BUS:180	Business Ethics	3
BUS:185	Business Law 1	3
MGT:101	Principles of Management	3
MGT:110	Small Business Management	3
MGT:130	Principles of Supervision	3
MGT:165	Principles of Quality	3
MKT:110	Principles of Marketing	3

Continued on next page...

# LOGISTICS & SUPPLY CHAIN MANAGEMENT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Diploma, Certificate

## RADIO FREQUENCY IDENTIFICATION (RFID) CERTIFICATE

### SESSION I

BUS:300	Introduction to Radio Frequency Identification (RFID)	3
MGT:260	Introduction to Business Logistics	<u>3</u>
		<b>6</b>

### SESSION II

BUS:301	The Impact of RFID on the Supply Chain	3
BUS:302	RFID Software	<u>3</u>
		<b>6</b>

**CERTIFICATE TOTAL .....12**

## LOGISTICS CERTIFICATE

### SESSION I

BUS:293	Principles of Workforce Competitive Advantage	3
MGT:260	Introduction to Business Logistics	<u>3</u>
		<b>6</b>

### SESSION II

HSE:261	Regulation and Compliance - Warehousing & Distribution	3
MGT:261	Principles of Transportation Management	<u>3</u>
		<b>6</b>

### SESSION III

MGT:265	International Transportation & Logistics	3
MGT:269	Introduction to Inventory Management	<u>3</u>
		<b>6</b>

**CERTIFICATE TOTAL .....18**

Gainful employment information for the Logistics program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

# MECHANICAL DESIGN TECHNOLOGY

Clinton, Muscatine & Scott Community Colleges

A.A.S., Diploma, Certificate

## MECHANICAL DESIGN TECHNOLOGY A.A.S. DEGREE

### TERM 1

#### Session I

CAD:286	SolidWorks – Modeling	3.00
DRF:131	Basic Drafting & Design I	3.00
MAT:142	Technical Mathematics I	1.50

#### Session II

CAD:263	SolidWorks – Assembly	3.00
DRF:132	Basic Drafting & Design II	3.00
MAT:143	Technical Mathematics II	<u>1.50</u>

**Term Total** **15.00**

### TERM 2

#### Session I

CAD:264	SolidWorks – Detailing	4.00
IND:222	Geometric Tolerancing and Dimensioning	3.00
MAT:144	Technical Mathematics III	1.50

#### Session II

CAD:287	SolidWorks – Applications	3.00
CSC:112	Computer Fundamentals for Technicians I/A	2.00
MAT:145	Technical Mathematics IV	<u>1.50</u>

**Term Total** **15.00**

**Mechanical Design Certificate Total** **30.00**

### TERM 3 (SUMMER)

DRF:161	Descriptive Geometry	3.00
ENG:107	Composition I: Technical Writing	<u>3.00</u>

**Term Total** **6.00**

**Mechanical Design Diploma Total** **36.00**

### TERM 4

#### Session I

DRF:331	Mechanical Drafting & Design I	3.00
EGT:161	Strength of Materials I/A	1.50
PHY:130	Applied Physics I	1.50

#### Session II

DRF:332	Mechanical Drafting & Design II	3.00
EGT:162	Strength of Materials I/B	1.50
MFG:186	Plant Safety	1.00
PHY:135	Applied Physics II	1.50

**Semester Total** **13.00**

### TERM 5

#### Session I

EGT:163	Strength of Materials II/A	1.50
MFG:371	Manual Projects	3.00
	Social Science/Humanities Choice (see list)**	3.00

#### Session II

CAD:288	SolidWorks – CSWA Preparation	3.00
EGT:164	Strength of Materials II/B	1.50
MFG:372	CNC Projects	<u>3.00</u>

**Semester Total** **15.00**

**AAS Total** **64.00**

\*\*Social Science/Humanities Choices

DRA:110	Introduction to Film
ECN:120	Principles of Macroeconomics
ECN:130	Principles of Microeconomics
HUM:110	Changes and Choices
HUM:183	Living with Space, Time and Technology
PHI:101	Introduction to Philosophy
PHI:105	Introduction to Ethics
PHI:110	Introduction to Logic
POL:111	American National Government
PSY:111	Introduction to Psychology
REL:101	Survey of World Religions
SOC:110	Introduction to Sociology

## A.A.S. DEGREE NURSING

### TERM 1

ADN:109	Introduction to Health Concepts	10.00
ADN:220	Pharmacology	2.00
BIO:168	Anatomy and Physiology I w/Lab	4.00
PSY:111	Introduction to Psychology	<u>3.00</u>
		<b>19.00</b>

### TERM 2

ADN:301	Holistic Health Illness Concepts OR	9.00
ADN:302	Holistic Family Health Concepts	
BIO:151	Nutrition	3.00
BIO:173	Anatomy and Physiology II w/Lab	4.00
PSY:121	Developmental Psychology	<u>3.00</u>
		<b>19.00</b>

### TERM 3 (SUMMER)

ENG:105	Composition I	3.00
SOC:110	Introduction to Sociology	<u>3.00</u>
		<b>6.00</b>

### TERM 4

ADN:302	Holistic Family Health Concepts OR	10.00
ADN:301	Holistic Health Illness Concepts	
ADN:451	Health Systems Concepts	3.00
BIO:186	Microbiology	<u>4.00</u>
		<b>17.00</b>

### TERM 5

ADN:452	Complex Health Concepts Module A	5.00
ADN:453	Complex Health Concepts Module B	<u>5.00</u>
		<b>10.00</b>

### TERM 6

ADN:905	Preceptorship	<u>2.50</u>
		<b>2.50</b>

**AAS Total** .....**73.50**

## DIPLOMA PRACTICAL NURSING

### FIRST SEMESTER

BIO:168	Human Anatomy and Physiology I w/Lab	4
PNN:165	Nursing Fundamentals Module A	5
PNN:166	Nursing Fundamentals Module B	5
PNN:210	Principles of Pharmacology Module A	1
PNN:211	Principles of Pharmacology Module B	1
PSY:111	Introduction to Psychology	<u>3</u>
		<b>19</b>

### SECOND SEMESTER

BIO:151	Nutrition	3
BIO:173	Human Anatomy and Physiology II w/Lab	4
PNN:511	Concepts in Clinical Nursing Module A	4
PNN:512	Concepts in Clinical Nursing Module B	5
PSY:121	Developmental Psychology	<u>3</u>
		<b>19</b>

### SUMMER SESSION

ENG:105	Composition I	3
PNN:641	Transition to Practice	<u>6</u>
		<b>9</b>

**DIPLOMA TOTAL** .....**47**

After completion of the one-year practical nursing program, students are academically qualified to take the NCLEX (National Council Licensure Examination) for Practical Nursing.

The application process and admission requirements for the Nursing program can be found at <http://www.eicc.edu/highschool/programs/career/>. Acceptance into the program is required.

Nursing courses in the first two semesters can be taken at Clinton, Muscatine or Scott Community Colleges. Remaining nursing courses can be taken at Clinton or Scott Community Colleges.

After completion of the one-year practical nursing program, students are academically qualified to take the NCLEX (National Council Licensure Examination) for Practical Nursing. After completion of the two-year ADN program, students are academically qualified to take the NCLEX (National Council Licensure Examination) for Registered Nursing.

Gainful employment information for the Nursing program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

# PHYSICAL THERAPIST ASSISTANT

Clinton, Muscatine & Scott Community Colleges

A.A.S., Diploma, Certificate

## PHYSICAL THERAPIST ASSISTANT A.A.S. DEGREE

### SEMESTERS 1 & 2

#### FOUNDATIONAL CONTENT

BIO:168	Anatomy & Physiology I*	4
PSY:111	General Psychology	3
SOC:110	Introduction to Sociology	3
SPC:112	Public Speaking OR	3
SPC:170	Professional Communication OR	
SPC:120	Intercultural Communication	
ENG:105	Composition	3
BIO:173	Anatomy & Physiology II*	4
PSY:121	Developmental Psychology	3
PHIL:105	Introduction to Ethics	3
MAT:110	Math for Liberal Arts or Higher math course**	3
HSC:113	Medical Terminology	<u>2</u>
<b>FOUNDATIONAL CONTENT TOTAL</b>		<b>31</b>

### SEMESTERS 3, 4, & 5 TECHNICAL PHASE

#### TECHNICAL PHASE SEMESTER 1

PTA:104	Introduction to Physical Therapy	1
PTA:110	Fundamentals for Physical Therapist Assistant	3
PTA:187	Physical Agents I	3
PTA:122	Kinesiology	4
PTA:150	Pathophysiology	3
PTA:213	Musculoskeletal I	3
PTA:310	Clinical I	<u>1</u>
		18

#### TECHNICAL PHASE SEMESTER 2

PTA:200	Therapeutic Exercise	4
PTA:214	Musculoskeletal II	4
PTA:188	Physical Agents II	3
PTA:241	Neuro for Physical Therapist Assistant	4
PTA:285	Professional Issues in Physical Therapy	1
PTA:311	Clinical II	<u>1</u>
		<b>17</b>

#### TECHNICAL PHASE SEMESTER 3 (SUMMER)

PTA:415	Clinical III	5
PTA:416	Clinical IV	<u>5</u>
<b>TECHNICAL PHASE TOTAL</b>		<b>45</b>

**Program Total** .....76

*COURSE DESCRIPTIONS TO COME.*

\*If taken prior to acceptance in the program, must have been taken within 4 years of acceptance date.

\*\*These would include MAT:121 College Algebra, MAT:128 Pre-Calculus, MAT:156 Statistics or MAT:210 Calculus.

# RADIOLOGIC TECHNOLOGY

Scott Community College

A.A.S.

## A.A.S. DEGREE

### FIRST SEMESTER

	<b>CREDITS</b>
BIO:168 Human Anatomy and Physiology I w/Lab*	4
RAD:100 Introduction to Radiography and Patient Care	5
RAD:123 Radiographic Procedures I	5
RAD:350 Imaging	<u>3</u>
	<b>17</b>

### SECOND SEMESTER

BIO:173 Human Anatomy & Physiology II w/Lab*	4
HSC:113 Medical Terminology*	2
RAD:143 Radiographic Procedures II	5
RAD:210 Clinical Education I	4
RAD:300 Radiographic Exposure	<u>4</u>
	<b>19</b>

### SUMMER SESSION

RAD:183 Special Procedures	3
RAD:220 Clinical Education II	<u>3</u>
	<b>6</b>

### THIRD SEMESTER

PSY:111 Introduction to Psychology* OR	
RAD:500 Clinical Education III	6
RAD:761 Film Evaluation I	3
RAD:800 Physics for Radiographers	3
SOC:110 Introduction to Sociology*	<u>3</u>
	<b>15</b>

### FOURTH SEMESTER

RAD:510 Clinical Education IV	6
RAD:750 Radiographic Pathology	3
RAD:790 Film Evaluation II	2
RAD:850 Radiation Protection and Biology	3
SPC:112 Public Speaking* OR	3
ENG:105 Composition I*	<u>—</u>
	<b>17</b>

### SUMMER SESSION

RAD:540 Clinical Education V	3
RAD:890 Quality Assurance	1
RAD:946 Seminar	<u>2</u>
	<b>6</b>

**A.A.S. TOTAL . . . . .80**

Enrollment is limited and entrance is restricted to the fall semester. In addition to the general admission requirements of the college, applicants must meet specific program admission criteria. The application process and admission requirements for the Radiology Technology program can be found at <http://www.eicc.edu/highschool/programs/career/>

This program is fully accredited by the Joint Review Committee on Education in Radiologic Technology, and graduates are eligible to write the national examination given by the American Registry of Radiologic Technologists (ARRT).

\*Courses may be taken while waiting to enter the program.

# RESPIRATORY CARE

## Clinton, Muscatine & Scott Community Colleges/Northeast Iowa Community College

### PARTNERSHIP BETWEEN EICCD AND NICC

A Respiratory Therapy program is available to our students through a cooperative partnership between Eastern Iowa Community College District (EICCD – Clinton, Muscatine and Scott Community Colleges) and Northeast Iowa Community College (NICC). The program is accredited by the Committee on Accreditation for Respiratory Care (CoARC).

### AWARD

After completing the program, students earn an A.A.S. degree and are eligible for credentialing exams offered by the National Board for Respiratory Care (NBRC).

### GRADUATION REQUIREMENTS

To earn a degree, students must complete all course work and attain a minimum of a "C-" in each course. A minimum 2.0 cumulative GPA is required for graduation.

### GENERAL EDUCATION COURSES STUDENTS TAKE AT CCC, MCC OR SCC

BIO:168	Human Anatomy & Physiology w/Lab I	4.00
BIO:173	Human Anatomy & Physiology w/Lab II	4.00
BIO:186	Microbiology	4.00
CSC:110	Introduction to Computers	3.00
ENG:105	Composition I	3.00
MAT:041	Basic Math Skills OR Higher Level Math Course	3.00
PSY:111	Introduction to Psychology	<u>3.00</u>
<b>TOTAL CREDITS</b>		<b>24.00</b>

### TRANSFERRING TO NICC

Students need to complete an NICC application indicating a major in Respiratory Therapy. Students must also complete a transcript request form at the Registrar's Office of CCC, MCC or SCC so that the Registrar submits their course transcript to NICC.

### COURSEWORK COMPLETED AT NICC

<b>FIRST TERM</b>		
RCP:270	Respiratory Therapy Techniques I*	8.00
RCP:320	Respiratory Therapy Science I	<u>3.50</u>
		<b>11.50</b>
<b>SECOND TERM</b>		
RCP:460	Respiratory Science II	3.50
RCP:540	Respiratory Therapy Techniques II	<u>8.00</u>
		<b>11.50</b>
<b>THIRD TERM</b>		
RCP:350	Pulmonary Pathology **	3.00
RCP:490	Respiratory Therapy Science III**	<u>6.00</u>
		<b>9.00</b>
<b>FOURTH TERM</b>		
RCP:600	Neonatal/Pediatric Respiratory Therapy	3.00
RCP:820	Respiratory Therapy Techniques IV	<u>7.50</u>
		<b>10.50</b>

### FIFTH TERM

HSC:136	Advanced Life Support (ACLS/PALS)	1.50
RCP:830	Respiratory Therapy V	12.00
RCP:840	Innovations in Respiratory Care	<u>5.50</u>
		<b>19.00</b>
<b>A.A.S. TOTAL</b>		<b>85.50</b>

\* Must have CPR Certification - Health Care Provider or Professional Rescuer Level.

\*\* Courses are offered online only. All other respiratory care courses are offered in the classroom setting at the NICC campus located in Peosta, Iowa.

### CLINICALS

Current physical, immunization records, and American Heart Health Care Provider CPR or the American Red Cross CPR for the Professional Rescuer certification must be complete before attending the clinical portion of the respiratory care courses. A criminal record/child abuse registry check is also required and a positive report may prevent you from attendance in clinical and completion of the program. The clinical site may also require documentation of health insurance coverage and drug screening.

Students complete their clinical experiences in Dubuque, Iowa City, and Manchester, Iowa; and in Madison, Wisconsin.

### COSTS OF EDUCATION

In addition to tuition and books, the educational costs of the respiratory therapy program include:

Background check	\$15.00 per last name
Physical exam/ Immunizations	Varies based on student's health insurance coverage and immunizations needed
Drug Testing	\$75.00
Apparel, clinical supplies	\$230.00
Computerized testing package	\$300.00
Clinical Transportation (Gas and Lodging)	Varies

The application process and admission requirements for the Respiratory Care program can be found at [www.nicc.edu/respiratorycare/](http://www.nicc.edu/respiratorycare/). Graduates of the Respiratory Care A.A.S. are eligible for credentialing exams offered by the National Board for Respiratory Care (NBRC).

Note that NICC requires a minimum grade of C- in each course.

The information provided in this Fact Sheet was accurate at the time of its creation and may not reflect subsequent changes made to the program. For the most current information about the Respiratory Therapy Program, please go to [www.nicc.edu](http://www.nicc.edu) and locate Respiratory Care in the Programs of Study menu.

# SURGICAL TECHNOLOGY AND STERILE PROCESSING AND DISTRIBUTION TECHNICIAN

Scott Community College

A.A.S., Diploma, Certificate

## FIRST SEMESTER

BIO:168	Human Anatomy and Physiology I	4
CSC:110	Introduction to Computers	3
CSP:110	Infection Control/Health Regulations	2
ENG:105	Composition I	3
HSC:113	Medical Terminology	2
SUR:122	Introduction to Surgical Technology	4
		<b>18</b>

## SECOND SEMESTER

BIO:173	Human Anatomy and Phys. II	4
BIO:186	Microbiology	4
PSY:111	Introduction to Psychology	3
SUR:225	Surgical Technology II	4
SUR:421	Surgical Tech Pharmacology	1
SUR:518	Surgical Technology Practicum I	<u>2.5</u>
		<b>18.5</b>

## THIRD SEMESTER

SUR:330	Surgical Technology Specialties	3
SUR:524	Surgical Technology Advanced Practicum II	<u>6.5</u>
		<b>9.5</b>

**DIPLOMA TOTAL . . . . . 46**

## FOURTH SEMESTER

BUS:161	Human Relations	3
FLS:141	Elementary Spanish	4
MAT:110	Math for Liberal Arts	3
SPC:112	Public Speaking	3
SUR:450	Advanced Concepts in Surg. Tech.	4
		<b>17</b>

**A.A.S. TOTAL. . . . . 63**

## STERILE PROCESSING AND DISTRIBUTION TECHNICIAN CERTIFICATE

### FIRST SEMESTER

BIO:114	General Biology IA	4
CHM:110	Introduction to Chemistry	3
CSC:110	Introduction to Computers	3
CSP:110	Infection Control/Health Regulations	2
HSC:113	Medical Terminology	<u>2</u>
		<b>14</b>

### SECOND SEMESTER

BIO:157	Human Biology	4
BIO:186	Microbiology	4
CSP:115	Instrument Use, Care, & Handling	3
CSP:120	Sterile Processing & Distribution	<u>3</u>
		<b>14</b>

### THIRD SEMESTER

CSP:210	Clinical Practicum	<u>2</u>
		<b>2</b>

**CERTIFICATE TOTAL . . . . . 30**

*\*\*\*To be admitted to the Surgical Technology program students must have the following prerequisite courses completed: CHM:110, BIO:114, and MAT:047. Students must also have a current BCLS card.*

Gainful employment information for the Surgical Technology program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

The Technical Studies program will provide Associate of Applied Science degree students with the opportunity to customize and personalize a specific technical course of study that meets their own individual employment needs.

The program incorporates a common core of general education course work, combined with a core concentration of technical courses and elective courses from other technical program offerings. The A.A.S. Degree in Technical Studies consists of 64 credits. Some of these credits may be acquired by assessing Credit for Prior Learning. A maximum of 46 credit hours may be earned toward the Technical Studies Degree through Credit for Prior Learning. This may include successful completion of 8,000 hours of any approved Bureau of Apprenticeship Training program.

Students must work with an academic advisor to complete and file an educational course of study plan with the registrar's office.

**CORE CONCENTRATION:**

24 credit hours of this degree program must come from one program-specific area.

**ELECTIVE COURSES:**

22 credit hours of this degree program can be selected from any of the current career program (A.A.S.) courses offered at the colleges.

**GENERAL EDUCATION:**

**18 credit hours required from the following areas:**

English or Communications	3
Math or Science	3
Microcomputer Applications	3
Arts and Humanities	3
Cultural/Historical Perspectives	3
Social Sciences	<u>3</u>
	<b>18</b>

**FIRST SEMESTER**

Technical Studies Core Courses	9
Math or Science Elective	3
Communication Elective	<u>3</u>
	<b>15</b>

**SECOND SEMESTER**

Technical Studies Core Courses	12
CSC:110 Introduction to Computers	3
Cultural/Historical Perspective Elective	<u>3</u>
	<b>18</b>

**THIRD SEMESTER**

Technical Studies Core Courses	3
Technical Studies Electives	9
Arts and Humanities Elective	<u>3</u>
	<b>15</b>

**FOURTH SEMESTER**

Technical Studies Electives	13
Social Science Elective	<u>3</u>
	<b>16</b>

**A.A.S. Total .....64**

# TRUCK DRIVING

Scott Community College

Certificate

## TRUCK DRIVING CERTIFICATE - DAY

TDT:111	Commercial Drivers License Regulations	3
TDT:130	Commercial Vehicle Operation	7

**CERTIFICATE TOTAL** .....10

## TRUCK DRIVING CERTIFICATE - EVENING

TDT:112	Commercial Drivers License Regulations	2.5
TDT:131	Commercial Vehicle Operation	5

**CERTIFICATE TOTAL** .....7.5

Day sessions start every seven weeks beginning in February and ending in November. Evening sessions are offered in April and July.

### THE PROGRAM INCLUDES:

The ten week commercial driver development program prepares the student for a career in the transportation industry. The student will spend three weeks consisting of 60 hours in the classroom developing the knowledge to take and pass the CDL permit state test, gaining an in-depth understanding of the Federal Motor Carrier Safety Administration rules and regulations, becoming conversant with the hours of service regulations and how to fill out log books, mapping and trip planning, and reviewing CSA2010 and driving techniques, situations and safety. The seven week vehicle operations portion of the course consists of a minimum of 10 hours per week of behind the wheel operation of a tractor trailer unit on city streets, rural roads, primary highways and interstate settings. This prepares the student to operate the vehicle safely in a variety of situations and to take and pass the pre-trip test, skills test, and road test administered by state to obtain a CDL license.

### TO SIGN UP:

1. Send a completed application to Scott Community College.
2. You must take the Department of Transportation physical, eye exam and drug test prior to the start of classes. Note: The forms are used for college purposes. They are not to be used for company hiring.
3. You are guaranteed a seat only after all tuition and fees have been paid.

# VETERINARY TECHNICIAN PROGRAM

Muscatine Community College

A.A.S.

## A.A.S. DEGREE

### PREREQUISITE TERM

BIO:114	General Biology IA	4.00
CHM:122	Introduction to General Chemistry	<u>4.00</u>
<b>Prerequisite Total</b>		<b>8.00</b>

### FIRST SEMESTER

AGV:118	Animal Anatomy and Physiology I	4.00
AGV:119	Veterinary Medical Terminology	2.00
AGV:130	Clinical Technology I	3.00
AGV:186	Canine and Feline Behavior	2.00
ENG:105	Composition I	<u>3.00</u>
<b>Semester Total</b>		<b>14.00</b>

### SECOND SEMESTER

AGV:127	Animal Anatomy and Physiology II	4.00
AGV:131	Clinical Technology II	3.00
AGV:133	Veterinary Clinic Pathology I	3.00
AGV:146	Large Animal Care	3.00
MAT:104	Applied Math Topics	<u>3.00</u>
<b>Semester Total</b>		<b>16.00</b>

### SUMMER SEMESTER

AGV:113	Canine and Feline Nutrition	2.00
AGV:184	Lab Animal Medicine	2.00
HUM:110	Changes and Choices	3.00
SPC:170	Professional Communication	<u>3.00</u>
<b>Summer Total</b>		<b>10.00</b>

### THIRD SEMESTER

AGV:114	Microbiology for Veterinary Technicians	3.00
AGV:134	Veterinary Clinic Pathology II	3.00
AGV:140	Veterinary Pharmacology	3.00
AGV:182	Diagnostic Imaging	3.00
AGV:232	Clinical Technology III	<u>4.00</u>
<b>Semester Total</b>		<b>16.00</b>

### FOURTH SEMESTER

AGV:159	Surgical Nursing	3.00
AGV:170	Veterinary Anesthesiology	3.00
AGV:933	Internship	<u>4.00</u>
<b>Semester Total</b>		<b>10.00</b>

**AAS Total** .....74.00

The application process and admission requirements for the Veterinary Technician program can be found at [www.eicc.edu/gainfulemployment](http://www.eicc.edu/gainfulemployment)

Graduates are eligible to sit for the Iowa Veterinary Technician Examination and the National Veterinary Technician Exam (NVTE).

## A.A.S. DEGREE

### TERM 1

#### Session I

MAT:733	Math for Technologies A	1.50
MFG:186	Plant Safety	1.00
WEL:126	Shielded Metal Arc Weld-Basic	4.75

#### Session II

MAT:734	Math for Technologies B	1.50
MFG:192	Blueprint Reading	3.00
WEL:129	Gas Metal Arc Weld-Basic	<u>4.25</u>

**Term Total** **16.00**

### TERM 2

#### Session I

CSC:112	Computer Fundamentals for Technicians I/A	2.00
ENG:105	Composition I OR	3.00
ENG:107	Composition I:Technical Writing	
WEL:137	Oxy-Acetylene Weld/Cut-Modules	0.50

#### Session II

CSC:113	Computer Fundamentals for Technicians I/B	2.00
WEL:132	Flux Core Arc Welding	2.25
WEL:133	Gas Tungsten Arc Welding	<u>2.50</u>

**Term Total** **12.25**

### TERM 3 (SUMMER)

Social Science/ Cultural Perspectives Option (see list)	3.00
WEL:215	Shielded Metal Arc Weld-Adv I <u>5.00</u>

**Term Total** **8.00**

### TERM 4

#### Session I

WEL:216	Shielded Metal Arc Weld-Adv 2	4.50
WEL:217	Gas metal Arc Welding-Adv	1.25

#### Session II

WEL:219	Layout and Fabrication	3.00
Technical/Career Education Courses (see list)	<u>4.00</u>	

**Term Total** **12.75**

### TERM 5

#### Session I

Technical/Career Education Courses (see list)	4.00
Social Science/Cultural Perspectives Option (see list)	3.00

#### Session II

Technical/Career Education Courses (see list)	3.00
Social Science/ Cultural Perspectives Option (see list)	<u>3.00</u>

**Term Total** **13.00**

**AAS Total** **62.00**

\*Students complete a minimum of 11.25 Technical/Career Education Course credits. Please see your advisor for assistance in selecting courses.

\*\*Total number of credit hours may vary depending on Technical/Career Education electives selected. The total minimum credits required for an A.A.S. in Welding is 62.00.

### SOCIAL SCIENCE/CULTURAL PERSPECTIVES OPTIONS

Must take three courses for a total of nine credit hours.

ANT:105	Cultural Anthropology
CLS:150	Latin American History and Culture
ECN:120	Principles of Macroeconomics
ECN:130	Principles of Microeconomics
FLx:141	Any Foreign Language – 1 semester
GEO:121	World Regional Geography
GLS:100	Contemporary World Issues
HIS:117	Western Civ I: Ancient & Medieval
HIS:118	Western Civ II: Early Modern
HIS:119	Western Civ III: Modern Period
HIS:151	U.S. History to 1877
HIS:152	U.S. History since 1877
HIS:211	Modern Asian History
HIS:231	Contemporary World Affairs
HUM:105	Working in America
HUM:110	Changes and Choices
POL:111	American National Government
PSY:111	Introduction to Psychology
SOC:110	Introduction to Sociology

### TECHNICAL/CAREER EDUCATION ELECTIVES

(must take 12 credits total)

CAD:286	SolidWorks Modeling	3.00
CAD:263	SolidWorks Assembly	4.00
DRF:131	Basic Drafting & Design I	3.00
DRF:132	Basic Drafting & Design II	3.00
ELE:216	DC Circuit Analysis	3.00
ELE:217	AC Circuit Analysis	3.00
MFG:105	Machine Shop Measuring	3.00
MFG:111	Machinery Handbook	1.00
MFG:112	Drills and Saws	2.00
MFG:116	Carbide Tooling	1.00
MFG:190	Metallurgy	2.00

## WELDING DIPLOMA

### TERM 1

#### Session I

MAT:733	Math for Technologies A	1.50
MFG:186	Plant Safety	1.00
WEL:126	Shielded Metal Arc Weld-Basic	4.75

#### Session II

MAT:734	Math for Technologies B	1.50
MFG:190	Metallurgy	2.00
MFG:192	Blueprint Reading	3.00
WEL:129	Gas Metal Arc Weld-Basic	<u>4.25</u>

**Term Total** **18.00**

### TERM 2

#### Session I

ENG:105	Composition I or	3.00
ENG:107	Composition I:Technical Writing	
WEL:132	Flux Core Arc Welding	2.25

#### Session II

WEL:215	Shielded Metal Arc Weld-Adv I	5.00
WEL:217	Gas metal Arc Welding-Adv	<u>1.25</u>

**Term Total** **11.50**

### TERM 3 (SUMMER)

Social Science/ Cultural Perspectives Option (see list)	3.00	
WEL:133	Gas Tungsten Arc Welding	2.50
WEL:137	Oxy-Acetylene Weld/Cut-Modules	0.50
WEL:216	Shielded Metal Arc Weld-Adv 2	4.50
WEL:219	Layout and Fabrication	<u>3.00</u>

**Term Total** **13.50**

**Diploma Total** **43.00**

Gainful employment information for the Welding program is located at <http://www.eicc.edu/highschool/programs/career/gainful/>

## BASIC WELDING CERTIFICATE

### TERM 1

#### Session I

MFG:186	Plant Safety	1.00
MFG:192	Blueprint Reading	3.00
WEL:126	Shielded Metal Arc Weld-Basic	4.75

#### Session II

WEL:137	Oxy-Acetylene Weld/Cut-Modules	0.50
WEL:129	Gas Metal Arc Weld-Basic	<u>4.25</u>

**Term Total** **13.50**

### TERM 2

#### Session I

WEL:132	Flux Core Arc Welding	2.25
WEL:133	Gas Tungsten Arc Welding	2.50

**Term Total** **4.75**

**Certificate Total** **18.25**

## PRODUCTION WELDING CERTIFICATE

### Session I

MAT:733	Math for Technologies A	1.5
MFG:186	Plant Safety	1
MFG:190	Metallurgy	2
WEL:129	Gas Metal Arc Welding - Basic	<u>4.25</u>
		<b>8.75</b>

### Session II

MAT:734	Math for Technologies B	1.5
MFG:192	Blueprint Reading	3
WEL:127	Shielded Metal Arc Welding - Modules	1.25
WEL:137	Oxy-Acetylene Welding - Modules	<u>.5</u>
		<b>6.25</b>

### Session III

WEL:132	Flux Core Arc Welding	2.25
WEL:217	Gas Metal Arc Welding - Advanced	1.25

**Term Total** **3.5**

**Certificate Total** **18.5**

# WELDING

Scott Community College

A.A.S., Diploma, Certificate

## STRUCTURAL WELDING CERTIFICATE

### TERM 1

#### Session I

MAT:733	Math for Technologies A	1.50
MFG:186	Plant Safety	1.00
WEL:126	Shielded Metal Arc Weld-Basic	4.75

#### Session II

MAT:734	Math for Technologies B	1.50
MFG:190	Metallurgy	2.00
MFG:192	Blueprint Reading	3.00
WEL:137	Oxy-Acetylene Weld/Cut-Modules	<u>0.50</u>

**Term Total** **14.25**

### TERM 2

WEL:132	Flux Core Arc Welding	2.25
WEL:215	Shielded Metal Arc Weld-Adv I	5.00
WEL:216	Shielded Metal Arc Weld-Adv 2	<u>4.50</u>

**Term Total** **11.75**

**Certificate Total** .....**26.00**

## GENERAL MAINTENANCE WELDING CERTIFICATE

### TERM 1

#### Session I

CSC:112	Computer Fundamentals for Technicians I/A	2.00
ELE:101	Industrial Safety	1.00
MAT:733	Math for Technologies A	1.50
WEL:126	Shielded Metal Arc Weld-Basic	4.75

#### Session II

CSC:113	Computer Fundamentals for Technicians I/B	2.00
MAT:734	Math for Technologies B	1.50
MFG:192	Blueprint Reading	3.00
WEL:129	Gas Metal Arc Weld-Basic	<u>4.25</u>

**Term Total** **20.00**

### TERM 2

#### Session I

EGT:133	Hydraulics/Pneumatics I	2.00
ELE:115	Basic Electricity I	2.00
WEL:136	Oxy-Acetylene Welding and Cutting	<u>4.25</u>

**Term Total** **8.25**

**Certificate Total** .....**28.25**



# Course Descriptions



EASTERN IOWA COMMUNITY COLLEGES  
CLINTON ♦ MUSCATINE ♦ SCOTT

**LEARN MORE. EARN MORE.**

# COURSE DESCRIPTIONS

## Course Descriptions

	Page
Accounting - ACC	127
Administrative Assistant - ADM	128
Agriculture - AGA, AGB, AGC, AGF, AGH, AGM, AGP, AGS, AGV	120
American Sign Language - ASL	137
Anthropology - ANT	128
Art - ART	138
Associate Degree Nursing - ADN	139
Automation Technology and Robotics - ATR	141
Auto Technology - AUT	142
Aviation - AVI	143
Biology - BIO	144
Business - BUS	145
Business Computer Applications - BCA	146
Cancer Information Management - CIM	148
Central Sterile Processing - CSP	149
Chemistry - CHM	151
Collision Repair/Refinish - CRR	153
Communications - COM	153
Computer Aided Drafting - CAD	153
Computer Forensics - CFR	155
Computer Networking - NET	155
Computer Programming - CIS	159
Computer Science - CSC	162
Conservation - CNS	162
Construction - CON	163
Criminal Justice - CRJ	163
Cultural Studies - CLS	164
Dental Assisting - DEA	164
Diesel Technology - DSL	164
Drafting - DRF	166
Drama - DRA	166
Early Childhood Education - ECE	167
Economics - ECN	168
Education - EDU	169
Electrical Technology - ELE	169
Electroneurodiagnostic Technology - END	171
Electronics - ELT	172
Emergency Medical Services - EMS	173
Engineering - EGR	175
Engineering Technology - EGT	175
English - ENG	176
English as a Second Language - ESL	177

Environmental Science - ENV	180
Finance - FIN	180
French - FLF	180
Geography - GEO	181
German - FLG	181
Global Studies - GLS	181
Graphic Arts - GRA, GRT	181
Health Science - HSC	183
Health Information Technology - HIT	184
Health, Safety & Environmental Technology - HSE	186
Heating, & Air Conditioning - HCR	188
History - HIS	190
Honors - HUM	191
Hospitality & Culinary Arts - HCM	191
Humanities - HUM	194
Industrial Technology - IND	195
Interior Design - INT	196
Interpreter Training - ITP	197
Journalism - JOU	198
Literature - LIT	199
Management - MGT	200
Manufacturing - MFG	202
Marketing - MKT	204
Mass Media Studies - MMS	205
Mathematics - MAT	205
Music (Applied) - MUA	208
Music - MUS	208
Philosophy - PHI	209
Physical Education - PEA, PEC, PEH, PEV	209
Physical Science - PHS	210
Physics - PHY	210
Political Science - POL	211
Practical Nursing - PNN	209
Psychology - PSY	213
Radiologic Technology - RAD	214
Reading - RDG	214
Religion - REL	216
Sociology - SOC	216
Spanish - FLS	217
Speech - SPC	218
Student Development - SDV	218
Surgical Technology - SUR	219
Sustainable Energy - SER	220
Truck Driving - TDT	220
Welding - WEL	221

**Here is an example to aid in understanding the course description designations:**

1) ACC: 2)146 3)Managerial Accounting 4) 3 cr.

5) A continuation of Principles of Accounting I, this course introduces corporate structures related to accounting for

6) (59.4 Lec. Hrs.)

7) Prerequisite: ACC:142 or permission of instructor.

8) Co-requisite:

1) Academic area prefix:

Example: ACC is Accounting.

2) Course number:

If the first number is less than 100, the course is for internal college credit only.

3) Course title.

4) Number of credit hours the course is worth.

5) Description of course content.

6) Designates the number of 50-minute contact hours per semester spent in lecture (Lec. Hrs.) and/or laboratory setting (Lab. Hrs.) and/or clinical setting (Clinical Hrs.) and/or cooperative learning setting (Co-op. Hrs.).

7) Prerequisites are courses that must be successfully completed or other qualifications that must be met prior to enrolling in the listed course.

8) Co-requisites are courses that must be taken before or at the same time as the listed course.

**Not all courses are available on all campuses each semester.**

## ACCOUNTING

### **ACC:111 Introduction to Accounting** 3 cr.

Designed for the student who has not had high school bookkeeping or for the student desiring to enter office employment. Emphasis is placed on learning the accounting cycle, structured systems, and records usually incorporated by small businesses and professional offices. A practice simulation provides an opportunity for students to apply those concepts learned throughout the course and also indicates to the instructor that competencies have been met. (59.4 Lec. Hrs.)

**Prerequisites:** MAT:041 or MAT:053 or minimum math placement score based on college assessment.

### **ACC:121 Principles of Accounting I** 3 cr.

An introduction to accounting terminology and concepts and accepted accounting practices of analyzing, recording, summarizing, presenting, and interpreting business financial transactions of sole proprietorships and partnerships. Significant emphasis is placed upon practice and application. (59.4 Lec. Hrs.)

### **ACC:142 Financial Accounting** 3 cr.

An introduction to the use of accounting in the decision making process. Information will be presented with a bias toward user orientation as opposed to preparer orientation. Course competencies will be developed in the areas of identifying the role of accounting in society, basic accounting and business terminology, concepts behind financial information, accepted accounting practices, analysis and interpretation of financial statements of sole proprietorships and corporations. (59.4 Lec. Hrs.)

**Prerequisite:** MAT:041 or MAT:053 and RDG:032/033 or minimum math and reading placement scores based on college assessment.

### **ACC:146 Managerial Accounting** 3 cr.

A continuation of Financial Accounting, this course emphasizes financial statement analysis, including the reporting of cash flows, and managerial accounting as it relates to decision-making and to the manufacturing environment. This course serves as a foundation for other accounting courses for students planning careers in accounting, as well as providing for the needs for students in business administration. (59.4 Lec. Hrs.)

**Prerequisite:** ACC:142 (Students pursuing an A.A.S. may fulfill the prerequisite with ACC:121 or ACC:142.)

### **ACC:161 Payroll Accounting** 3 cr.

This introductory course covers the processes of payroll accounting. Topics include methods of computing compensations, state and federal laws affecting payroll, mandatory and voluntary payroll deductions, methods of keeping payroll records, and preparation of internal and governmental reports. (59.4 Lec. Hrs.)

**Prerequisite:** ACC:121.

### **ACC:221 Cost Accounting** 3 cr.

A study of basic cost accounting concepts and product cost accumulation procedures emphasizing differences between job order, process and standard costing. Emphasis is placed on the managerial accounting activities of controlling costs, cost analysis and decision making. (59.4 Lec. Hrs.)

**Prerequisite:** ACC:146.

### **ACC:237 Intermediate Accounting** 4 cr.

The in-depth study of selected financial accounting theory and practices. Topics may include professional organization structures, financial statements, the time-value of money, inventories, other current and non-current assets and liabilities. As time permits some other specialty topics, such as the statement of cash flows, accounting for leases, and revenue recognition principles are introduced. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ACC:146.

### **ACC:251 Governmental and Nonprofit Accounting** 3 cr.

The purpose of this course is to give the student a basic background in accounting principles and practices for governmental units and other nonprofit organizations. (59.4 Lec. Hrs.)

### **ACC:265 Income Tax Accounting** 4 cr.

Covers federal income taxes as they apply to the individual, partnerships and business. Major emphasis is placed on the individual return including supporting schedules and statements. Considerable effort is expended in actual form completion and understanding of IRS requirements. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ACC:121 or ACC:142.

# COURSE DESCRIPTIONS

---

## **ACC:311 Computer Accounting** 3 cr.

Transfers manual accounting skills to a microcomputer operation. In addition to learning computer operation procedures, accounting units covered are the general ledger, special journals, vouchers, financial statement analysis, depreciation, inventory, payroll and Lotus 1-2-3. Simulations of business activities are processed through an entire accounting cycle and various reports are generated. Student will also learn to create an entire computerized accounting system. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ACC:121.

## **ACC:312 Computer Accounting** 4 cr.

This course is designed to develop accounting and problem solving skills on microcomputers. Students will complete the accounting cycle through financial statement preparation using integrated accounting software packages. Use of electronic spreadsheet capabilities will be explored. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ACC:146.

## **ACC:332 Computer Accounting - QuickBooks I** 2 cr.

In this course students will apply accounting concepts to keep financial records for small service and merchandising companies using the accounting software QuickBooks. Topics will include setting up a company, creating a chart of accounts, recording customer and vendor transactions, processing payroll, printing financial reports, recording adjusting entries and closing the accounting cycle. (29.7 Lec. Hrs./19.8 Lab Hrs.)

**Prerequisite:** ACC:111 or ACC:121 or ACC:142

## **ADMINISTRATIVE ASSISTANT**

---

### **ADM:105 Introduction to Keyboarding** 1 cr.

This course is designed for the student with no prior keyboarding experience. The major objective is to develop touch control of the keyboard with speed and accuracy through proper keyboarding techniques. (39.6 Lab Hrs.)

### **ADM:122 Document Formatting** 2 cr.

A course designed for the student with minimal keyboarding experience. The major objectives are to develop touch control of the keyboard with speed and accuracy through proper keyboarding techniques and to learn proper formatting of letters, simple tables, short reports, and memorandums. (19.8 Lec. Hrs./39.6 Lab Hrs.)

### **ADM:149 Transcription** 3 cr.

This course emphasizes the development of efficient transcription skills. Throughout this course, students are challenged to spell correctly and use proper punctuation while transcribing documents from taped dictation. The exercises gradually become more complex, giving the students many opportunities to make formatting, grammar, punctuation, usage, and style decisions. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** ADM:122, ADM:157.

### **ADM:157 Business English** 3 cr.

This course is designed to help the students sharpen their communication skills. The students will study and upgrade their skills in the basic areas of grammar and usage, punctuation, spelling, proofreading and editing. (59.4 Lec. Hrs.)

## **ADM:179 Records Management** 3 cr.

This course is designed for the student to learn and apply the indexing and filing rules that are applicable to the four major filing systems: alphabetic, geographic, numeric, and subject filing. Numerous records management supplies, equipment, computer database information, and careers in the records management field are also integrated into this course. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 and RDG:033 or minimum English and reading placement scores based on college assessment.

## **ADM:222 Career Capstone** 3 cr.

This course is designed to be a capstone in the Administrative and Office Support program. This capstone emphasizes the integration of the student's knowledge and application of office skills. This course should be taken during the last semester before graduation. (59.4 Lec. Hrs.)

**Prerequisite:** ADM:122, BCA:120, MGT:151.

## **ADM:254 Business Professionalism** 1 cr.

This course is designed to develop professional growth in the areas of leadership, community service, cooperation, patriotism and business knowledge through membership and participation in a professional organization. This course may be repeated for a total of eight credits. (19.8 Lec. Hrs.)

## **ADM:255 Business Professionalism II** 1 cr.

This course is designed to provide students the opportunity to develop professional growth in the areas of leadership, community service, cooperation, patriotism and business knowledge through membership and participation in a professional organization. This course may be repeated for a total of eight credits. (19.8 Lec. Hrs.)

**Prerequisite:** ADM:254.

# COURSE DESCRIPTIONS

## **ADM:936 Occupational Experience 3 cr.**

This course is designed to provide students with the opportunity to receive practical office-related work experience through on-the-job training. While at work, students apply knowledge and skills learned in the classroom to complete the tasks and responsibilities of their positions. Students are guided by the coordinated efforts of the employer and the occupational experience coordinator. (237.6 Co-op. Hrs.)

**Prerequisite:** Completion of approximately half of the credit hours required for graduation in the student's major program or consent of instructor, and a grade point average of 2.0 or higher.

## **ADM:940 Leadership Seminar 2 cr.**

This course is designed to develop self and professional growth in the area of leadership. The course will provide a base for students to build and increase self-esteem, discover the components of leadership, become aware of leadership issues, participate in a service project and develop their own leadership style. (39.6 Lec. Hrs.)

## **AGRICULTURE - AGRONOMY**

## **AGA:154 Fundamentals of Soil Science 3 cr.**

Introduction to physical, chemical and biological properties of soils, their formation, classification and distribution. (59.4 Lec. Hrs.)

## **AGA:210 Corn and Soybean Production 3 cr.**

This course covers the principles of corn and soybean production relative to managerial decisions needed to produce maximum economic yield. This course is designed to enable the student to learn and discuss the most current issues and research information dealing with the commercial and specialized production of corn and soybeans. Special focus will be placed on management's critical thinking abilities in relation to the above production factors and the economical and responsible use of all resources. (59.4 Lec. Hrs.)

## **AGA:270 Principles of Crop Management 3 cr.**

Covers the general scope of agronomy. Topics include plant anatomy, physiology, climate, soil, weeds and seeds. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **AGA:285 Crop Protection 3 cr.**

This course introduces students to the safe handling and use of agricultural chemicals; the biology of weed, insect, and disease pests in production agriculture; the control of weed, insect, and disease pests in production agriculture through integrated pest management practices; the maximum use of all economic resources as they relate to agricultural pest controls; the development of philosophies to protect the environment, and federal and state laws regarding the use of pesticides. Students will take the state pesticide applicator's exam upon completion of this course. Residents of states other than Iowa should be able to successfully complete those equivalent requirements in those states. (59.4 Lec. Hrs.)

## **AGA:336 Forage Production 1.5 cr.**

Forage Production is a study of the cultivation and production of grass and legume forage. Topics include identification of forage species, variety selection, seeding, fertilization, control of weeds, insects and diseases, grazing, harvesting and storage. (29.7 Lec. Hrs.)

## **AGA:349 Fertilizers 1.5 cr.**

The manufacture and kinds of lime and fertilizer materials, the economical and efficient use of lime and fertilizer materials, and the impact of lime and fertilizer material on the environment with practical application to production. Agriculture and horticulture soil and fertilizer management will be discussed. (30 Lec. Hrs.)

**Prerequisite:** AGA:351 and AGA:890.

## **AGA:351 Soil Science 1.5 cr.**

The nature of soils including soil formation, soil physical properties, biological properties, and soil stewardship with practical application to production agriculture and horticulture soil and fertilizer management will be addressed. (30 Lec. Hrs.)

**Prerequisite:** AGC:942.

## **AGA:373 Integrated Crop Management 2 cr.**

The integrated approach to management of weeds, insects, diseases, and disorders common to corn, soybeans, wheat, and alfalfa will be discussed and observed in the field environment. (21.6 Lec. Hrs./32.4 Lab Hrs.)

## **AGA:378 Sustainable Pest Management 3 cr.**

This course examines the health of soil and crops as well as insect cycling in pest management and weed control. Environmentally sound control options will be covered for common pest problems. (59.4 Lec. Hrs.)

## **AGA:881 Grain Science 1.75 cr.**

Grain handling, grading, discounts, pricing, drying, storage, insect and mold control will be discussed. The student will be introduced to the equipment used in grain sampling and testing and to practices used in grain handling on the farm and at elevator grain terminal businesses. (34.65 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## **AGA:890 Soil Chemistry 1.5 cr.**

Soil chemical properties, including clay mineralogy, cation exchange, pH, and availabilities of nitrogen, phosphorus, potassium, and micronutrients in the soil with practical application to production agriculture and horticulture soil and fertilizer management will be discussed. (30 Lec. Hrs.)

Prerequisite: AGA:351

## **AGA:901 Seed Science 1.5 cr.**

The biology of monocotyledonous and dicotyledonous seeds and seedlings, germination and seedling establishment, germination testing, certification, seed laws, seed purity and quality, variety selection, inoculation and seed treatments will be discussed.

(30 Lec. Hrs.)

## **AGRICULTURE - FARM MANAGEMENT**

---

## **AGB:103 Agricultural Economics 1.5 cr.**

This course deals with economic principles applied to the feed, grain, seed, fertilizer, and production agribusiness industries. Topics include supply, demand, economic returns, opportunity costs, prices, business regulations, microeconomics, macroeconomics, farm programs and finance.

(30 Lec. Hrs.)

## **AGB:105 Business Principles for Agriculture I 1.75 cr.**

This an introductory retail agribusiness course designed to enable students to learn and explore American agriculture, free enterprise systems, managerial functions, and business decision-making. (34.65 Lec. Hrs.)

## **AGB:106 Business Principles for Agriculture II 1.75 cr.**

This course is a study of the comprehensive managerial and operational sides of the retail agribusiness sector of American agriculture. Course emphasis shall be placed on financial management, location analysis, service analysis and getting the most out of the human and financial resources employed by a retail agribusiness firm.

(34.65 Lec. Hrs.)

## **AGB:108 Human Relations I 1.5 cr.**

Designed to help the student prepare for employment, satisfactory work performance, co-worker relations, employer-employee relations, work habits and attitudes and the procedures for applying and interviewing for a job.

(30 Lec. Hrs.)

## **AGB:112 Human Relations II 1.75 cr.**

This course will help the student understand how the study of human relations will help them achieve career success and increased work/life balance. Students will learn the nature, purpose, and importance of human relations in an organizational setting. The student will be able to identify major developments in the workplace that have given new importance to human relations and identify some basic themes that serve as a foundation for effective human relations.

(36 Lec. Hrs.)

## **AGB:141 Applied Agribusiness Accounting I 1.25 cr.**

An introduction to the accrual accounting system. Emphasis is also given to the accounting cycle and basic accounting principles and practices used by many companies in the input/supply sector of the agriculture industry.

(24 Lec. Hrs.)

## **AGB:142 Applied Agribusiness Accounting II 1 cr.**

This is the second of a two-course series of double entry, accrual accounting. Major emphasis of this course focuses on payroll accounting and the accounting practices of a merchandising business as found in retail agribusiness.

(20.4 Lec. Hrs.)

**Recommended:** AGB:141.

## **AGB:191 Agricultural Sales I 1.5 cr.**

This course will investigate agricultural sales as a career. Students will study and prepare for the sales process utilizing sales techniques and knowledge of the behavioral sciences.

(30 Lec. Hrs.)

## **AGB:192 Agricultural Sales II 1.75 cr.**

This course will cover the communications and skills needed to persuade people. This course will cover personality, product knowledge, prospecting and basic motivational techniques to help people solve problems and satisfy needs. Students will develop an understanding and practice approach, presentation and demonstration techniques using role play situations. The students will learn how to overcome objections and close a sale successfully.

(36 Lec. Hrs.)

**Prerequisite:** AGB:191.

## **AGB:193 Agricultural Sales III 1.25 cr.**

A continuation of AGB:191 and AGB:192 with emphasis on sales to agricultural customers. The total scope of the duties of a salesperson is emphasized. Use of the phone in sales is covered.

(24 Lec. Hrs.)

**Prerequisites:** AGB:192.

## **AGB:231 Futures and Options 1.5 cr.**

Principles of futures market operations, terminology, contract specifications and charting of trends will be discussed in this course. Hedging and how it fits in farm operations will be also be discussed.

(29.7 Lec. Hrs.)

**Prerequisite:** AGC:861.

## **AGB:232 Livestock and Grain Marketing 3 cr.**

This course is the study of agricultural commodity marketing with emphasis on traditional row crop, feed, oil grains and traditional livestock. Topics of value added and direct marketing will also be explored.

(59.40 Lec. Hrs.)

## **AGB:280 Business Law for Agriculture 1.5 cr.**

Students will learn and apply business law to the retail agribusiness setting. The course will focus on the legal and social environment of business, contracts, personal property and bailments, sales and leases of personal property, negotiable instruments, debtor-creditor relations and risk management, agency and employment, business organizations, and real property. This course will also address the legal, liability, risk management and security issues of a modern corporate or retail agribusiness.  
(30 Lec. Hrs.)

## **AGB:299 Farm Business Analysis 1.5 cr.**

This course covers appropriate record keeping, documentation and analysis of various crops and livestock budgets, cash flow, whole farm budgeting, rental and leasing agreements. (29.70 Lec. Hrs.)  
**Prerequisite:** AGB:302.

## **AGB:301 Applied Accounting – Farm Management I 1.5 cr.**

Emphasis is placed on the importance of farm recordkeeping as an essential management tool. Inventory, depreciation, receipts and expenses, cash and accrual methods of accounting, net farm income statements and net worth statements are included in this course. The students are given practical recordkeeping problems for experience.  
(29.7 Lec. Hrs.)

## **AGB:302 Applied Accounting for Farm Management II 1.5 cr.**

This course will develop the student's understanding of income tax management, depreciation, capital gains, setting up cash flows, net farm income statements, and net worth statements to help the student analyze the farm business.  
(30 Lec. Hrs.)

**Prerequisite:** AGB:301.

## **AGB:304 Agricultural Finance 1.5 cr.**

This course covers the importance of obtaining credit, its wise use, credit sources for farmers and maintaining a good credit rating. Students are exposed to credit instruments and the necessary budgets required for obtaining credit.  
(29.7 Lec. Hrs.)

## **AGB:305 Agricultural Law 1.5 cr.**

This course is a study of torts, restrictions on the use and ownership of property, water rights, fence issues, employer-employee relationships, forms of business ownership and structure, leasing and renting, estate planning, and contract law as it relates to production agribusiness.  
(29.70 Lec. Hrs.)

## **AGB:306 Risk Management 1.5 cr.**

This course deals with the principles of insurance coverage used in the farm business and other risk management tools available to production agribusiness professionals. This course also deals with the fundamental principles and strategies of a diverse risk management portfolio including crop insurance, liability issues and personal finance.  
(30 Lec. Hrs.)

## **AGB:357 Agribusiness Marketing and Retailing 3 cr.**

This course provides the student with knowledge required to understand and execute marketing promotions. It equips students with the ability identify and construct successful public relations campaigns and evaluate advertising communication used in agribusiness.  
(59.4 Lec. Hrs.)

## **AGRICULTURE - COMPREHENSIVE**

### **AGC:861 Farm Experience I 3 cr.**

Through this course students gain practical farm experience over a six week period at an approved employment center. Employment centers are approved and coordinated by a faculty member. Instructors work with students in selecting an employment center. Students receive pay as negotiated during an employment interview.  
(237.6 Co-op Hrs.)

**Pre-requisite:** Consent of instructor.

### **AGC:862 Farm Experience II 3.5 cr.**

Through this course students gain practical farm experience over a six week period at an approved employment center. Employment centers are approved and coordinated by a faculty member. Instructors work with students in selecting an employment center. Students receive pay as negotiated during an employment interview.  
(277.2 Co-op Hrs.)

**Pre-requisite:** AGC:861 or consent of instructor.

### **AGC:864 Farm Experience III 3 cr.**

Through this course students gain practical farm experience over a six week period at an approved employment center. Employment centers are approved and coordinated by a faculty member. Instructors work with students in selecting an employment center. Students receive pay as negotiated during an employment interview.  
(237.6 Co-op Hrs.)

**Pre-requisite:** AGC:862 or consent of instructor.

### **AGC:865 Farm Experience IV 3.5 cr.**

Through this course students gain practical farm experience over a six week period at an approved employment center. Employment centers are approved and coordinated by a faculty member. Instructors work with students in selecting an employment center. Students receive pay as negotiated during an employment interview.  
(277.2 Co-op Hrs.)

**Pre-requisite:** AGC:864 or consent of instructor.

### **AGC:901 Seminar I .5 cr.**

This course is designed to offer the student an opportunity to present and discuss current topics, problems, and ideas that do not relate to current course content and discuss questions pertaining to the agricultural industry. Instructors will guide discussions and attempt to provide conclusions and develop attitudes conducive to successful farm business management. A major portion of each Seminar course is devoted to the educational programming and leadership activities of Postsecondary Agricultural Students (PAS) organization. This is the first of four sequential courses that are required for graduation from the Farm Management Program.  
(9.9 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **AGC:902 Seminar II .5 cr.**

This course is designed to offer the student an opportunity to present and discuss current topics, problems and ideas that do not relate to current course content and discuss questions pertaining to the agricultural industry. Instructors will guide discussions and attempt to provide conclusions and develop attitudes conducive to successful farm business management. A major portion of each Seminar course is devoted to the educational programming and leadership activities of Postsecondary Agricultural Students (PAS) organization. This is the second of four sequential courses that are required for graduation from the Farm Management Program. (9.9 Lec. Hrs.)

**Pre-requisite:** AGC:901.

## **AGC:903 Seminar III .5 cr.**

This course is designed to offer the student an opportunity to present and discuss current topics, problems and ideas that do not relate to current course content and discuss questions pertaining to the agricultural industry. Instructors will guide discussions and attempt to provide conclusions and develop attitudes conducive to successful farm business management. A major portion of each Seminar course is devoted to the educational programming and leadership activities of Postsecondary Agricultural Students (PAS) organization. This is the third of four sequential courses that are required for graduation from the Farm Management Program. (9.9 Lec. Hrs.)

**Pre-requisite:** AGC:902.

## **AGC:904 Seminar IV .5 cr.**

This course is designed to offer the student an opportunity to present and discuss current topics, problems, ideas that do not relate to current course content and discuss questions pertaining to the agricultural industry. Instructors will guide discussions and attempt to provide conclusions and develop attitudes conducive to successful farm business management. A major portion of each Seminar course is devoted to the educational programming and leadership activities of Postsecondary Agricultural Students (PAS) organization. This is the fourth of four sequential courses that are required for graduation from the Farm Management Program. (9.9 Lec. Hrs.)

**Pre-requisite:** AGC:903.

## **AGC:910 Alpha Mu Sigma I .5 cr.**

Designed to help the student develop a working knowledge of parliamentary procedure, develop the ability to successfully conduct meetings, develop leadership qualities, develop and foster relationships with other students, DECA chapters and industry on a state and national level. (9.9 Lec. Hrs.)

**Prerequisite:** Consent of instructor or enrollment in the Feed and Fertilizer Marketing program.

## **AGC:911 Alpha Mu Sigma II .5 cr.**

Designed to help the student develop a working knowledge of parliamentary procedure, develop the ability to successfully conduct meetings, develop leadership qualities, develop and foster relationships with other students, DECA chapters and industry on a state and national level. (9.9 Lec. Hrs.)

**Prerequisite:** Consent of instructor or enrollment in the Feed and Fertilizer Marketing program.

## **AGC:912 Alpha Mu Sigma III .5 cr.**

Designed to help the student develop a working knowledge of parliamentary procedure, develop the ability to successfully conduct meetings, develop leadership qualities, develop and foster relationships with other students, DECA chapters and industry on a state and national level. (9.9 Lec. Hrs.)

**Prerequisite:** Consent of instructor or enrollment in the Feed and Fertilizer Marketing program.

## **AGC:913 Alpha Mu Sigma IV .5 cr.**

Designed to help the student develop a working knowledge of parliamentary procedure, develop the ability to successfully conduct meetings, develop leadership qualities, develop and foster relationships with other students, DECA chapters and industry on a state and national level. (9.9 Lec. Hrs.)

**Prerequisite:** Consent of instructor or enrollment in the Feed and Fertilizer Marketing program.

## **AGC:941 Employment Experience I 3 cr.**

Instructors and students select employment centers to gain practical experience from approved places of business during a six- to seven-week employment experience period. The experience centers are approved and coordinated by a faculty member. Students receive the going wages during these periods. (237.6 Co-op Hrs.)

**Prerequisite:** Consent of instructor and enrollment in Feed and Fertilizer Marketing program.

## **AGC:942 Employment Experience II 3.5 cr.**

Instructors and students select employment centers to gain practical experience from approved places of business during a six- to seven-week employment experience period. The experience centers are approved and coordinated by a faculty member. Students receive the going wages during these periods. (277.2 Co-op Hrs.)

**Prerequisite:** AGC:941. Consent of instructor and enrollment in Feed and Fertilizer Marketing program.

## **AGC:943 Employment Experience III 3 cr.**

Instructors and students select employment centers to gain practical experience from approved places of business during a six- to seven-week employment experience period. The experience centers are approved and coordinated by a faculty member. Students receive the going wages during these periods. (237.6 Co-op Hrs.)

**Prerequisite:** AGC:942. Consent of instructor and enrollment in Feed and Fertilizer Marketing program.

# COURSE DESCRIPTIONS

## **AGC:944 Employment Experience IV**

**3.5 cr.**

Instructors and students select employment centers to gain practical experience from approved places of business during a six- to seven-week employment experience period. The experience centers are approved and coordinated by a faculty member. Students receive the going wages during these periods.  
(277.2 Co-op Hrs.)

**Prerequisite:** AGC:943. Consent of instructor and enrollment in Feed and Fertilizer Marketing program.

## **AGRICULTURE - FLORAL**

### **AGF:120 Plant Identification and Care I**

**2 cr.**

Introduces the student to the study of garden and house flowering and foliage plants. Topics will include production, culture, propagation and materials necessary for the growth of annuals, perennials, bulbs, ground covers, ferns, exotic and tropical plants, shrubs and roses.  
(39.6 Lec. Hrs.)

### **AGF:139 Floral Design I**

**2 cr.**

Introduces the student to design theory. Emphasis is placed on the development of special techniques in basic design as it applies to flowers, foliage and accessories. Hands on work with floral design is completed in the three medias of fresh, silk and dried.  
(39.6 Lec. Hrs.)

### **AGF:299 Sustainable Market Farming**

**3 cr.**

This course is designed for students interested in growing vegetables and fruits. The course will include sustainable crop production; planning and timing of crops will be discussed, new methods of growing and pest management. Discussions will include the organic seed movement, organic certification and state/federal funding sources that may be available.  
(59.4 Lec. Hrs.)

## **AGRICULTURE - HORTICULTURE**

### **AGH:115 Turf Management**

**2 cr.**

This course introduces the types of grass species and their uses; their growth habits, and development as a unique plant species. Proper culture and establishment procedures are studied as well as their importance to the environment.  
(39.6 Lec. Hrs.)

### **AGH:131 Greenhouse Management**

**3 cr.**

This course presents the management of greenhouse crops. Common commercial crops are addressed and techniques used in the production of greenhouse crops are demonstrated.  
(59.4 Lec. Hrs.)

### **AGH:143 Equipment Repair**

**3 cr.**

An introductory course in basic horticulture equipment maintenance. Areas to be covered will include safety, basic tools, air-cooled engine technology, fuel and lubrication, electrical systems, governor systems, failure analysis, and engine disassembly and inspection, maintenance schedules and basic repairs.  
(48 Lec. Hrs./24 Lab Hrs.)

### **AGH:149 Drawing and Design**

**2 cr.**

This course provides students with the skills necessary to design residential landscapes. Attention will be given to choosing plant materials, design surfaces and site analysis. This course is specifically designed to allow students to go through the steps involved in residential site design.  
(39.6 Lec. Hrs.)

### **AGH:152 Landscape and Design**

**3 cr.**

Studies the theory and principles of landscape design as they are applied to selected problems in landscape development. The use of trees, shrubs, and planting in the public, living and service area of the home will be included.  
(59.4 Lec. Hrs.)

### **AGH:221 Principles of Horticulture**

**3 cr.**

This course is a study in horticulture. The goal of this course is to provide the basic knowledge in horticulture science and clearly illustrate how that knowledge is applied in both home and production agriculture.  
(59.4 Lec. Hrs.)

### **AGH:222 Plant Propagation I**

**2 cr.**

This course covers plant propagation procedures commonly done in the late winter and spring. Starting of seed and grafting will be covered. Propagation theory and history will be discussed.  
(39.6 Lec. Hrs.)

### **AGH:235 Plant Genetics**

**2 cr.**

An introductory genetics class for students majoring in Horticulture Science. This course will provide insight into many aspects of plant genetics, including inheritance in conjunction with methods for the isolation and detection of specific gene fragments so that the student can understand the detection of genetic diseases and identification of individual (DNA fingerprinting). Students can discover how genes are organized, how they reproduce and how they affect the next generation of cells. Recombination, structure and replication of DNA, and gene expression will be major topics of study.  
(39.6 Lec. Hrs.)

### **AGH:237 Plant Identification and Care II**

**2.5 cr.**

This course builds on the study of garden, house flowering and foliage plants. Topics covered will include history, origin, classification and propagation of a variety of plant materials. This will include annuals, perennials, bulbs, ground covers, ferns, tropical plants, shrubs and roses.  
(49.5 Lec. Hrs.)

### **AGH:254 Pest Management**

**2 cr.**

This course provides basic knowledge of the weeds, diseases and insects that commonly affect or attach to ornamental plants. The structure, function and life cycles of these pests will be studied. A collection of pests will help students with the identification process.  
(42 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## **AGH:274 Nursery Management** 2.5 cr.

This course will focus on the administration and culture of the nursery business. This will include retail garden centers and nurseries. Specifics will include fertilization, irrigation, plant growth and long-term nursery production cycles.

(24 Lec. Hrs/18 Lab Hrs.)

## **AGH:294 Small Business for Horticulture** 2 cr.

This course is designed to study the principles of organizing, financing and managing a small horticulture related business.

(39.6 Lec. Hrs.)

## **AGH:339 Athletic Field Maintenance** 1 cr.

A study of specific sport facilities utilizing turfgrasses including football, soccer, field hockey, baseball and softball fields. Techniques of operation, management, maintenance, budgets, construction and irrigation will be covered.

(19.2 Lec. Hrs./4.8 Lab Hrs.)

## **AGH:405 Golf Course Maintenance** 3 cr.

This course provides opportunities for students to learn techniques of golf course management and operation. Proper construction of specific golf course areas such as greens, tees and bunkers are studied. Basic golf course design is presented. Irrigation, maintenance and integrated pest management programs are presented.

(59.4 Lec. Hrs.)

**Prerequisite:** AGH:115 is recommended.

## **AGH:450 Horticultural Leadership I** .75 cr.

Designed to provide students the opportunity to discuss current issues in horticulture, be introduced to horticulture professionals as well as other horticulture students throughout the region.

(18 Lec. Hrs.)

## **AGH:452 Horticultural Leadership II** .5 cr.

Designed to provide students the opportunity to discuss current issues in horticulture, be introduced to horticulture professionals as well as other horticulture students throughout the region.

(12 Lec. Hrs.)

## **AGH:454 Horticultural Leadership III** .75 cr.

Designed to provide students the opportunity to discuss current issues in horticulture, be introduced to horticulture professionals as well as other horticulture students throughout the region.

(18 Lec. Hrs.)

## **AGH:455 Horticultural Leadership IV** .5 cr.

Designed to provide students the opportunity to discuss current issues in horticulture, be introduced to horticulture professionals as well as other horticulture students throughout the region.

(12 Lec. Hrs.)

## **AGH:805 Horticulture Internship I** 2.5 cr.

This course provides on-the-job experience in a commercial horticulture business.

Students will gain an in-depth understanding of the skills necessary to be successful in the field of horticulture.

(186.7 Co-op. Hrs.)

## **AGH:815 Horticulture Internship II** 4 cr.

This course provides on-the-job experience in a commercial horticulture business.

Students will gain an in-depth understanding of the skills necessary to be successful in the field of horticulture.

(300 Co-op. Hrs.)

## **AGH:827 Horticulture Internship III** 3.5 cr.

This course provides on-the-job experience in a commercial horticulture business.

Students will gain an in-depth understanding of the skills necessary to be successful in the field of horticulture.

(262.5 Co-op. Hrs.)

## **AGRICULTURE - MECHANICS**

---

### **AGM:130 Farm Electrification** 1.5 cr.

This is a basic electrical planning course which includes farmstead distribution planning, layout of circuits, electrical code, and selection of electric motors. Wiring skills will be a major emphasis of this course. (29.70 Lec. Hrs.)

### **AGM:157 Machinery Management** 3 cr.

The economics of machinery selection and use will receive major emphasis.

Management decisions concerning size of machine, purchasing, and the operation of major farm machines will also be topics for class consideration.

(59.4 Lec. Hrs.)

### **AGM:160 Farm Structures** 1.5 cr.

A course in building materials and planning to provide the student with fundamental knowledge needed in selecting economical, flexible and highly useful farm buildings. Structure trends, types, building materials and plan reading will be emphasized.

(29.70 Lec. Hrs.)

### **AGS:180 Sheep Production** 1.5 cr.

Students will gain the basic production principles necessary for raising sheep. Topics will include genetics, reproduction, health, nutrition and management.

(29.70 Lec. Hrs.)

### **AGM:423 Equipment & Diesel Performance** 2 cr.

Course deals with the operation, repair and maintenance of farm equipment with special emphasis on diesel engine performance. Focus shall be placed on diesel engines and components; fuel systems; electronic and performance enhancement technologies and hydraulic systems. (39.6 Lec. Hrs.)

## AGRICULTURE - PRECISION AG

### AGP:243 Precision Agricultural Applications 3 cr.

This introductory course is designed to help retail students assist agricultural producers to become more profitable and preserve non-renewable resources, identify computer hardware and software needs, and to make recommendations to producers based on agronomic and economic data. This course will concentrate on the theories and applications of Geographic Information Systems (GIS), Site Specific Farming (SSF), Precision Farming (PF) and Global Positioning Systems (GPS) and will explore various tools for Variable Rate Technology (VRT) and Variable Rate Application (VRA). Utilization of remote sensing data as a diagnostic tool for managerial decisions will be emphasized. (59.4 Lec. Hrs.)

## AGRICULTURE - ANIMAL SCIENCE

### AGS:109 Animal Science I 3 cr.

Designed to provide the student with an understanding of the practices, management programs, management and labor requirements, reproduction programs, gestation periods, sanitation, health, and disease control problems and background knowledge needed to comprehensively advise livestock producers on their livestock production enterprises. (59.4 Lec. Hrs.)

### AGS:119 Livestock Management 2 cr.

Designed to provide the student with an understanding of the practices, management programs, labor requirements, reproduction programs, gestation periods, sanitation, health, and disease control problems of livestock management as well as the background knowledge needed to comprehensively advise livestock producers on their livestock production enterprises. (39.6 Lec. Hrs.)

### AGS:180 Sheep Production 1.5 cr.

Students will gain the basic production principles necessary for raising sheep such as genetics, reproduction, health, nutrition and management. (29.7 Lec. Hrs.)

### AGS:315 Principles of Animal Nutrition 3 cr.

This course is a study of the digestive systems of farm livestock, the basic food nutrients, how and why they are needed by the animals and the individual nutrient requirements of each farm animal depending on stage of growth, development or function. It will also cover topics such as selection of feeds for feeding farm animals and the procedures used to determine what feeds to use. Students will select the proper feed rations to use and learn to formulate balanced feed rations. (59.4 Lec. Hrs.)

### AGS:318 Feed Formulation 1.75 cr.

This course examines the feeding standards and tables used to calculate feed rations for all classes of livestock. Students will use mathematical formulas and calculations to formulate livestock rations and diets. Algebraic, Pearson Square and substitution methods are used to formulate rations for feeding and premixing rations. (36 Lec. Hrs.)

**Prerequisite:** AGS:317 and MAT:041 or MAT:053 or minimum math placement score based on college assessment.

### AGS:324 Dairy Production 1.5 cr.

This course is designed to teach students how to profitably manage a dairy herd. Consideration is given to rations, feeding practices, care of replacements and use of records. (29.7 Lec. Hrs.)

### AGS:352 Genetics 1.5 cr.

This course deals with basic genetics principles as applied to crop and livestock science. Topics will include selection, breeding systems, breeding animals on individual type, progeny testing and genetic improvement. Seed selection based on hybrid characteristics and basic biotechnological advances will be discussed. (29.7 Lec Hrs.)

**Prerequisite:** AGC:861

### AGS:401 Swine Production 3 cr.

This is the first of two courses that together give a basic foundation for one planning to operate a profitable swine enterprise. Swine facilities from past to present are analyzed with special emphasis on the economic, social, environmental and physical demands of sustainability. Included are the fundamentals of swine care, selection, breeding, reproduction, management and disease prevention and control. (59.4 Lec. Hrs.)

### AGS:410 Swine Production II 1.5 cr.

This course offers a basic foundation for one planning to operate or become employed by a swine enterprise. Swine facilities are analyzed with special emphasis on the economic, social, environmental and physical demands of sustainability. Other major topics include the fundamentals of swine care in the grow-finish phase, comprehensive management, disease prevention and disease control, applications and evaluation of swine, feeding, housing management, sanitation, biosecurity, and disease prevention practices that optimize production efficiency and animal well-being. (29.7 Lec. Hrs.)

### AGS:554 Beef Production 3 cr.

This course is designed to prepare the student to be successful in the field of beef production. Emphasis is on beef cattle breeding and cow-calf operations in part one and nutrition and herd health in part two. Topics in beef cattle breeding, selection, ration planning, sire evaluation and approved management practices relevant to Midwest operations. Topics in cow-calf operation include cow-calf production records, breed selection, reproduction, economics and marketing and feed processing. (59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

## AGRICULTURE - VETERINARY TECHNOLOGY

### **AGV:113 Canine and Feline Nutrition** 2 cr.

This course highlights nutrition as an essential component of pet care. The student will learn basic nutrition and the nutrient requirements for feeding and maintaining healthy dogs and cats. This course teaches students to provide optimal nutritional care for pets.  
(39.6 Lec. Hrs.)

**Prerequisite:** AGV:130.

### **AGV:114 Microbiology for Veterinary Technicians** 3 cr.

This course highlights the opportunity for the students to learn the techniques used to identify the various forms of microorganisms, including bacteria and fungi that cause clinical illness. Students will learn culture techniques and determine antimicrobial agents of choice through sensitivity testing. The student will know how to use this information to assist the veterinarian in the diagnosis and treatment of these diseases.  
(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** AGV:133.

### **AGV:118 Animal Anatomy and Physiology I** 4 cr.

This course introduces the student to the basic concepts of an animal's form, structure, and function. These concepts are then used to study the gross anatomy, microscopic anatomy, and physiology of the animal body. The lab section of the class will give the student an in depth look at the gross anatomy of tissue types and organ systems to help them understand how the body works as a machine.  
(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** AGV:119, BIO:114.

### **AGV:119 Veterinary Medical Terminology** 2 cr.

This course provides the student with the skills to be able to write, pronounce, spell, define, and use medical terms in the veterinary profession. The student will be able to apply and demonstrate their knowledge of the terminology in everyday conversations with fellow students, instructors, and veterinary professionals.  
(39.6 Lec. Hrs.)

### **AGV:127 Animal Anatomy and Physiology II** 4 cr.

This course is a continuation of Animal Anatomy & Physiology I. It will give the student a more detailed look at the gross anatomy and physiology of the various organ systems including the cardiovascular, respiratory, digestive, nervous, endocrine, urinary and reproductive systems. We will also explore a more detailed look at the sense organs, pregnancy, development, and lactation, as well as a small section on avian and exotic anatomy & physiology.  
(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** AGV:118, CHM:122.

### **AGV:130 Clinical Technology I** 3 cr.

This course highlights communication within the veterinary medical team as well as provides an introduction to veterinary technology as a career. This course covers common names for species, general animal care and restraint, basic principles of a proper physical exam, nutrition, diagnostic techniques, and wound management.  
(39.6 Lec. Hrs./39.6 Lab Hrs.)

### **AGV:131 Clinical Technology II** 3 cr.

This course is designed to acquaint the students with common business procedures that the veterinary technician may be responsible for, as well as fundamental record keeping procedures, and computer utilization. There will be a presentation on veterinary careers, including a discussion on job placement, and interviewing. Veterinary ethics will also be discussed.  
(59.4 Lec. Hrs.)

**Prerequisite:** AGV:119, AGV:130.

### **AGV:133 Veterinary Clinic Pathology I** 3 cr.

In this course, students have the opportunity to learn the techniques used to identify the various forms of microorganisms and the drugs to which they are sensitive, and the various animal internal and external parasites, their life cycles and methods of detection. Students will learn history, terminology, equipment, structure, and classification of the various veterinary organisms. It will acquaint the student with the microscope, laboratory facility, and various preparation techniques available.  
(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** AGV:119, BIO:114, CHM:122.

### **AGV:134 Veterinary Clinic Pathology II** 3 cr.

This course is designed to familiarize students with the part of the laboratory that is devoted to analyzing blood, urine, cytology smears, and cytology preparation. It will acquaint the students with laboratory equipment, reagents, and techniques required to utilize blood samples and other bodily fluids as a diagnostic aid.  
(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** AGV:118, AGV:133.

### **AGV:140 Veterinary Pharmacology** 3 cr.

This course covers the study of drugs and other pharmaceuticals used in veterinary medicine. Emphasis will be on drug usage, client education, calculations, measurement, administration, inventory, and storage. This course will give a detailed outline of the technician's role and responsibility in the pharmacy.  
(59.4 Lec. Hrs.)

**Prerequisite:** AGV:118, AGV:131, AGV:133.

### **AGV:146 Large Animal Nursing** 3 cr.

More detailed information will be given regarding large animal diseases and the management of herd health. Discussions will include restraint, diagnostic testing, bandaging, diagnostic imaging, surgery and anesthesia, fluid therapy, medical and surgical nursing by body system, and euthanasia and necropsy.  
(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** AGV:127, AGV:140, AGV:159.

# COURSE DESCRIPTIONS

## **AGV:159 Surgical Nursing 3 cr.**

Introduces the student to the methods and mechanics of the sterilization process. Course covers the technician's role in the surgery room as well as patient prep, sterile techniques, surgical instrument identification, pack preparation, and surgical nursing care.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** AGV:118, AGV:131.

## **AGV:170 Veterinary Anesthesiology 3 cr.**

This course involves the study of pharmacology, application of anesthetic agents, the physiological effects and means of monitoring them, principles and administration of inhalant anesthetics, and a broad overview of anesthetic protocol and care. Emphasis will be on anesthetic practical skills and anesthesia equipment. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** AGV:127, AGV:134, AGV:140.

## **AGV:182 Diagnostic Imaging 3 cr.**

This course is designed to familiarize the student with the x-ray machine, darkroom, troubleshooting techniques, and radiation safety. Areas of emphasis will include technique failures, positioning, and standard diagnostic procedures. It will also introduce the student to digital radiography and ultrasound technologies.

(59.4 Lec. Hrs.)

**Prerequisite:** AGV:118 and AGV:130.

## **AGV:184 Lab Animal Medicine 2 cr.**

This course is designed to give the student a broad overview of laboratory animal medicine and technology. It will show the student how to utilize and manage various species in a research environment. Emphasis will be on the laboratory setting, regulatory guidelines, and ethical considerations, as well as information on handling, behavior, nutrition, lab, and treatment procedures. (39.6 Lec. Hrs.)

**Prerequisite:** AGV:119, BIO:114.

## **AGV:186 Canine and Feline Behavior 2 cr.**

This course teaches students to have an understanding of small animals' behavior, primarily canines and felines, to assist clients with choosing and training their pets as well as to maintain a controlled veterinary office setting. Techniques in preventing and resolving behavior problems will be discussed. (39.6 Lec. Hrs.)

**Prerequisite:** AGV:130.

## **AGV:232 Clinical Technology III 4 cr.**

This course is a continuation of Clinical Technology I & II. It will include information on preventative medicine, pathology and response to diseases, fluid therapy and blood transfusions, dentistry, and emergency and critical care. In addition to new information, the student will also be able to review techniques in order to prepare for the upcoming national exam. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** AGV:118, AGV:131, AGV:133.

## **AGV:932 Veterinary Technician Internship 4 cr.**

This is the final phase of the Veterinary Technician Program. At the end of the program each student will be assigned to complete his or her internship at an approved animal hospital under the supervision of a licensed veterinarian, where he or she will spend 198 hours practicing and applying the skills the student has learned. Each student will be given a skills checklist to complete during this time. This course must be passed in order to graduate from the veterinary technician program. (237.6 Clinical Hrs.)

**Prerequisite:** All other courses of the Veterinary Technician Program and consent of Program Director.

## **AMERICAN SIGN LANGUAGE**

### **ASL:151 American Sign Language I 5 cr.**

This is an introductory level course which is designed with a sequenced series of readiness activities in the language of American signs. The course emphasizes vocabulary building, sign principles and development of expressive and receptive signing skills. The students participate in exercises that develop a comprehension of sign vocabulary and grammatical patterns of ASL.

(79.2 Lec. Hrs./59.4 Clinical Hrs.)

**Co-requisite:** ITP:129

### **ASL:181 American Sign Language II 5 cr.**

This course is designed for students to continue to study American Sign Language (ASL). The students will participate in various exercises that will increase their receptive skills as well as expressive skills. The students will also be signing more, along with the full use of body language, facial expression, pantomime and gesture. The students will continue their awareness and developmental patterns and tendencies of ASL.

(79.2 Lec. Hrs./59.4 Clinical Hrs.)

**Prerequisite:** ASL:151.

### **ASL:251 American Sign Language III 5 cr.**

Expands on previously learned grammatical structures and lexical items of the target language. The student learns to control the language in a variety of conversational settings through directed conversations and group discussion.

(79.2 Lec. Hrs./59.4 Clinical Hrs.)

**Prerequisite:** ASL:181.

### **ASL:281 American Sign Language IV 4 cr.**

Expands on previously learned grammatical structures and lexical items of the target language. The student learns to control the language in a variety of conversational settings through directed conversations and group discussion.

(59.4 Lec. Hrs./59.4 Clinical Hrs.)

**Prerequisite:** ASL:251.

# COURSE DESCRIPTIONS

---

## **ASL:296 American Sign Language V** 4 cr.

This class is the continued work of ASL:281 and focuses on more advanced language skill development. The class will concentrate on vocabulary building and continued mastery of grammar through receptive and expressive language activities. Topics to be discussed in ASL:296 build on ASL:281 coursework and include narrating special experiences, explaining rules, sharing facts and describing accidents.

(59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** ASL:281.

## **ASL:297 American Sign Language VI** 4 cr.

This class builds on the topics addressed in ASL V and focuses on more ASL skill development. The class will concentrate on advanced vocabulary building and continued mastery of grammar through receptive and expressive language activities. Topics to be discussed in ASL VI include automobile accidents, money and banking vocabulary, finances and financial decisions, housing, car problems, life changes, ASL classifiers to describe the human body, and medical conditions, symptoms, causes and treatments. Emphasis is placed on real world applications. Students will expand their ASL storytelling techniques. (59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** ASL:296.

## **ANTHROPOLOGY**

---

### **ANT:105 Cultural Anthropology** 3 cr.

A comparative study of culture and social organization and the study of the effect and influence of language.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

### **ANT:943 Readings in Anthropology** 1-2 cr.

Provides the student with additional reading in anthropology, allowing the student to obtain a greater understanding in various problem areas in the discipline.

The student has the opportunity to earn one or two credits. This course may be repeated twice for additional credits. (39.6-79.2 Lab Hrs.)

## **ART**

---

### **ART:101 Art Appreciation** 3 cr.

Introduction to the world of paintings, sculpture and architecture. Emphasis is on the appreciation of well-known works of art in a variety of media. The artist and the creative process are explored.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

### **ART:120 2-D Design** 3 cr.

An introduction to the principles and procedures which guide the way images and objects are created. Provides a valuable basis for other subsequent fine art studio pursuits as well as for those who wish to progress into commercial applications of graphic and product design. (39.6 Lec. Hrs./39.6 Lab Hrs.)

### **ART:133 Drawing** 3 cr.

An introductory drawing course investigating traditional drawing techniques and materials. This class focuses on the realistic depiction of observed forms and objects. Using basic drawing materials, students will concentrate on the construction of still life objects, landscape and the human figure. Perspective, line, value and composition will be examined. Additionally, students will develop their knowledge of Master works and critical arts movements. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** Beginning lead course; no drawing experience required.

### **ART:134 Drawing II** 3 cr.

An intermediate level drawing course that further explores the use of traditional drawing materials, along with use of some non-traditional materials. This class continues with the study of observed forms and objects with expanded subject matter and development of personal expression through drawing. Development of strong compositional skills will be emphasized. Students in this second-level course will apply some study of human anatomy as it relates to drawing. Students will continue to increase and apply their knowledge of Master works, contemporary artists and critical arts movements to their course work.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ART:133.

### **ART:143 Painting** 3 cr.

A study of artistic principles in the various major paint media. Includes the selection, preparation and use of various surfaces employed. Designed to stress proper selection, usage and maintenance of tools, brushes and palettes. Exercises will teach the student the principles of art, good technical habits and cover special effects in the paint media. Students should demonstrate a working understanding of the properties of paint, color mixing and application, and will gain familiarity with painting terminology. The ability to paint directly from observation will be emphasized.

(59.4 Lec. Hrs./19.8 Lab Hrs.)

**Prerequisite:** Beginning level course; no painting experience required.

### **ART:144 Painting II** 3 cr.

In Painting II students work in a variety of painting media. The student is encouraged to pursue independent painting problems in depth, as well as assigned research areas. An expanded, in-depth study of color theory and composition is presented.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ART:143.

### **ART:157 Printmaking** 3 cr.

Introductory printing course with emphasis in basic printmaking techniques and processes. Printing proficiency in wood block serigraph and/or intaglio prints will be pursued. Students will be expected to print a minimum of one hour per week outside the class.

(59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **ART:161 Digital Art 3 cr.**

This course introduces the computer as a tool for visual communication and creation of various types of art in the Fine and Graphic Art context. It includes raster- and vector-based image-making, digital collage, digital image manipulation, digital painting and drawing, blending of traditional and digital art-making and experimentation in a variety of input and final output methods. (39.60 Lec. Hrs., 39.60 Lab Hrs.)

## **ART:163 Sculpture 3 cr.**

This studio course explores traditional and contemporary sculpture materials and processes. Emphasis is on both additive and subtractive methods of working. Goals include acquiring technical skills, understanding the physical and expressive possibilities of diverse materials, and learning safe, appropriate use of tools and materials. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **ART:164 Sculpture II 3 cr.**

A course designed to provide the intermediate art student opportunity to explore in greater depth the processes and techniques of the beginning sculpture course. The general goals of Sculpture II are to generate the artistic vision and the technical ability of each student, work in an individualized and supportive class environment; and strengthen the quality of the student's portfolio. (39.6 Lec. Hrs./39.6 Lab Hrs.)  
**Prerequisite:** ART:163.

## **ART:173 Ceramics 3 cr.**

Introductory ceramics course with emphasis on ceramics as a creative art. The student will work with the basic elements of forming, glazing and firing clay. Awareness of three-dimensional qualities and the effects of glaze, color and texture will be stressed. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **ART:174 Ceramics II 3 cr.**

A continuation of the basic elements of forming, glazing and firing clay. Awareness of three-dimensional qualities and the effects of glaze, color and texture will be stressed. (39.6 Lec.Hrs./39.6 Lab Hrs.)  
**Prerequisite:** ART:173 or equivalent.

## **ART:186 Digital Photography 3 cr.**

Digital Photography is designed for the Communications Media majors who focus on the visual arts. It is highly recommended for those who concentrate their studies in video productions and web graphics. The focus of the class is the manipulation of digital images using Adobe's Photoshop software. Although some basic principles of photography will be discussed, a previous photography course is not a prerequisite for enrollment. Students must be familiar with Microsoft Windows operating system software. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **ART:203 Art History I 3 cr.**

Investigates the visual arts from earliest prehistoric times through the Middle Ages and the thinking of the people responsible for creating the art. Emphasis in lecture and class discussion will focus on the world's visual creative development from the caves of France through the Middle Ages. (59.4 Lec. Hrs.)

## **ART:204 Art History II 3 cr.**

Studies the significant works of art from the late Gothic period to the present and the thinking of the people responsible for creating the art. Emphasis in lecture and class discussion will focus on the world's visual creative development. (59.4 Lec. Hrs.)

## **ART:949 Special Topics - Art 2 cr.**

This is a special topic course offered at discretion of the instructor. Students will be able to explore in greater detail a subject which does not normally fall within the scope of the current curriculum for Art but is related to the topic Art. The description for this course will be determined on a case by case basis as appropriate to the content. This course may be repeated twice for additional credits. (79.2 Lab Hrs.)

## **ASSOCIATE DEGREE NURSING**

### **ADN:109 Introduction to Health Concepts 10 cr.**

This course introduces the concepts within the three domains of the individual, healthcare and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence based practice, individual centered care and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course. (118.8 Lec. Hrs./237.6 Clinical Hrs.)

**Prerequisite:** Must be admitted into the Associate Degree Nursing program.

**Co-requisites:** ADN:220, BIO:168.

### **ADN:220 Pharmacology 2 cr.**

This course introduces information concerning sources, effects, legalities, and the safe use of medications as therapeutic agents. Emphasis is placed on nursing responsibility, accountability, pharmacokinetics, routes of administration, contraindications and side effects. Upon completion, students should be able to compute medication dosages and administer medications safely. (39.6 Lec. Hrs.)

**Prerequisite:** Must be admitted into the Associate Degree Nursing program.

**Co-requisites:** ADN:109, BIO:168.

### **ADN:301 Holistic Health-Illness Concepts 9 cr.**

This course is designed to further develop the concepts of acid-base, metabolism, cellular regulation, oxygenation, infection, stress/coping, health-wellness-illness, communication, caring interventions, managing care, safety, quality improvement and informatics. Upon completion, students will be able to provide safe nursing care incorporating the concepts identified in this course. (99 Lec. Hrs./237.6 Clinical Hrs.)

**Prerequisites:** ADN:109, ADN:220.

# COURSE DESCRIPTIONS

---

## **ADN:302 Holistic Family Health Concepts** 10 cr.

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of thermoregulation, oxygenation, sexuality, reproduction, infection, grief/loss, mood/affect, behavior, development, family, health-wellness-illness, elimination, intracranial regulation, communication, caring interventions, managing care and safety. Cellular regulation, perfusion, inflammation, sensory perception, stress/coping, cognition, self, violence and professional behaviors are also emphasized. Upon completion, students will provide safe nursing care incorporating the concepts identified in this course.

(118.8 Lec. Hrs./237.6 Clinical Hrs.)

**Prerequisites:** ADN:109, ADN:220.

## **ADN:451 Health System Concepts** 3 cr.

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, healthcare systems, ethics, accountability and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

(59.4 Lec. Hrs.)

**Prerequisites:** ADN:109, ADN:220, BIO:151, BIO:173.

## **ADN:432 Nursing the Childbearing Family** 5 cr.

Nursing the Childbearing Family is one of three courses which allow a student to articulate to the associate degree level of nursing education. The course is designed as a family-centered approach to caring for childbearing clients and families. The student will build on prior learning to apply critical thinking principles while caring for the childbearing family. The concepts of caring, health, environment, person and nursing are closely re-examined as they relate to the childbearing family. Emphasis is placed on concepts such as bonding, parenting and the family. Also, patient/client and family teaching are introduced as related to the childbearing years and the neonatal period. The various roles of the professional maternity nurse team member are examined.

(59.4 Lec. Hrs./118.8 Clinical Hrs.)

**Prerequisites:** BIO:151, BIO:173, PNN:211, PNN:512, PSY:111 and PSY:121.

**Co-requisites:** BIO:186, ENG:105 and SOC:110.

## **ADN:442 Nursing of Children and Families** 5 cr.

Nursing of Children and Families is one of three courses which allow a student to articulate to the associate degree level of nursing education. This course focuses on a family-centered approach in the promotion of child and family health. The previously taught concepts are reexamined as related to disorders of children.

Emphasis is placed on meeting children's health needs through the concepts of play, parenting and client-family teaching. The various roles of a pediatric professional nurse team member are examined.

(59.4 Lec. Hrs./118.8 Clinical Hrs.)

**Prerequisites:** BIO:151, BIO:173, PNN:166, PNN:211, PNN:512, PSY:111 and PSY:121.

**Co-requisites:** BIO:186, ENG:105 and SOC:110.

## **ADN:452 Complex Health Systems Mod A** 5 cr.

This course is designed to assimilate the concepts within the domain of the individual. Emphasis is placed on the concepts of fluid and electrolytes, metabolism, perfusion, professional behaviors, caring interventions and managing care. Upon completion, students should be able to demonstrate the knowledge, skills and attitudes necessary to provide quality, individualized, entry-level nursing care.

59.4 Lec. Hrs./118.8 Clin. Hrs.)

**Prerequisite:** ADN:301, ADN:302, ADN:451

## **ADN:453 Complex Health Systems Mod B** 5 cr.

This course is designed to assimilate the concepts within the two domains of healthcare and nursing. Emphasis is placed on the concepts of mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills and attitudes necessary to provide quality, individualized, entry-level nursing care.

(59.4 Lec. Hrs./118.8 Clin. Hrs.)

**Prerequisite:** ADN:452

## **ADN:473 Nursing in Mental Health**

**5 cr.**

Mental Health Nursing is one of three courses which allow a student to articulate to the associate degree level of nursing education. The course focuses on the maladaptive neuro-biological and behavioral responses of individuals to developmental and situational events throughout the life span. Theoretical concepts are presented to assist the student in developing self awareness, as well as understanding the meaning of behavior of others. The basic philosophical approach emphasizes the intrinsic worth and dignity of all individuals. Mental health nursing principles are presented with emphasis on the concept of caring, therapeutic use of self and the practice of therapeutic communication skills. The focus is on holistic nursing, and because mental health nursing is applicable to every nurse's individual practice, the concepts discussed in this course may be utilized in all clinical nursing settings. Application of specific mental health nursing principles and practice is determined by the nursing diagnosis of the client's psychosocial and behavioral problems. The mental health nursing clinical experience provides an opportunity for the student to utilize the nursing process in a variety of mental health care facilities.

(59.4 Lec. Hrs./118.8 Clinical Hrs.)

**Prerequisites:** BIO:151, BIO:168, BIO:173, PNN:165, PNN:166, PNN:210, PNN:211, PNN:511, PNN:512, PSY:111 and PSY:121.

**Co-requisites:** BIO:186, ENG:105 and SOC:110.

## **ADN:541/542 Concepts in Clinical Nursing II Modules A and B**

**13 cr.**

(ADN:541 - 6 cr.; ADN:542 - 7 cr.)

Focuses on the utilization of the nursing process and therapeutic communication in the care of individuals/groups with a variety of complex health problems. Theoretical concepts and principles underlying health problems during various developmental phases are explored. The nursing student will utilize critical thinking skills to analyze and synthesize previous and concurrent knowledge in the use of the nursing process. Clinical experiences are offered in a variety of environmental settings in which a registered nurse may practice. In each area, the role of the registered nurse will be emphasized. This course is offered in two modules. (89.1 Lec. Hrs./118.8 Clinical Hrs. per Module)

**Prerequisites:** ADN:432, ADN:442, ADN:473, BIO:186, ENG:105 and SOC:110.

## **ADN:811 Comprehensive Nursing**

**5 cr.**

This is an exit course for associate degree nursing students which builds on concepts taught in previous nursing courses. The concepts of caring, health, environment, person and nursing are closely examined. Emphasis is placed on the use of the nursing process to meet the health needs of individuals and groups across the life span, focusing particularly on the unique needs of elderly clients. Current patient care management philosophies along with varying leadership styles are presented. The student is provided an opportunity to examine ethical, legal and moral principles that relate to the delivery of nursing care through the examination of current trends and legislation affecting the health care industry. Specific strategies to meet the challenges of role transition from student to professional practitioner are discussed. (51.0 Lec. Hrs./72.0 Clinical Hrs.)

**Prerequisites:** ADN:432, ADN:442, ADN:473, ADN:541, ADN:542, BIO:151, BIO:168, BIO:173, BIO:186, ENG:105, PNN:210, PNN:211, PNN:165, PNN:166, PNN:511, PNN:512, PSY:111, PSY:121, and SOC:110.

## **AUTOMATION TECHNOLOGY AND ROBOTICS**

### **ATR:105 Industrial Robotics**

**3 cr.**

The student enrolled in Industrial Robotics will learn the history and evolution of industrial robots, the basic parts of a robotic work cell, robot motion and input/output programming, safe interaction with robot while programming, robot power systems and basic robot troubleshooting and maintenance procedures. While in the lab the student will program industrial robots to perform various functions.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELE:225

### **ATR:106 Motion Control**

**3 cr.**

This course provides the student with an understanding of the concepts, terminology, functionality and applications of motion control. This course will provide the foundation for learning the skills necessary to maintain and program motion control systems. Topics include servo motors, stepper motors, motion controllers, feedback systems and servo-mechanisms.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** IND:143.

### **ATR:122 Automated Manufacturing Technology**

**4 cr.**

A beginning course in robotics and automation designed to give students the fundamentals needed to complete further coursework in robotics. Topics covered will include computer usage, keyboarding, programming using LOGO, robot systems, computer aided design, robot geometry, analog and digital devices, logic circuits and machine vision.

(39.6 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisites:** IND:102 and MAT:720.

### **ATR:123 Automation Technology**

**3 cr.**

This course introduces various devices used in the manufacturing environment, including advanced programmable logic controllers (PLCs) using Allen-Bradley ControlLogix PLCs. The students also will study HMI devices and their applications.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELT:123.

# COURSE DESCRIPTIONS

---

## **ATR:276 Networking for Industry** 3 cr.

This course gives the student experiences with common types of networks used in industrial locations. The student will learn computer communication techniques and gain hands-on experience with RS 232, RS 422 and Ethernet networks. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **AUTO TECHNOLOGY**

---

### **AUT:103 Survey of Auto Technology** 1.5 cr.

This course is designed to introduce the student to a variety of tasks and skills commonly used in the automotive technology repair field. Topics will include basic maintenance and electrical service, engine performance service, brake and tire & wheel service and gasoline engine operation and repair. (59.4 Lab. Hrs.)

**Co-requisite:** AUT:115

### **AUT:115 Automotive Shop Safety** 1 cr.

This course is designed to acquaint the student with the proper personnel and shop safety procedures needed to function in an automotive or truck shop. The course will begin with an orientation of department and school policies and procedures. Students will learn general safety rules and work place safety including "Right to Know" and OSHA Regulations. (19.8 Lec. Hrs.)

### **AUT:164 Automotive Engine Repair** 4 cr.

Basic theory of two-cycle and four-cycle gasoline engines and their application will be introduced. Disassembly, inspection and reassembly competencies will be experienced as well as cooling, lubrication, induction, exhaust, compression and valve systems. Students will develop competencies in precision measuring and services procedures. (39.6 Lec. Hrs./118.8 Lab Hrs.)

**Perquisite or Co-requisite:** AUT:115.

### **AUT:232 Automotive Transmissions I** 3 cr.

This course is designed to provide basic knowledge in the diagnosis and repair of the automatic transmission. The student will develop skills necessary to perform in-car automatic transmission service. The student will also develop an understanding of the operation and service of torque converters, planetary gear trains and hydraulic components used in automatic transmissions. In-car service, as well as, removal-installation and overhaul procedures will be stressed in the lab portion of this course. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite or Co-requisite:** AUT:115.

### **AUT:233 Automotive Transmissions II** 3 cr.

This course is designed to provide advanced knowledge and skills in the diagnosis and repair of automatic transmissions and transaxles. The student will develop skills in reading transmission hydraulic control circuit schematic, perform diagnosis of electronically controlled automatic transmissions and transaxles and dis-assemble and re-assemble an automatic overdrive transaxle. The use of pressure gauges, scan tools and other test equipment will be practiced. (34.65 Lec. Hrs./74.25 Lab Hrs.)

**Prerequisites:** AUT:115 and AUT:232

### **AUT:304 Automotive Manual Drive Train and Axles** 4 cr.

Provides basic knowledge in automotive clutches, standard transmissions, transaxles and differential. Basic theory, diagnosis and service procedures are covered. Students will be able to correctly disassemble and reassemble standard transmissions, transaxles and differential in accordance with manufacturers' guidelines. (49.5 Lec. Hrs./89.1 Lab Hrs.)

**Prerequisite:** Completion of or concurrent enrollment in AUT:115.

### **AUT:404 Automotive Suspension and Steering** 4 cr.

This course deals specifically with automobile suspension and steering systems. Specific skills needed for the development of competencies will be taught. Competencies that are developed in this course are aimed at entry-level skills as a suspension and steering specialist. (49.5 Lec. Hrs./89.1 Lab Hrs.)

**Prerequisite or Co-requisite:** AUT:115.

### **AUT:524 Automotive Brake Systems and Service** 4 cr.

This course is designed to allow the student to begin the mastery of the brake systems used on today's cars and light trucks. This course deals specifically with disc and drum brakes, power and conventional braking systems and emergency braking systems. Topics also include hydraulic and electro-hydraulic brake components, basic diagnosis and anti-lock braking systems. The use of measuring tools, brake lathes and ABS scantools will be stressed. Students will develop competencies aimed at entry-level skills as a brake specialist. (49.5 Lec. Hrs./89.1 Lab Hrs.)

**Prerequisite:** AUT:115.

### **AUT:606 Basic Automotive Electricity/Electronics** 3 cr.

In this course the student is introduced to basic electrical and electronics principles. The basics are applied to automotive electrical circuits. What electricity is and how it works is covered in detail. Lab sessions are spent turning theory into hands-on practice with meters and basic circuits. (39.6 Lec. Hrs./59.4 Lab Hrs.)

### **AUT:614 Automotive Electrical I** 3 cr.

In this course the student is introduced to basic automotive battery, charging and starting systems. The operating principles will be discussed during the lecture/ discussion sessions. Lab sessions are spent practicing testing, diagnosis and repair. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Co-requisite:** AUT:115 and AUT:606.

# COURSE DESCRIPTIONS

## **AUT:656 Automotive Electrical II** 4 cr.

This course deals specifically with the automobile chassis electrical systems. The student will be taught how automobile circuits are wired and how they operate. Troubleshooting and repair of the systems will be stressed. Upon completion the student should be able to demonstrate an understanding of the operation and design of the following types of chassis electrical systems: lighting systems, horn, wiper/washer, cooling fan, instruments and warning devices, speed control, anti-lock brake and traction control, HVAC, heated windows and mirrors, power accessories, and passive restraint systems.  
(59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** Completion of or concurrent enrollment in AUT:606 and AUT:614.

## **AUT:704 Automotive Heating and Air Conditioning** 4 cr.

Provides basic knowledge in automotive heating and air conditioning. Basic theory, system diagnosis and service procedures are covered. Students are able to troubleshoot, purge, evacuate, charge and performance test an automobile or truck air conditioning system after completing this course.  
(59.4 Lec. Hrs./59.4 Lab Hrs.)

## **AUT:802 Engine Performance I** 3 cr.

This course is designed to train the student in engine mechanical testing and ignition system theory and testing. Basic ignition system theory, operation and diagnosis will be covered. Electronic (EI) and distributor (DI) ignition systems will be discussed. Lab time will be used to learn the use of diagnostic equipment in troubleshooting and repair of engine mechanical and ignition systems as they relate to drivability issues.  
(39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** Completion of or concurrent enrollment in AUT:115 and AUT:606.

## **AUT:811 Engine Performance II** 4 cr.

This course is designed to give students an understanding of electronic fuel injection and the use of computer controls in today's automobiles. The course will present Electronic Fuel Injection theory and component operation as well as automotive computer operation, sensor inputs and actuator outputs. Diagnosis and testing of these systems will be discussed and practiced. Similarities and differences of various Original Equipment Manufacturer systems will be discussed.  
(59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** AUT:802.

## **AUT:817 Automotive Engine Performance III** 3 cr.

The course will present automotive emissions, emission control devices and 5-gas analysis. This course is designed to help the student improve his/her ability to diagnose driveability problems. Diagnosis and testing will be discussed and practiced. A review of fuel, ignition and computer system testing will also be included.  
(34.65 Lec. Hrs./74.25 Lab Hrs.)

**Prerequisite:** AUT:811.

## **AUT:911 Co-operative/ Internship** 4 cr.

Co-operative Education Experience will integrate classroom theory with on-the-job training. The College will assist the student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. In addition to employment, attendance at scheduled on-campus seminars is required. Seminars may include job searching skills as well as professional development. Student eligibility consists of the successful completion of 12 EICC credit hours with at least two courses in the major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area.  
(384 Co-op. Hrs.)

**Prerequisite:** Consent of faculty coordinator.

## **AVIATION**

### **AVI:130 Private Pilot Ground School** 3 cr.

A comprehensive study of the aeronautical subjects necessary to support flight training for the FAA examination for the Private Pilot Certificate. Subjects covered include FAA regulations; the rules of the National Transportation Safety Board pertaining to accident reporting; the use of pilotage, dead reckoning and radio aids; recognition of critical weather situations and the use of weather reports; and safe and efficient operations principles of airplanes.  
(59.4 Lec. Hrs.)

**Prerequisite:** Second Class Physical.

**Co-requisite:** AVI:172

### **AVI:172 Private Pilot Flight Training** 2 cr.

Dual and supervised solo flight instruction necessary to qualify for the FAA Private Pilot Certificate. Areas covered in flight training include preflight operations, flight maneuvering by reference to ground objects, flight at critically slow air speeds and recover from stalls, takeoffs and landings, control and maneuvering an aircraft, cross-country flying, night flying and emergency operation.  
(79.2 Lab Hrs.)

**Prerequisites:** Second Class Physical; completion of or concurrent enrollment in AVI:130.

### **AVI:210 Instrument Ground School** 2 cr.

A comprehensive study of the aeronautical subjects necessary for the FAA Instrument Pilot Examination. Subjects covered include FAA regulations related to IFR conditions; the IFR air traffic system and procedures; the provisions of the Airman's Information Manual pertinent to IFR flight; dead reckoning appropriate to IFR navigation; IFR navigation by radio aids using the VOR, ADF and ILS systems; the use of IFR charts and instrument approach procedures charts; the procurement and use of weather information; and the function, use and limitations of flight instruments.  
(39.6 Lec. Hrs.)

**Prerequisites:** Second Class Physical; FAA Private Pilot Certification.

# COURSE DESCRIPTIONS

---

## **AVI:235 Instrument Flight Training** 2 cr.

Instrument flight instruction necessary to qualify for the FAA Instrument Rating Exam. Areas covered include control and maneuvering of aircraft by reference to flight instruments; IFR navigation by the use of VOR and ADF systems; cross-country flying in IFR conditions; and emergency procedures appropriate to the maneuvering of an airplane solely by reference to flight instruments. (79.2 Lab Hrs.)

**Prerequisites:** Second Class Physical; FAA Private Pilot Certification; completion of or concurrent enrollment in AVI:210.

## **AVI:244 Commercial Pilot Flight Training** 2 cr.

Dual and supervised solo flight instruction necessary to qualify for the FAA Commercial Pilot Certificate. Areas covered include flying an aircraft with retractable gear, flaps, controllable propeller and engine powered by at least 180 horsepower; night flying; take-offs and landings; and emergency procedures appropriate to VFR and IFR flight and the operation of complex airplane systems. (79.2 Lab Hrs.)

**Prerequisites:** Second Class Physical; FAA Instrument Rating; completion of or concurrent enrollment in AVI:260.

## **AVI:260 Commercial Pilot Ground School** 2 cr.

A comprehensive study of the aeronautical subjects necessary to qualify for the Commercial Pilot Certificate. Subjects covered include FAA regulations; basic aerodynamics; safety operations; high altitude operations and physiological considerations; loading computations; airplane performance speeds; runway and obstacle clearance; and cruise control. (39.6 Lec. Hrs.)

**Prerequisites:** Second Class Physical; FAA Instrument Rating.

## **AVI:305 Advanced Rating Ground School** 4 cr.

A comprehensive study of the aeronautical subjects necessary for the FAA Certified Flight Instructor Examination. Subjects covered include FAA regulations; instructional management and teaching techniques; aerodynamics; aeromedical information; multi-engine rating; integrated method of flight instruction; flight training syllabus; flight training maneuvers and procedures; weather information; engine and flight instrument operation; and safety principles. (79.2 Lec. Hrs.)

**Prerequisites:** Second Class Physical; FAA Commercial Pilot Certificate.

## **AVI:306 Advanced Rating Flight Training** 1 cr.

Flight instruction necessary to qualify for the FAA Certified Flight Instructor Examination and multi-engine rating. Areas covered include practice in the explanation, analysis and demonstration of flight procedures and maneuvers; multi-engine operations and in-flight application of teaching methods. (39.6 Lab. Hrs.)

**Prerequisites:** Second Class Physical; FAA Commercial Pilot certificate; completion of or concurrent enrollment in AVI:305.

## **BIOLOGY**

---

### **BIO:105 Introductory Biology** 4 cr.

An introduction to the science of biology. Topics include scientific method, ecology, basic chemistry, cells (structure, function, energy and reproduction), genetics, DNA applications, classification and characteristics of organisms, and evolution. This course is designed for students who are not majoring in biology or health-related fields. *This course satisfies a general education requirement in the Natural Sciences Area.*

This course is not intended to replace or substitute for BIO:114 or BIO:115. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** RDG:032/033 or minimum reading placement scores based on college assessment.

### **BIO:114 General Biology IA** 4 cr.

Introduction to basic principles of biology. Topics include chemical applications in biology, cellular biology, bioenergetics, cell division and genetics. *This course satisfies a general education requirement in the Natural Sciences Area.*

(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MAT:041, MAT:047 or MAT:053 and RDG:032/033 or minimum math and reading placement scores based on college assessment. Successful completion of CHM:122 or one year high school chemistry is recommended. (59.4 Lec. Hrs./39.6 Lab Hrs.)

### **BIO:115 General Biology IIA** 4 cr.

This course is a continuation of General Biology IA (BIO:114). Course topics include evolution, biological diversity, plant and animal anatomy and physiology and ecology.

(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** BIO:114

### **BIO:125 Plant Biology** 4 cr.

An introduction to the study of plants, emphasizing structure, function, reproduction and diversity. Topics include basic plant anatomy and physiology and the evolution of plant diversity. *This course satisfies a general education requirement in the Natural Sciences Area.*

(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ENG:013 and MAT:041 or MAT:053 or minimum English and math placement scores based on college assessment.

### **BIO:133 Ecology** 3 cr.

Introduction to ecological concepts: interdependence of organisms, the totality and patterns of relations between organisms and their environment. (59.4 Lec. Hrs.)

### **BIO:136-139 Field Ecology** 1-4 cr.

A survey of the flora and fauna of various habitats including classification, life history data and ecology. Emphasis is on field observations and techniques useful in analysis of natural populations.

(19.8-39.6 Lec. Hrs./0-79.2 Lab Hrs.)

# COURSE DESCRIPTIONS

## **BIO:151 Nutrition 3 cr.**

This course explores the normal nutritional needs for all individuals. Emphasis is placed on identifying the essential nutrients, their functions, and their deficiency symptoms. Diets and their components are discussed as well as food protection and preservation. (59.40 Lec. Hrs.)

**Prerequisite:** RDG:032/033 or minimum reading placement score based on college assessment. BIO:114 or BIO:168 is recommended.

## **BIO:157 Human Biology 4 cr.**

Human Biology is an introductory course in biological science that focuses on the general concepts of life as demonstrated by the human body through its chemistry, organization and continuity. This course will introduce the structure and function of the human body. Students will study major systems of the human body - with applications to health, disease, genetics, nutrition and wellness. This course is not equivalent to or intended to replace BIO:114 or BIO:168.

*This course satisfies a general education requirement in the Natural Sciences Area.* (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** RDG:032/033 or minimum reading placement scores based on college assessment.

## **BIO:163 Essentials of Anatomy and Physiology 4 cr.**

A one-semester course covering the fundamentals of human anatomy and physiology. Units of study include cell chemistry and structure and systems of the body (integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, urinary, reproductive and sensory).

This course is not equivalent to or intended to replace BIO:168 and/or BIO:173.

*This course satisfies a general education requirement in the Natural Sciences Area.* (59.4 Lec. Hrs./39.6 Lab Hrs.)

## **BIO:168 Human Anatomy and Physiology I with Lab 4 cr.**

A study of the structure and function of the human body. The study begins at the cellular level and proceeds through selected organ systems: integumentary, skeletal, muscular, nervous, and endocrine. This course is the first course of a two-semester sequence.

*This course satisfies a general education requirement in the Natural Sciences Area.* (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** BIO:114 or one year of high school biology within the last five years and CHM:110, 122, 165, 179 or one year of high school chemistry within the last five years.

## **BIO:173 Human Anatomy and Physiology II with Lab 4 cr.**

The second course in a two-semester sequence. The content includes the completion of the study of the organ systems: cardiovascular, lymphatic/immune, respiratory, urinary, digestive / metabolism, and reproductive. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** BIO:168.

## **BIO:186 Microbiology 4 cr.**

An in-depth examination of the microbial world with emphasis on classification, reproduction, genetics, physiology, infectious disease and control. Laboratory exercises will be directed toward the use of equipment and identification of clinically and economically important organisms. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** BIO:114 or BIO:168.

## **BIO:226 Local Flora 3 cr.**

The course examines the identification, ecology, and distribution of common native and exotic trees, shrubs, flowers, and other plants of the Upper Midwest. (59.40 Lec. Hrs.)

## **BIO:255 Neuroanatomy 3 cr.**

The gross anatomy of the brain and spinal cord will be discussed. Emphasis will be placed on clinical applications of the functional anatomy of the nervous system. Topics will include the structure and function of the sensory and motor pathways, basal ganglia, cranial nerves, ventricular system, vascular system and peripheral nervous system. (59.4 Lec. Hrs.)

**Prerequisites:** BIO:168 and BIO:173.

## **BIO:280 Biology Projects 1 cr.**

Study of special problems and research into a specific area of biology. This course may be repeated twice for additional credits.

(39.6 Lab Hrs.)

**Prerequisite:** Consent of instructor.

## **BUSINESS**

### **BUS:102 Introduction to Business 3 cr.**

Introduces the student to American contemporary business, its nature and environment. A survey course providing exposure to social responsibilities of business, management, production, human resources, marketing, finance, quantitative methods, world business and business law.

(59.4 Lec. Hrs.)

### **BUS:106 Employment Strategy 2 cr.**

Students will complete assignments focused on their individual and career targets, while developing successful lifetime job search skills and career management tools. Students will also learn job search techniques, such as completing employment applications, preparing letters of application and resumes and participating in a mock interview.

(39.6 Lec. Hrs.)

**Prerequisites:** ADM:105 and ADM:157.

### **BUS:110 Business Mathematics and Calculators 3 cr.**

Review of math fundamentals and their application to business. Topics covered include multiplication, division, fractions, percentages, interest, discounts, etc., on an electronic calculator. The student will be able to operate proficiently by the touch system.

(59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **BUS:130 Introduction to Entrepreneurship 3 cr.**

This course is designed for the student interested in developing knowledge in the area of small business management and entrepreneurship. Emphasis is on the essential concepts and techniques related to the start up of a small firm. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013, MAT:063 and RDG:045, or minimum English, math and reading placement scores based on college assessment.

## **BUS:135 Managing the Entrepreneurial Venture 3 cr.**

This course will introduce the student to contemporary business, its nature and environment. Also, this course will provide exposure to managerial functions such as planning, decision making, staffing, organizing and directing. The student will develop a basic understanding of financial accounting concepts and systems. This course also provides a comprehensive introduction to the diversified services offered by the banking industry. (59.4 Lec. Hrs.)

**Prerequisite:** BUS:147.

## **BUS:147 The Successful Entrepreneur 3 cr.**

This course will provide an integrated, analytical and managerial approach to the study of marketing. Legal issues, financial and economic forces are also analyzed as relative to becoming a successful entrepreneur. (59.4 Lec. Hrs.)

**Prerequisite:** BUS:130.

## **BUS:161 Human Relations 3 cr.**

Provides a foundation of accepted personal and business behavior in professional working relationships. Personality characteristics with relation to fellow employees and business associates are an integral part of the course. Topics include motivation of individuals and groups, contribution to a desirable working atmosphere, adjustment to the job, stress management techniques and other areas of human relations. (59.4 Lec. Hrs.)

## **BUS:167 Leadership and Professionalism 1 cr.**

This course is designed to provide students the opportunity to develop professional growth in the areas of leadership, community service, cooperation, patriotism and business knowledge. Students will be provided opportunities to demonstrate and refine leadership skills both inside and outside of the classroom. (19.8 Lec. Hrs.)

## **BUS:168 Leadership and Professionalism II 1 cr.**

This course is designed to provide students the opportunity to develop professional growth in the areas of leadership, community service, cooperation, patriotism and business knowledge and is a continuation of Leadership and Professionalism I. Students will be provided opportunities to demonstrate and refine leadership skills both inside and outside of the classroom. (19.8 Lec. Hrs.)

**Prerequisite:** BUS:167

## **BUS:180 Business Ethics 3 cr.**

Study of ethical principles and the application of ethical principles to situations relevant to decision-making in the professional and business world. (59.4 Lec. Hrs.)

## **BUS:185 Business Law I 3 cr.**

Provides the student with a basic understanding of business law. Includes an introduction to the legal environment (including ethics, property and computer law); contracts; sales; employer/employee relations (including agency); consumer protection and product liability; property and wills. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 and RDG:045 or minimum English and reading placement scores based on college assessment.

## **BUS:186 Business Law II 3 cr.**

Continuation of BUS:185. Topics may include personal property and bailments, criminal procedure, partnerships, authority of partners, duties, rights and remedies, corporations, real properties, estates and bankruptcy, labor and environmental law, landlord/tenant relationships and other selected topics. (59.4 Lec. Hrs.)

**Prerequisite:** BUS:185.

## **BUS:210 Business Statistics 3 cr.**

Through this course students develop an in-depth knowledge of the following statistics principles: frequency distributions, cumulative frequency distributions, relative frequency distributions, histograms, measures of central tendency, measures of dispersion, probability, the Central Limit theorem, confidence interval estimates, methods of sampling, hypothesis testing, analysis of variance, correlation analysis, linear and multiple regression analysis, chi-squared test, time series and forecasting, statistical quality control, and statistical decision making. (59.4 Lec. Hrs.)

(59.4 Lec. Hrs.)

**Prerequisite:** MAT:156.

## **BUS:293 Principles of Workforce Competitive Advantage 3 cr.**

This course focuses on developing basic professional skills to maximize productivity in the workplace and increase an individual's competitive edge. The emphasis is placed on the student's ability to be prepared for the challenges of everyday situations in the workplace. Major topics include work ethics, workplace values promoted by employers, self-reflection and willingness to make changes as needed, business etiquette, effective communication, teamwork, problem solving, diversity in the workplace and stress management. (59.4 Lec. Hrs.)

## **BUS:300 Introduction to Radio Frequency Identification 3 cr.**

Covers Radio Frequency Identification (RFID) concepts and fundamentals, and how emerging electronic product code (EPCglobal) standards are influencing adoption. Content includes RFID capabilities, current applications of RFID in businesses, and practical ways to articulate applications and uses of this technology to potential employers and peers. (59.4 Lec. Hrs.)

**Prerequisite:** CSC:110 or CSC:112 or consent of instructor.

## **BUS:301 The Impact of RFID on the Supply Chain 3 cr.**

Surveys case studies on how Radio Frequency Identification (RFID) has been used in the supply chain. Examples from the retail, pharmaceutical, defense, manufacturing and logistic industries will demonstrate how companies have gained competitive advantages by implementing this new technology. Topics will emphasize the impact on business processes, security of transmitted data, and financial analysis. (59.4 Lec. Hrs.)

**Prerequisite:** BUS:300 and MGT:260 or consent of instructor.

## **BUS:302 RFID Software 3 cr.**

This course covers all aspects of Radio Frequency Identification (RFID) software as well as the hardware that is utilized in RFID technology. Specifically students will learn how to install, configure and implement various applications and uses found in the supply chain. Topics include an understanding of the capabilities of the solution and how various applications and uses influence read rates and reliability. (59.4 Lec. Hrs.)

**Prerequisite:** BUS:300.

## **BUS:908 Co-operative Education Variable cr.**

Co-operative Education Experience will integrate classroom theory with on-the-job training. The College will assist the student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. In addition to employment, attendance at scheduled oncampus seminars is required. Seminars may include job searching skills as well as professional development. Student eligibility consists of the successful completion of 12 EICC credit hours with at least two courses in the major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area. (Variable Co-op. Hrs.)

**Prerequisite:** Consent of instructor.

## **BUSINESS COMPUTER APPLICATIONS**

---

### **BCA:120 Computer Orientation 1 cr.**

This is a first-semester course required of all Administrative and Office Support students. This course must be completed prior to enrolling in other computer-related courses in the program. The student will receive hands-on experience of introductory concepts of the computer. The class will cover basic computer hardware and software; how to work with files and folders; and a brief overview of the Internet. (19.8 Lec Hrs.)

### **BCA:129 Basic Word Processing 2 cr.**

This course is designed to give the student an introductory knowledge of an industry-standard word processing software. Topics to be covered include creating, printing, and editing documents; formatting characters and paragraphs; formatting documents and sections; printing envelopes and labels; cutting and pasting text within and between documents; formatting text into newspaper columns; and creating headers, footers, and footnotes and endnotes in reports. (39.6 Lec. Hrs.)

**Prerequisite:** ADM:105 or consent of instructor.

### **BCA:130 Advanced Word Processing 2 cr.**

In this course, the student will learn the advanced features of an industry-standard word processing software. Topics include merging documents, creating tables, inserting graphics and clip art, creating styles, sorting text, selecting records, and creating fill-in forms. (39.6 Lec. Hrs.)

**Prerequisites:** BCA:129

### **BCA:147 Basic Spreadsheets 2 cr.**

This course offers the student the opportunity to learn the fundamentals of Microsoft Excel, to be exposed to practical examples of the computer as a useful tool, and to become acquainted with the proper procedures to create worksheets suitable for course work, professional purposes, and personal use. The student will learn to write formulas and use built-in functions, answer what-if questions, format spreadsheets, create graphs, and use database functions of spreadsheets. (39.6 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## **BCA:148 Advanced Spreadsheets** 2 cr.

This class is designed to take students beyond the fundamentals of spreadsheets and to give them the opportunity to learn how to solve complex spreadsheet problems. Some of the topics include financial functions, templates, 3-D references in formulas, macros, an introduction to Visual Basic for Applications (VBA) for Excel, the Solve command, and pivot charts and pivot tables.

(39.6 Lec. Hrs.)

**Prerequisite:** BCA:147.

## **BCA:165 Basic Databases** 2 cr.

This course provides basic training using Microsoft Access, a database management system. The term database describes a collection of data organized in a manner that allows access, retrieval and use of that data. Using Access, students will create databases; add, change, and delete records in tables; establish relationships among tables; sort and index data; retrieve data using queries; and calculate statistics from the databases. In addition, students will create and edit forms for data entry and reports for more formal presentation of the data.

(39.6 Lec. Hrs.)

**Prerequisite:** BCA:120 or CSC:110.

## **BCA:188 Computer Fundamentals for Technicians** 3 cr.

This course will cover microcomputer operating systems, hardware and application software. Spreadsheets, database management, word processing and 2-D graphics packages will be specific areas of coverage. Lab exercises will follow lecture and class discussion.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

## **BCA:220 Integrated Computer Business Applications** 2 cr.

This course offers the student the opportunity to understand and apply OLE (object linking and embedding) concepts by creating documents using spreadsheet, word processing, database, and presentation software applications and then transferring data from one application to another. This is an office simulation that will allow students to utilize their decision-making and time management skills.

(39.6 Lec. Hrs.)

**Prerequisite:** BCA:130, BCA:147, BCA:165 or consent of instructor.

## **BCA:250 Desktop Publishing** 3 cr.

This course takes the student beyond the basic commands of word processing while gaining knowledge and practice in desktop publishing. Desktop publishing is the integration of graphics and text. The student will learn advanced features of the word processing software, such as creating and applying styles, macros and master documents. Decision-making skills will be used to complete desktop publishing projects such as graphs, bulleted charts, newsletters and folded brochures.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** BCA:130.

## **BCA:711 Introduction to Microsoft PowerPoint** 1 cr.

PowerPoint skills are needed to help deliver a dynamic, professional-looking message to an audience. Customized visual presentations contain diagrams, charts, tables, pictures, shapes, videos, sounds and animation effects to make presentations more effective. Students will learn how to customize presentations that will reinforce a speaker's message and help the audience retain information presented.

(14.85 Lec. Hrs./9.9 Lab Hrs.)

**Prerequisite:** BCA:120 or CSC:110.

## **BCA:722 Introduction to the Internet** 1 cr.

Students are introduced to the World Wide Web and its components. They will explore the World Wide Web and learn how the Web is organized, URLs, browsing Web pages, Web page management techniques and saving and printing material obtained from a Web site. In addition, they will learn techniques for searching the vast amount of material using search engines.

Test Out Available.

(19.8 Lec. Hrs.)

**Prerequisite:** BCA:106, BCA:120.

## **BCA:732 Getting Organized with Outlook** 1 cr.

Students will discover the benefits of using a powerful desktop information management program. They will learn how this program can assist in organizing a busy schedule, keeping track of files and communicating with others. Students will learn how individuals and work groups can organize, find, view and share information easily. Students will receive hands-on experience entering both on-time and recurring appointments and events. Other topics include sending e-mail messages, generating and managing daily, weekly and monthly schedules, printing and saving a calendar, generating a list of contacts, creating and printing tasks and creating, importing and exporting personal subfolders.

Test Out Available.

(19.8 Lec. Hrs.)

**Prerequisite:** BCA:106, BCA:120.

---

## **CANCER INFORMATION MANAGEMENT**

---

## **CIM:200 Registry Organization & Operations** 3 cr.

Students will develop an understanding of the regulatory requirements for an approved cancer program. Emphasis will be given to the requirements outlined by the Commission on Cancer (CoC) of the American College of Surgeons (ACoS), data standards set by the North American Association of Central Cancer Registries (NAACCR), data standards set by the National Cancer Institute (NCI) in its Surveillance, Epidemiology and End Results (SEER) program, data standards set by the World Health Organization (WHO) and other organizations. Legal, ethical and confidentiality issues in both the internal and external settings will be addressed. Students will obtain an overview of the relationships between a registry and other departments within a facility. Basic daily operational tasks, reference resources and computer hardware and software needs will be introduced.

(59.4 Lec. Hrs.)

**Prerequisites:** Completion of HIT diploma, CIM first year coursework or consent of instructor.

# COURSE DESCRIPTIONS

## **CIM:205 Cancer Pathophysiology 3 cr.**

Cancer Pathophysiology is a focused study of the major histological cell types in which cancer arises. Students will learn to differentiate between a new primary cancer and a recurrence of previous primary cancer cases utilizing the Surveillance on Epidemiology & End Results (SEER) Program guidelines on Multiple Primary/Histologies. Students will study advanced terminologies used by pathologists on gross and microscopic pathology reports. Students will study cancer epidemiology, diagnostic work up, and current therapies.

(59.4 Lec. Hrs.)

**Prerequisites:** BIO:173, HIT:150.

## **CIM:210 Oncology Coding and Staging Systems 4 cr.**

This course will focus on the basic concepts of coding and staging of malignant neoplasms. It will provide a general overview of the *International Classification of Disease for Oncology*, 3rd Ed. topography codes and *International Classification of Disease*, 9th Ed. morphology nomenclature and classification systems. American Joint Committee on Cancer (AJCC) staging, SEER Summary staging, and extent of disease concepts used by physicians and cancer surveillance organizations to determine treatment and survival will be emphasized.

(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** Completion of HIT diploma, CIM first year coursework or consent of instructor.

**Co-requisite:** CIM:200.

## **CIM:215 Abstracting Principles & Practice I 2 cr.**

Students will be introduced to the principles of cancer registry abstracting. Identification and selection of appropriate clinical information from medical records in a manner consistent with cancer registry regulatory core data item requirements will be emphasized. Recording accurate coding and staging of site-specific cancer information and use of CNExT cancer registry software from C/NET Solutions will be introduced.

(79.2 Lab. Hrs.)

**Prerequisites:** Completion of HIT diploma or consent of instructor and CIM:200 & CIM:210.

## **CIM:220 Abstracting Principles & Practice II 2 cr.**

This course further applies the principles of cancer registry abstracting. Identification and selection of appropriate clinical information from medical records in a manner consistent with cancer registry regulatory core data item requirements; recording, coding and stating site-specific cancer information; and using accuracy, timeliness and completeness of data.

(79.2 Lab. Hrs.)

**Prerequisite:** CIM:215.

## **CIM:240 Cancer Patient Follow-up 2 cr.**

This course will cover follow-up methodology, confidentiality and ethical issues; identification of second primaries, recurrence, spread of disease and survival data. Physician, patient and other follow-up resources and activities will be introduced.

(39.6 Lec.Hrs.)

**Prerequisites:** Completion of HIT diploma, CIM first year coursework or consent of instructor.

## **CIM:250 Cancer Statistics & Epidemiology 3 cr.**

This course will introduce the student to cancer statistics, principles of epidemiology, cancer surveillance, annual report preparation, presentation of cancer data and special studies. Use of cancer statistical data for marketing and strategic planning will also be studied.

(59.4 Lec. Hrs.)

**Prerequisites:** Completion of HIT diploma, CIM first year coursework or consent of instructor.

## **CIM:260 CIM Seminar 1 cr.**

This course provides a comprehensive discussion of all topics common to the cancer registry profession. Emphasis is placed on application of professional competencies, job search tools and preparation for the certification exam.

(19.8 Lec. Hrs.)

**Prerequisites:** Consent of instructor.

## **CIM:270 Cancer Registry Practicum 4 cr.**

Students must have student health forms completed and on file. This course will provide students with hands-on experience in all aspects of registry organization and operation. A total of 198 hours under the supervision of a CTR will be spent by the student abstracting and experiencing all the tasks of a full-time cancer registrar.

(237.6 Clinical Hrs.)

**Prerequisite:** Completion of all other CIM coursework or consent of instructor.

## **CENTRAL STERILE PROCESSING**

### **CSP:110 Infection Control/Health Regulations 2 cr.**

This course introduces basic patient care skills of infection control techniques such as hand washing. Additionally the course provides an overview of the health industry as it relates to health and safety regulations based on Occupational Safety and Health Administration (OSHA) and Center for Disease Control (CDC) guidelines.

(39.6 Lec. Hrs.)

**Co-requisite:** SUR:122.

### **CSP:115 Instrument Use, Care & Handling 3 cr.**

This course gives the basics of instrument types, uses and correct handling. The learner will have a better understanding of the instruments uses to better understand how to care for them.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CSP:110 and MAT:047 or minimum math placement score based on college assessment.

**Co-requisite:** CSP:120

# COURSE DESCRIPTIONS

## **CSP:120 Sterile Processing and Distribution** 3 cr.

This course gives the basics of Sterile Processing and Distribution preparing the learner for a career in the field of Sterile processing.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CSP:110 and MAT:047 or minimum math placement score based on college assessment.

**Co-requisite:** CSP:115.

## **CSP:210 Clinical Practicum** 2 cr.

This course gives the student hands on experience in a sterile processing department. The student must pass a skill evaluation done by the clinical preceptor to pass the course.

(118.8 Clin. Hrs.)

**Prerequisites:** CSP:115, CSP:120.

## **CHEMISTRY**

### **CHM:110 Introduction to Chemistry** 3 cr.

Designed for the student with no high school chemistry background. A study of chemistry in our lives and chemical principles preparatory to CHM:122 or CHM:165. An introduction to the composition and properties of matter, bond types, acids and bases, pH and a description of the major branches of chemistry. Does not meet the lab science requirement for graduation.

(59.4 Lec. Hrs.)

**Prerequisite:** MAT:041 or MAT:053 or minimum math placement score based on college assessment.

### **CHM:122 Introduction to General Chemistry** 4 cr.

An elementary approach to chemical principles and laboratory practices. Emphasizes the nature of matter, bonding, nomenclature, equations, acids and bases and chemistry as applied to everyday life. Intended primarily to fulfill laboratory science requirements and to fulfill chemistry requirements for nursing, dental hygiene, or some home economics and agricultural programs. *This course satisfies a general education requirement in the Natural Sciences Area.*

(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MAT:041 or MAT:053 or minimum math placement score based on college assessment.

### **CHM:132 Introduction to Organic and Biochemistry** 4 cr.

A continuation of CHM:122. Study of aliphatic and aromatic compounds, their chemistry and uses in consumer products such as polymers, drugs and foods.

Attention is also given to biologically important compounds: proteins, nucleic acids, carbohydrates and lipids and the chemistry of these molecules in the living organism.

(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CHM:122.

### **CHM:165/166 General Chemistry I** 4-5 cr.

The first course in a sequence of two general chemistry courses for students in pre-med, pre-chiro, pre-vet, pre-dental, pre-pharmacy, pre-engineering, other physical or biological sciences, or liberal arts.

Topics include calculation methods, stoichiometry, gases, atomic structure and periodicity, solutions, thermochemistry, and chemical bonding. The five credit hour course also covers crystal structures and treats the topics listed in greater detail. *This course satisfies a general education requirement in the Natural Sciences Area.*

(59.4-79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CHM:110 or CHM:122 or high school chemistry, and MAT:069 or MAT:073 or minimum math placement score based on college assessment, or consent of instructor.

### **CHM:175/176 General Chemistry II** 4-5 cr.

A continuation of CHM:165/166. Topics include kinetics, equilibrium, acid-base, thermochemistry, thermodynamics, electrochemistry and solubility equilibrium. The five credit hour course also covers organic chemistry, descriptive chemistry and qualitative analysis. These three topics as well as nuclear chemistry may be covered as enrichment topics (in the four credit hour course.) A project may be included in the 5-credit course.

(59.4-79.2 Lec. Hrs./39.6-59.4 Lab Hrs.)

**Prerequisite:** CHM:165/166 or consent of instructor. MAT:121 is recommended.

### **CHM:179 Principles of General Chemistry** 6 cr.

Presents the structure of the atom and how different elements combine, mathematical relationships involving chemical equations, chemical bonding, the gas laws, solutions, chemical equilibriums, acid-base solutions and thermodynamics. This course will fulfill the chemistry requirement of pre-chiropractic students.

*This course satisfies a general education requirement in the Natural Sciences Area.* (79.2 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CHM:110 or CHM:122 or high school chemistry and MAT:069 or MAT:073 or minimum math placement scores based on college assessment, or consent of instructor.

### **CHM:261/263 Organic Chemistry I** 4-5 cr.

Study includes the classes of organic compounds: aliphatic hydrocarbons, (aromatic hydrocarbons) alcohols, and alkyl halides (phenols). Attention to methods of instrumental analysis including IR, NMR and mass spectrometry. A functional group approach with emphasis on nomenclature, structure and bonding, physical properties, basic synthetic reactions and mechanism.

(59.4 Lec. Hrs./39.6-79.2 Lab Hrs.)

**Prerequisite:** CHM:175/176 or consent of instructor.

### **CHM:271/273 Organic Chemistry II** 4-5 cr.

A continuation of CHM:261/263. Covers topics on (alkyl halides) aromatic hydrocarbons, phenols, ketones and aldehydes, ethers, carboxylic acids, amines and other selected topics in biochemistry.

(59.4 Lec Hrs./39.6-79.2 Lab Hrs.)

**Prerequisite:** CHM:261/263 or consent of instructor.

### **CHM:281-282 Chemistry Projects** 1-2 cr.

An individual chemical project, laboratory-oriented, with a written report required at end of semester unless taken as a year-long project. May be used to supplement CHM:165/166 or CHM:261/263. This course may be repeated twice for additional credits.

(39.6-79.2 Lab Hrs.)

## CHINESE

### FLC:141 Elementary Chinese I 4 cr.

In this course students will develop the basic skills of understanding, speaking, reading and writing Chinese. The course also includes grammar analysis, classroom conversational practice and some exploration of the Chinese culture. (79.2 Lec. Hrs.)

**Prerequisite:** RDG:033 or minimum reading placement score based on college assessment.

## COLLISION REPAIR/REFINISH

### CRR:103 Survey of Auto Collision Repair 1.5 cr.

This course is designed to introduce the student to a variety of tasks and skills commonly used in the automotive collision repair field. Topics to be explored include detailing, metal finishing, panel alignment, and refinishing. (59.40 Lab Hrs.)

### CRR:113 Welding Survey 2 cr.

This course is designed to acquaint the student with the fundamentals of Gas Metal Arc Welding (GMAW) and Oxy-Acetylene Welding as it pertains to the Auto Collision Repair industry. Instruction will be given in equipment, setup, safety and application in the Oxy-Acetylene and GMAW processes with an emphasis on safety. The lab will be correlated with the lecture to provide the student with practical hands-on experience. (19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CRR:140.

**Co-requisite:** CRR:322.

### CRR:114 Welding Systems & Techniques 2 cr.

This course is designed to increase the students' proficiency with the basic welding concepts and to further their knowledge and skills of other welding processes used in Auto Collision Repair. Topics covered include Squeeze Type Resistance Spot Welding (STRSW), Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW), Plasma Arc Cutting (PAC) and the equipment used for these operations. (19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CRR:113.

### CRR:115 Advanced Welding Techniques 1 cr.

This is a lab course designed to enhance the students' skills with all of the welding concepts typically used in the Collision Repair Industry. It will include all welding processes used on steel, aluminum and other metallic parts typically encountered on the automobile. Joint design and fabrication will be covered to prepare the student for applicable qualification tests. (39.6 Lab Hrs.)

**Prerequisite:** CRR:113

### CRR:140 Orientation and Safety 3 cr.

This course is an orientation to the college and departmental activities, functions and regulations and an overall safety program. It covers all areas of shop and tool safety and includes topics pertinent to the Auto Collision Repair industry regarding employee and community right-to-know, hazard communication and the laws and regulations governing the handling of hazardous materials and waste. (59.40 Lec. Hrs.)

### CRR:200 Plastic Repair 1 cr.

This course is designed to acquaint the student with the methods and techniques used to identify and repair plastics commonly used on the modern day automobiles. Major topics of instruction include welding and adhesive repairs and panel replacements made on plastics, composites and polyester fiberglass and fiber-reinforced compounds. Pre-repair cleaning and preparation will also be emphasized. (39.60 Lab Hrs.)

### CRR:322 Basic Metal Bumping and Repair 5 cr.

This course is designed to acquaint the student with the tools, equipment and techniques utilized for repairing minor collision damage. Emphasis will be placed on damage identification and analysis, and formulating an appropriate repair plan. (59.40 Lec. Hrs., 79.20 Lab Hrs.)

### CRR:405 Non-Structural Panel Repair and Replacement 5 cr.

This course will provide training in the repair and replacement of metallic and composite non-structural component and stationary parts. Topics covered in the course include pre-replacement roughing and aligning, force application analysis, glass service and replacement and the alignment of all adjustable panels. (59.40 Lec. Hrs., 79.20 Lab Hrs.)

### CRR:452 Trim and Component Panel Service 2 cr.

This course will address all facets of interior and exterior trim and component panel service. Topics such as removal, replacement, and alignment techniques will be covered in-depth. The course will also include final detailing the interior and exterior of repaired vehicles. (19.80 Lec. Hrs., 39.60 Lab Hrs.)

### CRR:507 Structural Panel Repair and Replacement 5 cr.

This course is designed to provide the student with the skills necessary to repair the undercarriage on severely-damaged vehicles. It will include an in-depth study of measuring and tracking systems commonly used to analyze, isolate and repair damage to the undercarriage and other structural parts of collision-damaged vehicles. Replacement and corrosion protection of parts will also be included as part of the repairs. (59.40 Lec. Hrs., 79.20 Lab Hrs.)

### CRR:605 Mechanical Service 3 cr.

This course is designed to help the student identify and repair the mechanical problems and failures that typically occur as a result of an automobile accident. The course will include diagnosing and repairing problems with the brake system, drive train, exhaust system and other mechanical components typically damaged in a collision situation. The course will also include instruction diagnosing and repairing problems with the vehicle's air conditioning system and the regulations governing the handling and use of chlorofluorocarbon (CFC) gases. (19.80 Lec. Hrs., 79.20 Lab Hrs.)

# COURSE DESCRIPTIONS

## **CRR:612 Steering/Suspension 3 cr.**

This course is designed to acquaint the student with the suspension and steering systems, and how they are affected by a collision. It will include instruction in the diagnosis and repair of problems affecting the drivability of a vehicle after it has been involved in a collision. It also includes a study of the steering geometry, alignment principles, tracking and replacement procedures for damaged components. The interrelation of each part to the overall handling of the vehicle are all included.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

**Co-requisite:** CCR:507.

## **CRR:674 Electrical Service 4 cr.**

This course will acquaint the student with the methods utilized to diagnose and troubleshoot electrical problems that affect the operation of various electrically integrated parts of the vehicle. It will include energy production, electrical theory, interpreting wiring diagrams, electrical measuring and testing equipment as they are used in the repair of damaged passive and active restraint systems, air bags, anti-lock braking systems and other electrical problems which typically occur as a result of a collision.

(59.4 Lec. Hrs./59.4 Lab Hrs.)

## **CRR:743 Estimating 3 cr.**

This course is designed to acquaint the student with the methods and techniques used to analyze and identify the damage sustained by a vehicle involved in a collision. It will also include an in-depth study of the collision and specification manuals typically used in writing an automobile damage report. A survey of the day-to-day activities performed by shop personnel such as scheduling, customer relations and inventory control will also be included.

(59.4 Lec. Hrs.)

**Co-requisite:** Math elective-math above 100 level. MAT:104 or MAT:110 recommended.

## **CRR:799 Spray Techniques & Surface Coatings II 1 cr.**

This course is designed for the experienced painters seeking to upgrade their skills and become more proficient with the mechanics of the spray gun and application techniques. The course will provide the student with a more in-depth analysis of the principles and concepts utilized for applying various automotive, commercial and industrial surface coatings using both the virtual painting system and conventional spray painting equipment. Emphasis will be placed on proper equipment selection, setup, manipulation and maintenance.

(39.6 Lab Hrs.)

## **CRR:801 Refinishing I 3 cr.**

This is an introductory course designed to acquaint the student with all phases of surface removal and the preparation required for application of fillers, paint and primer coatings. Proper substrate preparation and basecoat application will be emphasized. Other topics will include pre-cleaning, surface removal, abrasives, fillers, basecoat selection, masking and proper spray application.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CRR:140

## **CRR:825 Refinishing Principles 5 cr.**

This course will prepare the student to select and apply basecoats and topcoats that are compatible with the existing finish and substrates. Topics covered will include methods used to identify existing finishes, selecting and applying the proper basecoats, top coats, solvent and additive selection and maintenance on all air supply and spray equipment. VOC tracking regulations and applications will also be introduced.

(59.4 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisite:** CRR:801.

## **CRR:842 Color Matching 5 cr.**

This course is an in-depth study of color and its makeup and the proper techniques utilized for tinting and shading paint to accomplish a color match on a vehicle. Spot repairing and blending techniques to obtain a color match on direct gloss, two and three stage finishes will also be included. The students will also be trained and evaluated using the spray technique analysis and research (star) criteria.

(39.6 Lec. Hrs./178.2 Lab Hrs.)

**Prerequisite:** CRR:825.

## **CRR:878 Advanced Refinishing 2 cr.**

This is the last in a series of refinishing courses which is designed to acquaint the student with diagnosing and repairing various paint problems and failures and repairing them using a systems approach. In-depth study and comparative analysis will be conducted on various paint manufacturers' products and how they are to be used in resolving the various paint failures. A VOC analysis will be completed for several of the products used.

(19.8 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** CRR:842.

## **CRR:908 Co-operative Education Variable cr.**

Co-operative Education Experience will integrate classroom theory with on-the job training. The College will assist the student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. In addition to employment, attendance at scheduled on campus seminars is required. Seminars may include job searching skills as well as professional development. Student eligibility consists of the successful completion of 12 EICC credit hours with at least two courses in the major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area. This course may be repeated for additional credit.

(Variable Co-op. Hrs.)

**Prerequisite:** Consent of instructor.

## COMMUNICATIONS

### COM:102 Communication

#### Skills 3 cr.

The purpose of this course is to prepare the student to communicate effectively in business and professional situations. The major emphasis is on improving interpersonal skills, on using standard English in writing and speaking, on gaining proficiency in listening and on composing specific types of business communications. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

### COM:140 Introduction to Mass Media 3 cr.

Introductory course examining the history, evolution and relationships of the media in and the effects on our society. Course includes both the print and electronic media as well as ethics, advertising and public relations. Recommended for students majoring in communication, journalism or U.S. culture. (59.4 Lec. Hrs.)

### COM:142 Mass Media Writing 3 cr.

This course addresses the variety of writing styles used in the media. Through regular assignments students will compare, contrast, and practice the writing styles of print journalism, advertising copy, public relations, and broadcast copy. The circumstances for the use of objective and subjective voice will be emphasized. (59.4 Lec. Hrs.)

## COMPUTER AIDED DRAFTING

### CAD:104 Computer Aided Drafting 3 cr.

This course introduces students to the foundations of drafting and descriptive geometry. The course will develop student skills in the areas of computer generated drawings, geometric constructions, sketching and shape description, multiview projections, sectional views, auxiliary views, dimensioning and axonometric projections. Emphasis will be placed on machine drafting concepts while utilizing proper computer aided design (CAD) techniques and methods. (39.6 Lec. Hrs./59.4 Lab Hrs.)

### CAD:114 AutoCAD I 2 cr.

This is a basic course covering the fundamentals of two-dimensional AutoCAD. Students begin with basic shapes and work through multi-view drawings in a series of extensive lessons. During the course students will cover: lines and essential tools; circles and drawing aids; layers, colors, and linetypes; templates, copies, and arrays; arcs and polar arrays; object snaps; text; and dimensions. (19.8 Lec. Hrs./39.6 Lab Hrs.)

### CAD:196 Architectural Drafting 3 cr.

An introduction to architectural drawing which includes: basic house design, room planning, foundation plans, floor plans, elevations, electrical plans, plumbing plans, HVAC plans and presentation drawings. The student will be provided enough information to prepare a set of architectural working drawings. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CAD:114.

### CAD:211 Fundamentals of AutoCAD 4 cr.

This is a basic course covering the fundamentals of two-dimensional AutoCAD. Students begin with basic shapes and work through multi-view drawings in a series of extensive lessons. During the course students will cover: lines and essential tools; circles and drawing aids; layers, colors, and linetypes; templates, copies, and arrays; arcs and polar arrays; object snaps; text; and dimensions. (39.6 Lec. Hrs./79.2 Lab Hrs.)

### CAD:225 Descriptive Geometry 2 cr.

This course will introduce students to the basic principles of Descriptive Geometry. These principles are valuable for determining true shapes of planes, angles between two lines, angles between two planes, or the angle between a line and a plane. Problems are solved graphically by projecting points onto selected adjacent projection planes in an imaginary projection system. Major areas of concentration will be: points and lines in space; auxiliary views; lines; line characteristics; planes; and plane relationships. (19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** DRF:115.

### CAD:231 Pro Engineer - Basic Modeling 4 cr.

This is a basic course teaching the fundamental operation of Pro Engineer. Students will learn the menu structure and command functionality to model basic parts using Pro Engineer. Students will gain an understanding of Parametric Modeling and the feature based design process. Use of the Intent Manager will be emphasized for creation of sketched features. Students will understand the need for and application of datums during the modeling creation. Revolved Protrusions and Revolved Cuts will also be explored. Students will also learn to create Chamfers and Cosmetic Threads. A large part of the course will be devoted to editing and modifying existing models. Students will develop an understanding of and control references during the modeling process. Students will also demonstrate a clear understanding of the resolve mode during modeling. (39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** DRF:114 and DRF:115.

# COURSE DESCRIPTIONS

---

## **CAD:233 Basic Detailing 4 cr.**

This is a course designed for technicians and designers who must use Pro Engineer's drawing functionality. Students will learn how to create orthographic views of part models to be used in detail drawings. Students will completely dimension drawings using title block formats, design tolerancing and GD and T. Students will also create assembly drawings and bill of materials using the table command. Multiple sheet drawings and multi-model drawings will also be created.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

## **CAD:241 Pro Engineer - Advanced Modeling 4 cr.**

This course is a continuation of Pro Engineer - Basic Modeling. Students will use skills mastered in Basic Modeling to create models with advanced techniques. Commands such as Pattern and Group, Ribs and Relations, Draft, Suppress and Text Protrusions, Shell, Reorder, Insert, Sweeps, Blends and Splines, and Helical Sweeps and 3D Notes will be covered.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CAD:231.

## **CAD:251 Pro Engineer - Assemblies 4 cr.**

This is a continuation of Pro Engineer Advanced Modeling. Students will use all of their modeling and design skills to create assemblies and sub-assemblies of parts. Assembly constraints and intent will be discussed to ensure proper assembly. Students will be challenged to use Pro Engineer's powerful functionality to create exploded view assemblies for manufacturing. Responsibility for proper part design will be emphasized in order to create accurate assembly information.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CAD:241.

## **CAD:256 Pro Engineer - Sheet Metal 4 cr.**

This course covers the sheet metal functionality of Pro Engineer. Students will create thin walled sheet metal parts on their own and in assemblies. Parts will be created in both their flat state and formed state. Parts can also be converted from solid parts into sheet metal parts. Bend tables will be created as well as using bend information from existing tables. Students will also create drawings from sheet metal parts and assemblies. This is like other Pro Engineer courses in that it is project oriented.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** DRF:114, DRF:115, CAD:231, CAD:233 and CAD:241.

## **CAD:261 SolidWorks - Basic Modeling 4 cr.**

This course will introduce students to the basic parametric modeling concepts using SolidWorks. Coverage will also include customizing the SolidWorks environment, Parametric Equations and Design Tables. Students will follow tutorials in each chapter and will use the skills learned in the tutorials to complete assigned projects at the end of each chapter.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** DRF:114 and DRF:115.

## **CAD:262 SolidWorks - Advanced Modeling 4 cr.**

This course will introduce students to the advanced parametric modeling concepts using SolidWorks. Topics will include lofts, sweeps, shelled parts, 2D layouts, vector mechanics, mechanism design and analysis and mold design.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CAD:261.

## **CAD:263 SolidWorks - Assembly Modeling 4 cr.**

This course will introduce students to the Assembly Modeling functionality of SolidWorks. Topics will include basic assembly functionality, sub-assemblies, creating features at the assembly level and exploded assemblies. Assembly Mates will be covered in order to create complex interconnected models.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CAD:262.

## **CAD:264 SolidWorks - Detailing 4 cr.**

This course will introduce students to the Detailing or 2D drawing creation functionality of SolidWorks. Students will use orthographic projection skills previously mastered to create multi-view drawings of 3D part models. Drawings will have full associability with the part models allowing automatic updates from part model to drawing and drawing to part model. Students will also use the SolidWorks drawing functionality to create 2D drawings of assembly models. Exploded assembly views will be created and bill of materials generated from the assembly model.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CAD:263.

## **CAD:265 SolidWorks - Sheet Metal 4 cr.**

This course will introduce students to the Sheet Metal modeling capabilities of SolidWorks. Students will use the knowledge gained from previous courses to create sheet metal parts using the Sheet Metal Module and Sheet Metal Tools. Real life sheet metal terminology will be used to create an environment similar to that of technicians in the sheet metal field.  
(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CAD:264.

## **CAD:286 SolidWorks-Modeling 3 cr.**

This course will introduce students to the basic and more advanced parametric modeling concepts using SolidWorks. Coverage will also include customizing the SolidWorks environment, Parametric Equations and Design Tables. Other areas of coverage will include sweeps, lofts and reference geometry creation. Students will follow tutorials in each chapter and will use the skills learned in the tutorials to complete assigned projects at the end of each chapter.  
(29.7 Lec. Hrs./59.4 Lab Hrs.)

**Co-requisite:** DRF:114 or instructor approval.

## **CAD:287 SolidWorks-Applications 3 cr.**

This is an advanced course dealing with real life manufacturing situations that students will be faced with while use SolidWorks. Multi-body parts, sheet metal and top-down assembly, weldments and 3D sketching and surfacing and mold tools will be covered.

(29.7 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** CAD:264, CAD:286

## **CAD:288 SolidWorks-CSWA Preparation 3 cr.**

This course covers all the areas of study from the previous SolidWorks courses. These include part modeling, assembly modeling and drawing creation. It will prepare students to take the CSWA test which will be administered at the end of the course.

(29.7 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** CAD:287

## **COMPUTER FORENSICS**

### **CFR:100 Introduction to Computer Forensics 3 cr.**

This course is designed to to acquaint the student with the field of computer forensics, investigation tools and techniques. Students will explore the set up of an investigator's office and laboratory, as well as examine what computer forensic hardware and software is available. Topics covered include procedures for identification, preservation, and extraction of electronic evidence, auditing and investigation of network and host intrusions and forensic tools.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** NET:107.

## **COMPUTER NETWORKING**

### **NET:104 IT Essentials I: PC Hardware and Software 4 cr.**

This course presents an in-depth exposure to computer hardware and operating systems. Students learn the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Through hands-on activities and labs, students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. In addition, an introduction to networking is included. This course helps students prepare for CompTIA's A+ certification.

(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** MAT:041 or MAT:053 and RDG:045 or minimum math and reading placement scores based on college assessment.

### **NET:105 Printer Maintenance and Repair 3 cr.**

This course will prepare the student to troubleshoot laser, inkjet and dot matrix printer failures, repair or replace the failing units, perform any required adjustments or alignments, and verify proper printer operation. Proper preventive maintenance techniques will also be covered.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** NET:104, NET:107, NET:114 or consent of instructor.

### **NET:106 IT Essentials II: Network Operating Systems 4 cr.**

This is an intensive introduction to multi-user, multitasking networking operating systems. Characteristics of the Linux and Windows network operating systems will be discussed. Students will explore a variety of topics including installation procedures, security issues, back-up procedures and remote access.

(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** NET:104.

### **NET:107 Hardware/Software Installation and Troubleshooting 3 cr.**

This course provides students with "hands-on" experience installing PC hardware and software. Online resources and reference manuals will be utilized for troubleshooting hardware and software problems.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:303.

### **NET:114 Foundations of Information Technology 3 cr.**

This course is designed as an introduction to the general uses, concepts, application and implementation of information technology within business and industry. Topics include programming logic, number systems, basic hardware design and software concepts. Some hands-on experience will consist of working with hardware, operating systems and networking.

(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** MAT:041 or MAT:053 and RDG:045 or minimum math and reading placement scores based on college assessment.

### **NET:155 Introduction to Wireless Networks 3 cr.**

This course provides a hands-on guide to planning, designing, installing and configuring wireless LANs that prepares students for the Certified Wireless Network Administrator (CWNA) certification. The course provides an in-depth coverage of wireless networks with extensive coverage of IEEE 802.11b/a/g/pre-n implementation, design, security, and troubleshooting. The lecture is reinforced with hands-on projects.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ENG:013 and MAT:069 or MAT:073 or minimum English and math placement scores based on college assessment and NET:114 or NET:255 or consent of instructor.

# COURSE DESCRIPTIONS

## **NET:167 Computer Systems and Troubleshooting 4 cr.**

This course presents an in-depth exposure to computer hardware and operating systems. Students learn the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Through hands on activities and labs, students learn how to assemble and configure a computer, install operating systems and software and troubleshoot hardware and software problems.

(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:305

## **NET:198 Networking I 5 cr.**

This course introduces the architecture, structure, functions, components and models of the Internet and computer networks. The principles of Internet Protocol (IP) addressing and fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of this course, students will be able to build simple Local Area Networks (LANs), perform basic configurations for routers and switches and implement IP addressing schemes. (79.2 Lec. Hrs./39.6 Lab Hrs.)

## **NET:214 Cisco Networking 5 cr.**

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. It uses the OSI and TCP layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. (79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** ENG:013, MAT:041 or MAT:053 and RDG:032/033 or minimum English, math and reading placement scores based on college assessment.

## **NET:224 Cisco Routers 5 cr.**

This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. By the end of this course, students will be able to recognize and correct common routing issues and problems.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:214.

## **NET:234 Cisco Switches 5 cr.**

This course provides a comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model and how to select devices for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual LANs, VTP, and Inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WWLAN in a small to medium network.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:214.

## **NET:244 Cisco WAN 5 cr.**

This course discusses the WAN technologies and network services required by converged applications in Enterprise Networks. The course uses the Cisco Enterprise Composite model (ECM) to introduce integrated network services and explains how to select the appropriate devices and technologies to meet ECM requirements. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principles of traffic, access control and addressing services. Finally, students learn how to detect, troubleshoot, and correct common enterprise network implementation issues. (79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** NET:224 and NET:234.

## **NET:255 Networking for Home and Small Businesses 5 cr.**

This course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help desk technicians. It provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small business environments. Instructors are encouraged to provide field trips and outside -the -classroom learning experiences. Labs include PC installation, Internet connectivity, wireless connectivity, file, and print sharing, and the installation of game consoles, scanners, and cameras.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

## **NET:256 Networking at a Small-to-Medium Business or ISP 5 cr.**

This course prepares students for jobs as network technicians. It also helps students develop additional skills required for computer technicians and help desk technicians. It provides a basic overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide e-mail services, web space, and authenticated access. Students also learn about soft skills required for help desk and customer service positions. Network monitoring and basic troubleshooting skills are taught in context. After completing this course the student will be prepared to take the CCENT entry level certification exam. (79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:255.

## **NET:257 Introducing Routing and Switching in the Enterprise 5 cr.**

This course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks, IP Telephony requirements, and security. It also introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Hands-on exercises include configuration, installation, and troubleshooting. (79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:256.

## **NET:258 Designing and Supporting Computer Networks 5 cr.**

Learners progress through a variety of case studies and role-playing exercises, which include gathering requirements, designing basic networks, establishing proof-of-concept, and performing project management tasks. In addition, lifecycle services, including upgrades, competitive analyses, and system integration, are presented in the context of pre-sale support. Upon completion of this course the student will be prepared to take the CCNA Certification Exam.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:257.

## **NET:280 Installation of CAT 5e and Fiber Optic Cabling 3 cr.**

In this course, students learn how to install and terminate copper and fiber cabling. The students are shown the proper tools and procedures to achieve desired results for constructing highly reliable voice, video and data networks. Network installation and troubleshooting skills will be practiced.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:107, NET:114

## **NET:298 Networking II 5 cr.**

This course describes the architecture, components and operations of routers and switches in a small network. Students will learn how to configure a router and a switch for basic functionality. Students will configure and troubleshoot routers and switches and resolve common issues with Routing Information Protocol (RIP), single-area and multi-area Open Shortest Path First (OSPF), virtual Local Area Networks (LANs) and inter-Virtual Local Area Network (VLAN) routing in both Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6) networks.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:198.

## **NET:300 IP Telephony (VoIP) 3 cr.**

This course provides an introduction to converged voice and data networks as well as the challenges faced by its various technologies. The course presents Cisco solutions and implementation considerations to address those challenges. In this course, students will learn about Cisco Call Manager Express (CME) architecture, components, functionality and features. They will also learn some Voice over Internet Protocol (VoIP) and Quality of Service (QoS) technologies and apply them to the CME environment. The focus of the course is: Call Manager Express, connecting to a PSTN network, connecting from one router across a WAN to another router running CME, and connecting from one CME enabled router to another CME enabled router.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** RDG:032 or 033 or minimum reading placement score based on college assessment, NET:114, NET:244, and NET:303.

## **NET:302 Health Information Networking 3 cr.**

Health Information Networking equips students with knowledge and skills that can be applied toward entry-level specialist careers in healthcare networking. Health Information Networking is a blended curriculum with both online and classroom learning. Health Information Networking aims to develop an in-depth understanding of principals and practicalities needed for information technology professionals wishing to specialize in healthcare network implementations.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:298

## **NET:303 Windows Workstation Operating Systems 3 cr.**

This course prepares the student for supporting and using Windows Operating System Platform in a business setting. Topics of this course include installation, administration of resources, troubleshooting, networking, optimization and security.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MAT:069 or MAT:073 and RDG:032/033 or minimum math and reading placement scores based on college assessment.

## **NET:305 Introduction to Network Operating Systems 3 cr.**

This course is designed to give students of varying experience a practical working knowledge of baseline IT skills and technologies. We will cover each of the major operating systems, including DOS, Windows 9x/NT/2000/XP and UNIX/Linux. Topics include: installation, administration of resources, troubleshooting, networking, optimization and security.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

## **NET:313 Windows Server 3 cr.**

This course is designed to give students a practical understanding of Windows Servers. Students will learn to plan, install, configure, manage, and troubleshoot windows servers using hands-on labs as well as group and individual projects. Topics covered include installing and configuring the server operating system, setting up hardware, configuring system resources, optimizing system performance, configuring server storage, configuring network connectivity, and implementing server security. This course may be taken more than once provided the server operating system being offered has changed. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:114 and RDG:033/032 or minimum reading placement scores based on college assessment.

## **NET:398 Networking III 5 cr.**

This course describes the architecture, components and operations of routers and switches in a large and complex network. Students will learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Spanning Tree Protocol (STP), and Virtual Terminal Protocol (VTP) in both Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6) networks. Students will also develop the knowledge and skills needed to implement Dynamic Host Configuration Protocol (DHCP) and Domain Name System (DNS) operations in a network.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:298

# COURSE DESCRIPTIONS

## **NET:474 Certification Preparation 1 cr.**

This course is designed as a review and final preparation for students taking Information Technology certification tests. (19.8 Lec. Hrs.)

## **NET:487 Network+ Exam Preparation 1 cr.**

The Network+ Test Preparation course will prepare the student to take the Network+ Certification Examination. Through hands-on training, students learn the vendor-independent network skills and concepts that affect all aspects of networking, such as installing and configuring the TCP/IP client. The course also helps prepare students for two popular certification examinations: CompTIA Network+ and Microsoft Networking Essentials. (9.9 Lec. Hrs./19.8 Lab Hrs.)

**Prerequisite:** MAT:069 or MAT:073 and RDG:032/033 or minimum math and reading placement scores based on college assessment.

## **NET:489 A+ Exam Preparation 1 cr.**

The A+ Test Preparation course prepares the student to take the A+ Certification Examination. Topics include: computer architecture, microprocessors, memory, storage, video, modems, printers, LANs (Local Area Networks), device drivers, batch files, hard drives, MS-DOS and Windows Family Operating Systems. (9.9 Lec. Hrs./19.8 Operating Lab Hrs.)

**Prerequisite:** MAT:069 or MAT:073 and RDG:032/033 or minimum math and reading placement scores based on college assessment.

## **NET:498 Networking IV 5 cr.**

This course discusses the WAN technologies and network services required by converged applications in a complex network. The course allows you to understand the selection criteria of network devices and WAN technologies to meet network requirements. You will learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. You will also develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network. (79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:398

## **NET:612 Fundamentals of Network Security 3 cr.**

This course provides the student with an overview of Information Technology (IT) Security and introduces the components necessary to secure network information systems. Topics include security policies, intrusion detection systems (IDS), firewalls, operating system security and network security basics. Students will also be introduced to current hacker techniques and log auditing processes. Current computer security issues will also be explored as class projects. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** RDG:032/033 or minimum reading placement scores based on college assessment and NET:214 or NET:258 or consent of instructor.

## **NET:619 Network Attacks: Detection, Analysis & Countermeasures 3 cr.**

Provides students the opportunity to attack computer networks to test their defenses and teaches them how to analyze attacks. Topics include attacks and attack analysis, intrusion detection and analysis and advanced defense countermeasure configuration using firewalls, routers and intrusion detection systems. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** NET:305

## **NET:635 Ethical Hacking 3 cr.**

This course introduces the art of ethical hacking and security testing, thereby preparing students to be efficient security professionals. In this course we will explore the tools and techniques that security professionals use to discover vulnerabilities and offer solutions to protect computer networks. Students will learn that by knowing what attackers know and think, they can better protect network resources from attacks. In addition to learning fundamental security testing concepts, the student will gain practical knowledge in computer programming, documentation of security tests, ethical and legal ramifications and discover that critical thinking skills and creativity are essential in security testing. (59.4 Lec. Hrs.) **Prerequisite:** NET:612

## **NET:639 SANs and Data Arrays 3 cr.**

To ensure that any business delivers the expected results, they must have access to accurate and timely information. The management and protection of business information is vital for the availability of business processes. This course introduces the concept of networks, storage and the storage area networks (SANs), which is regarded as the ultimate response to all these needs. Students will be introduced to real-life SANs alongside well-known technologies and platforms that are used in SAN implementations. The student will also be introduced to some of the trends that are driving the SAN evolution and how they might affect the future of storage technology. Extensive hands-on labs will allow students to experience first-hand the setup, management and security of modern SANs. (59.4 Lec. Hrs.) **Prerequisite:** NET:305

## **NET:652 Microsoft Exchange Server 3 cr.**

This course covers Microsoft Exchange Server Administration. It will empower students to successfully pass the MCSE certification exam, and its hands-on approach will also prepare students to face the real-life challenges of a Microsoft networking professional. Projects and exercises reinforce skills as they are learned and extensive test preparation resources help students get ready for exam day. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite:** NET:313

## **NET:679 TCP/IP and Subnetting 1 cr.**

This course is intended to provide the necessary information to understand the TCP/IP protocol Suite as well as IP Addressing and Subnetting. This course includes a discussion on the structure and purpose of an IP Address and the purpose for Subnetting. A thorough discussion on Subnetting Class A, B, & C networks, as well as, Variable Length Subnet Mask (VLSM), and Supernetting (Classless Internet Domain Routing) of multiple Class C Addresses is provided. Finally, an introduction to Internet Protocol Version 6 is provided. (9.9 Lec. Hrs./19.8 Lab Hrs.)

**Prerequisite:** ENG:013 and MAT:069 or MAT:073 or minimum English and math placement scores based on college assessment.

## **NET:728 Basic Home Networking** 1 cr.

This course covers design, installation, management and troubleshooting of the home networks. This course is designed for electricians and professionals seeking to upgrade their skills, as well as the do-it-yourselfers. We will cover the concepts of building a home network, as well as the variety of networking hardware and cabling options available today. We will also cover configuring Microsoft Windows operating systems, using firewalls and other means of network security, and testing and troubleshooting using standard tools. Clear and concise explanations of network basics, such as mission-critical TCP/IP and NetBEUI protocols, are also covered as well as how information will travel through their network and out across the Internet. Finally, we will cover household appliances and digital phone systems that can be connected to the home network, as well as game systems that allow users to play with others within the network or across the Internet.

(9.9 Lec. Hrs./19.8 Lab Hrs.)  
**Prerequisite:** ENG:013 and MAT:069 or MAT:073 or minimum English and math placement scores based on college assessment.

## **NET:785 Fundamentals of Desktop Support** 3 cr.

This course will introduce the student to the service concepts, skill sets, career paths, and operations of the help desk industry. Students will master the role of a help desk analyst, navigate the help desk environment, and learn crucial problem solving skills. Through this course students will develop the "soft skills" and the "self-management skills" needed to deliver excellent customer support at the help desk. This course provides an overview of the help desk for individuals interested in pursuing a career in technical support. The course will integrate strong real-world computer support examples, case studies, and group/team exercises to emphasize the concepts of the course.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** None.

## **NET:851 Innovations in Technology** 3 cr.

The Information Technology profession demands constant professional updates. This course allows students to explore current trends in the information technology area and participate in other career-path professional development activities.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CSC:110, MAT:110 and NET:303.

## **NET:860 Information Technology Specialist Capstone** 3 cr.

This capstone course is designed to allow the student to review, analyze and integrate the work the student has completed toward a degree in Information Technology. The student will complete an approved academic project and paper that demonstrates mastery of their program of study in a meaningful culmination of their learning, and assesses their level of mastery of the stated outcomes of their degree requirements.

(59.4 Lec. Hrs.)

**Prerequisite:** Instructor Approval

## **NET:910 Cooperative Work Experience** Variable cr.

Co-operative Education Experience will integrate classroom theory with on-the-job training. The college will assist a student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. This course may be repeated for up to a maximum of eight credit hours.

(79.2 Co-op Hrs./Cr. Hr.)

**Prerequisite:** Completion of at least 12 credit hours at a College(s) of EICC with at least two CIS or NET courses. Minimum GPA of 2.0.

## **NET:932 Internship** 1-3 cr.

Internship will integrate classroom theory with on-the-job training. The employment opportunity will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student will participate in job training experiences and demonstrate the knowledge that he or she has gained through college-level classroom instruction. Internship is open to students must complete 75% of their degree of study prior to participation in Internship. Prior to registering for Internship the student must have completed an application signed by the student, the employer and the faculty adviser. Students must complete 80 documented work hours for every one college credit hour. Students may take Internship for up to a maximum of three credit hours.

(79.2-237.6 Co-op. Hrs.)

**Prerequisite:** Instructor consent.

## **COMPUTER PROGRAMMING**

### **CIS:121 Introduction to Programming Logic** 3 cr.

Introduction to structured programming logic using a variety of methods to solve programming problems. Topics covered include flowcharting, pseudocode, hierarchy charts, truth tables, control breaks, arrays, logic constructs, object-oriented programming.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

### **CIS:138 Introduction to PC Programming** 2 cr.

Introduction to PC Programming is designed as a beginning programming course. The C++ language is used to teach the programming concepts of selection, iteration, arrays and classes.

(29.8 Lec. Hrs./19.8 Lab Hrs.)

# COURSE DESCRIPTIONS

## **CIS:140 Introduction to Game Design 3 cr.**

This course introduces game design theory, history of gaming, types of games, gaming platforms, major game components, and the gaming industry. Students will participate in designing games and develop prototypes using a variety of software tools.

(39.6 Lec Hrs./39.6 Lab Hrs.)

**Prerequisite:** MAT:069 or MAT:073 and RDG:033/032 or minimum math and reading placement scores based on college assessment.

## **CIS:159 Programming with Alice 3 cr.**

Using the Alice programming system, students will create and manipulate three-dimensional computerized worlds. This graphic approach to programming will teach basic programming control structures; as well as object-oriented, event-driven programming concepts.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ENG:013, MAT:041 or MAT:053, RDG:032/033 or minimum English, math and reading placement scores based on college assessment.

## **CIS:161 C++ 3 cr.**

This course is designed to give students a basic understanding of the C++ language. Topics covered include the Visual C++.NET environment, variables, calculations, loop structures, decision structures, pointers, arrays, functions and function templates.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** MAT:069 or MAT:073 and RDG:033/032 or minimum math and reading placement scores based on college assessment.

## **CIS:164 Advanced C++ 3 cr.**

This course is a continuation of C++. Topics covered include: the Visual C++.NET environment, classes, Inheritance, Windows Programming, Foundation Classes, File and Database access.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CIS:161.

## **CIS:170 Java 2 cr.**

Java is a beginning programming course. The course covers Java classes, methods, and objects, decisions, looping, strings and string buffer, arrays, applets and graphics.

(29.8 Lec. Hrs./19.8 Lab Hrs.)

## **CIS:171 Java 3 cr.**

This course provides an introduction to object-oriented programming using the Java programming language. The course covers methods, objects, and classes with the emphasis on modularity and reusable code. Students design programs demonstrating conditionals, iteration, array handling and event processing.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CIS:121.

## **CIS:185 Oracle Academy - Database Design 5 cr.**

This course is the first in a two-course sequence of database design and development courses sponsored by Oracle. Students will identify business needs and create the database conceptual and physical models to meet those needs. Students who successfully complete the two course sequence will earn an Oracle Academy Certificate.

(59.4 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** Consent of instructor required.

## **CIS:186 Oracle Academy - Database Development with SQL 5 cr.**

This course is the second in a two-course sequence of the database design and development courses sponsored by Oracle. Students will extend their skills learned in CIS:185 by creating and implementing their database design using SQL, the industry standard database programming language. Students who successfully complete the two course sequence will earn an Oracle Academy Certificate.

(59.4 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** CIS:185. CIS:121 or knowledge of at least one programming language recommended.

## **CIS:196 Oracle Database Programming with PL/SQL 5 cr.**

In this course, students will learn PL/SQL, Oracle's procedural extension language for SQL and the Oracle relational database. Students will explore the differences between SQL and PL/SQL, examine the characteristics of PL/SQL and learn how to use it to extend and automate SQL to administer the Oracle database. This course culminates with a project that challenges students to program, implement and demonstrate a database solution for a business or organization.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CIS:186

## **CIS:210 Web Development I 3 cr.**

Students will learn how to evaluate, design, construct and maintain Internet web pages and web sites. Topics include HTML, DTML, graphics, animation and FTP.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** RDG:032/033 or minimum reading placement scores based on college assessment.

## **CIS:211 Web Development II 3 cr.**

Students will learn how to evaluate, design, construct and maintain interactive Internet Web pages and Web sites using Dynamic Hyper Text Markup Language (DHTML). Topics include: JavaScript, server-side and client-side programs, variables, arrays, control structures, form validation, object properties, methods and event handlers, multimedia via Java applets and ColdFusion.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CIS:210.

# COURSE DESCRIPTIONS

## **CIS:224 Server Side Scripting 4 cr.**

Students will learn to develop and implement web applications using server side scripting with emphasis on PHP. Additional server side scripting languages and technologies will be discussed. Students will gain hands-on experience while writing real world-based web applications from the ground up. Basic SQL will also be learned as needed. Simple databases will be created for use with web application back-ends. Students will learn to access and modify their databases by building their front-ends using server side scripting and embedded SQL. (59.4 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite:** CIS:121, CIS:185, CIS:210, CIS:606

## **CIS:251 Fundamentals of Web Design I 3 cr.**

This course will focus on the overall production processes surrounding web site design with particular emphasis on design elements involving layout, navigation and interactivity. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite:** CIS:210.

## **CIS:274 E-Commerce Design 3 cr.**

This course explores how the landscape of online commerce is changing and evolving. With balanced coverage of both the technological and the strategic aspects of successful e-commerce, students are able to tackle the real-world business cases included in each chapter. Reflecting changes in the economy and how businesses are responding, this course emphasizes revenue and transaction cost reduction models as an alternative to the older ideas of business models. Topics covered include Technology Infrastructure: The Internet and the World Wide Web; Selling on the Web: Revenue Models and Building a Web Presence; Marketing on the Web; Business-to-Business Strategies: From Electronic Data Interchange to Electronic Commerce; and The Environment of Electronic Commerce: Legal, Ethical, and Tax Issues. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **CIS:307 Introduction to Databases 3 cr.**

This course provides the student with an overview of database management systems. The student will learn about database fundamentals, database modeling, Structured Query Language (SQL), database administration and current issues. Through hands-on exercises, students will develop databases on different platforms. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite:** RDG:032/033 or minimum reading placement scores based on college assessment.

## **CIS:331 Microsoft SQL Server 3 cr.**

This course will cover MS SQL Server structure and characteristics as well as Structured Query Language (SQL) commands from both console and user interface. While learning MS SQL Server commands, students will compare and contrast them to the American National Standards Institute (ANSI) SQL and apply both against the server. Students will use MS SQL Server in a client computer and in a Web server supported by Microsoft Active Server Page (ASP). (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite:** CIS:186

## **CIS:353 Database Models and Design Structures 3 cr.**

In this course students will learn and apply strategies and methodologies for database design, implementation and administration of local, remote and web-based database systems using industry and example-based studies and applications. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite:** CIS:185

## **CIS:388 Creative Writing for Games 3 cr.**

This course focuses on the specific aspect of writing for game development. Topics in this course include: techniques for brainstorming, storyboarding, storytelling principles, plot development, conflict, character development and dialog. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## **CIS:402 COBOL 3 cr.**

Introductory concepts of COBOL, the Common Business Oriented Language, will be presented in this course. Business problems will be solved using the structured approach to COBOL. Good style and design characteristics will be emphasized. This course will cover the basics of logic design, basic COBOL syntax, common COBOL verbs, arithmetic operations, report editing, techniques for comparing, and programming multiple levels of control for report formats. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite/Co-requisite:** CIS:121, MAT:069 or MAT:073 and RDG:032/033 or minimum math and reading placement scores based on college assessment.

## **CIS:504 Systems Structural Analysis 3 cr.**

This course provides a broad yet specific treatment of the makeup, analysis, design and implementation of systems projects with emphasis on learning how to analyze existing systems applications and design better ones for computer processing. Object-oriented design techniques are discussed and good communication skills will be emphasized. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisites:** At least two semesters of a programming language or equivalent work experience.

## **CIS:606 Visual Basic.NET I 3 cr.**

This hands-on course covers essential aspects of Visual Basic for Windows. Students will design applications; understand controls and properties; use variables, functions, and expressions; use statements and methods; use arrays; design menus; and access files. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Co-requisite:** CIS:121 recommended.

## **CIS:607 Visual Basic.NET II 3 cr.**

This course is a continuation of Visual Basic.NET I. Topics covered in this course include using masks and data validation, advanced controls, error handling, reporting, advanced file handling and packaging and distribution of completed applications. (39.6 Lec. Hrs./39.6 Lab Hrs.) **Prerequisite:** CIS:606.

# COURSE DESCRIPTIONS

---

## **CIS:608 Visual Basic III 3 cr.**

Students continue to study advanced Visual Basic topics including class modules, multi-tier database applications, web forms and web services..

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CIS:607.

## **CIS:704 UNIX / Linux 3 cr.**

This course is designed to give students a basic understanding of the UNIX operating system, commands, the word systems duties and system administrative duties required when using a UNIX-based system.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** NET:114 and NET:303.

## **CIS:710 Flash Game Development 3 cr.**

Students will apply basic game design elements to create Flash-based games in this hands-on course.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CIS:140 is recommended.

**Co-requisite:** CIS:161.

## **CIS:949 IT Special Topics 1 cr.**

Courses of instruction involving material of timely, special or unusual interest not contained in the regular course offerings. These courses may be offered by faculty members with the approval of their Department Chair and the Dean of the College. These may be courses exploring areas of special interest to the proposing faculty member, department or to the students. This course may be repeated for additional credit.

(19.8 Lec. Hrs.)

## **COMPUTER SCIENCE**

---

### **CSC:107 Computer Literacy 3 cr.**

This course introduces students to personal computer concepts and the basics of using computer applications. Students gain knowledge and skills using Microsoft operating systems and applications including word processing, spreadsheet and presentation software. Students also gain experience using the Internet and email. Conducting research and creating appropriate citations will be emphasized.

(59.4 Lec. Hrs.)

### **CSC:110 Introduction to Computers 3 cr.**

An introduction to computers including database, word processing and spreadsheet applications. This is a beginning course designed primarily to develop computer skills and will include student computer projects.

*This course satisfies a general education requirement for Computer Literacy.*

(39.6 Lec. Hrs./39.6 Lab Hrs.)

### **CSC:112 and CSC:113 Computer Fundamentals for Technicians I/A and I/B 2 cr. each**

This course will cover microcomputer operating systems, hardware and application software. Spreadsheets, database management, word processing, graphs and operating Windows environment, Internet searches and power point presentations. Lab exercises will follow lecture and class discussion.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CSC:112 - None.

CSC:113 - CSC:112.

## **CONSERVATION**

---

### **CNS:105 Conservation 2 cr.**

A study of the historical and biological basis for the conservation of natural resources with an emphasis on biodiversity and a survey of current problems and issues.

(39.6 Lec. Hrs.)

### **CNS:131 Wildlife Habitat Management 2 cr.**

Study of managing communities which provide habitat for wildlife. Primary emphasis is placed on manipulating vegetation to increase wildlife population.

(39.6 Lec. Hrs.)

### **CNS:132 Wildlife Management 2 cr.**

Study of the application of wildlife, management techniques, censusing, capture and marking of wildlife, habitat evaluation, Iowa gaming laws, life history studies and the application of wildlife management principles related to important recreational resources.

(39.6 Lec. Hrs.)

**Prerequisite:** BIO:114 and BIO:133.

### **CNS:137 Fisheries Management 2 cr.**

Study of the application of fish management principles. Topics include fish identification, population estimation techniques, age and growth studies, watershed evaluation and management, fish life history features and fish hatchery procedures.

(39.6 Lec. Hrs.)

**Recommended:** BIO:114 and BIO:133.

### **CNS:150 Conservation Occupations 1 cr.**

Orientation to the careers/carrer opportunities in conservation and ecology.

(19.8 Lec. Hrs.)

### **CNS:901 Wilderness Experience 2 cr.**

Provides the student with a living laboratory experience in a natural wilderness area to study biology, ecology, geology and related environmental conservation problems. The student will develop an appreciation of the wilderness environment and some basic skills of canoeing, water safety, camping, fishing, wilderness survival, map reading and the use of a compass. Additional fee will be charged.

(79.2 Lab. Hrs.)

### **CNS:930 Employment Experience 1-4 cr.**

Provides on-the-job training in the student's chosen area.

(79.2-316.8 Co-op. Hrs.)

## **CONSTRUCTION**

---

### **CON:170 Building Construction Techniques I 6 cr.**

Building Construction Technique I provides practical application of selected construction techniques. Students learn construction techniques in preparation of flat concrete work as well as fundamentals of block laying and brick laying techniques as they relate to basic construction. OSHA training, plumbing, framing, HVAC, roof sheathing and shingling will also be learned techniques.

(38.4 Lec. Hrs./ 230.4 Lab Hrs.)

# COURSE DESCRIPTIONS

## **CON:171 Building Construction Techniques II 6 cr.**

Building Construction Techniques II provides practical application of selected construction techniques. Students learn construction techniques in floor, wall and ceiling systems, stair construction and interior finishing skills.

(38.4 Lec. Hrs./ 230.4 Lab Hrs.)

**Prerequisite:** CON:170.

## **CON:175 Residential Construction Applications 6 cr.**

Students will apply advanced construction procedures on decks, walls, roofs, stairwells, and related structures. Durable design and application of proven methods will be emphasized, with the goal of building a house. The course relates to sustainable building practices.

(39.6 Lec. Hrs./79.2 Lab Hrs.)

## **CRIMINAL JUSTICE**

### **CRJ:100 Introduction to Criminal Justice 3 cr.**

An introduction to the criminal justice system: police, courts, corrections, the role of the criminal justice system in society and recommendations for reform.

Discussion will include career opportunities.

(59.4 Lec. Hrs.)

### **CRJ:118 Law Enforcement 3 cr.**

A survey course about the historical development of law enforcement, the functions of local, state and federal law enforcement agencies, police subculture, the function of patrol and other issues important to the field of policing. The use of police authority, police discretion, police violence and police corruption will be introduced.

(59.4 Lec. Hrs.)

### **CRJ:120 Introduction to Corrections 3 cr.**

The development of corrections, the correctional process, correctional client, alternatives to incarceration, effects of institutionalization, correctional administration and future of corrections.

(59.4 Lec. Hrs.)

### **CRJ:130 Criminal Law I 3 cr.**

A study of the substantive criminal law, its historical background and development, and the basic elements of criminal law, including criminal intent and criminal capacity.

(59.4 Lec. Hrs.)

### **CRJ:141 Criminal Investigation 3 cr.**

An introduction to the art of criminal investigation and case preparation. Topics include interrogation, gathering of information and evidence, informants, homicide investigation, fingerprinting and other selected evidence.

(59.4 Lec. Hrs.)

### **CRJ:142 Criminalistics 3 cr.**

Fundamentals of investigation, crime scene search and recording, collection and preservation of physical evidence, scientific aids, modus operandi, sources of information, interviews and interrogation, follow-up and case preparation.

(59.4 Lec. Hrs.)

### **CRJ:200 Criminology 3 cr.**

The study of human behavior and crime, the development of corrections and criminology with sociological and cultural approaches to crime and the career criminal.

Same as SOC:240.

(59.4 Lec. Hrs.)

### **CRJ:201 Juvenile Delinquency 3 cr.**

Introduces the causes of delinquency and the modification of such behavior by corrective institutions and individual therapy. Emphasis is placed on the study of the development of individual personality through inter-family relationships, antisocial aggressive acts from early abnormal family and social situations.

Same as SOC:230.

(59.4 Lec. Hrs.)

### **CRJ:208 Introduction to Private Security 3 cr.**

This course considers the history, principles and management of private security, procedural security, personal protection, fire prevention and the prevention of losses due to natural and man-made disasters as applied in industrial, retail and institutional settings.

(59.4 Lec. Hrs.)

### **CRJ:209 Vice and Drug Control 3 cr.**

Vice and Drug Control examines the controversial topic of vice and vicious activities (drugs, prostitution and gambling); the reasons why society attempts to control it; and the means by which control is gained. Individual elements of vicious activity, control methods, related criminological concepts and theories are defined and examined from historical, contemporary and futuristic perspectives through objective, subjective and critical frames of reference. Success of current vice control efforts and enforcement methods are investigated and alternative policies considered.

(59.4 Lec. Hrs.)

**Prerequisite:** CRJ:100.

### **CRJ:230 Evidence 3 cr.**

This course traces the nature and development of evidence law and its role in the criminal justice system. The student will be introduced to concepts such as direct and circumstantial evidence, relevancy, hearsay, character evidence and the various privileges that exist in evidence law. In addition, the student will learn how to present evidence in a courtroom both from a lawyer's examination and a witness' testimony.

(59.4 Lec. Hrs.)

### **CRJ:295 Contemporary Issues in Criminal Justice 3 cr.**

Devoted to exploration and analysis of contemporary issues in criminal justice. Class discussions, lectures and reading in conjunction with an individual research paper. Guest speakers and field trips when appropriate.

(59.4 Lec. Hrs.)

**Prerequisite:** CRJ:200.

### **CRJ:928 Independent Study in Criminal Justice 3 cr.**

Independent Study is a course designed to provide the student an opportunity to explore in greater depth an area(s) of individual interest within the discipline of criminal justice. Student will complete a project or a research paper under the guidance of a faculty member. This course may be repeated for a total of 6 credits. (118.8 Lab Hrs.)

**Prerequisite:** Minimum of 6 credits in criminal justice (CRJ).

# COURSE DESCRIPTIONS

---

## **CRJ:941 Practicum in Criminal Justice** 1 - 3 cr.

Practicum is intended to provide hands-on learning and experience relating theory to practice. Students undertake up to 99 hours of work and observation in settings that meet individual career and academic goals. The college approves sites and faculty members oversee the practicum. Academic assignments accompany the hands-on learning experience. This course may be repeated for a total of 6 credits. (118.8 Lab Hrs.)

**Prerequisite:** Grade Point Average of 2.0 or higher and consent of faculty member, Department Coordinator and Dean.

## **CULTURAL STUDIES**

---

### **CLS:121 Studies in Non-Western Culture** 3 cr.

This course is an interdisciplinary humanities course that will introduce students to selected regions and countries of the designated region. Regions are limited to East, South, Southeast and Southwest Asia; Africa; Oceania; the Caribbean region and Native American cultures. Emphasis will be placed on cultural, historical and geographical perspectives and the arts, issues and events that help to define and shape that part of the world. This course may be repeated twice for additional credits. (59.4 Lec. Hrs.)

### **CLS:150 Latin American History and Culture** 3 cr.

This course is designed to introduce Latin America- a region encompassing Mexico, Central America, South America, and the Caribbean. Emphasizing Latin American geography, history, culture, and politics, the course explores the links between the region's complex past and present circumstances. Emphasis is placed on how Latin Americans view themselves and how their history and culture differ from those of the United States and Europe.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment. Prior courses in history and literature (high school or above) strongly recommended.

## **DENTAL ASSISTING**

---

### **DEA:257 Dental Anatomy** 3 cr.

This course introduces histology, embryology and gross anatomy of the deciduous and permanent teeth. This also includes the structure, function, and form of individual teeth and supportive tissue. (59.4 Lec. Hrs.)

### **DEA:268 Pharmacy and Emergency Procedures for Dental Assisting** 2 cr.

This course is a study of the nature, action and uses of drugs seen in a dental setting. The student also will learn how to respond to the various emergencies that may occur in a dental office. (39.6 Lec. Hrs.)

### **DEA:285 Oral Pathology for Dental Assisting** 1 cr.

Introduction to the general principles of pathology, emphasis is on the specifics of disease entities of local and systemic origins to enable interpretation by the dental auxiliary of the medical and dental history with emphasis on specific oral pathology. Terminology is a focus, with descriptions of oral lesions and their treatment. (19.8 Lec. Hrs.)

### **DEA:293 Microbiology and Infection Control** 2 cr.

This course will acquaint the dental assisting student with a general knowledge of microbiology. Students will be presented the infection control procedures and protection protocols based on OSHA standards and CDC guidelines. (39.6 Lec. Hrs.)

Background in biology is recommended.

### **DEA:605 Dental Specialties** 4 cr.

Covers the dental specialties of endodontics, periodontics, pediatric dentistry, oral surgery, orthodontics, fixed prosthodontics and removable prosthodontics. (79.2 Lec.. Hrs.)

### **DEA:702 Dental Office Procedures** 2 cr.

Emphasizes procedures for office management in dental practices. Topics include: oral and written communication, appointment control, recall systems, resumes, supply inventory, records management, dental insurance preparation, financial arrangements, patient accounts, credit and collection, banking, salaries, tax forms, patient correspondence, legal and ethical conduct, and basic computer skills. A computer lab provides basic skills in computer use and utilization of the dental office software to perform office procedures. (19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** DEA:257

## **DIESEL TECHNOLOGY**

---

### **DSL:103 Survey of Diesel Technology** 1.5 cr.

This course is designed to introduce the student to a variety of tasks and skills commonly used in the diesel technology repair field. Diesel engine repair and maintenance, as well as automatic transmission operation and service will be discussed and practiced. (59.4 Lab. Hrs.)

**Co-requisite:** AUT:115

### **DSL:151 Truck Electrical Systems** 2 cr.

This course deals specifically with truck electrical systems. Students will gain the knowledge and competencies needed to diagnose, and repair electrical systems and accessory circuits on today's trucks. (19.8 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** AUT:115 and AUT:614.

### **DSL:201 Basic Gas Engine Performance** 2 cr.

This course is designed as a basic gasoline engine systems course for diesel technology students. Theory and operation of ignition, fuel injection and emission control systems will be taught. Lab time will be used to learn the use of diagnostic equipment in troubleshooting and repair of ignition, fuel and emission control systems. (19.8 Lec. Hrs./59.4 Lab Hrs.)

# COURSE DESCRIPTIONS

## **DSL:340 Diesel Engine Repair 5 cr.**

Acquaints the student with the modern diesel engine used in transportation and automotive industries. The course is divided into five sections. In each section, operation, overhaul and adjustments will be thoroughly covered for the diesel engine used in the transportation and the automotive diesel engine industry. Labs correlate with lectures to provide the student with practical hands-on experience. (39.6 Lec. Hrs./178.2 Lab Hrs.)

**Prerequisites:** AUT:115 and AUT:164.

## **DSL:435 Diesel Fuel Systems I 3 cr.**

This course acquaints the student with diesel fuel characteristics, fuel subsystems, overview of diesel fuel injection basics, and injector nozzles. (59.4 Lec. Hrs.)

**Prerequisites:** AUT:115 and DSL:603.

## **DSL:437 Diesel Fuel Systems II 4 cr.**

This course acquaints the student with operation testing and adjustments required to troubleshoot and repair diesel fuel systems. The course is broken down into different modules and includes: (A) Caterpillar Mechanical and Electronic Fuel Systems (B) Detroit Diesel Mechanical and Electronic Fuel System; (C) Cummins Manual Electronic Fuel Systems; (D) Roosa Mechanical Fuel Pumps (E) Robert Bosch VE Fuel Pumps (F) Mack and Volvo Fuel Systems (G) Common Rail and (H) Emissions. (59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** DSL:435.

## **DSL:505 Heavy Duty Drive Train I 3 cr.**

This course covers the theory and operation of heavy duty drive trains. Students will gain competencies in removal, installation and repair of clutches, heavy duty manual transmissions, power dividers, drive shafts and differential. Safety procedures will be stressed as well as basic maintenance and adjustment procedures. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** AUT:115 and MAT:104.

## **DSL:507 Heavy Duty Drive Train II 3 cr.**

This course covers the theory of drive trains and axles. Students will gain competencies in removal, installation, repair and adjustment of drive shafts, power dividers, differential and axles. Safety procedures will be stressed as well as basic maintenance and adjustment procedures.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** DSL:505.

## **DSL:519 Automatic Drive Train 4 cr.**

This course acquaints the student with the major components and operation of automatic transmissions. This course includes the functions and operation of truck transmissions, the functions and operations of the hydraulic system, lock-up type torque converter, and disassemble, rebuild and assembly procedures. Labs correlate with lectures to provide the student with practical hands-on experiences. (39.6 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisite:** AUT:115.

## **DSL:603 Hydraulics 2 cr.**

This course will acquaint the student with basic hydraulic operation, pumps and cylinder controls. This course will acquaint the student with troubleshooting of hydraulic systems. (19.8 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** MAT:104.

## **DSL:625 Heavy Duty Alignment 3 cr.**

This course goes into the theory and procedures of front and rear alignment. It will include automotive through heavy duty applications. Lab time will be on testing and setting according to service procedures. Also included will be basic truck driving to provide students experience in moving trucks and trailers into the shop area. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** AUT:115.

## **DSL:629 Heavy Duty Brakes and Service 3 cr.**

Acquaints the student with the principles of diagnosing and repairing truck brake systems. Included will be a study of hydraulic brake systems, air brake systems, brake components/brake adjustments as they pertain to heavy duty brake systems and preventative maintenance on brake systems as per NATEF. Labs correlate with lectures to provide the student with practical hands-on experience. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** AUT:115.

## **DSL:710 Heating, Air Conditioning and Refrigeration 4 cr.**

This course is designed for the student to gain a basic understanding and working knowledge of truck and automobile heating and air conditioning systems as well as trailer refrigeration units. Students will gain entry-level competencies in the diagnosis and repair of common problems in these systems. (59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** Completion of or concurrent enrollment in AUT:115.

## **DSL:815 Preventive Maintenance 1 cr.**

Students will learn how to perform prevention maintenance (P.M.) inspection of the cab, electric and frame, and trailers. (9.9 Lec. Hrs./29.7 Lab Hrs.)

**Prerequisite:** AUT:115 and AUT:614.

## **DSL:905 Cooperative Experience 2 cr.**

Co-operative Education Experience will integrate classroom theory with on-the-job training. The College will assist the student in securing employment which will be related to the student's major field of study and/or career interests. Under the supervision of the college and the employer, the student participates in job training experiences. In addition to employment, attendance at scheduled oncampus seminars is required. Seminars may include job searching skills as well as professional development. (158.4 Co-op. Hrs.)

**Prerequisite:** Consent of instructor.

Complete 12 credits with at least 2 courses in DSL. Minimum GPA 2.0.

# COURSE DESCRIPTIONS

---

## DRAFTING

---

### **DRF:114 Basic Drafting I/A 2.5 cr.**

The first of a two course sequence covering the fundamentals and foundations of drafting and mechanical drawing. This course will develop student skills in the areas of lettering and sketching techniques as well as the use of drafting instruments. Major units of instruction will include: lettering; instrument drawing; geometric constructions; sketching; and multiview projections.

(19.8 Lec. Hrs./59.4 Lab Hrs.)

### **DRF:115 Basic Drafting I/B 2.5 cr.**

The second of a two course sequence covering the fundamentals and foundations of drafting and mechanical drawing. This course will develop student skills in the areas of lettering and sketching techniques as well as the use of drafting instruments. Major units of instruction will include: sectional views; auxiliary views; and dimensioning.

(19.8 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** DRF:114.

### **DRF:130 Industrial Drafting Applications I 3.5 cr.**

The first of a two course sequence covering advanced applied industrial drafting topics. Students will get hands-on experience over the topics covered in this course during practical exercises. Major units of instruction will include: threads and fasteners; isometric drawing; welding representation; and intersections and developments.

(29.7 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** DRF:115.

### **DRF:131 Basic Drafting and Design I 3 cr.**

This is the first of a two course sequence covering the fundamentals and foundations of drafting and design. This course will develop student skills in the areas of sketching techniques and lettering as well as the use of drafting instruments. Major units of instruction will include sketching applications, lines and lettering, drafting geometry, and multiviews.

(29.70 Lec. Hrs., 59.40 Lab Hrs.)

### **DRF:132 Basic Drafting and Design II 3 cr.**

This is the second of a two course sequence covering the fundamentals and foundations of drafting and design. This course will develop student skills in the areas of sketching techniques and lettering, as well as the use of drafting instruments. Major units of instruction will include auxiliary views, dimensioning and tolerancing, fasteners and springs, and sections.

(29.70 Lec. Hrs., 59.40 Lab Hrs.)

### **DRF:135 Industrial Drafting Applications II 3.5 cr.**

The second of a two course sequence covering advanced applied industrial drafting topics. Students will get hands-on experience over the topics covered in this course through practical exercises. Major units of instruction will include advanced dimensioning; tolerancing; and working drawings.

(29.7 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** DRF:130.

### **DRF:148 Project Design I 1.5 cr.**

The first of a two course sequence which provides students insight into the design process. Students will be required to complete a set of two assigned projects during the course of the class.

(19.8 Lec. Hrs./19.8 Lab Hrs)

**Prerequisite:** CAD:231 or CAD:261 and EGT:162.

### **DRF:149 Project Design II 1.5 cr.**

The second of a two course sequence which provides students insight into the design process. Students will be required to complete a set of two assigned projects during the course of the class.

(19.8 Lec. Hrs./19.8 Lab)

**Prerequisite:** DRF:148.

### **DRF:161 Descriptive Geometry 3 cr.**

This course will introduce students to the basic principles of Descriptive Geometry. These principles are valuable for determining true shapes of planes, angles between two lines, angles between two planes, or the angle between a line and a plane. Problems are solved graphically by projecting points onto selected adjacent projection planes in an imaginary projection system. Major areas of concentration will be points and lines in space, auxiliary views, lines, line characteristics, planes, and plane relationships.

(39.60 Lec. Hrs., 39.60 Lab Hrs.)

### **DRF:331 Mechanical Drafting and Design I 3 cr.**

This is the first of a two-course sequence covering advanced topics in the areas of drafting and design. Students will get hands-on experience over the topics covered in this course utilizing practical exercises. The major unit of instruction covered will be to create full sets of working drawings, which include detail drawings, assembly drawings, and parts lists.

### **DRF:332 Mechanical Drafting and Design II 3 cr.**

This is the second of a two-course sequence covering advanced topics in the areas of drafting and design. Students will get hands-on experience over the topics covered in this course utilizing practical exercises. The major units of instruction covered will be mechanisms, belt and chain drives, and welding processes.

(29.70 Lec. Hrs., 59.40 Lab Hrs.)

## DRAMA

---

### **DRA:101 Introduction to Theatre 3 cr.**

A survey of the elements of the theatre. The course covers units on audience/performer relationships, dramatic forms, dramatic literature, history of the theatre, dramatic theory and criticism, and technical theatre.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **DRA:110 Introduction to Film 3 cr.**

Designed to introduce the student to the history, evolution, philosophic, artistic and economic aspects of motion pictures and the filmmaking industry. Students will have the opportunity to examine the various genres of the movie industry – drama, film noir, western, fantasy, documentary, romantic comedy, horror, musicals, silent film, etc. Utilizing film excerpts and entire movies as tools, students will hone skills in film analysis, beginning with recognition of theme and critically viewing productions in terms of such elements as: fictional elements, editing, cinematography, visual design, photography, special effects, sound, acting, music and directing. Progressively, students will observe similarities and distinctions in film and literature and relate philosophical, historical and cultural theories and events to the industry. *This course satisfies a general education requirement in the Arts and Humanities or Fine Arts area, but not both.* (59.4 Lec. Hrs.)

## **DRA:130 Acting I 3 cr.**

A fundamental course in the physical, vocal and imaginative techniques in the art of acting. Final project will be performance of a scene in a recital. (59.4 Lec. Hrs.)

## **DRA:131/132 Acting II 2-3 cr.**

A continuation of DRA:130, exploring the techniques in the art of acting with special emphasis on movement and dramatic interpretation. (39.6-59.4 Lec. Hrs.)  
**Prerequisite:** DRA:130 or consent of instructor.

## **DRA:136/137 Rehearsal and Performance 1-2 cr.**

Preparation for participation in a major play production. Late registration permitted. May be repeated up to a total of four hours of credit. (39.6-79.2 Lab Hrs.)

## **DRA:172/173 Technical Theatre Lab 1-2 cr.**

Through this course students gain practical experience in all aspects of technical theatre while working on college productions. May be repeated for up to eight credits. (39.6-79.2 Lab Hrs.)

## **DRA:237 Acting Lessons 1 cr.**

This course provides concentrated private coaching for the advanced acting student to strengthen and broaden their skills as an all-around performer. May be repeated for up to three credits. (19.8 Lec. Hrs.)

## **DRA:250 Directing 3 cr.**

Designed to assist the student with practical experience in analyzing the audiences to be reached, planning the season and preparing the play. Class projects include directing experience and the preparation of production books. (59.4 Lec. Hrs.)

## **EARLY CHILDHOOD EDUCATION**

### **ECE:103 Introduction to Early Childhood Education 3 cr.**

Gives students a historical and philosophical foundation of the field of early childhood education. Includes an overview of assessment and trends that influence best practices. Explores careers in the field. Addresses influences of families and diversity. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013, MAT:041 or MAT:053 and RDG:032/033 or minimum English, math and reading placement scores based on college assessment.

### **ECE:133 Child Health, Safety and Nutrition 3 cr.**

Focuses on current concepts in the field of health, safety and nutrition and their relationship to the growth and development of the young child ages birth to eight years. Blends current theory with practical applications and assessments. Includes the influences of families and diversity on health, safety and nutrition in early childhood settings. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013, MAT:041 or MAT:053 and RDG:032/033 or minimum English, math and reading placement scores based on college assessment.

### **ECE:158 Early Childhood Curriculum I 3 cr.**

Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages 3-8. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments in the following areas: dramatic play, art, music, fine and gross motor play. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013, MAT:041 or MAT:053 and RDG:032/033 or minimum English, math and reading placement scores based on college assessment.

### **ECE:159 Early Childhood Curriculum II 3 cr.**

Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages 3-8. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments in the following areas: math, science, technology, language arts and social studies. (59.4 Lec. Hrs.)

**Prerequisites:** ECE:158

### **ECE:168 Science and Math Activities for Young Children 3 cr.**

This course is designed for students in early childhood teacher training. Curriculum is presented in a developmental sequence designed to support young children's construction of the concepts and skills essential to a basic understanding of math and science. (59.4 Lec. Hrs.)

**Prerequisite:** ECE:103 and ECE:159.

# COURSE DESCRIPTIONS

## **ECE:169 Art and Music Activities for Young Children** 3 cr.

This course is designed to introduce students to a variety of media suitable for use with the young child. Emphasis will be placed on personal involvement in creative activities including creative movement, music, art and games that can be used with an integrated curriculum approach. (59.4 Lec. Hrs.)

**Prerequisites:** ECE:243.

## **ECE:170 Child Growth and Development** 3 cr.

Reviews typical and atypical development of children from conception to adolescence in all developmental domains. Presents interactions between child, family and society within a variety of community and cultural contexts. Examines theories associated with understanding children. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013, MAT:041 or MAT:053 and RDG:033 or minimum English, math and reading placement scores based on college assessment.

## **ECE:193 Dynamics of the Family** 3 cr.

Explores the critical relationship of family members to one another and of the Child Care Associate to members of the family. Multicultural relationships will be explored as well as an introduction to the changing role and structure in modern society. (59.4 Lec. Hrs.)

**Prerequisite:** ECE:103.

## **ECE:221 Infant/Toddler Care and Education** 3 cr.

Focuses on care, education and assessment of children from birth to thirty-six months. Prepares students to utilize developmentally appropriate practices including responsive caregiving, routines as curriculum, importance of relationships with diverse families, and a focus on the whole child in inclusionary settings. (59.4 Lec. Hrs.)

**Prerequisite:** ECE:103, ECE:133, and ECE:193.

## **ECE:243 Early Childhood Guidance** 3 cr.

Focuses on effective approaches and positive guidance strategies for supporting the development of all children. Emphasizes supportive interactions and developmentally appropriate environments. Development of self-control in children is stressed. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013, MAT:041 or MAT:053 and RDG:032/033 or minimum English, math and reading placement scores based on college assessment.

## **ECE:290 Early Childhood Education Program Administration** 3 cr.

Basic principles involved in setting up and administering an early childhood program. Emphasis placed on funding, enrollment procedures, curriculum planning, staff and parent relationships, problem solving and record keeping. State of Iowa day care center licensing standards and regulations are reviewed. (59.4 Lec. Hrs.)

**Prerequisites:** ECE:158 and ECE:159.

## **ECE:920 Field Experience/ECE 1 cr.**

Supervised experience in selected early childhood settings serving children ages birth-eight. Includes integration of theory, research and reflective practices. Provides an understanding of developmentally appropriate practices and the developmental stages of diverse populations of young children and their families. Emphasizes professional relationships and behavior, appropriate adult/child interactions, basic curriculum planning and program routines. This course may be repeated up to three times for a total of six credits. (0 - 19.8 Lec. Hrs./79.20-237.6 Coop Hrs.)

**Prerequisite:** ECE:103, ECE:158, ECE:159, ECE:170 and ECE:243.

## **ECONOMICS**

### **ECN:110 Introduction to Economics** 3 cr.

This course is a presentation of the basic economic problem of scarcity. It is a survey of micro-economics dealing with market behavior and macro-economics dealing with government stabilization policies in the U.S., including international trade. This course is not recommended for students who anticipate a bachelor's degree requiring a two-term sequence in economics. (59.40 Lec. Hrs.)

### **ECN:120 Principles of Macroeconomics** 3 cr.

This course discusses issues confronting society as a result of economic scarcity. It examines the systematic approach to these issues as it has developed in the U.S., where markets and government combine to determine the economic decision making process. Emphasis is placed on the fiscal and monetary policies of government, undertaken to modify the instability that occurs in the private sectors. Includes include the importance of international trade for U.S. well-being. *This course satisfies a general education requirement in the Social Sciences Area.* (59.4 Lec. Hrs.)

**Prerequisite:** MAT:041 or MAT:053 and RDG:032/033 or minimum math and reading placement scores based on college assessment.

### **ECN:130 Principles of Microeconomics** 3 cr.

This course examines how the market system resolves the economic problems of scarcity. Topics explored are: supply and demand theory; the varying degrees of competition and imperfection found in the market; consumer choice; firm's production cost in the short run and the long run; and firm's output and the pricing and employment of resources. The impact of international trade and finance will also be discussed.

*This course satisfies a general education requirement in the Social Sciences Area.* (59.4 Lec. Hrs.)

**Prerequisite:** MAT:041 or MAT:053 and RDG:032/033 or minimum math and reading placement scores based on college assessment.

# COURSE DESCRIPTIONS

## **ECN:943 Readings in Economics** 1-2 cr.

Designed to provide additional readings in economics, allowing the student to obtain a greater understanding of the various problem areas of this discipline. This course may be repeated twice for additional credits.

(39.6-79.2 Lab Hrs.)

**Prerequisite:** ECN:120 or ECN:130.

## **EDUCATION**

### **EDU:110 Exploring Teaching** 3 cr.

Designed to provide guided observation and teacher-aide services in school classrooms. Emphasis is placed on the education theory taught in other teacher-training subjects. Local school systems provide a learning experience to the education/teaching student. Students qualifying for the program will be assigned to selected elementary and secondary schools for practical classroom experience. (19.8 Lec. Hrs./84 Lab Hrs.)

**Co-requisite:** EDU:212 or consent of instructor.

### **EDU:125 Making a Difference** 3 cr.

The emphasis of this course is introducing the student to the careers related to education, particularly teacher and paraeducator as professionals. The course includes: human and legal rights of children with disabilities; introduction to human development; introduction to the classroom instruction process; discussion of instructional interventions as well as teaching strategies; and health and safety procedures in the classroom. (59.4 Lec. Hrs.)

### **EDU:212 Educational Foundations** 3 cr.

Study of the structure of American education, what is required for proper schooling and consideration of the role of the teacher. A broad foundation prepares the student for making career choices in school level and subject field. (59.4 Lec. Hrs.)

### **EDU:220 Human Relations for the Classroom Teacher** 3 cr.

This course focuses on the changing and multi-faceted diversity seen in today's classrooms and communities in the United States. Students will examine their own understanding of the scope of this diversity and be able to see how this diversity can enrich the classroom experience for teachers and students. The course will also show future teachers how to bridge their personal views and knowledge of diversity into actual teaching strategies in order to have a culturally relevant and responsive classroom where every student can thrive. (59.4 Lec. Hrs.)

**Prerequisite:** ECE:103 or EDU:212.

### **EDU:245 Exceptional Learner** 3 cr.

An introductory course designed to provide the student with an overview of the field of special education and the policies and programs established for the education of exceptional students. It includes an analysis of the nature, incidence and characteristics of the physically and mentally handicapped, the behavior disordered, the talented and gifted and the learning disabled. (59.4 Lec. Hrs.)

### **EDU:255 Technology in the Classroom** 3 cr.

Technology in the Classroom introduces prospective teacher-prep candidates and other interested students to a variety of digital tools and Internet resources along with best practices in the use of tools and technologies for classroom related functions and issues. (39.6 Lec Hrs./39.6 Lab Hrs.)

## **ELECTRICAL TECHNOLOGY**

### **ELE:101 Industrial Safety** 2 cr.

This course provides training in all aspects of safety in the industrial environment. Topics addressed include safety laws, personal protective equipment and electrical, chemical, mechanical and environmental hazards. (19.8 Lec. Hrs./39.6 Lab Hrs.)

**Recommended:** RDG:032/033 or minimum reading placement score based on college assessment.

### **ELE:127 Troubleshooting** 1 cr.

This is a modular course that covers troubleshooting concepts in electrical, electronic, mechanical and electromechanical systems. (9.9 Lec. Hrs./19.8 Lab Hrs.)

### **ELE:139 Electrical Systems Analysis** 3 cr.

This course focuses on analysis of installation, safe operation and maintenance of electrical systems. Rules and guidelines governing installation and operation of systems such as the National Electrical Code (NEC) and Occupational Safety and Health Act (OSHA) are presented where they are relevant to electrical systems. Total Productive Maintenance (TPM) is also covered to include maintenance of electrically operated machines and systems. (29.7 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** ELE:101, ELE:124 and ELE:129.

### **ELE:141 DC & AC Circuits** 4 cr.

Study of resistive circuits with DC and AC sources, emphasizing theorems and important methods of solution, followed by a study of reactive circuits. In the lab the principles learned in DC & AC circuits are applied. Proper lab procedure and the use of test instruments are taught. (39.6 Lec. Hrs./79.2 Lab Hrs.)

**Co-requisites:** MAT:743.

### **ELE:144 Solid State Devices & Systems** 3 cr.

A course that covers analog semiconductor devices, circuits, and systems. Theory and applications are presented in a logical sequence to prepare students for the job of effectively diagnosing, repairing and installing electronic circuits and systems. Emphasis is given to the use of instrumentation and lab skills. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** ELE:217.

# COURSE DESCRIPTIONS

## **ELE:145 Digital Circuits & Systems 3 cr.**

This course teaches the fundamentals of digital concepts and circuitry. Students learn how to interpret digital logic circuits by understanding the concepts of digital devices, gates, flip-flops, timers, counters, decoders, encoders, multiplexers, and de-multiplexers. Emphasis is given to hands-on lab experiences.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** ELE:144.

## **ELE:169 Power Distribution 4 cr.**

In industry today, maximum productivity is crucial for success. Advances in automated systems demand trained technicians for a high performance work environment. From documenting power quality problems to power quality troubleshooting tasks, test tool skills are a must for the up to date technician. This class covers both basic and advanced power quality principles and power distribution troubleshooting tasks.

(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELT:134

## **ELE:173 Industrial Print Reading 1 cr.**

This course covers reading and interpreting mechanical, electrical, electronic, electromechanical, hydraulic and welding prints. Symbols, drawings and prints in each one of these categories are covered.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Recommended:** ENG:013 and RDG:032/033 or minimum English and reading placement scores based on college assessment.

## **ELE:210 Programmable Controllers 4 cr.**

An introductory course covering electronic principles. No prior knowledge or experience in the field of electronics is necessary before enrolling in this course. The starting point is "what is electricity?" and the course develops from there to include the study of electric measuring units, basic circuit arrangements, DC fundamentals, AC fundamentals and semiconductor principles.

(39.6 Lec. Hrs./118.8 Lab Hrs.)

## **ELE:216 DC Circuit Analysis 3 cr.**

This course covers the fundamental concepts of DC circuit components analysis and their applications. The student will learn to identify the basic circuit elements in DC circuits and will be able to calculate current and voltage in a variety of common circuit configurations using standard analysis techniques.

Emphasis will be placed on the use of lab instruments and measuring devices.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Co-requisite:** MAT:722.

**Recommended:** ENG:013 and RDG:032/033 or minimum English and reading placement scores based on college assessment.

## **ELE:217 AC Circuit Analysis 3 cr.**

The course presents the fundamental concepts of AC circuit components analysis and their applications. The student will learn to predict the response of various R, C, and L components and their combinations to steady-state sinusoidal inputs. There will be an emphasis on the use of lab instruments and measuring skills.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** ELE:216.

## **ELE:225 Electrical Motor Control and Power Distribution 3 cr.**

A course that covers the concepts for electrical, motor, and electro-mechanical devices and their use in industrial control circuits. Emphasis is on operation and maintenance of three phase motors and motor controls and development of troubleshooting skills. An introduction to 3-phase power distribution is included.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** ELE:217.

## **ELE:226 Programmable Logic Control 3 cr.**

The course is designed to teach the student basic programming techniques, as well as the history, construction, function and application of industrial PLC's (Programmable Logic Controllers).

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** ELE:216 and ELE:225 or consent of instructor, and CSC:113.

## **ELE:227 Process Control 3 cr.**

This course teaches applications of industrial electronics and programmable logic controllers used to control manufacturing processes. Students perform labs on sequential logic systems, process control systems and closed loop servo systems. Interfacing and troubleshooting of electronic sensing devices and control systems is included.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** ELE:144 and MAT:722.

## **ELE:228 Micro-Controllers 3 cr.**

This course presents the principles of microprocessor-bases controllers using the PC platform. Students learn basic microprocessor characteristics, bus structure, and input/output systems. Students evaluate industrial PCs as controllers and data acquisition tools. General concepts of networks are included.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** ELE:145.

## **ELE:229 Industrial Codes and Specifications 3 cr.**

This course focuses on analysis of electrical systems installation, safe operation and maintenance. Rules and guidelines governing installation and operation of systems such as the National Electrical Code (NEC) and Occupational Safety and Health Act (OSHA) are presented where they are relevant to electrical systems. Total Productive Maintenance (TPM) is also covered to include maintenance of electrically operated machines and systems.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** ELE: 225.

## ELECTRONEURO- DIAGNOSTIC TECHNOLOGY

### END:111 Introduction to Electroneurodiagnostics (END) 6 cr.

This is an introductory course to basic electroencephalographic concepts and techniques. Instrumentation is demonstrated in the classroom and hands-on experience is provided in the laboratory. (59.4 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**Co-requisite:** BIO:168.

### END:301 Electroneuro- diagnostics I 6 cr.

This course is a continuation of END:111 Introduction to END. Terminology will be expanded. EEG tracings will be reviewed and the student will learn to interpret normal and abnormal patterns. The student will learn how to classify EEG activity along with how to classify seizure activity and seizure first aid. Laboratory exercises will include additional training on 10/20 system for measurement, electrode application and performance recording. (59.4 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisites:** BIO:168, END:111.

**Co-requisites:** BIO:173, END:800.

### END:320 Electroneuro- diagnostics II 2 cr.

This course will cover elements of electroneurodiagnostics (END) including medications and how they affect the electrical activity of the brain at both therapeutic and toxic levels, the different types of electrodes used in electroencephalography, various types of headaches and their relationship to the electroencephalogram (EEG), identification of electrocerebral silence (brain death) through specific EEG recording criteria and pattern recognition of the electrocardiogram (EKG) on the EEG. Clinical records will be evaluated. (39.6 Lec. Hrs.)

**Prerequisites:** BIO:173, END:301, END:800.

**Co-requisite:** END:820.

### END:330 Electroneurodiagnostic Clinical Science 2 cr.

Introduces students to electro-neurodiagnosis, neurophysiology, functional neuroanatomy, normal and abnormal conditions and correlates. Includes electroencephalographic signs of cerebral disorders. Studies specific neurological disease entities; integrates EEG patterns for cerebral disorders and diagnosis. (39.6 Lec. Hrs.)

**Prerequisites:** BIO:168, END:111.

### END:331 Neuroanatomy for END 2 cr.

This course will focus on the structure, function and terminology of the nervous system with the principle focus on issues relevant to neurodiagnostic technology. Students will learn how various symptoms and neurological deficits affect areas of the central and peripheral nervous systems. In addition, students will learn about the development of the nervous system, and the structures and functions of the cerebrum, brainstem and cranial nerves. Case studies will be used to reinforce the students understanding of how normal and abnormal functioning of the nervous system affect testing protocols and test results in neurodiagnostics. (39.6 Lec. Hrs.)

**Prerequisite:** BIO:173, END:301, END:800.

**Co-requisite:** END:320, END:820.

### END:340 Electroneuro- diagnostics III 3 cr.

This course studies specific neurological conditions such as brain tumors, toxic and metabolic disorders and cerebrovascular, infectious and degenerative diseases. Head trauma and psychological disorders will also be studied. Students will correlate EEG patterns with clinical conditions. (59.4 Lec. Hrs.)

**Prerequisites:** END:320, END:820.

**Co-requisites:** END:840.

### END:401 Nerve Conduction Studies 2 cr.

This course is designed to prepare students with the beginning skills needed to perform Nerve Conduction Studies. (39.6 Lec. Hrs.)

**Prerequisites:** END:331.

### END:410 Evoked Potentials 2 cr.

This course will introduce students to evoked potentials as well as give students exposure to advanced testing procedures done in neurodiagnostic laboratories. (39.6 Lec. Hrs.)

### END:510 Polysomnography 4 cr.

This course provides an introduction to polysomnography or sleep studies. Students learn the technical aspects of running all-night sleep studies and the classification of sleep disorders that will be discussed during lecture. Students will practice monitor placement and scoring of studies. (79.2 Lec. Hrs.)

**Prerequisites:** END:331, END:340, END:840.

**Co-requisite:** END:860.

### END:800 Clinical Practicum I 2 cr.

Students will be assigned to a clinical affiliate where they will be oriented to the hospital and to the Neurodiagnostic Department. Under direct supervision students will perform EEG recordings, calibrate instruments and perform medical and seizure history. Students will interpret EEG's with a technologist and occasionally work with a neurologist. (118.8 Clinical Hrs.)

**Prerequisite:** END:111.

**Co-requisite:** BIO:173, END:301.

### END:820 Clinical Practicum II 4 cr.

Students will be assigned to a clinical affiliate where they will gain more hands on experience in performing and interpreting electroencephalographic records. Students will review the electroencephalograph with a technologist and interpret it with a neurologist. (237.6 Clinical Hrs.)

**Prerequisite:** BIO:173, END:320 and END:820.

**Co-requisite:** END:320.

# COURSE DESCRIPTIONS

## **END:840 Clinical Practicum III 4 cr.**

This course is a continuation of Clinical Practicums I and II. It will focus on the student performing EEGs more independently. The student will also work with more advanced EEG procedures such as surgical monitoring and extended/continuous EEG. At the completion of this clinical practicum, the student will be able to measure for the 10/20 system in 10 minutes and apply electrodes in 35 minutes for a total hook-up time of 45 minutes.

(237.6 Clinical Hrs.)

**Prerequisites:** END:820.

**Co-requisite:** END:340.

## **END:860 Clinical Practicum IV 8 cr.**

This course will focus on the performance of polysomnography within the END laboratory and provide the students with the opportunity to continue to gain competency with EEG. The students will perform all-night sleep studies, analyze and compile data for physician interpretation. Opportunities for reinforcement of prior learning of EEGs will also be incorporated into this course.

(475.2 Clinical Hrs.)

**Prerequisites:** END:840.

**Co-requisite:** END:510.

## **END:880 Clinical Practicum V 4 cr.**

This course will provide experience in evoked potentials as well as continue practice in EEG and the advanced END procedures performed in the lab. The students will be prepared for employment by involvement in scheduling, supervision of first-year students and observation of advanced procedures.

(237.6 Clinical Hrs.)

## **ELECTRONICS**

### **ELT:121 Basic Electronics 5 cr.**

An introductory course covering electronic principles. No prior knowledge or experience in the field of electronics is necessary before enrolling in this course. The starting point is "what is electricity?" and the course develops from there to include the study of electric measuring units, basic circuit arrangements, DC fundamentals, AC fundamentals and semiconductor principles.

(59.4 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisite:** MAT:720.

### **ELT:123 Programmable Logic Controllers 3 cr.**

This course introduces students to basic programmable logic controller (PLC) operation and ladder logic programming including relay logic, program control, timer and counter instructions. PLC hardware, programming devices, memory and wiring are also included.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** CSC:110 or CSC:113, ELE:225.

### **ELT:134 Electrical Circuits and Components I 4 cr.**

The course covers basic electricity, direct current circuits, magnetism, electromagnetic induction, alternating current circuits, impedances, reactances, power and electrical energy. Emphasis is placed on electrical measurement, instruments and applications.

(59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite or Co-requisite:** MAT:069 or MAT:073 or MAT:121 or MAT:720.

### **ELT:135 Electrical Circuits and Components II 4 cr.**

The course places emphasis on alternating current circuits, impedances, reactances, power and electrical energy. Emphasis is placed on AC circuits, behavior, electrical measurement instruments and applications.

(59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** ELT:134.

### **ELT:153 Electronics 4 cr.**

A course covering solid state devices and their applications. The topics include diodes and bipolar transistors and their use in various circuits. Emphasis is placed on practical equivalent circuits and theory. In the lab the principles learned in DC & AC circuits are applied. Proper lab procedure and the use of test instruments are taught.

(39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** ELE:141 and MAT:743.

**Co-requisites:** MAT:748.

### **ELT:154 Industrial Electronics 3 cr.**

A continuation of Basic Electronics. The course will continue to study semiconductors and their applications in such circuits as transistor amplifiers, Op Amps, active filters, oscillators, timers, voltage regulators and phase locked loops.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** ELT:121.

### **ELT:174 Digital Circuits 3 cr.**

A course in digital logic with an emphasis on practical design techniques and circuit applications. Topics include gates, logic functions, mapping techniques, function minimization, flip-flops, counters, registers, IC family characteristics, encoders, decoders, multiplexers, demultiplexers, A to D and D to A conversion techniques.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

### **ELT:176 Instrumentation 3 cr.**

Applications of electronic and pneumatic instrumentation will be used to showcase various types of flow meters, level transmitters, differential pressure cells and other common instrumentation. The students will demonstrate the use of instrumentation in industrial systems.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** IND:136.

**Prerequisites:** IND:137.

### **ELT:177 Microcontrollers 3 cr.**

Introduction to the study of microcontrollers and their applications. Topics include microcontroller architecture and introductory programming and interfacing techniques.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CIS:161 and ELT:174.

## **ELT:275 Electro-Mechanical Controls 3 cr.**

A study of motor controls. Topics include single and three phase motor starters of varying primary and secondary voltages, and solid state vs. mechanical controls. (39.6 Lec. Hrs./59.4 Lab Hrs.)

## **ELT:280 PLC Troubleshooting 3 cr.**

This class reviews the concepts learned in Programmable Controllers using Allen-Bradley SLC PLC and RSLogix programming software. The class then teaches the student how to troubleshoot existing programs using hands-on learning experience.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELE:210.

## **ELT:309 Digital Circuits & Systems 3 cr.**

This course teaches the fundamentals of digital concepts and circuitry. Students learn how to interpret digital logic circuits by understanding the concepts of digital devices, gates, flip-flops, timers, counters, decoders, encoders, multiplexers and demultiplexers. Emphasis is given to hands-on lab experiences.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELT:312.

## **ELT:312 Solid State Devices & Systems 3 cr.**

This course covers analog semiconductor devices, circuits, and systems. Theory and applications are presented in a logical sequence to prepare students for the job of effectively diagnosing, repairing, and installing electronic circuits and systems.

Emphasis is given to the use of instrumentation and lab skills.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELE:217.

## **EMERGENCY MEDICAL SERVICES**

### **EMS:202 Emergency Medical Technician 9.5 cr.**

The Emergency Medical Technician Course is based on the National Emergency Medical Services Education Standards & Instruction Guidelines which is the National Standard Curriculum for EMS Education which is the foundation of knowledge and skills of the Emergency Medical Technician. Upon successful completion of the program, the student will obtain the AHA Pediatric Emergency Assessment, Recognition, & Stabilization certification, and be eligible for the National Registry EMT Practical & Written Examination to obtain a National EMT license, and a State of Iowa EMT certification.

(172.8 Lec. Hrs./30 Clinical Hrs./19.8 Co-op Hrs.)

### **EMS:238 Advanced Emergency Medical Technician 15 cr.**

The Advanced Emergency Medical Technician Course is based on the National Emergency Medical Services Education Standards & Instruction Guidelines which is the National Standard Curriculum for EMS Education which is the foundation of knowledge and skills of the Advanced Emergency Medical Technician. Upon successful completion of the program, the student will obtain the AHA Pediatric Emergency Assessment, Stabilization certification, and is eligible for the National Registry of Advanced Emergency Medical Technician practical and written examinations. Upon successful completion of the National Registry examinations, the student will receive a National Registry Advanced Emergency Medical Technician certification, and a State of Iowa Advanced EMT certification.

(218.4 Lec. Hrs./118.8 Clinical Hrs./158.4 Co-op Hrs.)

**Prerequisite:** EMS:202.

### **EMS:810 Advanced Cardiac Life Support - ACLS 1 cr.**

This intensive certification course is presented utilizing the American Heart Association Standards and Guidelines for the Advanced Cardiac Life support Provider (ACLS). This course is designed to expand the students' knowledge of Emergency Cardiovascular Care for the adult patient, and to formulate the correct treatment plan for given patient simulations. Upon successful course completion, the student will receive an American Heart Association ACLS Provider certification card for a two-year certification period.

(19.8 Lec. Hrs.)

### **EMS:815 Advanced Pediatric Life Support (PALS) 1 cr.**

This intensive certification course is presented utilizing the American Academy of Pediatrics and the American Heart Association Standards and Guidelines for the Pediatric Advanced Life Support Provider (PALS). This course is designed to expand the students' knowledge of Emergency Cardiovascular Care for the pediatric patient and to formulate the correct treatment plan for given patient simulations. Upon successful course completion the student will receive an American Heart Association PALS Provider certification card for a two-year certification period.

(19.8 Lec. Hrs.)

### **EMS:816 Pediatric Education for the Pre-Hospital Professionals (PEPP) 1 cr.**

The Pediatric Education for the Pre-Hospital Professionals course (PEPP) is an intensive course designed to expand the students' knowledge of Cardiac and Trauma Emergency Care for the pediatric patient. Participants will learn how to effectively assess and manage ill and injured children. This curriculum was developed by the American Academy of Pediatrics as a complete source of pre-hospital medical information for the emergent care of infants and children. Upon successful course completion the student will receive an American Academy of Pediatrics PEPP Provider certification card for a 4-year certification period.

(19.8 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **EMS:817 Basic Cardiac Life Support Instructor** 1 cr.

This course will provide the participant with the knowledge necessary to instruct the American Heart Association Basic Cardiac Life Support classes. It is designed to reinforce and expand BLS/AED/First Aid knowledge and skills, address teaching techniques and class formats, and cover record requirements and proper care of training manikins.

(19.8 Lec. Hrs.)  
**Prerequisites:** EMS:218, EMS:238

## **EMS:818 Neonatal Resuscitation Provider (NRP)** 1 cr.

The Neonatal Resuscitation provider course is a certification program that utilizes the standards and guidelines of the American Academy of Pediatrics and the American Heart Association. This course is designed to be an intensive course where participants learn an evidence-based approach in resuscitation of the neonate. The causes, prevention and management of mild to severe neonatal asphyxia are carefully explained so health care professionals may develop optimal knowledge and skill in newborn resuscitation. Upon successful course completion the student will receive an American Academy of Pediatrics/American Heart Association NRP Provider certification card for a 2-year certification period.

(19.8 Lec. Hrs.)

## **EMS:820 Pre Hospital Trauma Life Support (PHTLS)** 1 cr.

The Pre-Hospital Trauma Life Support course is presented utilizing the Standards and Guidelines for Emergency Trauma Care under the direction of the American College of Surgeons. This intensive hands-on program is a unique educational opportunity that was created in recognition for the real need in EMS education for additional training in the care of the trauma patient. This program is designed to enhance and increase knowledge and skills necessary in delivering critical care in the pre-hospital environment. Upon successful course completion the student will receive an American College of Surgeons PHTLS Provider certification for a 4-year certification period.

(19.8 Lec. Hrs.)

## **ENGINEERING**

### **EGR:107 Engineering Academy** 6 cr.

This course provides a broad introduction to engineering and its various disciplines, with particular emphasis on hands-on, project-based learning in collaboration with industry partner John Deere.

(118.8 Lec. Hrs.)

### **EGR:160 Engineering I** 3 cr.

This courses focuses on solving engineering problems while gaining an understanding of the engineering field and fundamental engineering topics. Engineering perspective and thinking will be gained while applying the problem solving process which involves analysis, documentation, and presentation of technical material. Problems will be solved using computer tools and as a team.

(59.4 Lec. Hrs.)

**Prerequisite:** MAT:121.

**Co-requisite:** ENG:105 and MAT:128.

### **EGR:180 Statics** 3 cr.

The course focuses on the fundamental concepts of mechanics including vectors, forces, moments, free body diagrams, equilibrium of a particle, equilibrium of rigid bodies, and equivalent systems. Structural analysis, internal forces, centers of gravity, centroids, moments of inertia, and friction are also covered. Concepts are applied to structural and machine elements such as bars, trusses, frames, and composite mechanisms.

(59.6 Lec. Hrs.)

**Prerequisite:** MAT:210 and PHY:212.

### **EGR:280 Dynamics** 3 cr.

The course focuses on particle and rigid body motion. Kinematics, kinetics, work-energy, and impulse-momentum principles are covered for particles and rigid bodies in one-dimension and two-dimensions. Three-dimensional rigid body kinematics and kinetics are introduced.

(59.6 Lec. Hrs.)

**Prerequisite:** EGR:180, MAT:210 and PHY:212.

**Co-requisite:** MAT:216.

### **EGR:285 Introduction to Electrical Science** 3 cr.

This course covers electrical circuit analysis with the goal of developing electrical engineering fundamentals for any engineering discipline. This course consists of a lecture and laboratory session. The primary focus is basic circuit theory, circuit modeling, analytical methods, first-order circuits, basic second-order circuits, and steady state AC circuit analysis. Practical laboratory and engineering skills will be achieved through building various electric circuits and taking electrical measurements.

(59.4 Lec. Hrs.)

**Prerequisites:** MAT:210 and PHY:222.

**Co-requisite:** MAT:216.

### **EGR:290 Thermodynamics** 3 cr.

The course focuses on the definitions, concepts, and laws of thermodynamics. Thermodynamic properties are defined that describe the behavior and state of systems. The first and second laws of thermo-dynamics are applied to control masses and control volumes. Analysis is applied to a variety of standard thermodynamic cycles. Analysis techniques are developed to systematically solve engineering problems involving thermodynamic systems and processes. Specific topics include work, heat, energy, ideal gases, the Carnot cycle, efficiency, entropy, exergy, vapor power cycles, gas power cycles, and refrigeration cycles.

(59.4 Lec. Hrs.)

**Prerequisites:** CHM:165, MAT:210 and PHY:212.

**Co-requisite:** MAT:216.

### **EGR:380 Mechanics of Deformable Bodies** 3 cr.

This course provides an introduction to the mechanics of solids with application to engineering. The primary focus is stress and strain in structural elements resulting from axial, torsional, flexural, and combined loading. Other major concepts include mechanical material properties used to relate stress and strain in common machine elements, beam stresses and deflections, column buckling, and an introduction to energy methods.

(59.4 Lec. Hrs.)

**Prerequisites:** EGR:180, MAT:210 and PHY:212.

**Co-requisite:** MAT:216.

## **EGR:430/EGT:430 PLTW – Aerospace Engineering 3 cr.**

This course exposes students to the world of aeronautics, flight and engineering. Students will be introduced to the Project Lead The Way® activity-based, project-based and problem-based learning through exploring the world of aerospace engineering. Students should have experience in physics, mathematics and technology education. They will employ engineering and scientific concepts in the solution of aerospace problems. (59.4 Lec. Hrs.)

**Prerequisite:** MAT:069, MAT:073 or minimum math placement score based on college assessment.

## **ENGINEERING TECHNOLOGY**

### **EGT:116 Continuous Quality Management 3 cr.**

This is an introductory course which will lead the student into the world of quality and the quality process. Students will learn new ways to make decisions based on pertinent data gained through the use of many new tools. Students will be encouraged to use the tools and information they receive in everyday life as well as in their future careers. (59.4 Lec. Hrs.)

### **EGT:137 Fluid Power Control 4 cr.**

This course covers maintenance and troubleshooting fluid power electrical controls such as relay logic, programmable controls and servo controls. Troubleshooting and maintenance of servo valves and proportional control valves as well as other fluid power components are covered. Logical control sequences are presented to instruct the student on the concepts used in industrial controls automation. (39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** EGT:117, ELT:123

### **EGT:133 Hydraulics/Pneumatics I 2 cr.**

This course presents the basic laws of fluid power systems and properties of fluids to explain the behavior of fluid power devices in fundamental applications. Fluid power components such as cylinders, motors, compressors, pumps, flow control valves and accumulators are studied as well as assembled in labs. Fluid power symbols are taught through example air and hydraulic diagrams. (19.8 Lec. Hrs., 39.6 Lab Hrs.)

### **EGT:134 Hydraulics/Pneumatics II 4 cr.**

This course features fluid power devices in control applications. Fluid power cylinders and motors are presented in direction and speed control circuits using flow controls, direction and pressure control valves. Also pressure intensifiers, air-over-oil systems, rotary actuators and flow dividers are presented in their applications. (39.6 Lec. Hrs., 79.2 Lab Hrs.)

**Prerequisites:** EGT:133

### **EGT:135 Hydraulics/Pneumatics III 3 cr.**

This course focuses on the proper selection of hydraulic and pneumatic components from guidelines provided. Students work out piping layout and sizing on example systems. Cylinders and motors are chosen from tables and charts based on criteria. Sizing of flow and pressure control devices such as pressure regulators or flow dividers as well as other components are covered. (29.7 Lec. Hrs./59.9 Lab Hrs.)

**Prerequisites:** EGT:134 or consent of instructor.

### **EGT:137 Fluid Power Control 4 cr.**

This course covers maintenance and troubleshooting fluid power electrical controls such as relay logic, programmable controls and servo controls. Troubleshooting and maintenance of servo valves and proportional control valves as well as other fluid power components are covered. Logical control sequences are presented to instruct the student on the concepts used in industrial controls automation. (39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** EGT:117, ELT:123

### **EGT:145 Hydraulics/Pneumatics V 4 cr.**

This course covers three key areas of fluid power controls. Students are shown how to properly install belt, chain or direct-coupled drives that are used to power hydraulic pumps and motors. Students are then shown how to identify vibration frequencies of drive mechanisms and how to minimize their effects. Lastly, students disassemble, inspect and reassemble common fluid power components. (39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** EGT:137 or consent of instructor.

### **EGT:161 Strength of Materials I/A 1.5 cr.**

The first of a four course sequence, this is an intensive applied math and strength of materials problem experience. The content covered will be reinforced with many applied problems. This course will include: resultants of coplanar force systems, equilibrium of coplanar force systems, and analysis of structures. (29.7 Lec. Hrs.)

**Prerequisite:** MAT:145.

### **EGT:162 Strength of Materials I/B 1.5 cr.**

The second of a four course sequence, this is an intensive applied math and strength of materials problem experience. The content covered will be reinforced with many applied problems. This course will include: friction, centroids and centers of gravity, and area moments of inertia. (29.7 Lec. Hrs.)

**Prerequisite:** EGT:161.

### **EGT:163 Strength of Materials II/A 1.5 cr.**

The third of a four course sequence, this is an intensive applied math and strength of materials problem experience. The content covered will be reinforced with many applied problems. This course will include: stresses and strains, properties of materials, and stress considerations. (29.7 Lec. Hrs.)

**Prerequisite:** EGT:162.

# COURSE DESCRIPTIONS

---

## **EGT:164 Strength of Materials II/B** 1.5 cr.

The fourth of a four course sequence, this is an intensive applied math and strength of materials problem experience. The content covered will be reinforced with many applied problems. This course will include: torsion in circular sections, shear and bending moments in beams, and stresses in beams.  
(29.7 Lec. Hrs.)

**Prerequisite:** EGT:163.

## **EGT:400/EGR:400 PLTW - Introduction to Engineering Design** 3 cr.

This course will expose students to the design process, engineering standards, research and analysis, technical documentation, global and human impacts, communication methods, and teamwork. Students will employ engineering and scientific concepts in the solution of engineering design problems. In addition, students will use Inventor, a 3D solid modeling design software package, to help them design solutions to solve proposed problems.  
(59.4 Lec. Hrs.)

**Prerequisite:** MAT:069, MAT:073 or minimum math placement score based on college assessment.

## **EGT:410/EGR:410 PLTW - Principles of Engineering** 3 cr.

A course that helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem-solving process to benefit people. The course also includes concerns about social and political consequences of technological change.  
(59.4 Lec. Hrs.)

**Prerequisite:** MAT:069, MAT:073 or minimum math placement score based on college assessment.

## **EGT:420/EGR:420 PLTW - Digital Electronics** 3 cr.

The major focus of the Digital Electronics course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Students will analyze, design and build digital electronic circuits. While implementing these designs, students will continually hone their interpersonal skills, creative abilities and understanding of the design process.  
(59.4 Lec. Hrs.)

**Prerequisites:** EGT:400 or EGT:410.

## **EGT:440/EGR:440 PLTW - Biotechnical Engineering** 3 cr.

Using activities, projects and problems, students learn first-hand how engineers and technicians operate in the worlds of biotechnology and bio-engineering.  
(59.4 Lec. Hrs.)

**Prerequisites:** EGT:400 or EGT:410.

## **EGT:450/EGR:450 PLTW - Computer Integrated Manufacturing** 3 cr.

This course builds on solid modeling skills. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design are included.  
(59.4 Lec. Hrs.)

**Prerequisites:** EGT:400 or EGT:410.

## **EGT:460/EGR:460 PLTW - Civil Engineering and Architecture** 3 cr.

This course provides an overview of civil engineering and architecture emphasizing the inter relationship of both fields. Students are presented with real world problems and are given the opportunity to apply knowledge to project planning, site planning, and building design using state-of-the-art software.  
(59.4 Lec. Hrs.)

**Prerequisites:** EGT:400 or EGT:410.

## **EGT:470/EGR:470 PLTW - Engineering Design and Development** 3 cr.

This is an engineering research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles learned in prior required courses. Teams will defend their solution to the engineering problem.  
(59.4 Lec. Hrs.)

**Prerequisite:** EGT:400, EGT:410 and EGT:420.

---

## ENGLISH

---

### **ENG:013 Basic Writing** 3 cr.

Introductory course designed to help the student who has difficulty in expressing thoughts clearly and effectively in written communication. Emphasis is on improving writing skills by constant practice. Grammar, sentence structures and paragraph structures are studied in the context of writing. This course is recommended for students whose diagnostic or assessment scores indicate a need for preparatory work in composition.  
(59.4 Lec. Hrs.)

### **ENG:064 Language Skills** 1-3 cr.

Introductory course designed to assist students in gaining language/reading skills and knowledge necessary to express thoughts clearly and effectively in written communication and to build the necessary foundation for higher levels of language development. Grammar, sentence structure, punctuation, and paragraph development are always studied in the context of writing. This course is recommended for students whose assessment scores indicate a need for supplemental work in composition.  
(19.8-59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## ENG:105 Composition I 3 cr.

A writing and reading course designed to prepare the student for the types of written communication and thought essential to the academic and working world. The general goals of Composition I are to have students gain more confidence in their writing abilities and improve their proficiency in critical reading, exposition and persuasion. (59.4 Lec. Hrs.) *This course satisfies a general education requirement in Communications.*

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## ENG:106 Composition II 3 cr.

An advanced writing and reading course dealing with logic in thought and communication. Emphasis is on reasoning and argument, research skills and sophistication of style in writing. *This course satisfies a general education requirement in Communications.* (59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or ENG:107.

## ENG:107 Composition I: Technical Writing 3 cr.

A writing, speaking and reading course to prepare students for the types of communication and thought essential to the working world. The general goals of Technical Communication are that students gain more confidence in their writing abilities and improve their proficiency in critical reading and problem-solving, applied to practical situations. Students will also present material orally and visually, with assignments related to their content areas. Emphasis is on the writing process and learning the forms appropriate for technical communication purposes and audiences. This course is an alternative to ENG:105 and is recommended for students in technical, business and science programs. (59.4 Lec. Hrs.) *This course satisfies a general education requirement in Communications.*

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## ENG:108 Composition II: Technical Writing 3 cr.

An advanced course in technical writing for students in technical, business or science programs. Because students in technical fields need to become familiar with the complexities and constraints of on-the-job communication, this course offers practice in the kinds of technical writing, reading and oral communication encountered in the world of work. Students will analyze, evaluate and research complex communication situations and apply what they've learned, using collaborative, interpersonal and problem-solving skills and the essentials of style, formatting, documentation and graphics. Designed to help students acquire the rhetorical skills needed to respond to a variety of audiences in authoritative and convincing ways. (59.4 Lec. Hrs.) *This course satisfies a general education requirement in Communications.*

**Prerequisite:** ENG:105 or ENG:107.

## ENG:221 Creative Writing 3 cr.

Advanced writing workshop designed for the student who likes to write. Emphasis is placed on self-expression, audience reaction, craftsmanship and the importance of meeting deadlines. Assignments will range from short sketches and poems to full-length short stories and essays. The learning experience is enhanced through class discussion and critical analysis of individual works. (59.4 Lec. Hrs.)

**Recommended:** ENG:105 and a general education Literature course.

## ENG:230 Creative Writing: Fiction 3 cr.

The study and practice of fiction. Emphasis is on writing the short story with practice and study of the proper elements of writing. These elements are also applicable to the writing of the novel. (59.4 Lec. Hrs.)

**Prerequisites:** ENG:105 and ENG:106 or ENG:107 and ENG:108.

## ENG:238 Creative Writing: Non-Fiction 3 cr.

The practice of creating non-fiction prose. Emphasis is on the magazine article and the feature story. (59.4 Lec. Hrs.)

**Prerequisites:** ENG:105 and ENG:106 or ENG:107 and ENG:108.

---

## ENGLISH AS A SECOND LANGUAGE

---

### ESL:113 Basic ESL Grammar 2 cr.

This is an entry-level course in the acquisition of basic grammatical rules and structures necessary for using English as a second language. Emphasis is placed on practicing structure in context and developing communicative competence. This course is designed to be taken with Listening Comprehension, Speaking, Reading and Writing as part of an intensive English program for non-native speakers. Course placement approval requires permission of program manager. (19.8 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisites:** ESL:121, 122, 123, 124 are recommended.

### ESL:121 Basic ESL Writing 1 cr.

This is an entry-level course in the acquisition of basic writing skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Reading as part of an intensive English program. Course placement approval requires permission of program manager. (9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:113, 122, 123, 124 are recommended.

# COURSE DESCRIPTIONS

## **ESL:122 Basic ESL Listening Comprehension 1 cr.**

This is an entry-level course in the acquisition of basic aural skills in English for non-native speakers. This course is designed to be taken with Grammar, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:113, 121, 123, 124 are recommended.

## **ESL:123 Basic ESL Speaking 1 cr.**

This is an entry-level course in the acquisition of basic oral skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Writing and Reading as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:113, 121, 122, 124 are recommended.

## **ESL:124 Basic ESL Reading 1 cr.**

This is an entry-level course in the acquisition of basic reading skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Writing as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:113, 121, 122, 123 are recommended.

## **ESL:125 Low Intermediate ESL Grammar 2 cr.**

This is a course in continuing the acquisition of basic grammatical rules and structures necessary for using English as a second language. Emphasis is placed on practicing structure in context and developing communicative competence. This course is designed to be taken with Listening Comprehension, Speaking, Reading and Writing as part of an intensive English program for non-native speakers. Course placement approval requires permission of program manager.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisites:** ESL:126, 127, 128, 129 are recommended.

## **ESL:126 Low Intermediate ESL Listening Comprehension 1 cr.**

This is a course in continuing the acquisition of basic aural skills in English for non-native speakers. This course is designed to be taken with Grammar, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:120, 127, 128, 129 are recommended.

## **ESL:127 Low Intermediate ESL Speaking 1 cr.**

This is a course in continuing the acquisition of basic oral skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Writing and Reading as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:125, 126, 128, 129 are recommended.

## **ESL:128 Low Intermediate ESL Reading 1 cr.**

This is a course in continuing the acquisition of basic reading skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Writing as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:125, 126, 127, 129 are recommended.

## **ESL:129 Low Intermediate ESL Writing 1 cr.**

This is a course in continuing the acquisition of basic writing skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Reading as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:125, 126, 127, 128 are recommended.

## **ESL:130 Intermediate ESL Grammar 2 cr.**

This is a course in continuing the acquisition of grammatical rules and structures necessary for using English as a second language. Emphasis is placed on practicing structure in context and developing communicative competence.

This course is designed to be taken with Listening Comprehension, Speaking, Reading and Writing as part of an intensive English program for non-native speakers. Course placement approval requires permission of program manager.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisites:** ESL:134, 136, 137, 138 are recommended.

## **ESL:134 Intermediate ESL Writing 1 cr.**

This is a course in continuing the acquisition of writing skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Reading as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:130, 136, 137, 138 are recommended.

## **ESL:136 Intermediate ESL Listening Comprehension 1 cr.**

This is a course in continuing the acquisition of aural skills in English for non-native speakers. This course is designed to be taken with Grammar, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:130, 134, 137, 138 are recommended.

## **ESL:137 Intermediate ESL Speaking 1 cr.**

This is a course in continuing the acquisition of oral skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Writing and Reading as part of an intensive English program. Course placement approval requires permission of program manager.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:130, 134, 136, 138 are recommended.

# COURSE DESCRIPTIONS

## **ESL:138 Intermediate ESL Reading 1 cr.**

This is a course in continuing the acquisition of reading skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Writing as part of an intensive English program. Course placement approval requires permission of program manager. (9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:130, 134, 136, 137 are recommended.

## **ESL:140 High Intermediate ESL Grammar 2 cr.**

This is a course in continuing the acquisition of grammatical rules and structures necessary for using English as a second language. Emphasis is placed on practicing structure in context and developing communicative competence. This course is designed to be taken with Listening Comprehension, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager. (19.8 Lec. Hrs./39.6 Lab Hrs.)

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisites:** ESL:144, 146, 147, 148 are recommended.

## **ESL:141 High Intermediate ESL Writing 1 cr.**

This is a course in continuing the acquisition of writing skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Reading as part of an intensive English program. Course placement approval requires permission of program manager. (9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:140, 146, 147, 148 are recommended.

## **ESL:146 High Intermediate ESL Listening Comprehension 1 cr.**

This is a course in continuing the acquisition of aural skills in English for non-native speakers. This course is designed to be taken with Grammar, Speaking, Reading and Writing as part of an intensive English program. Course placement approval requires permission of program manager. (9.9 Lec. Hrs./19.8 Lab Hrs.)

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:140, 144, 147, 148 are recommended.

## **ESL:147 High Intermediate ESL Speaking 1 cr.**

This is a course in continuing the acquisition of oral skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Writing and Reading as part of an intensive English program. Course placement approval requires permission of program manager. (9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:140, 144, 146, 148 are recommended.

## **ESL:148 High Intermediate ESL Reading 1 cr.**

This is a course in continuing the acquisition of reading skills in English for non-native speakers. This course is designed to be taken with Grammar, Listening Comprehension, Speaking and Writing as part of an intensive English program. Course placement approval requires permission of program manager. (9.9 Lec. Hrs./19.8 Lab Hrs.)

**Co-requisites:** ESL:140, 144, 146, 147 are recommended.

## **ESL:240/241/242/243 Low Advanced ESL Communicative Competence 1-4 cr.**

This is a course for non-native speakers to improve advanced language skills in academic reading, listening and speaking. This course is designed so a student could concurrently enroll in selected non-ESL courses. Course placement approval requires permission of program manager. (9.9-79.2 Lec. Hrs./19.8-118.8 Lab Hrs.)

## **ESL:244 Low Advanced ESL Grammar/Writing 3 cr.**

This is a course for non-native speakers in the acquisition of advanced grammatical structures and writing skills necessary for academic English. Emphasis is placed on practicing structure in context and writing fluently. This course is designed so a student could concurrently enroll in selected non-ESL courses. Course placement approval requires permission of program manager. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **ESL:253 Advanced ESL Grammar/Writing 3 cr.**

This is a course for non-native speakers to review and refine advanced grammatical structures and writing skills necessary for academic English. Emphasis is placed on practicing structure in context and writing fluently. This course is designed so a student could concurrently enroll in selected non-ESL courses. Course placement approval requires permission of program manager. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **ESL:254/255/256 Advanced ESL Communicative Competence 1-3 cr.**

This is a course for non-native speakers to refine advanced language skills in academic reading, listening and speaking. This course is designed so a student could concurrently enroll in selected non-ESL courses. Course placement approval requires permission of program manager. (9.9-79.2 Lec. Hrs./19.8-118.8 Lab Hrs.)

**Co-requisite:** ESL:253 is recommended.

## **ESL:260 High Advanced ESL Grammar/Writing 3 cr.**

This is a course for non-native speakers wishing to attain mastery of the most advanced grammatical structures and writing skills necessary for academic English. The writing component will include a research paper. Course placement approval requires permission of program manager. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisite:** ESL:261 or ESL:928 is recommended.

## **ESL:261/262/263 High Advanced ESL Communicative Competence 1-3 cr.**

This is a course for non-native speakers wishing to attain mastery of the most advanced language skills in academic reading, listening and speaking. Course placement approval requires permission of program manager. (9.9-29.7 Lec. Hrs./19.8-59.4 Lab Hrs.)

**Co-requisite:** ESL:260 or ESL:928 is recommended.

# COURSE DESCRIPTIONS

---

## **ESL:928 ESL Independent Study 1-3 cr.**

This course is an independent study lab for non-native speakers which will focus attention on specific areas of English as a Second Language through the use of individualized texts and other materials. This course may be repeated and can be taken for varied credit depending on need. Course placement approval requires permission of program manager. (39.6-118.8 Lab Hrs.)

## **ENVIRONMENTAL SCIENCE**

---

### **ENV:115/111 Environmental Science 3-4 cr.**

A general goal of this course is for students to become familiar with the application of scientific principles common to environmental problems. Also, it is important for students to become aware of the causes of, the consequences of, and the possible remedies for these problems, and for students to be able to objectively analyze the issues and arguments related to environmental concerns. *The four-credit-hour course with lab satisfies a general education requirement in the Natural Sciences Area. It may be counted as either Life Science or Physical Science, but not both.* (59.4 Lec. Hrs./0-39.6 Lab Hrs.)  
**Pre-requisite:** RDG:032/033 or minimum reading placement score based on college assessment.

### **ENV:137 Studies in Energy and the Environment 1 cr.**

Independent study of problems concerning pollution and energy. The student will review a minimum of three books or investigate and write a paper on any energy or pollution problem of current interest, to receive one credit. Two credits will be earned for the three book reviews and the paper. (19.8 Lec. Hrs.)

### **ENV:139 Energy and the Environment 4 cr.**

The course is intended to introduce students to the scientific principles associated with energy transformation, collection, extraction, transmission and storage as they learn energy's significance in society and the effects of its use on the environment.

*This course satisfies a general education requirement in the Natural Sciences area.* (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Pre-requisite:** RDG:032/033 or minimum reading placement score based on college assessment.

### **ENV:145 Conservation Biology 4 cr.**

This course examines the ecological principles used in the preservation of biological diversity. Some topics explored are population dynamics, conservation genetics, island biogeography, mathematical modeling of ecological systems, disturbance ecology, Geographic Information Systems (GIS), reserve theory and wildlife corridors. Laboratories will involve fieldwork, data analysis, computer work and research.

*This course satisfies a general education requirement in the Natural Sciences area.* (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** ENV:111

## **FINANCE**

---

### **FIN:106 AIB Principles of Banking 3 cr.**

Provides a comprehensive introduction to the diversified services offered by the banking industry today. It includes new material on bank accounting, pricing and profitability, and expands the discussion on the personnel and security functions of the bank. (59.4 Lec. Hrs.)

### **FIN:121 Personal Finance 3 cr.**

Designed to provide the student with an introduction to the rudiments of personal finance and investing; not intended as a course in principles of finance, corporate finance, or investments. Course will introduce students to basic money management, buying decisions (auto, housing), insurance, investing and financial planning. (59.4 Lec. Hrs.)

**Prerequisite:** MAT:041 or minimum math placement score based on college assessment.

### **FIN:130 Principles of Finance 3 cr.**

This course addresses financial management and the principles and practices of decision-making involving financial analysis, valuation, capital allocation, and budgeting. (59.4 Lec. Hrs.)

**Prerequisite:** ACC:142 and ECN:120.

**Co-requisite:** MAT:156.

### **FIN:180 Introduction to Investments 3 cr.**

A study of the theory of investment analysis and management and the preparation and development of an investment portfolio with attention to valuation regarding yield and risk. (59.4 Lec. Hrs.)

## **FRENCH**

---

### **FLF:141 Elementary French I 4 cr.**

A foundation course which covers the fundamentals of French language and culture. The course is designed for the student with no knowledge of the language. The communication skills of reading, writing and speaking will be developed to aid the student in oral proficiency. Each unit will deal with specific aspects of French culture.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.* (79.2 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## **FLF:142 Elementary French II 4 cr.**

Designed for the student who has some knowledge of French language and culture. Oral communication is stressed with further emphasis on grammar and selected readings in the history, literature and culture of France.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(79.2 Lec. Hrs.)

**Prerequisite:** FLF:141 or equivalent.

## **FLF:231/241 Intermediate French I 3-4 cr.**

Provides a thorough review of the patterns of basic French grammar with emphasis on the development of speaking, writing and understanding the French language, literature and culture.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** FLF:142 or 2-3 years of high school French.

## **FLF:232 Intermediate French II 3 cr.**

Provides a reinforcement of basic skills with emphasis on conversation, composition, literary readings, French culture and review of grammar as needed.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** FLF:231 or 3-4 years of high school French.

## **GEOGRAPHY**

---

### **GEO:121 World Regional Geography 3 cr.**

A survey course of basic geographical knowledge. Students will be introduced to geographical principles and ways of thinking thus providing them with the tools to study both physical and human geography.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## **GERMAN**

---

### **FLG:141 German I 4 cr.**

Introduces the basic grammar and pronunciation of the German language. This is a course for students with little or no knowledge of the German language.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives area.*

(79.2 Lec. Hrs.)

### **FLG:142 German II 4 cr.**

A continuation of German I. Review of basic material and pronunciation plus introduction of new grammatical structures.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives area.*

(79.2 Lec. Hrs.)

**Prerequisite:** FLG:141 or 1-2 years of high school German.

## **GLOBAL STUDIES**

---

### **GLS:100 Contemporary World Issues 3 cr.**

An interdisciplinary approach to the study of issues affecting life in the modern world. Identifies topical areas to study as background to major contemporary issues. Typical areas of discussion will be ecology, world economy, resource utilization and comparative cultures. Instruction will be primarily discussion and will utilize guest lectures, outside reading and projects and limited lecture.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

### **GLS:120 Education Experience Abroad 1-3 cr.**

Exploration of world historic sites, cultural features and geography, combined with reading from applicable sources, will enable the student to draw conclusions about the significance of individual events in a context of a culture/civilization. This course provides a structured short-term study experience in a foreign country, preceded by preparatory study and followed by project completion after return from travel. Additional cost for travel. May be repeated up to two times for a total of 3 credits.

(19.8-59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 and RDG:032/033 or minimum English and reading placement scores based on college assessment.

Consent of instructor required.

## **GRAPHIC ARTS**

---

### **GRA:103 Introduction to Macintosh 1 cr.**

This course is a prerequisite/co-requisite for all electronic publishing and multimedia courses. This specialized course is designed for students entering the graphic arts technology program and provides them with the basic operational knowledge of Macintosh and IBM-compatible computers. Topics covered include cross-platform explanation of the basic operating systems, how to work with memory, creating and saving files, how to work with publishing and graphics files on a network, electronic transfer across platforms, file maintenance, and troubleshooting.

(19.8 Lec. Hrs.)

### **GRA:150 Introduction to Web Design 3 cr.**

This course will instruct students on planning, designing, and managing effective web sites. Focus is placed on developing manual HTML and CSS scripting skills as well as incorporating XML-ready and XHTML-ready script into the code. Throughout this class special consideration given to creating sites which are W3C and ADA compliant.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** GRA:103 and GRT:220

**Co-requisites:** GRT:110.

# COURSE DESCRIPTIONS

---

## **GRA:164 Digital 3-D and Animation** 3 cr.

This specialization course will introduce the student to the basic steps for completing computer animation. Concepts to be explored include 3-D modeling, rendering, compositing and special effects and recording of the animation sequence to video. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** GRT:162 and GRT:220.

## **GRA:172 Typography** 2 cr.

This course explores the fundamental principles of typography and its role in graphic design. Students will explore both the form and function of typography in design. Through lectures and hands-on projects students will progress from organizing basic characters to words, lines of type, paragraphs, pages and grids. (39.6 Lec. Hrs.)

## **GRA:232 Digital Photography** 3 cr.

This is an introductory course in digital photography. Fundamental concepts covered include equipment, exposure, and composition. Students will also begin to learn how to make high-quality black-and-white and color prints from their work. A professional quality digital single lens reflex (DSLR) camera is required. (59.4 Lec. Hrs.)

## **GRA:900 Special Projects in Graphic Arts Technology** 3 cr.

This course is designed by the student and members of the graphic arts technology faculty to provide a highly individualized learning experience within the areas of electronic pre-press, multi-media, webpage design, graphic design, animation, graphic arts management, or press operations. Specific advanced tasks and projects are identified and customized for the student for completion in one semester. Students will create a portfolio highlighting the skills they have developed throughout the program. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** All courses from the first three semesters of the Graphic Arts program or consent of instructor.

## **GRAPHIC TECHNOLOGIES**

---

### **GRT:108 Introduction to Graphic Arts Technology** 4 cr.

The objective of this course is to give students a complete introduction to the graphic communications industry. Students will cover safety, an introduction to graphic communications, history of the graphic arts, traditional and electronic pre-press procedures, press and finishing operations, Web development and multi-media. This course is an introduction to the graphic communications industry and students should be prepared for an intensive course of study. (79.2 Lec. Hrs.)

### **GRT:110 Calculations and Measurements for Graphic Arts** 3 cr.

The course is designed for students who will pursue a career in the graphic arts industry. It includes a complete study of basic math skills for pre-press, press, estimating and bindery. (59.4 Lec. Hrs.)

### **GRT:121 Electronic Publishing** 3 cr.

Participants will gain an in-depth working knowledge of Quark XPress, with an emphasis on technical skills. In addition they will learn about the basics of design and layout, typography and about the many tools and resources available. Participants will study and apply the design elements of emphasis, contrast, balance alignment, repetition, flow, use of images, color and typography by completing specific projects designed to increase their understanding of each element and through class critiques of each project. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** GRA:103 and GRT:108.

### **GRT:130 Quality Concepts and Regulations for the Graphic Arts** 2 cr.

This course will introduce the student to concepts being utilized throughout industry today. Techniques for team building, decision making and communication will be discussed and incorporated. The skills developed in this course will be utilized throughout the program. (39.6 Lec. Hrs.)

### **GRT:160 Electronic Pre-Press** 3 cr.

A continuation of Electronic Publishing. The course will involve the student in advanced functions on the computer formats. Exposure to layout software as well as various publication formats will be addressed. (39.6 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** GRT:121.

### **GRT:162 Introduction to 3-D Modeling** 3 cr.

This course will introduce students to basic and intermediate 3-D modeling concepts. Students will be given instruction on building simple to complex objects using points, polygons, primitives, and sophisticated advanced tools found in various software modeling packages. Students will learn how to prepare 3-D graphics for print, for Web, interactive software titles, and video. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** GRA:103.

### **GRT:163 Flash** 3 cr.

This course explores the creation of interactive projects utilizing time-based graphics, sounds, animation, and video. (39.6 Lec. Hrs./39.6 Lab Hrs.)

### **GRT:165 ActionScript** 3 cr.

This class explores the development of interactive content using ActionScript 3.0. Special focus will be on production and project management skills, along with best practices. Typical projects include preloaders, interactive portfolios, digital kiosks, music / video players, games, etc. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** GRT:163

# COURSE DESCRIPTIONS

## **GRT:169 Color Theory** 2 cr.

A basic course designed to increase the intellectual and visual awareness of the technical aspects, manipulation and control of color. Basic color principles, terminology and applications will be discussed. Students will experiment with the interaction of color and its implications and explore color harmonies. (39.6 Lec. Hrs.)

**Co-requisite:** ENG:013 and MAT:041 or minimum English and math placement scores based on college assessment.

## **GRT:215 Advanced Pre-Press Techniques** 3 cr.

An in-depth study of photomechanical techniques and processes detailing half-toning, duo tones and problem solving. This specialization course will also detail advanced film assembly and contacting operations. Other concepts explored will include densitometry, pin register systems and maintenance on various pre-press equipment. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** GRT:110.

## **GRT:220 Electronic Color Control** 3 cr.

This specialization course will introduce the student to various means of image creation and manipulation. The principles of scanning, software systems and color control through means of composites will be addressed. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** GRT:160.

## **GRT:222 Digital Output for Graphic Management** 3 cr.

Students will be introduced to the pre-flight software available for preparing files to be printed to disk, film, paper and directly to the plate. Practical experience will be gained through the application of the pre-flight software to documents prepared in page layout software, including Quark Xpress and PageMaker. Experience with the management of files using the PostScript page description language will be stressed. Students will also learn about digital input devices, such as cameras, graphic pads, and scanners, as well as learn how to prepare files for electronic transfer to service bureaus. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** GRA:103 and GRT:160.

## **GRT:230 Advanced Electronic Color Control** 3 cr.

As the graphic arts production process compresses more and more to the designer, graphic artists are expected to take on more of an active role in the capturing and manipulation of bitmap images for print. Students will explore advanced topics related to the creation and capture, manipulation and targeting of bitmap images for print and the Web. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** GRT:220.

## **GRT:245 Issues in Graphic Arts Technology** 3 cr.

Students will cover a variety of business topics related to graphic communications, including professional relationships, business practices, pricing and trade customs, salaries, legal issues and professional and technology related issues. In addition forms and contracts will be covered. The course will cover graphic design, web design, illustration, animation and other areas of specialty. (59.4 Lec. Hrs.)

## **GRT:250 Electronic Imaging** 3 cr.

A continuation of Electronic Color Control, this course will involve the student in high-end scanning and output devices. Various networking configurations, as well as software and hardware associated with the process, will be covered in detail. (19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** GRA:103 and GRT:220.

## **GRT:264 JavaScript** 3 cr.

This specialization course will introduce the student to advanced concepts in web development. Students will begin developing skills in scripting JavaScript and Document Object Model (DOM) Scripting. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** GRA:150

## **GRT:266 Technology Changes in the Graphic Arts** 2 cr.

Seminar course on advances in graphic arts technology and how they may affect the industry and workplace. The Graphic Arts Technology Center will be utilized to demonstrate new advances in technology and environmental technology. (39.6 Lec. Hrs.)

**Prerequisite:** All core curriculum courses and technical electives for the first 3 semesters of the Graphic Arts Program.

## **GRT:268 Authoring** 3 cr.

File sizes and download times of multimedia content often exceed what is generally considered acceptable for the Internet. In these situations thought needs to be given to distributing multimedia content on CD and DVD-based media. This course will explore the creation of interactive content for CDs and DVDs. (19.8 Lec. Hrs./79.2 Lab Hrs.)

## **GRT:949 Special Topics** 1 cr.

This is a special topic course offered at discretion of the instructor. Students will be able to explore in greater detail a subject that does not normally fall within the scope of the current curriculum for the Graphic Arts Technology program, but is related to the topic of Graphic Arts. The description for this course will be determined on a case by case basis as appropriate to the content. This course may be repeated for additional credit. (39.6 Lab Hrs.)

## **HEALTH SCIENCES**

### **HSC:106 Contemporary Health Issues** 3 cr.

Exploration of areas of human health. Topics include emotional health, chemical alteration of behavior, human sexuality, personal health care, disease and health in society. (59.4 Lec. Hrs.)

### **HSC:113 Medical Terminology** 2 cr.

This course enables students to recognize and define medical terminology as well as identify medical words from Greek and Latin prefixes, suffixes, word roots and combining forms. This course is offered in three formats: classroom instruction, online instruction, or as an independent study. (79.2 Lab Hrs.)

# COURSE DESCRIPTIONS

## **HSC:125 Survey of Anatomy for Allied Health 2 cr.**

Survey of Anatomy for Allied Health is a beginning-level study of the structure, organization and functions of the major organ systems of the human body. (39.6 Lec. Hrs.)

**Co-requisite:** HSC:113.

## **HEALTH INFORMATION TECHNOLOGY**

### **HIT:120 Pharmacology for HIT 1 cr.**

This course provides the student with an introduction to common drugs and drug therapies as they relate to the field of health information technology. It includes accurate identification of drug name spelling and indications for usage. (19.8 Lec. Hrs.)

### **HIT:139 Math for Healthcare Professions 3 cr.**

Designed for allied health care profession majors. Covers general development of skills involving computations of fractions, decimals, percents, ratios, proportions, basic algebra equations, mean, median, & mode. Builds critical thinking skills for success in occupations that will later require algebra skills in understanding dosage calculations and conversions between metric, apothecary, household and other systems of measurement. Advanced topics will include: infection rate computations and survival statistics. The student will be introduced to variance, standard deviation, dispersion, data analysis, and interpretation. Applied topics such as patient accounts, Medicare and non-Medicare insurance billing, payroll, and computing FTE's in healthcare staffing will help build the applied math skills needed in healthcare supervision and management. (59.4 Lec. Hrs.)

**Co-requisite:** CSC:110.

### **HIT:150 Principles of Disease I 2 cr.**

This course covers disease etiology and organ system involvement, including physical signs and symptoms, prognoses, and common complications and their management. Topics include basic microbiology and principles of disease. This is an introduction to the pathophysiology of disease and covers common disorders of the body from the cellular level to the systemic. (39.6 Lec. Hrs.)

**Prerequisites:** HIT:120 or HSC:113.

### **HIT:160 Principles of Disease II 3 cr.**

This course is a continuation of HIT:150 Principles of Disease I and focuses in-depth on common disorders of the body by organ system involvement such as cardiovascular system, gastrointestinal system, urinary system, etc. Depth of study will focus on the five basic classifications of disease as manifested in each body organ system: signs and symptoms, diagnostic work-up, current disease management and prognosis as it pertains to each body system. (59.4 Lec. Hrs.)

**Prerequisite:** HIT:150.

### **HIT:250 Coding I 3 cr.**

This course is the first of a three-part series and it provides a foundation in basic diagnostic coding and classification systems in a variety of health care settings. Emphasis is placed on International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) coding conventions, rules, methodology, sequencing, data sets, documentation requirements, quality control and coding resources. Practical application of coding inpatient and outpatient records with ICD-9-CM classification system will be studied utilizing workbooks and various handouts. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** BIO:168, HIT:120 and HSC:113, or consent of instructor.

**Co-requisites:** BIO:173 and HIT:150.

### **HIT:251 Coding II 3 cr.**

This course is a continuation of HIT:250 Coding I. Students are introduced to Current Procedural Terminology, 4th Ed. (CPT-4) as it relates to physician's offices/hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Payment System (APCs). Students will be working with actual medical records in the classroom lab. Emphasis is placed on practical application of coding outpatient/ambulatory records. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** All HIT first year courses or consent of instructor.

### **HIT:252 Coding III 3 cr.**

This course is a continuation of a three-part coding sequence. It is designed to provide students the opportunity to become proficient coders. Students will apply coding guidelines, rules, and regulations. Case scenarios and actual medical records will be used to code ICD-9-CM diagnoses and CPT-4 procedures. Students will assign appropriate codes through chart documentation review and analysis, assign diagnosis-related groups (DRGs) and ambulatory payment classifications (APCs) utilizing 3M coding & reimbursement software. Students will learn valid reimbursement optimization techniques. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** All HIT first year courses, HIT:250 and HIT:251 or consent of instructor.

### **HIT:253 ICD-10-CM/Diagnosis Coding 1.5 cr.**

Introduces use of the ICD-10-CM classification system with application of coding scenarios. ICD-10-CM is the diagnosis classification system developed by the Centers for Disease Control and Prevention for use in all U.S. health care treatment settings on Oct. 1, 2013. (29.7 Lec. Hrs.)

**Prerequisite:** BIO:168, HIT:120 and HSC:113, or consent of instructor.

# COURSE DESCRIPTIONS

## **HIT:254 ICD-10-PCS/Procedural Coding 1.5 cr.**

Introduces use of the ICD-10-PCS classification system with application of coding scenarios. ICD-10-PCS also will apply use of ICD-10-PCS coding for data collection and billing procedures. ICD-10-PCS is the procedural classification system developed by the Centers for Medicare & Medicaid Services (CMS) for use in the U.S. for inpatient hospital settings ONLY. (29.7 Lec. Hrs.)

**Prerequisite:** HIT:253 or consent of instructor.

## **HIT:312 Health Informatics and Information Management Systems 3 cr.**

This course should enable the student to describe the different types of code sets and classification systems used in healthcare. It should also enable the student to understand the basic steps in implementing an electronic health record and using the software Access for data collection. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** All HIT first year courses or consent of instructor.

**Co-requisites:** HIT:451

## **HIT:370 Health Records in Acute Care 3 cr.**

This course introduces students to the Health Information Management profession. Topics include acute care health record content and usage, quantitative and qualitative analysis, record format, control, storage, retention policies and filing and numbering systems. (39.6 Lec. Hrs./39.6 Lab Hrs.)

## **HIT:380 Health Records in Alternative Care Settings 3 cr.**

This course is a continuation of HIT:370 Health Records in Acute Care. Students will look at the entire continuum of health care delivery systems. Alternative care settings including ambulatory care, long-term care, home health, hospice and mental health will be studied along with their respective licensing and accrediting standards, documentation issues and reimbursement methodologies. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** HIT:370.

## **HIT:400 Clinical Documentation Improvement 2 cr.**

This course will introduce HIM professionals to the challenge of detailed clinical documentation in the electronic health record as the healthcare industry transitions to ICD-10-CM. The course will focus on the clinical terminologies needed to assign accurate coding which avoids potential reimbursement losses. Facilitation and coordination between the medical coding department and clinicians by means of the standard physician query process will be examined. Important Note: Clinical documentation improvement (CDI) is not about how to code in ICD-10. CDI is: knowing what to look for in medical records, as well as how to ask for clarification provided by physicians. (39.6 Lec. Hrs.)

**Prerequisite:** HIT:251 or HIT:254.

## **HIT:422 Medico-Legal Aspects 3 cr.**

This course is an introduction to the concepts of medical law and ethics for allied health care practitioners. Topics including criminal and civil acts, contracts, negligence and ethical concepts as they relate to the medical profession, health information management, Health Insurance & Portability Accountability Act (HIPAA) and other health care legislative rulings are discussed. (59.4 Lec. Hrs.)

**Prerequisite:** HIT:370 or consent of END Program Director

## **HIT:440 Quality Management 3 cr.**

This course provides an overview of supervision and management activities in a health information department. Focus is placed on a team approach toward the achievement of both departmental and organizational goals. Students will participate in problem-solving activities, committee activities and development of technical writing skills. Emphasis is placed on activities relating to planning, organizing, directing, controlling and budgeting in an HIM department. Additional topics include performance improvement monitors, utilization management, risk management principles, and QA (Quality Assurance) activities pertaining to JCAHO (Joint Commission on Accreditation of Healthcare Organizations) accreditation survey. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** All HIT first year courses or consent of instructor.

## **HIT:451 Allied Health Statistics 3 cr.**

This course covers maintenance, compilation, analysis and presentation of health care statistics. Topics include basic statistical principles, morbidity, mortality, and commonly computed hospital rates; uniform reporting requirements; and selection and construction of data displays. Upon completion, students should be able to calculate morbidity, mortality, and commonly computed hospital rates, comply with uniform reporting requirements, analyze and present statistical data. (59.4 Lec. Hrs.)

**Prerequisite:** All HIT first year courses or consent of instructor.

## **HIT:485 Medical Billing and Reimbursement Systems 3 cr.**

This course is designed to prepare students for jobs in medical office and hospital billing departments. Comprehensive coverage of every stage of the medical insurance claim cycle will be studied in a logical sequence. Basic concepts of medical coding, detailed information on various insurance payers and plans, including Medicare, Medicaid, disability plans, private indemnity plans, and managed care plans will be presented and studied. Students will obtain hands-on experience in completion of the CMS-1500 claim form and the UB-94 hospital claim form with step-by-step guidelines for data entry. Demonstration of current physician practice management software will be included. Additional emphasis will be placed on the security of information entered into computer databases in compliance with new Federal legislation requiring the use of electronic patient records. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** All HIT first year courses or consent of instructor.

**Co-requisites:** HIT:251.

# COURSE DESCRIPTIONS

---

## **HIT:596 Health Information Technology Practicum 2 cr.**

This is a supervised 99-hour professional practice experience designed to introduce the student to the basic daily operations and functions of a health information department. The student will utilize knowledge and skills learned in the classroom, observe and, when appropriate, practice hands-on applications under the supervision of health information department staff.

Students will be required to meet certain goals and objectives, submit a written report of the learning experience and undergo a professional and technical skills evaluation. Although the acute care setting is a common setting for Practicum I, any healthcare setting may be appropriate. Site to be arranged by the instructor.

(118.8 Hrs. Clinical Practicum)

**Prerequisites:** CSC:110, HIT:370, and HSC:113 or consent of instructor.

## **HIT:597 Health Information Technology Practicum II 4 cr.**

This is supervised 224-hour professional practice experience designed to give the student exposure to advanced level functions in various healthcare settings. Coding, transcribing, auditing, billing and QI activities will be emphasized. The student will be required to meet written goals and objectives, submit a written report on the learning experience and undergo a professional and technical skills evaluation. Practicum site to be arranged by the instructor.

(268.8 Hrs. Clinical Practicum)

**Prerequisite:** All HIT coursework prior to the 4th semester or consent of instructor.

## **HIT:601 Medical Transcription 2 cr.**

This course provides opportunities to practice and develop basic skills in the use of transcription equipment, gain familiarity with common formats of medical reports and common medical terminologies. Reference sources are discussed and students receive laboratory experience in transcribing medical records and forms, case histories, consultation reports, operative records, and discharge summaries dictated by real physicians and encompassing all body systems.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CSC:110, HSC:113, and HIT:120.

## **HIT:620 Advanced Medical Transcription 1 cr.**

This course is a continuation of HIT:601. In-depth medical reports dictated by real physicians are provided including radiology, pathology, orthopedic, cardiovascular and gastrointestinal operative reports. Emphasis is placed on accuracy of spelling and format. The SUM Program software for advanced students is utilized.

(39.6 Lab Hrs.)

**Prerequisite:** HIT:601.

## **HIT:946 Seminar 1 cr.**

This is a capstone course designed to provide a comprehensive review of professional competencies, preparation for the RHIT certification exam, preparation of professional resume and job search tools.

This course should be taken the last semester of the HIT Program.

(19.8 Lec. Hrs.)

**Prerequisite:** All HIT coursework prior to the 4th semester or consent of instructor.

## **HEALTH, SAFETY & ENVIRONMENTAL TECHNOLOGY**

---

### **HSE:100 Occupational Safety 3 cr.**

This course provides an introduction to the U.S. Occupational Safety and Health Administration's (OSHA) regulations that pertain to protecting workers from exposure to occupational hazards. Students concentrate on researching, interpreting, summarizing, and applying the OSHA regulations. Students are introduced to a proactive philosophy of company compliance with OSHA regulations, with an emphasis on using specific approaches to providing a safe and healthful work environment. Additionally, through activities and exercises, students are introduced to procedures for conducting a chemical inventory, interpreting Material Safety Data Sheets (MSDSs), developing a written Hazard Communication (HAZCOM) program, and developing an effective HAZCOM training program.

(59.4 Lec. Hrs.)

### **HSE:105 Characteristics of Hazardous Materials 3 cr.**

This course provides instruction in learning to recognize the physical and chemical characteristics of hazardous materials classes and how chemicals within those classes can harm humans and the environment. By applying basic chemistry, students will associate chemical names with particular health and safety hazards. Additionally, students will identify common trade names and/or synonyms for the chemicals.

(59.4 Lec. Hrs.)

### **HSE:110 Industrial Processes 3 cr.**

In this course, the student is provided a nontechnical introduction to common general manufacturing processes that involve hazardous materials and wastes, with emphasis on: waste minimization/pollution prevention (P2) strategies, waste treatment methods, and common processes within facilities. Each student completes a major project in which he/she investigates and reports on a specific industry, especially its basic processes, materials flow, worker health and safety exposures, and waste reduction issues.

(59.4 Lec. Hrs.)

**Co-requisites:** CHM:122, HSE:100 and HSE:200.

### **HSE:200 Waste and Remediation 3 cr.**

This course provides a study of the U.S. Environmental Protection Agency regulations pertaining to hazardous waste management, with an emphasis on the requirements of the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Students learn the steps in managing hazardous wastes from cradle to grave, which includes reading, interpreting, and applying sections from the Code of Federal Regulations.

(59.4 Lec. Hrs.)

**Co-requisite:** HSE:100 or demonstrated ability to use the Code of Federal Regulations.

# COURSE DESCRIPTIONS

## **HSE:205 Air and Water Quality** 3 cr.

This course provides a study of the U.S. Environmental Protection Agency regulations pertaining to compliance with the Clean Air Act Amendments of 1990 and the Clean Water Act's National Pollutant Discharge Elimination System. Students learn to support professional personnel responsible for complying with the environmental regulations for air emissions, and wastewater, which includes reading, interpreting, and applying sections from the Code of Federal Regulations. (59.4 Lec. Hrs.)

**Co-requisite:** HSE:100 or ability to use the Code of Federal Regulations.

## **HSE:211 Contingency Planning/ Incident Management** 4 cr.

This course provides instruction on how to develop an emergency response contingency plan for a facility or community. Students learn that the steps for emergency preparedness include analyzing the hazards, writing and implementing the contingency plans, training employees for an emergency, and evaluating the effectiveness of the contingency plan. Students will develop and implement the "Incident Management System" through both practical and theoretical case scenarios. (79.2 Lec. Hrs.)

**Prerequisite:** HSE:100 and HSE:200.

## **HSE:225 Legal Aspects of Occupational Safety and Health** 3 cr.

This course provides a study of legal implications of legislation as it applies to health and safety in the workplace. Students concentrate on regulatory, common, and administrative law; mandatory and voluntary compliance; applicable government agencies and their roles; and Occupational Safety and Health Administration regulations. Additionally, students are introduced to the professional code of ethics of a safety person. (59.4 Lec. Hrs.)

**Prerequisite:** HSE:100.

## **HSE:230 Transportation of Hazardous Materials** 3 cr.

This course provides a detailed study of the U.S. Department of Transportation (DOT) Hazardous Materials Regulations. Additionally, students shall be introduced to certain Environmental Protection Agency regulations pertinent to hazardous materials transportation. The course includes problems and case studies in which the student identifies and interprets applicable DOT regulations and recommends compliance strategies. Also, students gain a practical understanding of DOT issues through interviews with local professionals in hazardous materials handling. Students learn how a hazardous materials technician or an environmental health and safety technician may support professional personnel responsible for compliance with the environmental regulations for transportation of hazardous materials. Emphasis is placed on identifying, interpreting, and applying sections from the Code of Federal Regulations (CFR). (59.4 Lec. Hrs.)

**Prerequisite:** HSE:100 and HSE:200.

## **HSE:250 Special Topics (Fire Prevention and Ergonomics)** 4 cr.

### **FIRE PREVENTION**

The students will be introduced to different methods of fire prevention, how certain chemicals and materials burn, and what additional hazards these chemicals will produce. This course will also address fire detection and employee alarm systems. Resources will include the local fire departments, National Fire Protection Association (NFPA), and Federal Emergency Management Agency (FEMA).

### **ERGONOMICS**

Ergonomics is the science of fitting the job to the worker. This course will address different means to reduce the number and severity of musculoskeletal disorders (MSDs) caused by exposure to risk factors in the workplace. Work-related musculoskeletal disorders (WMSDs) can result when there is a mismatch between the physical requirements of the job and the physical capacity of the worker. (79.2 Lec. Hrs.)

**Prerequisites:** CHM:132 and HSE:100.

## **HSE:251 Ergonomics** 2 cr.

Ergonomics is the science of fitting the job to the worker. This course will address different means to reduce the number and severity of musculoskeletal disorders or cumulative trauma disorders caused by exposure to risk factors in the workplace. Work-related musculoskeletal disorders can result when there is a mismatch between the physical requirements of the job and the physical capacity of the worker. (39.6 Lec. Hrs.)

**Prerequisite:** CHM:132 and HSE:100. HSE:251 and HSE:252 are equivalent to HSE:250.

## **HSE:252 Fire Prevention** 2 cr.

In this course the students will learn about firefighting equipment including but not limited to fixed and portable fire suppression equipment. The students will also be introduced to different methods of fire prevention, how certain chemicals and materials burn, and what additional hazards they will produce. This course will also address fire detection and employee alarm systems. Resources will include local fire departments, National Fire Protection Association (NFPA), and Federal Emergency Management Agency (FEMA). (39.6 Lec. Hrs.)

**Prerequisite:** CHM:132 and HSE:100. HSE:251 and HSE:252 are equivalent to HSE:250.

## **HSE:261 Regulation & Compliance in Warehousing and Distribution** 3 cr.

This course provides an introduction to the U.S. Occupational Safety and Health Administration's (OSHA) regulations that pertain to protecting workers from exposure to occupational hazards. Students concentrate on researching, interpreting, summarizing, and applying the OSHA regulations. Students are introduced to a proactive philosophy of company compliance with OSHA regulations, with an emphasis on using specific approaches to providing a safe and healthful work environment. The student will also study the legal implications of legislation as it applies to health and safety in the workplace. The third portion of the course will provide the student the background information needed to conduct an in-depth incident investigation. Material relevant in the Workers Compensation insurance aspect side of the post-incident will be covered. (59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## **HSE:270 Sampling and Monitoring Procedures 4 cr.**

This course introduces students to a variety of sampling procedures used in industrial settings and for emergency response.

Topics to be covered include: sampling and monitoring devices; industrial hygiene monitoring; outside air sampling; surface water, groundwater, soil and waste sampling. Emphasis will be placed on collecting and preserving representative samples, interpreting laboratory results, and on complying with relevant federal regulations.

(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** MAT:069 or MAT:073 or minimum math placement score based on college assessment, CHM:122, HSE:100, and HSE:200.

**Co-requisite:** CHM:132.

## **HSE:275 Worker Compensation/ Incident Investigation 3 cr.**

An accident is an unplanned event that results in personal injury or in property damage. Employers need to investigate all accidents regardless of the extent of injury or damage. The first part of this course will provide the students the background information needed to conduct an in-depth incident investigation. The second part will cover material relevant in the workers compensation insurance aspect side of the post incident. Students will learn what the actual cost of insurance is and how that is calculated, and how an effective safety program will reduce the cost of the company's insurance premiums and the actual workers compensation claims.

(59.4 Lec. Hrs.)

**Prerequisite:** HSE:100

## **HSE:280 Hazardous Materials Health Effects 3 cr.**

This course provides a review of human health effects from exposures to chemicals. Topics covered include determination of risk factors, routes of entry of hazardous materials and their effects on target organs, acute and chronic effects, and control measures.

(59.4 Lec. Hrs.)

**Prerequisites:** CHM:122, CHM:132, HSE:100, and HSE:105.

## **HSE:285 Industrial Hygiene 3 cr.**

The Industrial Hygiene course will provide the necessary information to the students to allow them to establish and maintain a basic industrial hygiene program. Through practical exercises, students will learn to anticipate, recognize, evaluate, and control occupational health hazards in the workplace. The student will learn basic environmental sampling concepts for the collection and analysis of data to identify problems, and develop methods and procedures to control or eliminate occupational exposures in the workplace. The course will cover physical and chemical exposures in the workplace. Examples of topics covered in this course include: basics of toxicology; occupational diseases related to skin contact or inhalation of chemicals in the workplace; the detection and control of airborne contaminants and ventilation; illness and injury from causes such as sound, radiation, heat, biological agents, and accidents; anatomy and physiology.

(59.4 Lec. Hrs.)

**Prerequisite:** CHM:122, CHM:132 and HSE:100.

## **HSE:290 Electrical Safety 3 cr.**

This course utilizes the Occupational Safety and Health Administration (OSHA) standards and the National Electrical Code to provide an overview of electrical installations and equipment with an emphasis on controlling electrical hazards in the workplace. Specific areas of study include single and three phase systems, energized parts, cord and plug connected equipment, fixed equipment, grounding, personal protective equipment and safe work practices. Special emphasis is placed on electrical hazard recognition and OSHA inspection procedures.

(59.4 Lec. Hrs.)

# HEATING AND AIR CONDITIONING

---

## **HCR:116 Domestic Heating 5 cr.**

This course covers installation, troubleshooting, maintenance and repair of gas, fuel oil, electric furnaces and heat pumps. The course will also cover temperature, humidity, air filtering and air movement for a complete home conditioning system.

(59.4 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisites:** HCR:308 and HCR:405.

**Co-requisite:** HCR:441, HCR:851, and MAT:104, 121 or 140.

## **HCR:260 HVAC Trade Skills (I) 3 cr.**

This course covers all types of tools pertaining to, but not restricted to, the HVAC profession. Included with the introduction of the student to the tools is the proper usage of these tools. The student will learn soldering and brazing, iron pipe cutting and threading, PVC solvent welding, all fittings, drilling, sawing and cutting sheet metal.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

**Co-requisite:** HCR:308, HCR:405 and COM:102, ENG:105 or SPC:122.

## **HCR:261 HVAC Trade Skills 3 cr.**

This course covers all types of tools pertaining to but not restricted to the HVAC profession. Included with the introduction of the student to the tools is the proper usage of these tools.

The student will learn how to manufacture sheet metal fittings with the tools available. Included with the hand tools will be the different power tools that are common to sheet metal shops everywhere.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** HCR:260.

## **HCR:271 Advanced Domestic Heating and Air Conditioning 5 cr.**

This course covers all residential and light commercial high-efficiency heating and air conditioning equipment. Included with the instruction will be a hands-on, competency-based lab with high-efficiency equipment. This course will cover all 80-90% furnaces.

(59.4 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisite:** HCR:116, HCR:308, HCR:405 and HCR:441.

**Co-requisite:** HCR:880.

# COURSE DESCRIPTIONS

## **HCR:291 Commercial Systems 3 cr.**

This course covers all types of commercial heating and cooling systems. Systems included are air cooled and water cooled air conditioning systems, cooling towers, water chillers, gas and electric heating systems for heating air and water, industrial heating systems including direct fired make up air equipment.

Commercial water heaters and controls will also be discussed.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** HCR:116, HCR:308, HCR:405 and HCR:441.

**Co-requisite:** HCR:802.

## **HCR:308 Refrigeration Fundamentals 5 cr.**

This course covers temperature/pressure relationships, basic refrigeration systems, refrigerants, metering devices, tool identification/usage and safety, basic refrigeration components and their use, refrigeration applications and methods of installation, maintenance, diagnosis and repair of refrigeration equipment.

(59.4 Lec. Hrs./118.8 Lab Hrs.)

**Co-requisites:** HCR:260, HCR:405 and COM:102, ENG:105 or SPC:122.

## **HCR:320 Light Commercial Refrigeration 6 cr.**

This course addresses the use, installation, diagnosis and maintenance of all types of commercial refrigeration systems including, but not limited to, walk-in/reach-in coolers and freezers, ice machines, and refrigerant control devices. This course will also cover piping methods for refrigeration, compressors and pumps.

(79.2 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisite:** HCR:271.

**Co-requisite:** HCR:805.

## **HCR:405 Basic Electricity for HVAC Technicians 5 cr.**

This course covers those concepts and procedures that will enable the student to work successfully in the industry. Electrical principles, components, meters, schematic and systems are discussed and applied to modern small and large scale installations. Troubleshooting and servicing are presented in practical terms for ensuring immediate productivity.

(59.4 Lec. Hrs./118.8 Lab Hrs.)

**Co-requisites:** HCR:260, HCR:308 and COM:102, ENG:105 or SPC:122.

## **HCR:406 Basic Electricity/ Apprenticeship 3 cr.**

This course covers those concepts and procedures that will enable the student to work successfully in the Heating Ventilation and Air Conditioning (HVAC) industry. Electrical principles, components, meters, schematics and systems are discussed and applied to modern small- and large-scale installations. Troubleshooting and servicing are presented in practical terms for ensuring immediate productivity.

(29.7 Lec. Hrs./59.4 Lab Hrs.)

## **HCR:441 HVAC Controls and Circuitry 5 cr.**

This course acquaints the student with the electrical controls and circuitry associated with domestic oil, gas and electric heating systems. Hands-on laboratory experiences are correlated with the lecture to provide the student with realistically simulated work situations.

(59.4 Lec. Hrs./118.8 Lab Hrs.)

**Prerequisites:** HCR:260, HCR:308 and HCR:405.

**Co-requisite:** HCR:116, HCR:851 and MAT:104, MAT:110 or MAT:121.

## **HCR:525 Welding for the HVAC/R Trades 3 cr.**

This course is designed to acquaint the student with the methods and techniques used to weld in the HVAC/R trades field. Major topics of instruction include oxyacetylene welding, cutting, brazing, and basic metal arc welding (SMAW stick welding). Preparation and safety will also be emphasized.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** HCR:260.

## **HCR:802 Control Systems for HVAC 4 cr.**

This course covers electrical symbols, transformers, single phase motors, three-phase motors, motor starters and electronic devices for the Heating, Ventilation and Air Conditioning field (HVAC). Included with the instruction will be a hands-on, competency-based lab.

(59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** HCR:441.

**Co-requisite:** HCR:291 recommended.

## **HCR:804 Controls for HVAC/Apprenticeship 3 cr.**

This apprenticeship course covers electrical symbols, transformers, single-phase motors, three-phase motors, motor starters, and electronic devices for the heating, ventilation, and air conditioning field (HVAC). Hands-on, competency based labs are included with classroom instruction.

(59.4 Lec. Hrs.)

**Prerequisite:** HCR:118

## **HCR:805 Environmental Controls and Equipment 5 cr.**

This course covers laws and enforcement of the Clean Air Act, and the process and equipment used for reclamation and recycling of CFC's, HCFC's, and HFC's. Transportation of these refrigerants and certification test as required for EPA Section 608 will be discussed. Geothermal design, installation and service will be included in this course.

(59.4 Lec. Hrs./118.5 Lab Hrs.)

**Prerequisite:** HCR:116 and HCR:308.

**Co-requisite:** HCR:320.

## **HCR:811 Computer Aided Control System Design 3 cr.**

This course is designed to deliver instruction in the area of heating and cooling load calculations, airflow and air supply/return layout for residential systems. Extensive use of computers and Manual J based load calculation software will be used in training. This course also introduces students to boiler system design, system sizing and trouble shooting.

(59.4 Lec. Hrs.)

**Prerequisite:** HCR:116, HCR:308 and HCR:441.

**Co-requisite:** HCR:805.

## **HCR:851 HVAC-R Industry Safety 2 cr.**

This course provides an introduction to the U.S. Occupational Safety and Health Administration's (OSHA) regulations that pertain to protecting workers from exposure to occupational hazards. Students concentrate on researching, interpreting, summarizing, and applying the OSHA regulations. Students are introduced to a proactive philosophy of company compliance with OSHA regulations with an emphasis on using specific approaches to provide a safe and healthful HVAC/R work environment. The course also provides the students with an industry approved 10 hour OSHA certificate.

(39.6 Lec. Hrs.)

**Co-requisite:** HCR:405.

# COURSE DESCRIPTIONS

## **HCR:860 HVAC Management and Business Fundamentals** 3 cr.

Topics of this course include HVAC residential heating and cooling load loss calculations, equipment sizing, duct sizing and layout, job estimating, billing, customer relations and actual comparison of gas and electric heat calculations. Airflow measurements and calculations will also be demonstrated. Small business forms will be discussed including basic payroll, job estimating, workers compensation and self-employed government forms. (59.4 Lec. Hrs.)

**Prerequisites:** HCR:116.

**Co-requisite:** HCR:291.

## **HCR:880 Industry Competency Exam (ICE) - Residential** 1 cr.

This course is designed to prepare the student for the Residential Industry Competency Exam. Time is spent on each section of the exam, to ensure the student successfully passes the exam. The Residential Industry Competency Exam (ICE) is designed to test for knowledge of the fundamentals and basic skills necessary for entry-level residential technicians. (19.8 Lec. Hrs.)

**Prerequisite:** HCR:116 and HCR:441.

**Co-requisite:** HCR:271.

## **HCR:885 Light Commercial Competency Exam** 1 cr.

This course is designed to prepare the student to successfully complete the Light Commercial Industry Competency Exam (LC-ICE). The LC-ICE is designed to test for knowledge of the fundamentals and basic skills needed for an entry-level commercial HVAC technician. This course will also review the material for the North American Technician Excellence (NATE) Certification Core Exam. Completion of at least one of the exams is mandatory, either the LC-ICE or the NATE. Each exam requires an additional fee. (19.8 Lec. Hrs.)

**Prerequisites:** HCR:260, HCR:271 and HCR:880.

**Co-requisite:** HCR:320, HCR:805 and HCR:811.

## **HISTORY**

### **HIS:117 Western Civilization I: Ancient and Medieval** 3 cr.

A survey course in Western Civilization from ancient history into the age of absolutism. The civilizational components of religion, philosophy, literature, art, architecture and science are integrated into the political and social history of Europe, from our Mesopotamian and Egyptian origins to about 1450.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 minimum English placement score based on college assessment.

### **HIS:118 Western Civilization II: Early Modern** 3 cr.

This is a survey course in Western Civilization from the Renaissance through the Age of Democratic Revolutions. The civilizational components of religion, philosophy, literature, art and architecture are integrated into the political and social history of Europe, from about 1450 to the end of the eighteenth century.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 minimum English placement score based on college assessment.

### **HIS:119 Western Civilization III: The Modern Period** 3 cr.

This is a survey course in Western Civilization in the Modern Age, from the Age of Democratic Revolutions through the present day. The civilizational components of religion, philosophy, literature, art, science and architecture integrated into the political and social history of Europe and its impact on the modern world.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 minimum English placement score based on college assessment.

### **HIS:120 Readings in Western Civilization** 1-2 cr.

This course is designed to provide the student with additional reading in Western Civilization, allowing the student to obtain a greater understanding of the various problem areas in this discipline than can be attained by normal course work.

(39.60 to 79.20 Lab. Hrs.)

**Prerequisite:** HIS:117, HIS:118 or HIS:119.

### **HIS:151 U.S. History to 1877** 3 cr.

The study of political, cultural and economic developments in North American colonies and the United States from discovery through Reconstruction.

Historical perspective and critical analysis are emphasized.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

### **HIS:152 U.S. History since 1877** 3 cr.

The study of political, cultural, social and economic developments from 1877 to the present. Historical perspective and critical analysis are emphasized.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

### **HIS:211 Modern Asian History** 3 cr.

Designed to assist the student in analyzing developments in the modern history of China, India and Japan. Emphasis is placed on the historical changes and continuity in the three major cultures of Asia including the impact of the West and methods of modernization.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## **HIS:224 Nazi Germany 3 cr.**

"Nazi Germany" is a survey of the origins and development of the National Socialist German Workers Party (NSDAP), the foreign policies of Adolph Hitler which led to WW II, and the implementation of the Final Solution to the Jewish Question, the Holocaust.

(59.4 Lec. Hrs.)  
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## **HIS:231 Contemporary World Affairs 3 cr.**

This course is designed to be a study of current events viewed in their historical context. Emphasis is placed on global politics, domestic issues, and cultural developments.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives area.*

(59.4 Lec. Hrs.)  
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## **HIS:257 African American History 3 cr.**

Designed to assist students in developing an understanding of institutional racism in an historical context. Emphasis is placed on slave culture, social role of newly freed African Americans and community changes in the Twentieth Century.

(59.4 Lec. Hrs.)

## **HIS:269 The 1960's and the Vietnam War 3 cr.**

This course provides students with perspectives of the turbulent cultural, political, and social changes of the 1960s and early 1970s during the administrations of Kennedy, Johnson and Nixon, the causes and consequences of the Vietnam conflict, and the Watergate affair.

(59.40 Lec. Hrs.)

## **HIS:271 American Frontier History 3 cr.**

The study of European migration to North America, with a focus upon the interaction within settlements on the frontier. Emphasis upon political, cultural and economic developments in North American Colonies, the trans-Appalachian region, and the trans-Mississippian regions. Comparative study is emphasized with the patterns of frontier culture in the Far West, of the post-bellum period.

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## **HIS:272 Readings in United States History 1-2 cr.**

Designed to provide the student with additional readings in United States history, allowing the student to obtain a greater understanding of the various problem areas of this discipline. This course may be repeated for additional credit.

(39.6-79.2 Lab. Hrs.)

**Prerequisite:** HIS:151 or HIS:152.

## **HONORS**

---

### **HUM:924 Honors Service Project 1 cr.**

This course is designed to integrate academic study and community service. By volunteering at least 32 hours at a non-profit service organization, students will have an opportunity to exercise civic responsibility and deepen their understanding of the content in their majors. Students will learn and develop through active participation in organized service experiences that meet our community's needs.

(39.6 Lab. Hrs.)

**Prerequisite:** Successful completion of HUM:926 or HUM:927.

## **HUM:926 Honors Seminar 3 cr.**

This course is topical and the subject will vary from semester to semester. It is designed to explore critically and creatively selected issues related to the universal themes that inform the human condition. It can be interdisciplinary and community oriented, and will include a special project applicable to the requirements of the Honors Program.

(59.4 Lec. Hrs.)

**Prerequisite:** Acceptance in the Honors Program or a 3.5 cumulative grade point average.

## **HUM:927 Honors Independent Study 1 cr.**

This course is designed to provide the student with the opportunity to obtain a greater understanding of a topic in this subject. The student will go beyond what is covered and expected in other classes of this discipline. The student will plan and complete an honors project or research paper for the course. The specifics of the honors project or paper will be contracted with the instructor and the Honors Committee at the beginning of the semester.

(39.6 Lab. Hrs.)

## **HOSPITALITY, CULINARY ARTS AND MANAGEMENT**

---

### **HCM:100 Sanitation and Safety 2 cr.**

This course provides the student with a solid foundation in food service sanitation and safety. Students are required to pass the State of Illinois sanitation exam for certification in order to continue in the Culinary Arts curriculum. (39.6 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **HCM:116 Fundamentals of Baking 3 cr.**

This course is for a student with very little baking/pastry experience. Students will cover the basics of theory and preparation of baked items. Science and math will play a large role in this course. Items the students will prepare include yeast bread, cookies, creams, puddings, pie crusts and filling, and quick breads. The focus of the course is on standard production methods for a successful product in small and large scale batches.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisites:** HCM:100.

## **HCM:125 Basic Cake Decorating 1 cr.**

The course is designed to explain and demonstrate the crucial techniques, equipment, and components required to produce a decorated cake. Practice will be required outside of class for students to achieve success in decorating the most basic layered cake to the most complex tiered cake.

(39.6 Lab. Hrs.)

## **HCM:154 Basic Food Preparation 2 cr.**

Upon completion of this course, students will have attained basic skills in grilling, knife skills, frying, broiling, sauteing, vegetable cookery, recipe conversion and soups/stocks.

(19.8 Lec. Hrs./59.4 Lab Hrs.)

## **HCM:155 Garde Manger 3 cr.**

Students will prepare all foods associated with a true garde manger station in a restaurant including salads, pate, terrines, cold appetizers, showpieces, ice carvings, canapés and show platters.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** HCM:100, HCM:160 and HCM:241.

## **HCM:156 Intermediate Food Preparation 3 cr.**

Upon completion of this course, students will have attained a medium level of skills in equipment usage, knife skills including mandolin, starches and vegetable cookery, protein fabrication, derivative sauces, fish and shell fish cookery, stone oven and Rational cooking, beginning sous vide cookery, and sanitation skills.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** HCM:100, HCM:154 and HCM:180

## **HCM:160 Advanced Food Preparation 3 cr.**

Through this course students will develop food preparation and professional standards at an advanced level. Skill areas addressed include knife cuts, industry based equipment, mother sauces and their derivatives, culinary brigade, chef management, and the preparation of soups, starches, vegetables, protein, sushi, healthy alternatives and one-bit foods.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** HCM:156 and HCM:265.

**Co-requisite:** HCM:301.

## **HCM:180 Food Fundamentals 2 cr.**

This course is an overview of foodservice and culinary arts. Students look at industry structure, developing trends and influences of management. Students will develop their awareness of food products and the world of food.

(39.6 Lec. Hrs.)

**Co-requisite:** HCM:100.

## **HCM:182 Intermediate Baking 3 cr.**

This course is designed for students with a fundamental knowledge of baking. The students will learn to bake a variety of items from breads to custards to cakes. The students will use their creativity in this class as well as follow variations of recipes. Science and math are a large part of this course.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** HCM:100 and HCM:116.

## **HCM:212 Industry Management 3 cr.**

This course will expose students to theoretical concepts as well as practical applications to develop management skills related to the restaurant industry. The course is service-oriented with emphasis on staff and guest relations.

(59.4 Lec. Hrs.)

**Prerequisite:** HCM:255, HCM:154 and HCM:180 are recommended.

## **HCM:233 Menu Planning and Nutrition 3 cr.**

Emphasis will be on basic food nutrients and their use in restaurant cooking. USDA guidelines and USRDA standards are covered. Students will calculate body energy requirements and create nutritionally sound menus using classical tools/preparation methods.

(59.4 Lec. Hrs.)

**Prerequisites:** HCM:154.

## **HCM:241 Menu Planning and Sales Promotion 3 cr.**

Students will learn what influences impact menus and how to target menus to specific needs. Menus from other cultures and menus for a variety of functions will be covered. The student will learn to prepare a cost-effective, seasonally oriented and overall aesthetic menu.

**Prerequisite:** HCM:154.

**Recommended:** HCM:212 and HCM:265.

## **HCM:255 Purchasing 3 cr.**

This course will provide the student with a general understanding of purchasing in a professional food service setting and introduce the student to all aspects of obtaining goods: calculating quantities, costs, budgets, menu planning, choosing vendors, delivery schedules as well as storage needs. The student will apply culinary math calculations to analyze purchasing options.

(59.4 Lec. Hrs.)

**Prerequisite:** HCM:180 and HCM:265.

**Co-requisite:** HCM:503 or permission of instructor.

## **HCM:265 Mathematics for Hospitality 3 cr.**

This course will provide the student with a general understanding of mathematics application used in a professional food service setting. This course will then introduce the student to the mathematical knowledge needed in the restaurant and hospitality industry.

(59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **HCM:280 Food Cost Accounting**

**3 cr.**

This course teaches students to effectively calculate and control costs in foodservice establishments. Students are provided with the basic concepts to yield a profit in the kitchen and manage effective control over income and expenses in the restaurant industry.  
(59.4 Lec. Hrs.)

## **HCM:301 Beverage Control**

**3 cr.**

This course will provide an in-depth study of wines, beverages, spirits and beers. Topics covered include purchasing, storage and developing a wine list that is compatible with a variety of foods. Students must be 21 years of age to taste alcoholic beverages.  
(59.4 Lec. Hrs.)

## **HCM:310 Hospitality Law**

**3 cr.**

This course reviews the legal areas relevant to the hospitality industry including government regulations, food and liquor liability, guests' rights and safety and employer/employee rights and responsibilities.  
(59.4 Lec. Hrs.)

**Prerequisite:** RDG:045 or minimum reading placement score based on college assessment.

## **HCM:319 Introduction to Hospitality Field**

**3 cr.**

This course is an overview of the hospitality industry. Students will examine and review the industry structure and developing trends in hotel management. Students will begin their awareness and exploration of the world of hospitality.  
(59.4 Lec. Hrs.)

## **HCM:328 Conversational Spanish for Hospitality Management**

**3 cr.**

This course emphasizes conversation in Spanish using relevant contemporary situations. Situations to be presented will be determined following an assessment of student's background and needs. Listening and comprehension is highly emphasized.  
(59.4 Lec. Hrs.)

## **HCM:330 Hospitality Personnel Management**

**3 cr.**

This course will assist students in developing skills in diverse working environments, documentation, analyzing and interviewing candidates for employment positions.  
(59.4 Lec. Hrs.)

## **HCM:331 Workplace Human Relations**

**3 cr.**

This course will expose students to multiple areas of the human resources including real life case studies based on the hospitality industry assessments and history.  
(59.4 Lec Hrs.)

## **HCM:335 Introduction to Event Planning**

**3 cr.**

This course is an overview of the event management industry. Students will examine the industry and the developing trends in planning events.  
(59.4 Lec. Hrs.)

## **HCM:501 Culinary Practicum I**

**3 cr.**

Students will complete a total of nine practicums (6000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.  
(960 Practicum Hrs.)

## **HCM:502 Culinary Practicum II**

**3 cr.**

Students will complete a total of nine practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.  
(960 Practicum Hrs.)  
**Prerequisite:** HCM:501.

## **HCM:503 Culinary Practicum III**

**1.5 cr.**

Students will complete a total of nine practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.  
(480 Practicum Hrs.)  
**Prerequisite:** HCM:502.

## **HCM:504 Culinary Practicum IV**

**3 cr.**

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.  
(960 Practicum Hrs.)  
**Prerequisite:** HCM:503.

## **HCM:505 Culinary Practicum V**

**3 cr.**

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.  
(960 Practicum Hrs.)  
**Prerequisite:** HCM:504.

## **HCM:506 Culinary Practicum VI**

**1.5 cr.**

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.  
(480 Practicum Hrs.)  
**Prerequisite:** HCM:505.

## **HCM:507 Culinary Practicum VII**

**3 cr.**

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.  
(960 Practicum Hrs.)  
**Prerequisite:** HCM:506.

## **HCM:508 Culinary Practicum VIII**

**3 cr.**

Students will complete a total of 9 practicums (6,000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the American Culinary Federation's work processes.  
(960 Practicum Hrs.)  
**Prerequisite:** HCM:507.

# COURSE DESCRIPTIONS

---

## **HCM:509 Culinary Practicum IX** 1.5 cr.

Students will complete a total of nine practicums (6000 hours total) in addition to classroom study. Practicums provide the students with on-the-job training following the work processes documented in the EICC's Patterns & Standards for the Occupation of Cook. A focus of this practicum is for the student to develop and practice the skills of supervisor/lead cook.

(480 Practicum Hrs.)

**Prerequisite:** HCM:508.

## **HCM:589 Introduction to Restaurant Management** 3 cr.

Students will develop fundamental skills necessary to begin a career in the restaurant field of hospitality. Topics include customer service, management and scheduling. General overviews of both front and back of the house will be covered.

(59.4 Lec. Hrs.)

## **HCM:606 Hospitality Management** 3 cr.

This course is designed to train students in a supervisory capacity. Topics including problem solving, team playing, delegating of duties and evaluating performance are included in this course.

(59.4 Lec. Hrs.)

**Prerequisite:** HCM:319.

## **HCM:932 Internship** 1 - 2.5 cr.

Internship course work provides students the opportunity to further develop and practice their hospitality skills in real world scenarios.

Event management students are trained in all aspects of event planning. Students will learn how to design, plan, market and stage an event. The hours of this course will be applied to the 297 hours of experience with an approved event planner required to earn a certificate in Event Management.

(79.2 - 237.2 Coop. Hrs.)

**Prerequisite:** HCM:335.

## **HCM:957 Hospitality Lab I** 2 cr.

This hands-on lab course will allow students to train in front and back of the hospitality establishments. Training in operations of food service, dining skills, housekeeping and laundry operations are included in this course.

(79.2 Lab Hrs.)

## **HCM:958 Hospitality Lab II** 2 cr.

This is a hands-on lab course where students will practice their skills in customer service, concierge contacts and point-of-sale training.

(79.2 Lab Hrs.)

## **HCM:959 Hospitality Lab III** 3 cr.

This course will build on the foundation of customer service, front desk operations, catering and events planning, maintenance, and guest services that will be emphasized at the advanced level in this course.

(118.8 Lab Hrs.)

## **HUM:135 Humanities of the Early World** 3 cr.

This course is an integrated humanities course that surveys the major cultural achievements and ideas of Western civilization from Ancient Greece through the Middle Ages. Art, architecture, music and drama are presented as they reflect the society and world view of the eras studied.

*This course fulfills a general education requirement in the Arts and Humanities.*

(59.4 Lec. Hrs.)

## **HUM:136 Humanities of the Renaissance** 3 cr.

This is an integrated humanities course which surveys the major cultural achievements and ideas of Western civilization from the Renaissance through the 18th Century. Art, architecture, music and drama are presented as they reflect the society and the world view of the eras studied.

*This course fulfills a general education requirement in the Arts and Humanities.*

(59.4 Lec. Hrs.)

## **HUM:137 Humanities of the Modern World** 3 cr.

This is an integrated humanities course that surveys the major cultural achievements and ideas of Western civilization from the 19th century through the early 21st century. Art, architecture, music and drama are presented as they reflect the society and world view of the eras studied.

*This course fulfills a general education requirement in the Arts and Humanities.*

(59.4 Lec. Hrs.)

## **HUM:183 Living with Space, Time and Technology** 3 cr.

This course will explore human values and individual beliefs within a constantly changing environment, community relationships, technological networks, the ethical dimensions of work and a meaningful personal life-style.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 minimum English placement score based on college assessment.

## **HUMANITIES**

---

### **HUM:105 Working in America** 3 cr.

A humanities course which has as its theme the interplay of work and the individual. It focuses on technological society and how the humanities can interpret and reflect upon that society.

(59.4 Lec. Hrs.)

### **HUM:110 Changes and Choices** 3 cr.

Changes and Choices offers students an opportunity to explore ways in which the humanities can contribute to their personal and work lives, especially as they face change and make decisions.

ENG:013 or minimum English placement score based on college assessment.  
*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

# COURSE DESCRIPTIONS

## **HUM:287 Leadership Development Studies 3 cr.**

The central focus of this course is the development of leadership skills. The course is designed to provide a basic understanding of leadership and group dynamics theory and to assist the student in developing a personal philosophy of leadership, an awareness of the moral and ethical responsibilities of leadership, and an awareness of one's style of leadership. The course will integrate readings from the humanities, classic works of literature and experiential learning exercises. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 minimum English placement score based on college assessment.

## **INDUSTRIAL TECHNOLOGY**

### **IND:102 Manufacturing Processes 3 cr.**

An introductory course covering the machines, materials and processes used in a wide variety of industries. The course will emphasize the machining process used to produce machine parts, as well as systems used to control the processes. The course will include lecture and hands-on lab activities, as well as site visitations to reinforce the course content. (39.6 Lec. Hrs./59.4 Lab Hrs.)

### **IND:111 Industrial Safety Mechanical Systems 1 cr.**

This course teaches the student general industrial safety practices. The topics include electrical safety, lockout tagout procedures, confined entry, NPFA symbols, and personal safety. (19.8 Lec. Hrs.)

### **IND:129 Interpreting Pneumatics and Hydraulics Drawings 1 cr.**

This course covers methods of visualizing and interpreting views and dimensions of basic pneumatics and hydraulic drawings as well as interpretation of symbols. (19.8 Lec. Hrs.)

### **IND:133 Interpreting Electrical and Electronic Drawings 1 cr.**

This course covers methods of presenting and interpreting basic electrical and electronic drawings including block diagrams, schematic diagrams, component identification, logic diagrams, printed wiring boards, lighting, motor controls, power distribution and generation. (19.8 Lec. Hrs.)

### **IND:134 Industrial Print Reading 2 cr.**

This course presents an overview of methods used in presenting and interpreting a variety of industrial drawings and prints. This course is designed to provide the necessary skills to read and interpret symbols commonly found on industrial drawings and prints. (19.8 Lec. Hrs./39.6 Lab Hrs.)

### **IND:136 Process Control I 3 cr.**

This course introduces the student to the basic concepts, terminology and instruments used in open-loop and closed-loop process control systems. Pressure, temperature, flow, level and analytical processes will be covered. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELT:312.

### **IND:137 Process Control II 3 cr.**

This course is a continuation of Process Control I. The students will learn to read and interpret process and instrumentation drawings (P&IDs), perform instrument calibration and properly tune process controllers. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** IND:136.

### **IND:143 Motors and Drives 3 cr.**

The student enrolled in Motors and Drives will learn the fundamentals of industrial motor control and power electronics. The topics covered include: AC and DC motors, thyristors, variable frequency drives, DC motor control and power distribution. Laboratory assignments help to illustrate the subjects discussed in the classroom. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELE:217

### **IND:146 Hydraulic Power Systems 2 cr.**

A study of fluid power technology using liquid as the transfer media. Complete hydraulic systems are studied including power sources, reservoirs, pumps, lines, valves and actuators. (19.8 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** MAT:069 or MAT:073 or MAT:121 or MAT:720.

### **IND:147 Pneumatic Power Systems 2 cr.**

An introduction to the principles of fluid power technology using air or gas as the transfer media. Basic principles are introduced. Complete pneumatic systems are studied including power sources, compressors, lines, valves and actuators. (19.8 Lec. Hrs./59.4 Lab Hrs.)

### **IND:148 Mechanisms 3 cr.**

The application of principles and practical problem solving involving hydraulics, pneumatics, cams, gears and gear trains, belt drives and other industrial devices. Topics include hydraulic and pneumatic theory, drive train component alignment, and motion concepts. Laboratory will enhance the students' understanding. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** IND:149.

### **IND:149 Applied Mechanics 3 cr.**

This course is designed to introduce the fundamentals of mechanics and to build confidence in the students in applying mechanics principles to solve problems. Having successfully completed this course the student will be able to: Explain the fundamental principles of static mechanics; solve static systems; distinguish between stress, strain, force, work, energy and power; describe Newton's Laws of motion and solve applied problems; solve simple dynamics and kinematics problems. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MAT:743.

**Co-requisites:** MAT:748.

# COURSE DESCRIPTIONS

## **IND:158 Sheet Metal Fabrication 3 cr.**

A study of some of the more common problems encountered during installation and modifications, particularly the mechanical and field fabrication problems involved in duct work, piping and electrical work. Introduction to the use of sheet metal tools, edges, seams and locks. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** IND:134.

**Co-requisites:** IND:129 and IND:133.

## **IND:159 Bearings and Lubrication 2 cr.**

A study of friction, force and lubrication of industrial equipment, preventive maintenance, troubleshooting and replacement of bearings. (19.8 Lec. Hrs./59.4 Lab Hrs.)

## **IND:188 Mechatronic Applications 3 cr.**

Mechatronics is the result of a union of several fields, including electronics, mechanics, pneumatics, hydraulics and others. In this course robotic systems are studied in detail along with work cell designs. Common robotic applications are studied along with robot terminology. In the lab students will interface between systems gaining understanding of how different technologies interact. (39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** ELT:123 and IND:136.

## **IND:222 Geometric Tolerancing and Dimensioning 3 cr.**

This course introduces the student to the fundamentals of geometric tolerancing and dimensioning concepts as adopted by the American National Standards Institute (ANSI) and published by the American Society of Mechanical Engineers for engineering and related documentation. (59.4 Lec. Hrs.)

## **INTERIOR DESIGN**

### **INT:116 Materials I 4 cr.**

The focus of this course is the study of natural and man-made fibers. Specific units of study will cover the properties, terminology, production methods, finishing treatments, and weaves of natural and man-made fibers. Various aspects of fibers used in the interior environment will be explored. (79.2 Lec. Hrs.)

### **INT:120 Materials II 3 cr.**

This course is a study of the materials used in interiors, including the criteria for evaluation and selection of materials and procedures for estimating quantities. (59.4 Lec. Hrs.)

### **INT:127 History of Decorative Arts I 3 cr.**

This course examines the history of interior design from Renaissance to the 1800s. Art, furniture, architecture, fabric and accessories are discussed. (59.4 Lec. Hrs.)

**Prerequisite:** INT:301.

### **INT:131 Interiors I 4 cr.**

Students will be introduced to the specialty area of residential design through client need analysis and design concept writing. Projects will include the development of floor plan drafting skills, space planning, room elevations, furniture and surface treatment selection and specification, finish schedules and sample board presentations. (59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** INT:116, INT:301, INT:302 and INT:310.

### **INT:134 Marketing for Interior Designers 3 cr.**

This course teaches the fundamentals of marketing, sales and working with the public. The general structure of a marketing plan will be discussed and understanding of the world market place. Students will prepare sales presentations for the class. (59.4 Lec. Hrs.)

### **INT:140 Presentation Graphics 3 cr.**

This course is a study of drawing and rendering techniques for interiors. Marker and colored pencil application for drawings will be presented. Students will learn to draw two-point and one-point perspectives, room interiors and furniture sketches. There will be an introduction to the use of computer-generated drawings to facilitate presentations. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** INT:302 and INT:310.

### **INT:205 Kitchen and Bath Design and Lighting 4 cr.**

This course is designed in three segments presenting procedures in lighting design, electrical planning, light quantity and quality analysis and fixture selection. The second segment focuses on kitchen space planning and design utilizing detail drawing, cabinet specification and appliance selection. Bath design is the final segment teaching appliance placement, space planning and contemporary design. (59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** INT:131, INT:140 and INT:310.

### **INT:209 CAD for Interior Designers 3 cr.**

This is a beginning level course designed for interior design students and/or professionals. The course will upgrade and enhance their technical drawing skills by introducing them to a computer-aided drafting and 3-D modeling program. The course will use current CAD training hardware and software which is comparable to the equipment used in the local interior design field. The 3-D program will enable the interior design student to quickly create 3-D drawings, such as isometric and perspective views. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** INT:140 and INT:310 or portfolio evaluation.

### **INT:210 Interiors II 3 cr.**

This course is designed to expand students' experience in residential design. Students will design for complex interior problems integrating previous coursework. (39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** INT:120, INT:127, INT:131 and INT:140.

**Co-requisites:** INT:209.

# COURSE DESCRIPTIONS

## **INT:215 History of 20th Century Art and Architecture 4 cr.**

This course surveys painting, sculpture, architecture and interior design from 1910 to the present time. Emphasis is placed on the inter-relatedness of these four art forms as they evolve and on their reflection of events and values of the period. The course is presented through slide lectures and field trips to local and regional art museums and architectural sites.

(79.2 Lec. Hrs.)

## **INT:228 History of Decorative Arts II 3 cr.**

This course examines the history of interior design from 1800 to 1910. Art, furniture, architecture, fabric and accessories are discussed.

(59.4 Lec. Hrs.)

**Prerequisite:** INT:127.

## **INT:230 Interiors III 3 cr.**

This course presents students with advanced residential problems and light commercial design problems. Students will research a historical design and learn techniques in historic restoration. Problems will emphasize adaptive use concepts.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** INT:205 and INT:210.

## **INT:261 Codes for Interiors 2 cr.**

Codes are an essential part of all building interiors. Local, state and federal codes impact most new and remodeled interiors. Interior designers need a working knowledge of these codes to provide safe, accessible designs. This course defines codes and provides students with a working knowledge of these requirements.

(39.6 Lec. Hrs.)

**Prerequisite:** INT:205.

## **INT:301 Design Fundamentals 3 cr.**

This course examines the creative design process, the elements and the principles required to execute an original idea. Projects emphasize elements of line, shape, pattern, texture and value. The course also presents a survey of the history of design ornament starting in ancient civilization to the Renaissance.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

## **INT:302 Color Theory 3 cr.**

The study of color as a significant design element encompasses the principle of color as a component of white light, the nature of color sensation, and the psychological effects of color. Working with colored pencils and markers, the student develops an understanding of color relationships. Experiments with color mixing and rendering of fabrics gives the student opportunities to apply the color principles of hue, value, intensity, simultaneous contrast and color harmony.

(39.6 Lec. Hrs./59.4 Lab Hrs.)

## **INT:310 Architectural Graphics 4 cr.**

In this course basic drafting skills will be learned through various elementary scale drawing exercises. These exercises will prepare the student for the completion of a full set of drawings for a residence.

Lectures will present blueprint reading, construction systems and details, floor plan evaluations and housing styles.

(59.4 Lec. Hrs./59.4 Lab Hrs.)

## **INT:313 Contract Design 4 cr.**

Students will study the specialty area of contract design which may include office design, related commercial interiors/store design, restaurant design, hotel/hospitality design and/or medical/hospital design. Projects will develop and incorporate the skills of concept writing, space planning/bubble diagrams, developing project programs/specifications, matrix development, systems furnishings, lighting/reflected ceiling plans, presentation/ rendering graphics and furniture section-cuts/construction graphics. This course will provide an introductory level of skills/ information needed for integration into the contract design field.

(59.4 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisites:** INT:205 and INT:209.

**Co-requisites:** INT:261.

## **INT:920 Field Experience 4 cr.**

Students will find placement in a work experience related to interior design. The field project will provide students on-the-job experience with an interior design firm. Students will observe experienced professionals in the work setting and will be introduced to the skills, knowledge and concepts required of a professional interior designer. Classroom lectures and discussions will give individuals the opportunity to share in the variety of experiences offered in each firm. The lecture component will present the professional requirements and ethical standards expected in the field.

(13.2 Lec. Hrs./162 Lab. Hrs.)

**Prerequisite:** 33 credits of interior design courses and a 2.0 GPA..

## **INTERPRETER TRAINING**

### **ITP:121 Introduction to Interpreting I 4 cr.**

Introduces basic knowledge and application of skills necessary for an individual to interpret accurately with emphasis on interpreting theory with opportunities to apply the concepts learned from the text and lecture.

(59.4 Lec. Hrs./59.4 Clinical Hrs.)

**Prerequisite:** ASL:151.

### **ITP:124 Introduction to Interpreting II 3 cr.**

This course gives the student a fundamental background in the theoretical and practical aspects of interpretation and transliteration, focusing on skill development in the classroom on three levels: prepared or rehearsed, simultaneous, and consecutive.

(39.60 Lec. Hrs., 39.60 Lab Hrs.)

### **ITP:129 Deaf Studies 4 cr.**

This course introduces students to fields of study about the American Deaf experience in the United States, including linguistics, sociology, audiology, and psychology. The course exposes students to the historical views of deafness and deaf education. Students will be familiarized to the contributions and contemporary lives of deaf people in America.

(79.20 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## **ITP:131 Social Aspects of Deaf Culture 4 cr.**

Social Aspects of Deaf Culture examines the various cultural aspects of the deaf community. It presents the interrelationship of language and culture along with a study of socialization, norms and values. (79.2 Lec. Hrs.)

## **ITP:135 Introduction to Language 3 cr.**

This course is designed to introduce students to the linguistic features of language. Students will first learn the characteristics common to all languages and the basic descriptive tools of linguistics. Origins, properties, and word formation systems and syntactic systems as they apply to all languages, but especially to English and ASL, will be covered. This will prepare the students to apply this information to the study of ASL as a language and its unique linguistic properties. (59.4 Lec. Hrs.)

**Prerequisite:** ITP:141.

## **ITP:141 English Vocabulary/Grammar for Interpreters 4 cr.**

This course focuses on developing and expanding student competence in vocabulary comprehension and expressions that parallel American Sign Language. Coursework assists students in the improvement of their understanding and application of the semantic aspects of both languages. (59.4 Lec. Hrs./59.4 Clinical Hrs.)

## **ITP:209 Interpreting Skills Lab 1 cr.**

This course is designed to provide the students with an ongoing interpreting skills experience in a safe environment under instructional supervision. Students will practice interpreting in a variety of simulated settings with immediate feedback from the instructor. Students will also develop intercultural communication skills.. (39.60 Lab. Hrs.)

## **ITP:230 Transliteration I 4 cr.**

This course examines the various sign language codes used in the educational programs of North America. It focuses on understanding methodology as well as skill and vocabulary building in the system. (59.4 Lec. Hrs./59.4 Clinical Hrs.)

## **ITP:231 Transliteration II 3 cr.**

Transliteration II will continue to develop the skills begun in Transliteration I. Emphasis will be placed on speed, conceptual accuracy and skill within the English-based sign systems. This class will focus on the professional skills necessary in educational interpreting situations. (39.6 Lec. Hrs./59.4 Clinical Hrs.)

**Prerequisite:** ITP:230.

## **ITP:253 Practical Issues 3 cr.**

Emphasizes important aspects of interpreting that deal with various settings and situations. It also provides opportunities to observe professional interpreters performing their tasks. This course will give the student a general understanding and exposure to a variety of interpreting situations and how to interpret them. (39.6 Lec. Hrs./59.4 Clinical Hrs.)

**Prerequisites:** ASL:251 and ITP:121.

## **ITP:256 Interpreter Certification Preparation 2 cr.**

This course offers an overview of various interpreter tests that are given to sign language interpreters in the field of interpreting to maintain their certification status and keep their licenses up-to-date and in good standing. The course also offers helpful tips and strategies for students to prepare and study for the testing before or upon the completion of their Interpreter Training Program coursework. (39.6 Lec. Hrs.)

**Prerequisite:** ASL:296, ITP:124, ITP:129, ITP:131 and ITP:230 .

**Co-requisite:** ASL:297 and ITP:231 or instructor permission.

## **ITP:941 Practicum 2 cr.**

Practicum consists of field experience that provides advanced training for interpreting students giving them the opportunity to apply learned concepts and skills in actual interpreting situations with professional supervision. This on-the-job experience is the final phase of training prior to entrance into the field of professional interpreting. (158.4 Co-op Hrs.)

**Prerequisite:** Student must complete this course in their last semester of studies in the Interpreter Training program or consent of instructor or academic advisor must be obtained.

**Co-requisite:** ITP:253.

## **JOURNALISM**

---

### **JOU:120 Beginning Newswriting 3 cr.**

Presents the fundamentals of newswriting: copy editing, newspaper style, spelling and vocabulary, writing leads, basic news stories, speeches, editorials and the handling of press releases. (59.4 Lec. Hrs.)

### **JOU:123 Intermediate Newswriting 3 cr.**

Refines newswriting skills through an introduction to more complex newswriting experiences such as interviews, feature stories, sportswriting and interpretive writing. (59.4 Lec. Hrs.)

**Prerequisite:** JOU:120.

### **JOU:172 Intermediate Photography 3 cr.**

Acquaints the student with photography and darkroom techniques with particular emphasis on control. Various techniques will be demonstrated and the student will use the necessary chemicals, papers and films to achieve negative and print excellence. (59.4 Lec. Hrs.)

## JOU:932 Journalism Internship 3 cr.

On-site experience in a community news organization is provided and is supervised by a professional journalist. Practical experience will be provided in all aspects of working at a daily news organization and includes gathering, processing and editing the news. The student will learn to maintain a daily beat, write news articles and observe operations of the news organization.

(118.8 Internship Hrs.)

**Prerequisites:** JOU:120 and JOU:123.

## JOU:941 Practicum in Journalism 1-3 cr.

Practicum is intended to provide hands-on learning and experience relating theory to practice. Students undertake up to 99 hours of work and observation in settings that meet individual career and academic goals. The college approves sites and faculty members oversee the practicum.

Academic assignments accompany the hands-on learning experience. This course may be repeated for a total of 6 credits. (118.8 Lab Hrs.)

**Prerequisite:** Grade Point Average of 2.0 or higher and consent of faculty member, Department Coordinator and Dean.

## LITERATURE

### LIT:101 Introduction to Literature 3 cr.

A literature appreciation course which offers an introduction to the major literary genres: the short story, poetry, drama and the novel. Emphasis is on learning the basic elements of each genre and applying those elements as tools of literary interpretation through critical reading and writing.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or ENG:107. ENG:106 or ENG:108 recommended.

### LIT:105 Children's Literature 3 cr.

Designed primarily for the student planning to enter elementary-level teaching. The student will develop an understanding of why and what children read and develop criteria for the selection of material for children's recreational and curriculum enrichment.

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or ENG:107.

ENG:106 or ENG:108 and a general education literature course recommended.

### LIT:110 American Literature to Mid-1800's 3 cr.

A study of the important characteristics and transitions in American literature.

Emphasis is given to the works of selected poets and prose writers from 1607 to 1865. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or ENG:107.

ENG:106 and a general education literature course recommended.

### LIT:111 Modern American Literature Since Mid-1800's 3 cr.

An introduction to literary works in four genres (the short story, poetry, drama and the novel) by American authors from 1865 to the present, with a focus on themes and formal characteristics that define American literature. Emphasis is on learning the basic elements of each genre and applying those elements as tools of literary interpretation through critical reading and writing.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or ENG:107.

ENG:106 or ENG:108 recommended.

### LIT:135 Film as Literature 3 cr.

Film as Literature examines the motion picture as a literary form. The motion picture is compared to other narrative literature, such as the novel, the short story, the epic poem, and the memoir. Special emphasis is placed on how written narratives are adapted into motion picture narratives.

(59.4 Lec. Hrs.)

### LIT:183 Masterpieces: Neoclassical to Modern 3 cr.

An introduction to major works of literature from the 17th Century to the present. Attention is given to the personal and social values of the period through the study of the four primary literary genres: the short story, poetry, drama and the novel. Emphasis is on learning the basic elements of each genre and applying those elements as tools of literary interpretation through critical reading and writing.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or ENG:107.

ENG:106 or ENG:108 recommended.

### LIT:185 Contemporary Literature 3 cr.

This course focuses on works written since World War II. The effects of culture, environment and mass media on literature and the four major genres (short fiction, poetry, novel and drama) are explored in detail through critical reading and writing.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or ENG:107.

ENG:106 or ENG:108 recommended.

### The following courses will be offered on a rotating basis under Studies in Literary Form:

#### LIT:161 The Short Story 3 cr.

An examination of the literary history and boundaries of the short story, its particular components in comparison with other kinds of fiction and short writings (e.g. novels, fairy tales, oral histories), and its subgenres (e.g. horror, detective, science fiction).

(59.4 Lec. Hrs.)

**Prerequisites:** ENG:105 or ENG:107. A

general education literature course and ENG:106 or ENG:108 is recommended.

# COURSE DESCRIPTIONS

---

## **LIT:200 Studies in Literary Form** 3 cr.

This course studies one particular literary genre such as the novel, the short story, contemporary drama, modern poetry, etc. The course emphasizes the craft of the genre through the examination of major, representative works as well as historical development. Students may enroll in more than one course under this catalog number. (59.4 Lec. Hrs.)

**Prerequisites:** ENG:105 or ENG:107. A general education literature course and ENG:106 or ENG:108 is recommended.

**The following courses will be offered on a rotating basis under Studies in Literary Theme:**

## **LIT:180 Mythology** 3 cr.

This course emphasizes the historical development and the craft of mythology through the study of major, representative works from ancient to modern day. Students will explore how mythology contributes to an understanding of the world and universe, and critically examine its pertinence to contemporary society. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or 107.

## **LIT:195 Nature of Evil in Literature** 3 cr.

A study of the social idea of evil as it is reflected in literature through the centuries (from *Paradise Lost* to *The Exorcist*). (59.4 Lec. Hrs.)

**Prerequisites:** ENG:105 or ENG:107. A general education literature course and ENG:106 or ENG:108 is recommended.

## **LIT:210 The Graphic Novel** 3 cr.

The Graphic Novel explores an emerging new form of literature, what some have simply called in the past “comic books”. These texts are complex visual-textual artifacts, addressing issues on identity, gender, race, religion, politics, and history. This course will study the evolution of the graphic novel, from the “funnies” to a respected form of literature. Literary techniques and theories will be used to analyze the multiple genres of the graphic novel (adventure, fantasy, fiction and non-fiction, horror, mystery, horror, sci-fi, and superhero). Special emphasis will be placed on image reading, exploring visual language and rhetoric – an important 21st Century skill. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:105 or ENG:107.

## **LIT:943 Readings in Literature** 1-2 cr.

Designed to provide the student additional readings in literature, allowing the student to obtain a greater understanding in various areas in the discipline than can be attained by normal course work. This course may be repeated for additional credit. (19.8 - 59.4 Lec. Hrs.)

## **MANAGEMENT**

---

### **MGT:101 Principles of Management** 3 cr.

This course is designed to explain the history and development of management theory and practice. Behavioral and scientific schools of management philosophy are examined. Components of organizations and how they must be integrated at all levels in an organization in order to produce an effective system are presented. (59.4 Lec. Hrs.)

**Prerequisite:** RDG:032/033 or minimum reading placement score based on college assessment.

### **MGT:110 Small Business Management** 3 cr.

Blends entrepreneurial dreams with exploration of the range of business functions necessary to operate a small business, such as marketing and financial management, and business planning. Students will sharpen their problem-solving skills through a variety of experiential exercises, classroom discussion, and the completion of a partial business plan by course’s end. (59.4 Lec. Hrs.)

### **MGT:130 Principles of Supervision** 3 cr.

Emphasis is placed on the managerial directing functions, including the necessary supervisory qualities, duties and responsibilities. Attention is also given to contemporary supervisory approaches to supervision; the supervisor's relationship to the total management environment; self-management; and the supervisor's relationship to the individual employee and the work group. (59.4 Lec. Hrs.)

### **MGT:151 Management Communications I** 3 cr.

A writing course that prepares the student for the types of written communication essential to management and supervision success. (59.4 Lec. Hrs.)

### **MGT:165 Principles of Quality** 3 cr.

This course provides a basic introductory understanding of the key principles of Total Quality Management (TQM) - leadership, information and analysis, planning, human resources, processes, results and customer satisfaction. (59.4 Lec. Hrs.)

**Prerequisite:** MGT:101.

### **MGT:188 Personnel Administration/Industrial Relations** 3 cr.

An introduction to the theory and practice of personnel administration and industrial relations with a view toward harmonizing an individual worker's goals with goals of the organization. (59.4 Lec. Hrs.)

## **MGT:210 Management Decision-Making 3 cr.**

This course is a capstone “big-picture” course. It cuts across the whole spectrum of business and management. The center of attention is the total enterprise - the industry and competitive environment in which it operates, its long-term direction and strategy, its resources and competitive capabilities, and its prospects for success. Students will role play as managers answering such questions as what should managers do, and do well, to make the company a winner. Students will integrate the skills and knowledge they have acquired in previous courses in working real-world cases drawn from actual businesses.

(59.4 Lec. Hrs.)

**Prerequisite:** Completion of first year Business Management curriculum or consent of instructor.

## **MGT:260 Introduction to Business Logistics 3 cr.**

This course will provide an overview of the role of logistics in today's business world; terminology in the field of logistics; and an overview of the major functional areas of the logistics field such as transportation, inventory management, distribution and warehousing, and regulation and compliance. The student will be exposed also to trends, issues, and challenges of the field, as well as to potential careers in logistics (locally, regionally and nationally).

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:064, MAT:041 or MAT:053 and RDG:045 or minimum English, math and reading placement scores based on college assessment.

## **MGT:261 Principles of Transportation Management 3 cr.**

This course studies the fundamental roles and importance of transportation in companies and society. The course evaluates the complex environment in which transportation services are provided and explores strategies for adapting to a fast-paced and rapidly changing industry. Specific tools include overview of transportation, the supply chain, the economy, traditional modes of transportation, special carriers, global transportation, economic operating characteristics of each mode, costing, pricing, carrier strategy, and information management.

(59.4 Lec. Hrs.)

**Prerequisite:** MGT:260.

## **MGT:265 International Transportation and Logistics 3 cr.**

This course focuses on the major factors of importing and exporting goods and services on a global scale. It includes understanding current terminology, regulations, analysis of and opportunities in international markets, basic principles of international financing, exchange rates, and other elements associated with the transportation and distribution operations to facilitate global trade.

(59.4 Lec. Hrs.)

**Prerequisite:** MGT:260.

## **MGT:267 Principles of Cargo Security 3 cr.**

This course examines relevant facets of maritime, land, pipeline and air transportation security related systems and associated issues. It covers applicable legislation and the agencies tasked to oversee each mode of transportation. This course also describes how to implement an appropriate program to enhance the security of a particular mode of transportation.

(59.4 Lec. Hrs.)

**Prerequisite:** MGT:260.

## **MGT:268 Principles of Logistics Operations Management 3 cr.**

Provides a detailed study of operations management emphasizing the need to achieve the highest level of service and product quality while keeping cost as low as possible. The major areas covered include main concepts, tools and techniques of operations management, coordination and planning, quality improvement and project management for the typical business processes and its relationship to the supply chain.

(59.4 Lec. Hrs.)

**Prerequisites:** HSE:261, MGT:260, MGT:261, MGT:265 and MGT:269.

## **MGT:269 Introduction to Inventory Management 3 cr.**

Focuses on the role of inventory management in the supply chain. Students will be exposed to the concepts, principles, problems and procedure of inventory management. The crucial role of inventory and materials management in the efficiency, competitiveness, and profitability of a business will be examined. The importance of inventory management, material requirements planning and just-in-time systems will also be emphasized.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MGT:260.

## **MGT:928 Independent Study - Special Projects in Logistics and Supply Chain 3 cr.**

Independent Study is a course designed to provide the student an opportunity to explore in greater depth an area(s) of individual interest within the discipline of logistics and supply chain to include RFID, inventory management, transportation, regulation and compliance, and import/export. The student will complete a project or a research paper under the guidance of a faculty member.

(118.8 Lab Hrs.)

**Prerequisites:** BUS:300, BUS:301, BUS:302, HSE:261, MGT:260, MGT:261, MGT:265, MGT:267 and MGT:269.

**Co-requisite:** MGT:268.

# COURSE DESCRIPTIONS

## MANUFACTURING

### **MFG:105 Machine Shop Measuring** 3 cr.

This course will cover a variety of precision measurement devices that are used in manufacturing processes. These devices include machinists scales, dividers, spring calipers, combination square, hermaphrodite calipers, calipers (vernier, dial, and digital), micrometers, depth micrometers, surface gauge, dial indicators, gauge blocks, height gauges and sine bar. Emphasis will be placed on how the student will accurately use these devices in the laboratory situation. (19.8 Lec. Hrs./79.2 Lab Hrs.)

### **MFG:111 Machinery Handbook** 1 cr.

The Machinery Handbook is the number one reference and application guidebook used by machinists of all levels in modern manufacturing. General information, using math tables, gear/thread information and speed/feeds will be covered. (19.8 Lec. Hrs.)

### **MFG:112 Drills and Saws** 2 cr.

This course will develop the primary skills and knowledge necessary to use basic drill presses and saws in the laboratory situation. Areas of instruction will include sharpening drill bits, drilling, reaming, counterbore, spotface, countersink, hand/power tapping and types/uses of saws. Students will be able to properly operate manual and automatic drilling operations using simple and larger radial 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. (19.8 Lec. Hrs./39.6 Lab Hrs.)

### **MFG:113 Vertical/Horizontal Mills** 5.5 cr.

Upon completion of this course, students will be able to demonstrate competencies in all facets of manual milling operations. Students will be able to master the basic and advanced skills to operate both vertical/horizontal mills. Various topics covered in this course will include align vise, head, flycutter and end mill, tilt head and turn vise, drill, tap, ream, rotary table, saw slot on horizontal, sine plate, offset boring head, indexing head, keyways, dividing heads, gear cutting, universal indexing head, 5 C collet holders and dovetails. Special concentration will be placed on the set-up and safe operation of all milling machines with a heavier emphasis placed upon vertical milling machine operation in preparation for CNC Milling Center programming and operation. Various milling projects will strengthen the proper use of this equipment. (39.6 Lec. Hrs./138.6 Lab Hrs.)

**Prerequisite:** MFG:105.

### **MFG:114 Surface Grinding** 2.75 cr.

Students enrolled in this course will begin with development of basic off-hand and flat stock grinding techniques in both wet and dry applications and will progress to the more complex techniques used in grinding. Special attention will be placed on set-up including jigs and fixtures applications. Hands-on projects will enhance student's ability to incorporate optical comparators for final finishing and polishing of precision grinding application. Various grinding projects will strengthen the proper use of this equipment. (19.8 Lec. Hrs./69.3 Lab Hrs.)

**Prerequisite:** MFG:105.

### **MFG:115 Lathe Work** 4.5 cr.

This course will develop the theoretical and hands-on skills necessary to efficiently and productively operate all types of engine lathes. Students will begin with the basic skills and knowledge development of speeds, feeds, materials, cutting tools and basic turning techniques and will continue to refine their skills to include lathe tooling, facing, aligning lathe centers, turning, grooving/parting, cut radius/external tapers, knurling, boring internal tapers and internal/external threads. Students will progress from the basic manual lathes through the larger industrial DRO lathes and will polish their skills on turret lathe operation in preparation for CNC lathe programming and operation. Various lathe projects will strengthen the proper use of this equipment. (19.8 Lec. Hrs./138.6 Lab Hrs.)

**Prerequisite:** MFG:105.

### **MFG:116 Carbide Tooling** 1 cr.

This course will introduce the student to the history and advances of carbide tooling. Indexable inserts, drilling/milling/turning with carbide tools, basic tooling applications of carbides and coated carbide tools are also covered. Students will develop the necessary skills to understand and effectively utilize different types of machine tooling. (9.9 Lec. Hrs./19.8 Lab Hrs.)

### **MFG:117 Cylindrical Grinding** 1.5 cr.

This course will introduce the student to proper use and application of cylindrical grinders in manufacturing settings. Topics covered will include parallel grinding and external/internal tapers methods. (9.9 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MFG:114.

## **MFG:118 Machine Tool Project 4 cr.**

This course will provide the student with the opportunity to integrate all skills gained in manual machining courses to design, build, produce variety of parts using the equipment and tools in the manufacturing setting. Special attention and emphasis will be placed upon accuracy and proper use of equipment/tools following safe work practices in the lab situation.

**Prerequisites:** MFG:112, MFG:113, MFG:115, and MFG:117.

## **MFG:140 Geometric Dimensioning and Tolerances 1 cr.**

This course will cover the basic principles of geometric dimensioning and tolerances (GD&T), interpreting GD&T symbols, interpreting form and orientation tolerances, profile, runout and location tolerances as it relates to manufacturing settings.

(9.9 Lec. Hrs./19.8 Lab Hrs.)

**Prerequisite:** MFG:192.

## **MFG:151 CNC Fundamentals 2 cr.**

This course will introduce students to the Cartesian Coordinate System. Students will concentrate on the use of G 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.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MFG:105.

## **MFG:186 Plant Safety 1 cr.**

This course is fundamental to the safe operation of all machine tools within industrial application. Students will develop the basic skills and knowledge necessary to work safely within all aspects of the manufacturing industry. Basic safety, electrical safety, chemical health hazards, forklift safety and machine tool safety will be covered.

(19.8 Lec. Hrs.)

## **MFG:190 Metallurgy 2 cr.**

All ferrous and non-ferrous metals have unique characteristics making their machining unique and individual. This course will teach the basic theory of metals and their characteristics from their differences in hardness, brittleness and durability, resistance to corrosion, and machinability and welding. Basic understanding of metallurgy is essential if machinists and welders are to employ the correct techniques and operational sequences to produce quality parts and products efficiently and effectively.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

## **MFG:192 Blueprint Reading 3 cr.**

This course will cover introduction to engineering drawings, multi-view drawings, sectional views, dimensions and tolerances and part feature specification.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

## **MFG:201 CNC Turning Operator 2 cr.**

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. Various projects will strengthen the proper use and troubleshooting of this equipment in the manufacturing setting.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MFG:151.

## **MFG:205 Milling Programming 2 cr.**

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.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MFG:221.

## **MFG:221 CNC Milling Operator 2 cr.**

This course will introduce 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. Various projects will strengthen the proper use and troubleshooting of this equipment in the manufacturing setting.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MFG:151.

# COURSE DESCRIPTIONS

---

## **MFG:223 CAD/CAM 2 cr.**

This course is designed to develop the skills necessary to author, apply and troubleshoot CNC programs in, as well as operate, basic CNC equipment, including CNC Turning/Milling Centers. Design and programming skills will be developed utilizing HAAS Fanuc control trainers for application on both types of machining centers, with students progressing from rudimentary to advanced CNC machining projects on both HAAS Turning and Milling Centers. Other topics such as mastercam working environment, overview of CAD/CAM processes, modifying existing geometry, tooling fundamentals, 2-D tool paths on mill/lathe, creating lathe geometry and improving CAD files will strengthen the proper use and understanding of CAD/CAM equipment in laboratory situations.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** MFG:186 and MFG:192.

## **MFG:224 Coordinate Measuring Machine 1 cr.**

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.

(39.6 Lab Hrs.)

**Prerequisites:** MFG:186, MFG:192.

## **MFG:229 CNC Project 2 cr.**

This course will provide the student with the opportunity to integrate all skills gained in CNC programming and machining courses to design, build, produce 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/tools following safe work practices in the lab situation.

(79.2 Lab Hrs.)

**Prerequisite:** MFG:205 and MFG:239.

## **MFG:239 Lathe Programming 2 cr.**

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.

(19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MFG:201.

## **MFG:371 Manual Projects 3 cr.**

This course will develop the primary skills and knowledge to use basic measurement instruments and manual machine tools in the laboratory situation. Areas of instruction will include basic measurement tools, drill press, manual vertical milling machine, manual lathe and surface grinder. Various projects will strengthen the proper use of these tools.

(29.70 Lec. Hrs., 59.40 Lab Hrs.)

## **MFG:372 Manual Projects 3 cr.**

This is an introductory course focusing on the creation of real parts using Computer Aided Design/Computer Aided Manufacturing software and Computer Numerical Control machine tools. Students will create 3-dimensional parts using SolidWorks parametric modeling software. Students will then export those part files to Mastercam CAM software and process the part files to be machined using a CNC mill.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisite:** DRF: 132 or MFG:192

## **MFG:505 Lean Manufacturing 1 cr.**

This course covers the principles and techniques of lean manufacturing. Topics include lean principles, value stream mapping, total productive maintenance, manufacturing cells, office cells, setup reduction, pull systems and continuous improvement.

(19.8 Lec. Hrs.)

# MARKETING

---

## **MKT:110 Principles of Marketing 3 cr.**

Develops an integrated, analytical and managerial approach to the study of marketing. Principles of the psychological, social, political and economic forces are analyzed as relative to marketing. Strategy of marketing is based on the consumer-oriented concept.

(59.4 Lec. Hrs.)

## **MKT:140 Principles of Selling 3 cr.**

Presents information regarding careers in selling, sales management, preparation needed for selling and sales presentations. Films and presentation by professional sales personnel enhance the learning experience.

(59.4 Lec. Hrs.)

## **MKT:150 Principles of Advertising 3 cr.**

Explains the economic functions of advertising, its value and use in business. Analysis of consumer motivation, presentation of advertising and the effectiveness of various media is presented. Assignments give practice in effective advertising methods.

(59.4 Lec. Hrs.)

## **MKT:160 Principles of Retailing 3 cr.**

Presents the character and significance of retailing in our economy. Examines the principles and applications of strategic planning in retail areas such as ownership, organization, consumer behavior, trading area, merchandise planning and financial management.

(59.4 Lec. Hrs.)

## **MKT:181 Customer Service Strategies 2 cr.**

This course is designed to introduce students to the concepts of customer service and to help them learn the skills and techniques necessary to provide excellent service to the internal and external customers of the organizations for which they work. These skills are vital for every job since identifying and satisfying customer needs are essential parts of every business organization.

(39.6 Lec. Hrs.)

## MASS MEDIA STUDIES

### MMS:111 Video Production I 3 cr.

Introductory course in electronic remote video camera operation and editing. Special attention given to shot selection, framing, composition, and lighting. Weekly projects evaluated by students and instructor in group process. (39.6 Lec. Hrs./39.6 Lab Hrs.)

### MMS:115 TV Production 3 cr.

Introduction to the principles, procedures and techniques of television production. Emphasis on the basic design and functions of TV production equipment. (59.4 Lec Hrs.)

## MATHEMATICS

### MAT:037 Introduction to Applied Math Topics Module I 1 cr.

This course is designed for any applied technology student who needs to improve arithmetic skills. Topics include arithmetic operations and problem solving with real numbers, fractions, decimals and percents. This course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math. A scientific calculator is required. (19.8 Lec. Hrs.)

### MAT:038 Introduction to Applied Math Topics Module II 1 cr.

This course is designed for any applied technology student who needs to improve math skills. Topics include measurement systems, ratios and proportions, problem solving and an introduction to geometry. This course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math. A scientific calculator is required. (19.8 Lec. Hrs.)

**Prerequisite:** MAT:037 or minimum math placement score based on college assessment.

### MAT:039 Introduction to Applied Math Topics Module III 1 cr.

This course is designed for any applied technology student who needs an introduction to basic algebra. Topics include operations with signed numbers, techniques for solving simple equations and problem solving. This course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math. A scientific calculator is required. (19.8 Lec. Hrs.)

**Prerequisite:** MAT:038 or minimum math placement score based on college assessment.

### MAT:041 Basic Math Skills 1-2-3 cr.

This course is designed for students needing additional preparation for higher math courses. Topics include arithmetic operations on real numbers, fractions, decimals, percent, measurement, ratio and proportion, metric system, problem solving, and an introduction to algebra. This course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math. (19.8, 39.6, 59.4 Lec. Hrs.)

### MAT:047 Math for Nursing 3 cr.

This course is designed for pre-nursing students who need to improve arithmetic skills. This course builds on basic math skills and incorporates math computation skills necessary in the healthcare field. Emphasis is on understanding systems of measurement and conversions - metric, apothecary, household and other systems of measurement. Topics include: whole number review, decimals, fractions, ratios and proportions, percents, formulas, household and metric measurement, basic algebra and word problems. The course is recommended for students whose scores on assessment or diagnostic tests indicate a need for supplemental work in math. (59.4 Lec. Hrs.)

### MAT:053 Prealgebra 4 cr.

This course is designed for students who need to review and improve their arithmetic skills. Topics include whole numbers, introduction to algebra, understanding variables and solving equations, solving application problems, rational numbers, ratios, proportions, and geometric relationships, percents, measurements, graphs, exponents, and polynomials. (39.60 Lec. Hrs., 79.20 Lab Hrs.)

### MAT:063 Elementary Algebra 4 cr.

A beginning course for students with little or no background in algebra. Covers basic concepts, linear equations and inequalities, graphing and linear equations in two variables, exponents and polynomials, factoring, rational expressions, and roots and radicals. (79.2 Lec. Hrs.)

**Prerequisite:** MAT:041, MAT:053 or minimum math placement score based on college assessment.

### MAT:065 Math Literacy 6 cr.

This one-semester course for non-math and non-science majors prepares students to take MAT:110 Math for Liberal Arts or MAT:156 Statistics. The topics in the course include numeracy, proportional reasoning, algebraic reasoning, functions, geometry, statistics, and student success strategies. When completed, the successful student will develop mathematical maturity through problem solving, critical thinking, and writing. This course is computer enhanced and students will be expected to use online resources for homework assessment. Students majoring in science, technology, engineering, math, business, or elementary education should not enroll in this course. (118.8 Lec. Hrs.)

**Prerequisite:** MAT:041 or minimum math placement score based on college assessment.

# COURSE DESCRIPTIONS

## **MAT:069 Accelerated Algebra 6 cr.**

A one-semester accelerated algebra course for students who can handle a faster pace. The course covers basic concepts, linear equations and inequalities, linear equations in two variables and their graphs, exponents and polynomials, factoring, rational expressions, systems of linear equations and inequalities, absolute value equations and inequalities, roots and radicals, complex numbers, quadratic equations and inequalities, functions, and exponential and logarithmic functions. A graphing calculator is required. (118.8 Lec. Hrs.)

**Prerequisite:** MAT:041 with a grade of A or minimum ACT Math score of 16 or minimum COMPASS Algebra score of 11.

## **MAT:073 Elementary Algebra II 4 cr.**

A one-semester course for students with a background in elementary algebra. Topics covered include a review of fundamental concepts, linear equations and inequalities in one variable, polynomials and factoring, rational expressions, linear equations and inequalities in two variables, rational exponents and radicals, quadratic equations and inequalities, systems of linear equations and inequalities, introduction to relations and functions and exponential and logarithmic functions. A graphing calculator is recommended. (79.2 Lec. Hrs.)

**Prerequisite:** MAT:063, minimum math placement scores based on college assessment, or MAT:065 and permission of instructor.

## **MAT:104 Applied Math Topics 3 cr.**

Presents algebra and geometry applied to specific trade applications. Mathematical ideas and procedures will be presented first, followed by application within the various trades. (59.4 Lec. Hrs.)

**Prerequisite:** MAT:039, MAT:041, MAT:053 or minimum math placement scores based on college assessment.

## **MAT:110 Math for Liberal Arts 3 cr.**

A mathematics course designed for the liberal arts student. The course covers a broad spectrum of topics designed to help the student survey and develop skills that lead to an appreciation of the value and uses of mathematics. The course will include units on logic, problem solving and sets; counting methods and probability; statistics; financial mathematics; and different base systems. Other topics may be included in the course.

*This course satisfies a general education requirement in the Mathematics area.* (59.4 Lec. Hrs.)

**Prerequisite:** MAT:065, MAT:069, MAT:073 or minimum math placement scores based on college assessment.

## **MAT:117 Math for Elementary Teachers 3 cr.**

This course is designed for elementary education majors. Topics in this course include mathematical reasoning, logic, sets, number theory, integers, fractions and rational numbers, decimals, percents, statistics, measurement, and transformations.

*This course satisfies a general education requirement in the Mathematics area for elementary education majors only.* (59.4 Lec. Hrs.)

**Prerequisite:** MAT:069 or MAT:073 or minimum math placement scores based on college assessment.

## **MAT:121 College Algebra 4 cr.**

A college level course designed for students majoring in business, science, math, and pre-engineering. The course will prepare students for future study in mathematics. Topics include: solving equations and inequalities; functions including polynomials; absolute value; greatest integer; exponential and logarithmic functions; system of equations; matrices; permutations and combinations; and The Binomial Theorem. A graphing calculator is required. (79.2 Lec. Hrs.)

**Prerequisite:** MAT:069 or MAT:073 or minimum math placement scores based on college assessment.

## **MAT:128 PreCalculus 4 cr.**

A higher level mathematics course intended to prepare students for calculus or advanced science courses. Topics covered include logarithms and exponential functions, trigonometric functions, complex numbers, analytic geometry, and topics in the theory of equations. A graphing calculator is required.

*This course satisfies a general education requirement in the Mathematics Area.* (79.2 Lec. Hrs.)

**Prerequisite:** MAT:121 or minimum math placement scores based on college assessment.

## **MAT:140 Finite Math 3 cr.**

Finite Mathematics is designed for students studying business, the social sciences, or the life sciences. Topics covered in this course are sets, functions, finance, matrices, systems of linear equations, linear programming, exponential and logarithmic functions, and sequences and series. A graphing calculator is required. *This course satisfies a general education requirement in the Mathematics Area.* (59.4 Lec. Hrs.)

**Prerequisite:** MAT:069 or MAT:073 or minimum math placement scores based on college assessment.

## **MAT:142 Technical Mathematics I 1.5 cr.**

The first of a four course sequence, this course is designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. This course will also prepare the student for further study in mathematics. Topics include: real numbers, solving equations, fractional equations, percent/ proportion/ variation, calculator operations, and measurements. (29.7 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **MAT:143 Technical Mathematics II** 1.5 cr.

The second of a four course sequence, this course is designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. This course will also prepare the student for further study in mathematics. Topics include: geometry, algebraic fractions, formula rearrangement, functions and graphs, right triangles, and oblique triangles.

(29.7 Lec. Hrs.)

**Prerequisites:** MAT:142.

## **MAT:144 Technical Mathematics III** 1.5 cr.

The third of a four course sequence, this course is designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. This course will also prepare the student for further study in mathematics. Topics include: systems of two equations and formulas, systems of three equations, powers/roots/logarithms, trigonometric functions, vectors, and polynomials.

(29.7 Lec. Hrs.)

**Prerequisites:** MAT:143.

## **MAT:145 Technical Mathematics IV** 1.5 cr.

The fourth of a four course sequence, this course is designed to give the student a basic knowledge of applied mathematics and the understanding of how they relate to the manufacturing industry. This course will also prepare the student for further study in mathematics. Topics include: factoring and fractions, quadratic equations, circle concepts, identities/inverse notation/equations, complex numbers, and sine waves.

(29.7 Lec. Hrs.)

**Prerequisites:** MAT:144.

## **MAT:156 Statistics** 3 cr.

Introductory statistics course for business, economics, mathematics, science and social science students. The course deals with obtaining, presenting and organizing statistical data. Topics covered include descriptive measures, probability, probability distributions, binomial distributions, normal distributions, sampling estimates, confidence intervals, hypothesis testing, chi-square test, and linear regression and correlation. A graphing calculator with statistics functions is required.

*This course satisfies a general education requirement in the Mathematics Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** MAT:065, MAT:069 or MAT:073 or minimum math placement scores based on college assessment.

## **MAT:165 Business Calculus** 3 cr.

This course is designed for students in business, social sciences and life sciences. Topics covered are limits, derivatives and applications of the derivative related to business, social science and the life sciences, integration and applications of the integral to business, social science and life sciences. A graphing calculator is required. *This course satisfies a general education requirement in the Mathematics Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** MAT:121 or minimum math placement scores based on college assessment.

## **MAT:210 Calculus I** 4 cr.

First of a series of three courses. The purpose of the sequence is to provide the student with a foundation in calculus and analytical geometry. Those students enrolled in the science, math, engineering, computer science and similar fields will gain proficiency. Topics include analytic geometry, differentiation and applications of the derivative, integration and its applications. A graphing calculator is required.

*This course satisfies a general education requirement in the Mathematics Area.*

(79.2 Lec. Hrs.)

**Prerequisite:** MAT:128 or minimum math placement scores based on college assessment.

## **MAT:216 Calculus II** 4 cr.

A continuation of Calculus I, this is the second course in the series. Topics include differentiation and integration of trigonometric, logarithmic and exponential functions, methods of integration, improper integrals; polar coordinates and infinite series. A graphing calculator is required.

(79.2 Lec. Hrs.)

**Prerequisite:** MAT:210.

## **MAT:219 Calculus III** 4 cr.

A continuation of Calculus II, this is the final course in the series. Topics include solid analytic geometry, moments, partial derivatives, multiple integrals, and vector analysis. A graphing calculator is required.

(79.2 Lec. Hrs.)

**Prerequisite:** MAT:216.

## **MAT:227 Differential Equations** 4 cr.

This course is designed primarily for science, mathematics and engineering majors. Topics include ordinary differential equations, differential operators, numerical techniques and applications. A graphing calculator is required.

(79.2 Lec. Hrs.)

**Prerequisite:** MAT:216.

## **MAT:705 Industrial Math and Measurement I** 2 cr.

The first course of a two course sequence designed to provide the student a basic knowledge of applied mathematics. Topics include basic math operations, English and metric measurement, calculator functions, geometry and algebraic fractions.

(24.75 Lec. Hrs./29.7 Lab Hrs.)

**Prerequisite:** RDG:033 or minimum reading placement score based on college assessment.

# COURSE DESCRIPTIONS

---

## **MAT:706 Industrial Math and Measurement II** 2 cr.

The second of a two course sequence, this course is designed to give the student a basic knowledge of applied mathematics. Topics include functions and graphs, right and oblique triangles, systems of two and three equations, powers, roots and logarithms.  
(24.75 Lec. Hrs./29.7 Lab Hrs.)  
**Prerequisite:** MAT:705.

## **MAT:733 Math for Technologies A** 1.5 cr.

This course will cover use of fractions, decimals, exponents and percentages as they apply to manufacturing applications. It will also introduce the use of algebraic formulas.  
(29.7 Lec. Hrs.)

## **MAT:734 Math for Technologies B** 1.5 cr.

This course will cover algebraic equations, ratios and proportions, geometric shapes, and machine shop trigonometry.  
(29.7 Lec. Hrs.)

## **MAT:743 Technical Math** 3 cr.

The first of a two-course sequence designed to communicate the mathematics principles, concepts and manipulative skills needed in basic science and technology. Covers the areas of basic algebra and trigonometry.  
(59.4 Lec. Hrs.)

## **MAT:748 Technical Math II** 3 cr.

The second of a two-course sequence designed to communicate the mathematics principles, concepts and manipulative skills needed in basic science and technology. Covers the areas of advanced algebra.  
(59.4 Lec. Hrs.)  
**Prerequisite:** MAT:743.

## **APPLIED MUSIC**

---

### **MUA:101 Applied Voice** 1 cr.

Advances students from their present vocal ability to a higher and more proficient level. There is no prerequisite and students need only the desire and interest to learn better singing techniques. May be repeated up to a total of 8 credits.  
(9.9 Lab. Hrs.)

### **MUA:120 Applied Piano** 1 cr.

Advances students from their present ability to a higher and more proficient level. There is no prerequisite and students need only the desire and interest to learn to play the piano. May be repeated up to a total of 8 credits.  
(9.9 Lab. Hrs.)

### **MUA:147 Applied Instrumental Lessons** 1 cr.

Students will be able to further their musical and technical skills on a particular instrument. May be repeated up to a total of 8 credits.  
(9.9 Lec. Hrs./19.8 Lab. Hrs.)

## **MUSIC**

---

### **MUS:100 Music Appreciation** 3 cr.

An introductory course including an exploration of the basic music elements; a survey of musical periods and their characteristics from the ancient through the twentieth century; and a discussion of the differences between Western and non-Western musical form and function. Listening and concert attendance required.  
*This course satisfies a general education requirement in the Arts and Humanities Area.*  
(59.4 Lec. Hrs.)

### **MUS:120 Music Theory I** 3 cr.

An introduction to the basic elements of music, music reading and elementary ear training. Music notation skills are emphasized.  
(59.4 Lec. Hrs.)

### **MUS:123 Music Theory II** 4 cr.

Techniques and materials of diatonic music, including melodic, harmonic and structural analysis. Introduction to tonal harmony through part-writing and harmonization of melodies. Sight-singing and aural skills included.  
(59.4 Lec. Hrs./39.6 Lab. Hrs.)  
**Prerequisite:** MUS:120.

### **MUS:147 College Community Orchestra** 2 cr.

Designed for students to play with a community orchestra and participate in performances throughout the semester. Audition is required for selection into the orchestra. May be repeated up to a total of 8 credits.  
(79.2 Lab Hrs.)

### **MUS:151 Pop Singers** 1 cr.

Pop Singers perform musical numbers with choreography; sacred and secular numbers, either a cappella or with instrumental accompaniment. They perform many civic and school concerts throughout the year. Audition is required for selection for the group. May be repeated up to a total of 8 credits.  
(39.6 Lab. Hrs.)  
**Co-requisite:** MUA:101 and MUS:154.

### **MUS:154 Chorus** 1 cr.

Designed for the student to participate in group performances. Choral arrangements include a variety of literature throughout the year including works with orchestra, sacred, secular and popular musical scores. The chorus presents several concerts during the year and produces the annual variety show. Open to all students without an audition. May be repeated up to a total of 8 credits.  
(39.6 Lab. Hrs.)

### **MUS:158 Civic Chorale** 1 cr.

Designed to allow the choral groups to perform large scale choral works with orchestration and soloists. Enrollment may be with or without credit. Civic Chorale membership is open to any resident of the community without audition. May be repeated up to a total of 8 credits.  
(39.6 Lab. Hrs.)

# COURSE DESCRIPTIONS

## MUS:162 Instrumental Ensembles

1 cr.

This course is designed for students to play a variety of styles of music in an ensemble setting. This course is open to students and community members for credit or non-credit. Auditions are not required. Public performances will be included. Can be repeated.  
(39.6 Lab Hrs.)

## MUS:199 Music History

3 cr.

This course surveys the history of music from ancient times to the present. Basic elements of music are introduced as they apply to specific musical periods. The course includes listening activities and concert attendance.  
(59.4 Lec. Hrs.)

## MUS:204 History of Rock and Roll

3 cr.

This course is a study of Rock and Roll from the mid 1950s to the present. It is designed to create critical listeners of popular culture music through analysis of song forms, rock band instrumentation, and the political, cultural, and social significance of song lyrics.  
(59.4 Lec. Hrs.)

## MUS:222 Music Theory III

4 cr.

Further study in diatonic techniques and initial study in twentieth century techniques. Continuation of writing skills and analysis including small part forms. Sightsinging and aural skills included.  
(59.4 Lec. Hrs./39.6 Lab. Hrs.)  
**Prerequisite:** MUS:123.

## MUS:223 Music Theory IV

4 cr.

An introduction to the techniques and materials of twentieth century music through analysis, listening and writing. Sightsinging and aural skills included.  
(59.4 Lec. Hrs./39.6 Lab. Hrs.)  
**Prerequisite:** MUS:222.

## PHILOSOPHY

### PHI:101 Introduction to Philosophy

3 cr.

An introductory course using an analytical approach to the major types and problems of philosophy and stressing their relevance to contemporary society. *This course satisfies a general education requirement in Arts and Humanities.*  
(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

### PHI:105 Introduction to Ethics

3 cr.

This course is designed to give an introduction to ethics from a philosophical perspective. As with any philosophical activity, it will be an inquiry into the fundamental principles and basic concepts that are found at work in the ongoing determination of right and wrong in human life. Socrates' statement that ethics or moral philosophy is a subject that is "no small matter, but (concerns) how we ought to live" will be the overriding consideration in this course. *This course satisfies a general education requirement in the Arts and Humanities Area.*  
(59.4 Lec. Hrs.)

**Prerequisite:** Take ENG:013 or minimum English placement score based on college assessment. ENG:105 and PHI:101 recommended.

### PHI:110 Introduction to Logic

3 cr.

A study of the argumentative use of language and of methods for distinguishing correct from incorrect reasoning. First the multiple uses of language and their governing conventions are analyzed. Next the language of argument and informal fallacies are studied, followed by close analysis of actual arguments. The formal analysis of argument is then introduced through work on propositional logic and categorical syllogisms. The relation of formal analysis to everyday argument is examined as the course emphasis is on effective use of the latter.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## PHYSICAL EDUCATION

### PEA:102 Aerobic Fitness I

1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.  
(39.6 Lab. Hrs.)

### PEA:117 Bowling I

1 cr.

Designed for students who would like to develop a degree of skill sufficient for leisure time participation.  
(39.6 Lab. Hrs.)

### PEA:128 Distance Running I

1 cr.

Designed for students who would like to improve their physical conditioning and/or develop an interest in jogging for leisure activity.  
(39.6 Lab. Hrs.)

### PEA:134 Golf I

1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.  
(39.6 Lab Hrs.)

### PEA:143 Physical Conditioning I

1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.  
(39.6 Lab. Hrs.)

### PEA:154 Racquetball I

1 cr.

Designed for students who would like to develop a degree of skill sufficient for leisure time participation.  
(39.6 Lab. Hrs.)

### PEA:164 Swimming I

1 cr.

For skill techniques or physical condition. Basic swimming strokes, breath control and balance and control of the body are taught.  
(39.6 Lab. Hrs.)

### PEA:174 Tennis I

1 cr.

Designed for the student who would like to develop a degree of skill sufficient for leisure time participation.  
(39.6 Lab. Hrs.)

# COURSE DESCRIPTIONS

---

## **PEA:185 Weightlifting I 1 cr.**

Designed for the student who would like to develop a degree of knowledge sufficient for leisure time participation. (39.6 Lab. Hrs.)

## **PEA:187 Weight Training I 1 cr.**

A course in physical fitness with emphasis on weight training. (39.6 Lab. Hrs.)

## **PEC:100/101 Introduction to Coaching 2-3 cr.**

Introductory course dealing with the responsibilities, duties and problems in coaching the interscholastic athlete and the interscholastic team. (39.6-59.4 Lec. Hrs.)

## **PEC:144 Theory of Coaching Baseball 2 cr.**

A study of theory, mechanics and strategy of coaching baseball. Topics include offensive and defensive team play and basic fundamentals of hitting, catching, throwing and running. Attention is given to organization of team and practice sessions, conditioning and handling of players. (39.6 Lec. Hrs.)

## **PEH:102 Health Education 3 cr.**

Study of the problems of health affected by social, economic and political changes of the twentieth century. (59.4 Lec. Hrs.)

## **PEH:109 Personal Wellness 1 cr.**

The objective of this course is to teach students the basic principles of exercise, both theory and practice. Concepts included in this course are pre-exercise evaluation, cardiovascular fitness, practical training techniques, various exercise programs and post-exercise evaluation. Students will have the option of analysis of computerized assessments. (19.8 Lec. Hrs.)

## **PEH:142 First Aid 3 cr.**

Deals with first aid practices and problems relating to shock, contusions, hemorrhages, fractures, poisoning and other related injuries and illnesses. (39.6-59.4 Lec. Hrs.)

## **PEV:112 Techniques in Baseball 2 cr.**

A course dealing with the development of the skills necessary for competition in baseball at the intercollegiate level. (79.2 Lab. Hrs.)

## **PEV:167 Techniques in Softball 2 cr.**

A course dealing with the development of the skills necessary for competition in softball at the intercollegiate level. (79.2 Lab Hrs.)

## **PHYSICAL SCIENCE**

---

### **PHS:120 Exploring Physical Science 4 cr.**

An introduction and overview to physical science. A typical semester will cover 3 to 5 of the major fields in physical science from the following areas: Physics, Modern Physics, Chemistry, Geology, Astronomy, Meteorology, Environmental Science and Oceanography. Topics covered will be determined by the instructor. *This course satisfies a general education requirement in the Natural Sciences Area.* (59.4 Lec. Hrs./39.6 Lab. Hrs.)

**Recommended:** ENG:013 and MAT:063 or minimum English and math placement scores based on college assessment.

### **PHS:152 Astronomy 4 cr.**

A basic course in descriptive astronomy dealing with the development of modern astronomy and with its present-day theories and observations. Topics covered include motions of solar system and deep sky objects, telescopes and other instruments, members of the solar system, nature of the sun, other stars, origin and development of stars and planets, our galaxy, other galaxies, and the organization of the universe. Some night labs are required.

*This course satisfies a general education requirement in the Natural Sciences Area.* (59.4 Lec. Hrs./39.6 Lab. Hrs.)

**Recommended:** MAT:063 or minimum math placement score based on college assessment.

### **PHS:166 Meteorology: Weather and Climate 4 cr.**

An introduction to meteorology. Topics covered: earth's atmosphere, the elements of weather, weather forecasting, different types of storms and storm formation, severe weather, thunderstorm, hurricanes, tornados, the global climate, global change, and man's interaction with the environment. *This course satisfies a general education requirement in the Natural Sciences Area.* (59.4 Lec. Hrs./39.6 Lab. Hrs.)

**Recommended:** ENG:013 and MAT:063 or minimum English and math placement scores based on college assessment.

### **PHS:172 Physical Geology 4 cr.**

A survey course in physical geology including the Earth's physical systems, the rock cycle, the hydrologic cycle, and the theory of plate tectonics. Volcanism, earthquakes, erosion, and geologic resources are included. Emphasis in lab is on reading geologic maps and the study of common rocks and minerals.

*This course satisfies a general education requirement in the Natural Sciences Area.* (59.4 Lec. Hrs./39.6 Lab. Hrs.)

**Recommended:** MAT:063 or minimum math placement score based on college assessment.

## **PHYSICS**

---

### **PHY:110 Survey of Physics I 3 cr.**

The first of two algebra-based courses in physics for pre-chiropractic students. Students will develop problem solving skills in mechanics, thermodynamics, and acoustics. The student will become proficient in applying the scientific method to laboratory measurements of topics from motion, heat, and sound. Applications to physics of the body will be emphasized.

*This course satisfies a general education requirement in Natural Science.* (39.6 Lec. Hrs./39.6 Lab. Hrs.)

**Prerequisite:** MAT:069 or MAT:073 or minimum math placement score based on college assessment.

# COURSE DESCRIPTIONS

---

## **PHY:111 Survey of Physics II 3 cr.**

The second of two algebra-based courses in physics for pre-chiropractic students. Students will develop problem solving skills in electricity and magnetism, optics, and modern physics. The student will become proficient in applying the scientific method to laboratory measurements in topics from electric circuits, light, and radiation physics. Applications to physics of the body will be emphasized. (39.6 Lec. Hrs./39.6 Lab. Hrs.)

**Prerequisite:** PHY:110

## **PHY:130 Applied Physics I 2 cr.**

The first of a two course sequence, this is an intensive applied math and physics problem experience. The content covered will be reinforced with many applied problems. This course will include: technical measurements and vectors, translational equilibrium and friction, and torque and rotational equilibrium. (19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MAT:143.

## **PHY:135 Applied Physics II 2 cr.**

The second of a two course sequence, this is an intensive applied math and physics problem experience. The content covered will be reinforced with many applied problems. This course will include: uniform acceleration, Newton's second law, and work/energy/power. (19.8 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** PHY:130.

## **PHY:162 College Physics I 4 cr.**

The first course in a sequence of two physics courses for students in liberal arts, pre-med, pre-vet, pre-dental, pre-pharmacy and other students not majoring in the physical sciences, math or engineering. Topics include fundamentals of mechanics, Newton's laws of motion, energy, momentum, periodic motions, fluids, rotation and thermal physics. Applications and history are discussed.

*This course satisfies a general education requirement in Natural Science.* (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MAT:069 or MAT:073 or minimum math placement score based on college assessment or two years of high school algebra. Trigonometry or high school geometry recommended.

## **PHY:172 College Physics II 4 cr.**

A continuation of PHY 162 College Physics I, topics include electricity, magnetism, and optics, modern physics and nuclear physics. The goal is to achieve a basic understanding of the fundamental principles in these topics and to be able to apply these concepts to a variety of physical situations. Students are expected to acquire basic skills in scientific methods, critical reasoning, and problem solving. Students are also expected to learn to organize their thoughts clearly and to express themselves clearly in both written and oral communication. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** PHY:162 or consent of instructor.

## **PHY:173 Conceptual Physics Fundamentals I 2 cr.**

The course is designed to provide the student with a fundamental knowledge of the rules of nature as they pertain to atoms, equilibrium, motion, energy, gravity and fluid mechanics. Emphasis is placed on the methods of understanding and investigating nature with the scientific method. (12 Lec. Hrs./55.2 Lab Hrs.)

**Prerequisite:** MAT:723.

## **PHY:174 Conceptual Physics Fundamentals II 2 cr.**

This course is a continuation of PHY-173. It is designed to provide the student with a fundamental knowledge of the rules of nature as pertains to temperature, heat transfer, change of phase, waves and sound light, quantum theory, atomic nuclei and radioactivity. Emphasis is placed on the methods of understanding and investigating nature with the scientific method. (12 Lec. Hrs./55.2 Lab Hrs.)

**Prerequisite:** PHY:173.

## **PHY:212 Classical Physics I 5 cr.**

The first course in a sequence of two physics courses for students planning to major in physics, engineering, mathematics or other physical sciences. Topics include fundamentals of mechanics, Newton's laws of motion, energy, periodic motions, momentum, fluids, rotation and thermal physics. The application of calculus to physics concepts is used. *This course satisfies a general education requirement in the Natural Sciences Area.* (79.2 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisite:** MAT:210 or consent of instructor.

## **PHY:222 Classical Physics II 5 cr.**

A continuation of PHY:212 Classical Physics I, topics include electricity, magnetism, electromagnetic waves, optics. The goal is to achieve a basic understanding of the fundamental principles in these topics and to be able to apply these concepts to a variety of physical situations. Students are expected to acquire basic skills in scientific methods, critical reasoning and problem solving. Students are also expected to learn to organize their thoughts clearly and to express themselves clearly in both written and oral communication. The application of calculus to these physics concepts is used. (79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** MAT:210 or PHY:212 or consent of instructor.

**Co-requisite:** MAT:216.

---

## **POLITICAL SCIENCE**

---

## **POL:111 American National Government 3 cr.**

A survey of American government and politics. It includes discussion of the historical foundations and fundamental principles of American democracy, the basic institutions of government, the fundamental rights of citizens and the public policy process.

*This course satisfies a general education requirement in the Social Sciences Area.* (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

# COURSE DESCRIPTIONS

## **POL:112 American State and Local Government** 3 cr.

An introduction to politics, government and public policy at the state and local level, with particular emphasis on the state of Iowa. It includes an analysis of the relationship among federal, state and local governments; the structure and powers of state and local governments; the scope of political participation in state and local parties; and public policy-making by state and local governments.  
(59.6 Lec.Hrs.)

## **POL:121 International Relations** 3 cr.

This course involves the study of international relations, including major theories and concepts relating to the international political system, international organizations, foreign policy, globalization, international economics, ecology and international conflict. The course is designed to give the student a better understanding of international relations in the world today with application to specific cases.  
(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 and RDG:032/033 or minimum English and reading placement scores based on college assessment.

## **POL:125 Comparative Government and Politics** 3 cr.

This course is a survey of political institutions across the globe. It includes discussion of the political institutions of countries at different levels of development. Emphasis will be placed on the impact of these differences on a state's citizens and public policy. Comparative Government will familiarize students with similarities and differences of governments around the world.  
(59.4 Lec.Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment. POL:111 is recommended.

## **POL:943 Readings in American Government** 1-2 cr.

Designed to provide the student with additional reading in American government, allowing the student to obtain a greater understanding of the various problem areas in this discipline. This course may be repeated twice for additional credit.  
(39.6-79.2 Lab. Hrs.)

**Prerequisite:** POL:111.

## **POL:949 Special Topics in Political Science** 1-3 cr.

Special Topics for Political Science.  
(19.8-59.4 Lec. Hrs.)

## **PRACTICAL NURSING**

### **PNN:165/166 Nursing Fundamentals Modules A and B** 10 cr.

(PNN:165 - 5 cr.; PNN:166 - 5 cr.)  
This course is the initial course in the nursing curriculum. The course introduces the core concept of caring as it relates to the practice of nursing. This course acquaints the student with the therapeutic use of self in caring for clients across the life span. Additionally, the concepts of health, environment, person and nursing are presented as the supporting structure to practice. The nursing process, critical thinking, communication and adaptation are introduced as contributing concepts that are essential to the art of holistic caring. The course is structured to facilitate acquisition of knowledge, techniques and professional values necessary to basic nursing care. The course includes the psychosocial and interpersonal concerns of the nurse and client in the therapeutic environment. Basic interventions for the client with specific health needs are included. Various health care facilities are used including acute and long-term care facilities. This course is offered in two modules. Module A is a prerequisite to Module B.  
(59.4 Lec. Hrs./118.8 Clinical Hrs.for each module)

**Prerequisites for PNN:166:** PNN:165 and PNN:210.

Note: PNN:165 is a prerequisite for PNN:166.

**Co-requisites:** BIO:168; PNN:210, PNN:211 and PSY:111.

### **PNN:210/211 Principles of Pharmacology, Modules A and B** 2 cr.

(PNN:210 - 1 cr.; PNN:211 - 1 cr.)  
Presents basic principles of pharmacology and their relationship to nursing. Drugs are viewed either as assisting the body in homeostasis, assisting the process of adaptation when change is necessary, or as protection against environmental hazards. From these basic concepts, pharmacological maintenance and regulation of body functions are discussed. Drug categories are discussed according to drug prototypes. This allows students to draw inferences about other drugs in the same category. Emphasis is placed on nursing responsibilities in drug therapy including SAFE administration of ALL drugs. This course is offered in two modules. Module A is a prerequisite to Module B.  
(19.8 Lec. Hrs. for each module)

### **PNN:511/512 Concepts in Clinical Nursing I Modules A and B** 9 cr.

(PNN:511 - 4 cr.; PNN:512 - 5 cr.)  
This course builds on basic concepts and techniques learned in Nursing Fundamentals. It is the second nursing course in the Practical Nursing curriculum. In addition, this course contributes to the foundation of the Associate Degree Nursing curriculum. Emphasis will be placed on adaptation to common stressors, the resulting health-illness responses and the transformation of caring into therapeutic nursing interventions. A life span approach to health restoration and rehabilitation will be used. The course is structured to integrate prior and concurrent knowledge and techniques. Professional behaviors conducive to a therapeutic environment are emphasized. Clinical experience is provided in acute and long-term care facilities. This course is offered in two modules. Module A is a prerequisite to Module B.  
(49.5 Lec. Hrs./118.8 Clinical Hrs. per module)

**Prerequisites:** BIO:168, PNN:165/166, PNN:210/211 and PSY:111. Note: PNN:511 is a prerequisite for PNN:512.

**Co-requisites:** BIO:151, BIO:173 and PSY:121.

# COURSE DESCRIPTIONS

## **PNN:641 Transition to Practice** 6 cr.

Transition to Practice is an exit course for practical nurses which builds on concepts taught in previous nursing courses. The concepts of caring, health, environment, person and nursing are closely examined. Emphasis is placed on meeting the spiritual, psychosocial, emotional and physical needs of clients, by the practical nurse team member. In addition, nursing care specific to elderly clients is presented. This course affords the student an opportunity to examine current trends in health care delivery and legislation. Consequently the student will be prepared to assume the role of a licensed practical nurse.

(79.2 Lec. Hrs./118.8 Clinical Hrs.)

**Prerequisites:** BIO:151, BIO:168, BIO:173, PNN:165, PNN:166, PNN:210, PNN:211, PNN:511, PNN:512, PSY:111 and PSY:121.

**Co-requisite:** ENG:105.

## **PSYCHOLOGY**

### **PSY:111 Introduction to Psychology** 3 cr.

An examination of the fundamentals of behavior. Designed to familiarize students with human behavior, how it is studied and the applications of the results of that study. Theoretical issues, comprehension of research findings and research techniques will also be examined.

*This course satisfies a general education requirement in the Social Sciences Area.*  
(59.4 Lec. Hrs.)

### **PSY:121 Developmental Psychology** 3 cr.

Designed to provide the student with an understanding of the process and interrelationship of physical, emotional, intellectual and social evolution in the individual. Attention is given to these human potentials throughout the life cycle from conception to death.

(59.4 Lec. Hrs.)

**Recommended:** ENG:105.

### **PSY:211 Psychology of Adjustment** 3 cr.

A study of the factors of mutual accommodation, adjustment. Emphasis is placed on normal adjustment problems.  
(59.4 Lec. Hrs.)

**Prerequisite:** PSY:111 or consent of instructor.

### **PSY:213 Industrial and Organizational Psychology** 3 cr.

A study of psychology as a guide to the relationship of people in industry. Designed to help each student develop an awareness of needs, sentiments and attitudes toward self and others in an organizational setting. Organizational problems are anticipated and preventive means are studied.

(59.4 Lec. Hrs.)

**Recommended:** PSY:111.

### **PSY:222 Child Psychology** 3 cr.

Deals with the interplay of biological factors, human interactions, cultural forces and social structures which shape the growing child from conception to adolescence.

(59.4 Lec. Hrs.)

### **PSY:223 Child and Adolescent Psychology** 3 cr.

Deals with the interplay of biological factors, human interactions, cultural forces and social structure which shape the growing child from conception through adolescence.

(59.4 Lec. Hrs.)

### **PSY:224 Adolescence Psychology** 3 cr.

A comprehensive examination of the physical, cognitive and social dynamics of the developmental period between the ages of 11-18 years. Topics of discussion include puberty, the adolescent and the family, the adolescent and peers, education of adolescents, and sex and drugs in the adolescent subculture. The course is designed to provide an accurate picture of the adolescent within American culture.

(59.4 Lec. Hrs.)

### **PSY:226 Psychology of Aging** 3 cr.

Aging is presented as an aspect of living. The course studies aging in terms of four distinct, but interrelated processes: chronological aging, biological aging, psychological aging and social aging.

Same as SOC:220.

(59.4 Lec. Hrs.)

**Prerequisite:** PSY:121 recommended.

### **PSY:236 Psychology of Personality** 3 cr.

An in-depth study of concepts related to personality development, description, assessment and special problems. Emphasis is given to the fields of psychoanalytic, behavioral, self-actualization and existentialism.

(59.4 Lec. Hrs.)

**Prerequisite:** PSY:111 or PSY:121 or consent of instructor.

### **PSY:241 Abnormal Psychology** 3 cr.

Designed to provide the student with an understanding of abnormal behavior as it exists in modern life. Also the student will be given criteria to recognize abnormal behavior and be shown theoretical aspects along with treatment designs.

(59.4 Lec. Hrs.)

**Prerequisite:** PSY:111 or consent of instructor. ENG:105 recommended.

### **PSY:246 Introduction to Counseling Skills** 3 cr.

This course is designed to provide students with three essential components relative to the fields of counseling and human services. These are 1) to attain a foundation in the theories of psychotherapy. In this course, selected prominent theories of psychotherapy, which provide guidelines for understanding human problems and for selecting interventions for these problems, will be studied. 2) To learn "helping" skills so that students can begin to practice micro-counseling techniques in the classroom. 3) To gain knowledge about the large number of occupational choices within the field of counseling and human services.

(59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

---

## **PSY:251 Social Psychology 3 cr.**

A survey of the theories and research dealing with individual behavior in the social environment. Topics include social influence processes, interpersonal attraction, group behavior, leadership, conformity and attitude formation and change.

Same as SOC:251.  
(59.4 Lec. Hrs.)

**Prerequisite:** PSY:111 or consent of instructor.

## **PSY:261 Human Sexuality 3 cr.**

Introduction to the study of the dynamics of human sexuality. Emphasis is given to the physiological, psychological and social aspects of sexuality.

Same as SOC:261.  
(59.4 Lec. Hrs.)

## **PSY:262 Psychology of Gender 3 cr.**

This course is designed to explore the differences between the male and female gender from conception through adulthood. Differences in abilities and attitudes which arise from biology and the brain will be emphasized, although socio-cultural explanations for differences will also be discussed. In addition, the differences in the use of language and communication by males and females will be explored. The goal of the course is to understand these differences and to decide how males and females can use this understanding to communicate with each other and to augment appreciation for the cross-sex.

(59.4 Lec. Hrs.)

**Recommended:** PSY:111.

## **PSY:281 Educational Psychology 3 cr.**

This course is designed for individuals who are or will be working in a vocational environment that requires them to provide or become part of an educational or training program. Although the course is targeting traditional educational systems, there is direct applicability to virtually any setting in which you may be required to help an individual or group of individuals learn and understand new information, or to develop new knowledge and skills sets. The fundamentals of this course are designed to assist the student in differentiating learning theory and processes as aspects of human development. Emphasis is placed on the roles of the educators and the students in applying the principles of learning, instruction, evaluation and pupil management.

(59.4 Lec. Hrs.)

**Prerequisite:** PSY:111 or consent of instructor.

## **PSY:943 Readings in Psychology 1-2 cr.**

Designed to provide additional readings in psychology, allowing the student to obtain a greater understanding of the various areas of this discipline than can be attained by normal course work. This course may be repeated twice for additional credit.

(39.6-79.2 Lab. Hrs.)

**Prerequisite:** PSY:111 or consent of instructor.

# RADIOLOGIC TECHNOLOGY

---

## **RAD:100 Introduction to Radiography and Patient Care 5 cr.**

This course will introduce the student to the history of radiology and radiologic technology. The student should learn about the hospital; its structure, medical specialties, and the role of the radiographer on the health care team. The student should gain the knowledge necessary to provide safe patient care including: communication skills, legal and ethical issues in medicine, body mechanics, patient transfer, medical terminology, valuing diversity, standard precautions and radiography as a profession. In the final half of the semester the student will spend four hours per week observing in the radiology department.

(59.4 Lec. Hrs./79.2 Lab Hrs.)

**Co-requisites:** RAD:123, RAD:350.

## **RAD:123 Radiographic Procedures I 5 cr.**

This course familiarizes the first-semester student with patient positioning and common terms and procedures performed in the radiology department. Procedures to be studied and simulated in the energized laboratory include upper and lower extremity, chest, gastrointestinal, abdominal and urinary tract radiography. Preparation, precautions and administration of contrast media will be explored. Radiographic critique will be integrated throughout the course.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisites:** RAD:100, RAD:350.

## **RAD:143 Radiographic Procedures II 5 cr.**

This course is designed to study radiographic anatomy and procedures of the shoulder and pelvic girdles, bony thorax, spine and skull. Students will simulate these procedures in the energized laboratory. Emphasis will be given to those procedures that are most commonly performed in the radiology department. Radiographic film critique will be integrated throughout the course.

(79.2 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** RAD:123.

**Co-requisites:** RAD:210, RAD:300.

# COURSE DESCRIPTIONS

## **RAD:183 Special Procedures 3 cr.**

An integrated study of detailed anatomy, physiology and radiographic procedures including the use of special equipment. Special emphasis is placed on the radiographic procedures related to the circulatory and nervous system. The scientific principles and uses of computerized tomography, digital angiography, magnetic resonance, ultrasonography and nuclear medicine are discussed. Students will apply these principles during clinical practicum and special rotations. Preparation, precautions and administration of contrast media will be explored.  
(59.4 Lec. Hrs.)

**Prerequisite:** RAD:143.

**Co-requisites:** RAD:220.

## **RAD:210 Clinical Education I 4 cr.**

The radiography student will be assigned to a clinical affiliate. Students will be thoroughly oriented to the operation of the hospital and radiology department. Students will observe, assist with and gradually perform under direct supervision, procedures learned in RAD:123 Radiographic Procedures I. They will learn routine procedures performed in the assigned clinical affiliate and apply procedures introduced in RAD:350 Imaging. Film critique will be integrated throughout the course. Students will meet requirements and competencies in the areas specified in the clinical procedure manual.  
(249.6 Clinical Practicum Hrs.)

**Prerequisites:** RAD:100, RAD:123, RAD:350.

**Co-requisites:** RAD:143, RAD:300.

## **RAD:220 Clinical Education II 3 cr.**

The student will be assigned to the same clinical affiliate as in Clinical Education I. Students will continue to perform radiographic procedures with indirect supervision on those exams where competency has been achieved. Emphasis will be placed on routine procedures learned in Radiographic Procedures I and II. Film critique will be integrated throughout the course. Students will meet requirements and competencies in the areas specified in the clinical procedure manual. The student will complete rotations in ultrasound, nuclear medicine and radiation therapy.  
(187.2 Clinical Practicum Hrs.)

**Prerequisite:** RAD:210.

**Co-requisites:** RAD:183.

## **RAD:300 Radiographic Exposures 4 cr.**

This course explores the principles of equipment operation, phototimers and manual techniques. The factors affecting radiographic quality and the methods for maintaining good radiographic quality are investigated. Many learning experiences are provided in the energized laboratory.  
(59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisite:** RAD:350.

**Co-requisites:** RAD:143, RAD:210.

## **RAD:350 Imaging 3 cr.**

This course explores the principles of automatic processing, digital radiography, image intensification and fluoroscopy. Film characteristics and composition, screens, grids are investigated. Learning experiences are provided in the energized laboratory when appropriate.  
(39.6 Lec. Hrs./39.6 Lab Hrs.)

**Co-requisites:** RAD:100, RAD:123.

## **RAD:500 Clinical Education III 6 cr.**

The student will be assigned to a different clinical affiliate where he/she will be oriented to the hospital and radiology department. Under indirect supervision, the student will perform routine procedures where competency has been achieved as assigned. With direct supervision, the student will achieve competencies in radiographic procedures as specified in the clinical manual. Film critique will be integrated throughout the course. The student will complete rotations in computed tomography, mammography, magnetic resonance imaging and cardiac catheterization.  
(374.4 Clinical Practicum Hrs.)

**Prerequisite:** RAD:220.

**Co-requisites:** RAD:761, RAD:800.

## **RAD:510 Clinical Education IV 6 cr.**

The student will be assigned to the same clinical affiliate as Clinical Education III and continue to perform routine procedures with indirect supervision where competency has been achieved. Film critique will be integrated throughout the semester. Students will meet requirements as specified in the clinical procedures manual.  
(374.4 Clinical Practicum Hrs.)

**Prerequisite:** RAD:500.

**Co-requisites:** RAD:750, RAD:790, RAD:850.

## **RAD:540 Clinical Education V 3 cr.**

Students will be assigned to the same clinical affiliate as in Clinical Education IV. Students will continue to perform radiographic procedures with minimal supervision and attain competency in all radiographic procedures as specified in the clinical procedure manual.  
(187.2 Clinical Practicum Hrs.)

**Prerequisite:** RAD:510.

**Co-requisites:** RAD:890, RAD:946.

## **RAD:750 Radiographic Pathology 3 cr.**

This course focuses on the common diseases and abnormalities of organs and systems as they relate to radiography. The anatomy and physiology of each system will be reviewed preceding the discussion of that system's diseases. Proper learning and understanding of the material will be facilitated by experience in performing radiographic procedures and film evaluation, including the concept of the changes in technique required to compensate for density differences produced by the underlying pathologic conditions.  
(59.4 Lec. Hrs.)

**Prerequisites:** RAD:500, RAD:761, RAD:800.

**Co-requisites:** RAD:510, RAD:790, RAD:800.

## **RAD:761 Film Evaluation I 3 cr.**

This is the first of a two course sequence. This course is designed to emphasize principles of film evaluation as it relates to technique, collimation, shielding, positioning and radiographic quality. "Radiograph rejects" are studied in detail. Procedures to improve their diagnostic quality are emphasized, including the use of existing diagnostic exams to demonstrate desirable films.  
(59.4 Lec. Hrs.)

**Prerequisites:** RAD:183, RAD:220.

**Co-requisites:** RAD:500, RAD:800.

# COURSE DESCRIPTIONS

---

## **RAD:790 Film Evaluation II** 2 cr.

This is the second of a two course sequence. This course is designed to emphasize principles of film evaluation as it relates to techniques, collimation, shielding, position and radiographic quality. "Radiograph rejects" are studied in detail. Procedures to improve their diagnostic quality are emphasized, including the use of existing diagnostic exams to demonstrate desirable films. (39.6 Lec. Hrs.)

**Prerequisite:** RAD:761.

**Co-requisites:** RAD:510, RAD:750, RAD:850.

## **RAD:800 Physics for Radiographers** 3 cr.

This course explores the physical concepts of energy, the structure of matter, electrostatics, electrodynamics, magnetism, electromagnetism, electric generators and motors, the principles of electricity as it relates to x-ray circuits, rectification and x-ray production. X-ray tubes, rating charts and interaction of x-rays with matter are also discussed in detail. (59.4 Lec. Hrs.)

**Prerequisites:** RAD:183, RAD:220, RAD:300.

**Co-requisites:** RAD:500, RAD:761.

## **RAD:850 Radiation Protection and Biology** 3 cr.

This course explores the history and biological effects of ionizing radiation. Different methods of radiation measurement, detection and protection are discussed. (59.4 Lec. Hrs.)

**Prerequisites:** RAD:500, RAD:761, RAD:800.

**Co-requisites:** RAD:510, RAD:750, RAD:790.

## **RAD:890 Quality Assurance** 1 cr.

This course explores the theory and practice of quality assurance in the diagnostic radiology department. The use of quality assurance test tools, interpretation of results and management of a quality assurance program through record keeping are investigated in the laboratory. (9.9 Lec. Hrs./19.8 Lab Hrs.)

**Prerequisites:** RAD:510, RAD:790, RAD:850.

**Co-requisites:** RAD:540, RAD:946.

## **RAD:946 Seminar** 2 cr.

This course is designed to provide the student with the opportunity to explore state-of-the-art technology, computer fundamentals and computer applications in radiology. The student will also be given the opportunity for the re-examination of previously learned material and based on pre-assessment, certain topics will be selected for discussion. (39.6 Lec. Hrs.)

**Prerequisites:** RAD:510, RAD:790, RAD:850.

**Co-requisites:** RAD:540, RAD:890.

## READING

---

### **RDG:032/033 Introduction to College Reading** 2-3 cr.

Introductory course designed to assist the student whose present reading level is not sufficiently developed to meet the recommended college-level assignments. Emphasis will be on improving comprehensive reading skills as well as reading speed and general vocabulary. Satisfactory completion of course work and a passing score on the reading posttest must be met before enrollment in 100 level courses is permissible. (39.6-59.4 Lec. Hrs.)

**Prerequisite:** ENG:064, RDG:042, RDG:045 or minimum English or reading placement scores based on college assessment.

### **RDG:045 Keys to Reading** 3 cr.

This course is designed for students who need intensive direction in reading and study skills. Emphasis will be on improving comprehensive reading skills and general vocabulary. (59.4 Lec. Hrs.)

## RELIGION

---

### **REL:101 Survey of the World's Religions** 3 cr.

This is an introductory course to the origins and historical developments of various religions of the world. Particular emphasis will be placed on understanding why peoples of the world embrace various religions, and the role religion plays in giving meaning and purpose to personal and social existence. The course will provide students the opportunity to understand world events through an understanding of the impact of religious beliefs and values on people's daily lives. The study will include a survey of Religions of Prehistoric Cultures; Native American Religions; African Religions; Religions of India; Religions of China and Japan; Religions of Southwest Asia; Christianity; the Bahai Religion; and New Religions in America.

*This course satisfies a general education requirement in the Arts and Humanities Area.*

(59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## SOCIOLOGY

---

### **SOC:110 Introduction to Sociology** 3 cr.

The basic premise of sociology is that life is not lived individually, but in groups, through the symbols, the language, the roles we play, the culture the group has developed and the meanings the group has to offer. This course will introduce a framework of thinking that involves social structure, function, interaction and conflict, with respect to family, education, the economy, government and religion.

*This course satisfies a general education requirement in the Social Sciences Area.* (59.4 Lec. Hrs.)

### **SOC:115 Social Problems** 3 cr.

Designed to assist the student in the examination of major social problems: poverty, mental illness, crime and delinquency, alcoholism and drug addiction, family disorganization, problems of the aged and racial problems. (59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

## **SOC:120 Marriage and Family 3 cr.**

A study of the contemporary American family, the interpersonal relationships of family members, the emergence of human personality and the roles and role expectations of our culture, with emphasis on how they affect the student. (59.4 Lec. Hrs.)

## **SOC:160 Introduction to Social Work 3 cr.**

Social work's objective is to help people meet their legitimate needs. A society's social welfare system is the set of provisions it makes for the well-being of all its members. This course is an introduction to the social work profession, its participation in the social welfare system, and some of the ways social workers help people. (59.4 Lec. Hrs.)

**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

## **SOC:220 Sociology of Aging 3 cr.**

Aging is presented as an aspect of living. The course studies aging in terms of four distinct, but interrelated processes: chronological aging, biological aging, psychological aging and social aging. Same as PSY:226. (59.4 Lec. Hrs.)

**Recommended:** PSY:121.

## **SOC:230 Juvenile Delinquency 3 cr.**

Introduces the causes of delinquency and the modification of such behavior by corrective institutions and individual therapy. Emphasis is placed on the study of the development of individual personality through inter-family relationships, antisocial aggressive acts from early abnormal family and social situations.

Same as CRJ:201. (59.4 Lec. Hrs.)

## **SOC:240 Criminology 3 cr.**

The study of human behavior and crime, the development of corrections and criminology with sociological and cultural approaches to crime and the career criminal. Same as CRJ:200.

## **SOC:251 Social Psychology 3 cr.**

A survey of the theories and research dealing with individual behavior in the social environment. Topics include social influence processes, interpersonal attraction, group behavior, leadership, conformity and attitude formation and change.

Same as PSY:251. (59.4 Lec. Hrs.)

**Prerequisite:** PSY:111 or consent of instructor.

## **SOC:261 Human Sexuality 3 cr.**

Introduction to the study of the dynamics of human sexuality. Emphasis is given to the physiological, psychological and social aspects of sexuality.

Same as PSY:261. (59.4 Lec. Hrs.)

## **SOC:941 Practicum in Sociology/Social Work 1 – 3 cr.**

Practicum is intended to provide hands-on learning and experience relating theory to practice. Students undertake up to 99 hours of work and observation in settings that meet individual career and academic goals. The college approves sites and faculty members oversee the practicum. Academic assignments accompany the hands-on learning experience. (39.6 - 118.8 Lab Hrs.)

**Pre-requisite:** Grade Point Average of 2.0 or higher and permission of faculty member, Department Coordinator and Dean.

## **SOC:943 Readings in Sociology 1-2 cr.**

Designed to provide additional reading in sociology, allowing the student to obtain a greater understanding in various problem areas in the discipline. This course may be repeated twice for additional credit. (39.6-118.8 Lab. Hrs.)

**Prerequisite:** SOC:110.

## **SPANISH**

### **FLS:141 Elementary Spanish I 4 cr.**

Beginning Spanish with emphasis on understanding, speaking, reading and writing. Supplemented by cultural readings and multimedia presentations. *This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.* (79.2 Lec. Hrs.)

### **FLS:142 Elementary Spanish II 4 cr.**

A continuation of FLS:141, further developing the student's skills in reading, writing, listening and speaking. Similarities and differences in culture will also be explored.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.* (79.2 Lec. Hrs.)

**Prerequisite:** FLS:141 or equivalent.

### **FLS:231/241 Intermediate Spanish I 3-4 cr.**

Equivalent to third-level Spanish, this course reviews the fundamentals of language communication and further improves on idiomatic usages, speaking and understanding. Readings and multimedia presentations on Hispanic culture, current events and literary offerings are integrated in texts and assignments. Exams will test oral, cultural, comprehension and written skills.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.* (59.4/79.2 Lec. Hrs.)

**Prerequisite:** FLS:142, two years of high school Spanish or consent of instructor.

# COURSE DESCRIPTIONS

---

## **FLS:232/242 Intermediate Spanish II** 3-4 cr.

Designed to complete the second-year college course through intensive practices of methods and materials presented in Intermediate Spanish I. Advanced examination of Hispanic culture, through selected readings and multi-media presentations, will aid the student in increasing speed and fluency in the spoken language. Translation skills will be enhanced as well.

*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

(59.4/79.2 Lec. Hrs.)

**Prerequisite:** FLS:231 or consent of instructor.

## **SPEECH**

---

### **SPC:111 Public Speaking** 2 cr.

Introduction to public speaking with emphasis on organization, presentation and listening. Experience in the process and principles of public speaking: audience analysis, selection and organization, style and delivery. Practice in preparation and delivery of informative and persuasive extemporaneous speeches. *This course satisfies a General Education requirement in Communication.* (39.6 Lec. Hrs.)

### **SPC:112 Public Speaking** 3 cr.

Introduction to public speaking with emphasis on organization, presentation and listening. Experience in the process and principles of public speaking: audience analysis, selection and organization, style and delivery. Practice in preparation and delivery of informative and persuasive extemporaneous speeches. *This course satisfies a General Education requirement in Communication.* (59.4 Lec. Hrs.)

### **SPC:114 Advanced Public Speaking** 2 cr.

Applications of the principles, theory, process and analysis of various methods of speaking, persuasion, composition, audience analysis, propaganda and logical, ethical and emotional proofs to change attitudes. Students will participate in class debates and discussions. (39.6 Lec. Hrs.)

### **SPC:120 Intercultural Communication** 3 cr.

Introduction to the principles of intercultural communication. Emphasis on the impact of culture on personal identity and communication processes. Students will acquire knowledge and develop skills to help them communicate with a diverse audience. (59.4 Lec Hrs.)

### **SPC:122 Interpersonal Communication** 3 cr.

This course will help students become more aware of how they relate to and communicate with other people. Elements will include self-esteem, disclosure, perception, listening, verbal and nonverbal communication, persuasion, assertiveness, coping with conflict and managing relationships. Small group communication and critical thinking are emphasized. (59.4 Lec. Hrs.)

### **SPC:170 Professional Communication** 3 cr.

Introduction to the principles of professional communication. Components include interpersonal, dyad, small group and large group discussion, extemporaneous and impromptu speaking - informative and persuasive. *This course satisfies a general education requirement in the Communications Area.* (59.4 Lec. Hrs.)

## **STUDENT DEVELOPMENT**

---

### **SDV:107 Health Science College Experience** 1 cr.

This course will assist all science students to acquire essential skills needed for academic success in the fields related to science and health. The topics covered are classroom strategies, computer resources, science terminology and symbols, scientific interpretation of data, and student responsibilities. (19.8 Lec. Hrs.)

### **SDV:108 The College Experience** 1 cr.

This course will assist all new college students to acquire essential skills needed for academic success. The topics covered are campus resources, classroom strategies, library skills, computer resources, and student responsibilities. (19.8 Lec. Hrs.)

### **SDV:113/114 Strategies for Academic Success** 2-3 cr.

The purpose of this course is to provide an opportunity for students to learn and adopt methods to be successful in school. Topics include memory development, reading and note-taking techniques, test-taking techniques, time and money management, stress reduction, self-esteem, and college policies and procedures. (39.6-59.4 Lec. Hrs.)

### **SDV:129 Transition to College** 1 cr.

Transition to College introduces students to the college environment and engages students in developing the essential skills for a successful college experience. (19.8 Lec. Hrs.)

### **SDV:130/131 Career Exploration** 1-2 cr.

Designed to involve students in educational and occupational orientation (as related to self) and to make valid educational choices. Participants have an opportunity to investigate employment opportunities in their field of interest. The college selection process is reviewed and an appropriate curriculum for students' majors will be developed. (19.8-39.6 Lec. Hrs.)

### **SDV:174 Critical and Creative Thinking** 3 cr.

Provides training in thinking, decision-making, problem analysis and problem solving. The students will apply critical and creative thinking strategies to problems in a variety of personal, occupational and cultural situations. (59.4 Lec. Hrs.)

**SDV:188 Understanding Chemical Dependency 2 cr.**

This course studies a broad range of chemicals and the physiological and psychological effects on the human body and mind. The study includes behavioral implications and issues of prevention, intervention and treatment. (39.6 Lec. Hrs.)

**SDV:196 Getting Involved 1 cr.**

Students will receive credit for volunteer work in a community organization or with one of the college services. Emphasis is on involvement with other people. Activities may include tutoring, working with youth or aged, or a leadership position in a college activity. This course may be repeated once for additional credit. (19.8 Lec. Hrs.)

**Prerequisite:** Consent of instructor.

**SDV:220 Honors Colloquium 2 cr.**

Provides students who have a high level of academic achievement with learning opportunities beyond current curricular offerings. Through a variety of classroom and field activities, students will be challenged to use critical and creative thinking processes. Academic departments and guests will have opportunities to present enriching activities. (39.6 Lec. Hrs.)

## SURGICAL TECHNOLOGY

**SUR:122 Introduction to Surgical Technology 4 cr.**

This course provides an introduction to the knowledge and skills required for surgical technologies including principles of sterile techniques, the operative care of the surgical patient, and the roles of scrubbing and circulating duties. Application of surgical fundamentals is demonstrated. Theory is correlated to practice by requiring students to participate as members of a surgical team in laboratory simulations. (59.4 Lec. Hrs./59.4 Lab Hrs.)  
**Co-requisite:** CSP:110.

**SUR:225 Surgical Technology II 4 cr.**

This course is a continuation of Introduction to Surgical Technology with emphasis on acquiring skills of scrubbing and assisting the circulator during surgical procedures in the operating room and delivery room. Specific areas of study are general surgery, genitourinary, orthopedics, and endocrine system. Students must demonstrate competency in the lab setting of this course and pass a clinical readiness examination in order to proceed to clinical coursework. (59.4 Lec. Hrs./39.6 Lab Hrs.)

**Prerequisites:** CSP:110, SUR:122, MAT:047 or minimum math placement score based on college assessment.

**Co-requisites:** SUR:421 and SUR:518.

**SUR:330 Surgical Technology Specialties 3 cr.**

This course is a continuation of the surgical technology series and outlines advanced techniques in surgical technology. This course will focus on specifics to all the different surgical specialties. (59.4 Lec. Hrs.)

**Prerequisite:** SUR:225, SUR:421 and SUR:518.

**Co-requisite:** SUR:524.

**SUR:421 Surgical Technology Pharmacology 1 cr.**

This course is a study of pharmacology and anesthesia. It will deal with all aspects of pharmacology: drug sources, forms, nomenclature, route of administration, classifications, pharmacokinetics, pharmacodynamics, drug handling techniques, identification, supplies needed, transfer of medications to the sterile field, commonly used medications, general anesthesia, nerve conduction blocks, history, and team member roles during anesthesia. (19.8 Lec. Hrs.)

**Prerequisites:** CSP:110, SUR:122, MAT:047 or minimum math placement score based on college assessment.

**Co-requisites:** SUR:225 and SUR:518.

**SUR:450 Advanced Concepts in Surgical Technology 4 cr.**

This course is a continuation of the Surgical Technology series. In this course the students will gain knowledge of specific surgeries related to the disease processes. This lecture class will give the students an opportunity to learn about new technology within the surgery arena. Suturing and knot tying will also be presented. (79.2 Lec. Hrs.)

**Prerequisites:** SUR:330 and SUR:524

**SUR:518 Surgical Technology Practicum I 2.5 cr.**

This course provides the student with an introductory hands-on experience at a designated clinical site. Students will participate in the following activities: preparation, aseptic technique, prioritization of duties, uses of time, professional/personal habits, safety/ethical aspects and skill set. (153.6 Clinical Hrs.)

**Prerequisite:** CSP:110, SUR:122, MAT:047 or minimum math placement score based on college assessment.

**Co-requisite:** SUR:225 and SUR:421.

**SUR:524 Surgical Technology Advanced Practicum II 6.5 cr.**

This course is a continuation of Practicum I and provides the student with advanced hands-on experience at a designated clinical site. Students will be participating in the following activities: preparation, aseptic technique, prioritization of duties, uses of time, professional/personal habits, safety/ethical aspects and skill set. (386.4 Clinical Hrs.)

**Prerequisite:** SUR:518.

**Co-requisite:** SUR:330.

# COURSE DESCRIPTIONS

---

## SUSTAINABLE ENERGY

---

### **SER:100 Introduction to Renewable Energy Applications** 2 cr.

Provides an overview of various renewable energy applications. This includes a discussion of energy from wind, solar, ethanol, biodiesel, methane and hydro. There will be an introduction to cost, uses and maintenance of such systems.

(39.6 Lec. Hrs.)

### **SER:102 History of Power Generation** 3 cr.

This course will provide a comprehensive history of power production. The course will cover the progressions of power generation from the earliest forms of power such as fire, wind and water to the modern power generation techniques. Also covered will be historical sidelines to alternative power. This course will utilize a lab component to reinforce the fundamentals of each power generation technology.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

### **SER:103 Renewable Energy Site Assessment** 3 cr.

This course examines the theoretical background, utilization of existing energy-potential databases, and on-site evaluation methodologies for determining the feasibility and actual siting of solar and wind technologies, both active and passive, but also consideration for fuels cells, geothermal and biomass sources. It also guides the student through multiple deployment methods for the installation of anemometers, pyranometers, and weather stations, as well as their integration with state-of-the-art data logging computer systems.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

### **SER:104 Residential Renewable Energy Power Systems** 3 cr.

This course covers the fundamentals of capturing the wind and sun for use in power generation. Students will install working wind turbines and solar photovoltaic systems on pre-selected sites. A significant amount of this class will be dedicated to hands-on construction of the systems. This is an applied learning course with optional tower climbing.

(29.7 Lec. Hrs./59.4 Lab Hrs.)  
**Prerequisite:** MAT:723 and SER:100.

### **SER:105 Residential Renewable Energy Mounting & Tower Systems** 3 cr.

This course will provide the students with a comprehensive overview of the tower types used in the wind industry. Tower safety and construction will be the primary focus of this course. Work will include freestanding, guyed and tilt-up towers. A section will include solar mounting systems for use in hybrid systems. This is an applied learning class, with optional tower climbing.

(29.7 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** MAT:723 and SER:100.

### **SER:108 Inverters, Chargers and Storage Devices** 3 cr.

This course will focus on the components used in conditioning the power generated to the various end-use applications. There will be a focus on systems that are on grid, off grid and hybrid. Students will work with batteries, inverters, controllers, grounding systems and pumping applications. This is an applied learning class.

(29.7 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** MAT:723 and SER:100.

### **SER:109 Monitoring and Maintenance** 3 cr.

Upon completion of this course students will be well versed in real time and historical monitoring and evaluation of data. The students will learn how to do system repairs and annual maintenance. The primary focus will be on machines from 1kw to 20kw. Students will be exposed to large turbines as well as small turbines. The secondary component of this class will focus on residential and small commercial solar photovoltaic systems.

(29.7 Lec. Hrs./59.4 Lab Hrs.)

**Prerequisite:** SER:100.

## TRUCK DRIVING

---

### **TDT:111 Commercial Drivers License Regulations** 3 cr.

This course is designed to deliver all of the information needed for students to pass three Commercial Drivers license (CDL) written examinations in the states of Illinois and Iowa: general knowledge, combination vehicle and air brakes. CDL requirements, Department of Transportation (DOT) Rules and Regulations, log books and air brakes will be covered.

(59.4 Lec. Hrs.)

### **TDT:112 Commercial Drivers License Regulations** 2.5 cr.

This course is designed to deliver all of the information needed for students to pass three Commercial Drivers license (CDL) written examinations in the states of Illinois and Iowa: general knowledge, combination vehicle and air brakes. CDL requirements, Department of Transportation (DOT) Rules and Regulations, log books and air brakes will be covered.

(49.5 Lec. Hrs.)

### **TDT:130 Commercial Vehicle Operation** 7 cr.

This course delivers the information necessary to take and pass the CDL skills test and become a commercial vehicle operator. The student will develop the skills and techniques essential to the safe and professional operation of a commercial vehicle.

(19.8 Lec. Hrs./237.6 Lab Hrs.)

**Prerequisite:** TDT:111 or TDT:112.

**TDT:131 Commercial Vehicle Operation** 5 cr.

This course delivers the information necessary to take and pass the CDL skills test and become a commercial vehicle operator. The student will develop the skills and techniques essential to the safe and professional operation of a commercial vehicle.

(9.9 Lec. Hrs./178.2 Lab Hrs.)

**Prerequisite:** TDT:111 or TDT:112.

## WEB DEVELOPMENT

**WDV:101 Introduction to HTML and CSS** 3 cr.

This course introduces current standards of HTML, XHTML and CSS. Students will code HTML and CSS web pages, test them in browser and publish them to a web server. Page layouts will use various CSS techniques. Tables and forms will be used as well. A current version of Dreamweaver will be used to build more complex pages.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**WDV:221 JavaScript** 3 cr.

This specialization course will introduce the student to advanced concepts in web development. Students will begin developing skills in scripting JavaScript and Document Object Model (DOM) scripting.

(39.6 Lec. Hrs./39.6 Lab Hrs.)

**WDV:233 Web Servers** 3 cr.

This course is designed to introduce students to both Microsoft and Linux web servers. Students will learn, compare and contrast the characteristics of each server, their similarities and differences in terms of supporting languages and services necessary to create working web sites with different needs in each one of them. Students will also observe an installation of each type of server and perform an installation project.

(39.6 Lab Hrs./39.6 Lab Hrs.)

**Prerequisite:** CIS:210, NET:303.

## WELDING

**WEL:124 Maintenance Welding** 3 cr.

Designed for the basic needs of the manufacturing student, including instruction and practice in gas cutting and welding, brazing, arc welding in various positions and basic MIG welding. Topics covered also include safe use of welding equipment and machinery, abrasive cut-off saws, shears, grinders and various tools common to the welding field.

Designed to teach the student how to weld with different electrodes in all positions. Emphasis is on the E-6010 and E-7018 electrodes. The student safely sets up welding equipment, learns how to adjust it and how to operate it, and how to weld and braze in all four positions. The learning experience is also enhanced by cutting freehand with the cutting torch and operating semi-automatic cutting equipment. (19.8 Lec. Hrs./118.8 Lab Hrs.)

**WEL:126 Shielded Metal Arc Welding - Basic** 4.75 cr.

This course covers basic Shielded Metal Arc Welding procedures in the flat position. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./168.3 Lab Hrs.)

**WEL:127 Shielded Metal Arc Welding - Modules** 1.25 cr.

Selected modules from WEL:126 course will be taught in this course. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./29.7 Lab Hrs.)

**Co-requisites:** MFG:186 or consent of instructor.

**WEL:129 Gas Metal Arc Welding - Basic** 4.25 cr.

This course covers safety and Metal Inert Gas (MIG) welding techniques in horizontal, vertical and overhead positions. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./148.5 Lab Hrs.)

**Co-requisites:** MFG:186.

**WEL:132 Flux Core Arc Welding** 2.25 cr.

This course covers safety and flux core arc welding techniques. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./69.3 Lab Hrs.)

**WEL:133 Gas Tungsten Arc Welding** 2.5 cr.

This course covers safety and tungsten inert gas (GAS) in the flat position. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./79.2 Lab Hrs.)

**WEL:136 Oxy-Acetylene Welding and Cutting** 4.25 cr.

This course covers safety and Oxy-Acetylene Welding and Cutting techniques. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./148.5 Lab Hrs.)

**WEL:137 Oxy-Acetylene Welding and Cutting - Modules** 0.5 cr.

Selected modules from WEL:136 will be covered. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting. Variable credits are awarded in this course.

(4.95 Lec. Hrs./9.9 Lab Hrs.)

**WEL:215 Shielded Metal Arc Welding - Advanced I** 5 cr.

This course covers basic advanced shielded metal arc welding procedures in variety of positions. Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./178.2 Lab Hrs.)

**Prerequisite:** WEL:126.

# COURSE DESCRIPTIONS

---

## **WEL:216 Shielded Metal Arc Welding - Advanced II 4.5 cr.**

This course continues with the advanced concepts and techniques covered in the Shielded Metal Arc Welding (Advanced I - WEL:215 course). Variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./158.4 Lab Hrs.)

**Prerequisite:** WEL:215

## **WEL:217 Gas Metal Arc Welding - Advanced 1.25 cr.**

This course covers advanced metal inert gas (MIG) welding techniques in a variety of positions. Electrode selection, power source and welding distortion control using arc-welding process are emphasized. Numerous hands-on projects/experiments integrate and reinforce theoretical concepts in the laboratory setting.

(9.9 Lec. Hrs./29.7 Lab Hrs.)

**Prerequisite:** WEL:129.

## **WEL:219 Layout and Fabrication 3 cr.**

This course includes the computation and development of sketch outs of various geometries and special fabrication techniques in cutting, fitting, clamping and tacking. The lab project requires the use of fabrication equipment.

(19.8 Lec. Hrs./79.2 Lab Hrs.)

**Prerequisites:** WEL:216 and WEL:217.

## **WEL:331 Welding Fundamentals 2 cr.**

This course is designed especially for auto technology and diesel technology students. The welding processes that will be studied are those that are currently being used in auto and truck repair centers. Competencies that will be developed are intended to provide entry-level skills. This course is not designed to provide the skills required for welding certification.

(19.8 Lec. Hrs./59.4 Lab Hrs.)

## **WEL:949 Special Topics - Welding 1-6 cr.**

Students with basic welding knowledge and skills may develop specialized courses of study to meet their individual needs. This course may be repeated for a maximum of 6 credits.(39.6-237.6 Lab Hrs.)



# Personnel Directory



EASTERN IOWA COMMUNITY COLLEGES  
CLINTON ♦ MUSCATINE ♦ SCOTT

**LEARN MORE. EARN MORE.**

# PERSONNEL DIRECTORY



**EASTERN IOWA**  
COMMUNITY COLLEGES

## Board of Directors

**Shirley Stewart**  
District I

**Milton Shaw**  
District II

**Joseph D'Souza**  
District III

**Robert H. Gallagher - President**  
District IV

**Mary Lou Engler - Vice President**  
District V

**Brian J. Angwin**  
District VI

**Kendra Beck**  
District VII

**Bill Phelan**  
District VIII

**Michelle Garrin**  
District IX

**Don Doucette**  
Chancellor

**Honey H. Bedell**  
Secretary

**Lana J. Dettbarn**  
Treasurer

## DISTRICT ADMINISTRATION

### **Heather Adams**

Computer Technology Support Specialist  
AA/AS, Scott Community College  
BS, St. Ambrose University

### **Karen S. Allen**

Continuing Education Registration Clerk

### **Lisa Appenzeller**

Continuing Education

### **Paula Arends**

Iowa WORKS  
Workforce Investment Act/PACE Director  
B.A. Eastern Illinois University  
M.Ed. University of Illinois

### **Julie Aye**

Urban Center Manager

### **Bruce Bainbridge**

Industrial Engineering  
Technology/Drafting  
Blong Technology Center  
BS, University of Wisconsin - Stout

### **Nancy Beam**

Payroll Specialist  
AA, Scott Community College

### **Honey H. Bedell**

Associate Director for Board  
Services/Executive Director,  
EICC Foundation  
BA, Baylor University  
MA, University of Iowa

### **Kathryn A. Birkett**

Iowa WORKS Fiscal Officer  
AA, Clinton Community College  
BA, Mount St. Clare College  
MBA, Western Illinois University

### **Jeff Blackwell**

Achieve Quad Cities Liaison

### **Jim Brattvet**

Assistant to Director of Economic  
Development  
BS, Florida Atlantic University  
MIS, University of Phoenix  
MBA, Kennesaw State University

### **Vincent L. Briley**

Assistant Director of Instructional  
Support  
BSS, Ohio University  
MA, Ohio State University

### **Mary S. Briones**

Associate Director, Health Occupations,  
Continuing Education  
RN, University of New York  
BS, University of St. Francis  
MS, University of St. Francis

### **Alan Campbell**

Associate Director, Communications  
BA, William Penn College  
MBA, St. Ambrose University

### **Lauri Eich**

Executive Assistant, Continuing  
Education  
AA, Teikyo Marycrest  
BA, Mount St. Clare

### **Tori Cribbs**

Switchboard/Records Clerk

### **Donna Day**

Executive Assistant  
AAS, American Institute of Commerce

### **Ilene Deckert**

Associate Director, Economic  
Development  
BS, Clarke College

### **Lana J. Dettbarn**

Executive Director,  
Administrative Services  
BA, Western Illinois University  
MBA, St. Ambrose University

### **Bruce Diamond**

Administrative Assistant, Advanced  
Technology Environmental Energy Center  
BA, Augustana College

### **Melonee K. Docherty**

Lead Instructional Designer  
Advanced Technology Environmental  
and Energy Center  
AS, Black Hawk College  
BA, Augustana College

### **Nancy J. Dugan**

Assistant Director of  
Institutional Research  
AA, Scott Community College  
BA, Iowa Wesleyan College

### **Roma Egger**

Administrative Assistant I,  
Information Technology

### **Jenny Eis**

Computer Technology Support Specialist  
AA/AS, Scott Community College

# PERSONNEL DIRECTORY

**Alison Entler**

Microcomputer Technology  
Support Specialist  
AAS, Scott Community College

**Karen D. Farley**

Associate Director of Marketing  
BA, MA, University of Northern Iowa

**Laurie Finn**

Director, Resource Development  
BA, Drake University  
MBA, St. Ambrose University  
PhD, University of Iowa

**Johnna Forbes**

Information Specialist/Iowa WORKS  
Employment and Training Counselor

**Jen'e Fuller**

Continuing Education Administrative  
Assistant

**Kathryn F. Garrison**

Iowa WORKS Employment & Training  
Counselor  
BS, Illinois State University

**Sandra Gayman**

Assistant Director of Database Services  
AAS, Scott Community College  
BA, St. Ambrose University

**H. James Gekes**

Assistant Director of Web-based Services  
BS, Northern Illinois University

**LeAnn M Gillespie**

Personnel Specialist  
BA, St. Ambrose University

**Debora Goodall**

Associate Director, Business and  
Management  
AA, Mount St. Clare College  
BA, Loras College  
MS, Western Illinois University

**Terri Goodman**

Administrative Assistant for e-learning,  
and Professional Development  
BS, Iowa State University

**Sarah Graves**

PACE Navigator  
BA, University of Iowa

**Jeff Halterman**

Assistant Dean for Reach to Achieve  
BA, Marycrest College  
MEd, Auburn University

**Dawn Hamilton**

Assistant Director for Health  
Continuing Education  
ADN, Scott Community College  
BS, University of St. Francis

**Gloria Hanne**

Project Coordination Specialist  
Advanced Technology Environmental and  
Energy Center

**Laurie Hanson**

Director of Institutional Effectiveness  
& Instructional Support  
BA, Hope College  
MA, Western Illinois University

**Amy Hanzelin**

Accountant  
BA, Coe College

**Nicole Harrison**

Web & Media Specialist  
AAS, Clinton Community College

**Eric Hayes**

Urban Center Maintenance

**Tracy Higgins**

Data Entry/Records Clerk

**Heidi Hilbert**

Dean of eLearning  
BS, University of Iowa  
MBA, HRM, Columbia Southern  
University

**Mary Hildebrandt**

Administrative Assistant I  
BA, Iowa Wesleyan College

**Tammy L. Hoover**

Information Center Specialist  
AAS, Scott Community College

**Gina Howell**

Advanced Technology Environmental  
Energy Center Interactive Learning  
Lab Education Coordinator  
BA, Marycrest College  
MS, Western Illinois University

**Katherine Jaeggi**

Administrative Assistant,  
Blong Technology Center  
AAS, Scott Community College

**Winifred Jones**

Help Desk Technician

**Lori Kaiser**

Continuing Education Administrative  
Assistant

**Mark D. Kapfer**

Executive Director, Community and  
Economic Development  
BA, University of South Dakota  
MA, Western Illinois University

**Angelique Kimble**

Accounts Receivable Clerk  
BS, Illinois State University  
MBA, Colorado Technical University

**Christina R. Kloss**

Executive Assistant to Director of  
External Affairs

**Cynthia S. LaFrentz**

Purchasing Specialist  
AA, Scott Community College

**Ellen Kabat Lensch**

Executive Director for Resource  
Development & Innovation  
BS, Iowa State University  
MBA, St. Ambrose University  
PhD, University of Iowa

**Amy Loving**

Nahant Marsh ECO Education Assistant  
Advanced Technology Environmental  
Energy Center  
BA, Western Illinois University

**Jill Maine**

Assistant Director for Long Term Care  
AS, Scott Community College

**Dan Martin**

Director of Operations  
Blong Technology Center  
BS, Middle Tennessee State University

**Robin Martin**

Accounts Payable Clerk  
AA, Waynesburg College

**Sergio Mendoza**

Prevocational Training Facilitator  
BA, Augustana College

**Gary Mohr**

Executive Director for External Affairs  
BS, Northwest Missouri State University  
MS, Iowa State University

# PERSONNEL DIRECTORY

---

**John Morgan**

Coordinator/Trainer for Health, Safety, and Environmental Program  
Advanced Technology Environmental and Energy Center  
AAS, Black Hawk College

**Catarina Pena**

College Customer Service Specialist  
AA, Scott Community College

**Jeremy Pickard**

International Education Director  
Advanced Technology Environmental Energy Center Associate Director  
BA, Northwestern College  
MA, Iowa State University  
PhD, Iowa State University

**Julie Plummer**

Assistant Director, Iowa Waste Exchange/EICC Sustainability Manager  
BA, Augustana College  
MA, University of Iowa

**Tom Rathmann (KEC)**

Advisor  
BA, St. Ambrose University  
MA, Western Illinois University

**Karinda Richard**

IT Report Writing Specialist  
AS, Scott Community College

**Marsha Rinetti**

Director, Eastern Iowa Small Business Development Center  
BSE, Kansas State  
MBA, Illinois State

**Brian Ritter**

Facilitator, Nahant Marsh/Eco. Education, Advanced Technology Environmental and Energy Center  
AA, Scott Community College  
BS, St. Ambrose University  
MS, Western Illinois University

**Gale G. Roeder**

Associate Director of Family and Consumer Science, Continuing Education  
BS, Iowa State University  
MS, University of Iowa

**Gary Ronzheimer**

Assistant Director, Fire Science and Rescue, Health, Continuing Education  
BA, Columbia Southern University

**Pat Rosenberg**

Machining Instructor  
Blong Technology Center

**Tamara Sachsenmaier**

Iowa WORKS Employment and Training Counselor  
AA, Clinton Community College

**Dennis Schnoor**

Assistant Director for Industrial Technologies - Continuing Education  
AAS, Scott Community College

**Dawn M. Schroeder**

College Customer Service Specialist  
AAS, Scott Community College

**Gail Sederquist**

IT Web-Based Program/Data Analyst  
BA, Augustana College  
BS, University of Iowa

**Sabrina Shoemaker**

Iowa WORKS Employment and Training Counselor

**Erin Snyder**

Associate Director for Enrollment Management  
BA, University of North Carolina - Chapel Hill

**Martha Spears**

Iowa WORKS Employment and Training Specialist  
BA, Western Illinois University

**Tim Stoffer**

Post-Secondary Success Consultant

**Lori Strausse**

Accounts Payable Clerk  
AA, American Institute of Business

**Deborah J. Sullivan, PHR**

Director of Human Resources  
BS, University of Phoenix  
NMHRM, University of Phoenix

**Lynn Summers**

Assistant Director of Computer Support  
AS, Black Hawk College  
BS, George Williams College

**Doris Swanson**

Executive Assistant to the Chancellor

**Jennifer Sweborg**

PACE Navigator  
MA, Western Illinois University

**Suteesh Tandon**

Director of Business Services,  
BA, Delhi University of India  
CA, Institute of Chartered Accountants of India

**James A. Temple**

Assistant Director for Health (EMS), Continuing Education  
BA, Dordt College  
EMT-P, Scott Community College

**Chris Warner**

Computer Technology Support Specialist

**Frank Weiser**

Assistant Director of Media Services  
AAS, Scott Community College

**Ladrina Wilson**

Assistant Director for Enrollment/ Customer Service  
BS, Northern Arizona University

**Wanda Wyatt**

PACE Navigator

**Melody Young**

Iowa WORKS Employment and Training Counselor

**Sue Zettl**

Graphics Technician  
AA, Scott Community College  
BA, Marycrest College

## Clinton Community College

**Amensisa Abdi**

Physics Instructor  
MS, University of Cincinnati  
PhD, University of Cincinnati

**Eric Allen**

PTA Instructor  
BS, Illinois State University  
MS, Illinois State University  
MPT, Midwestern University  
PhD, University of Iowa

**Seth Archer**

Instructor, English, Communication and Film  
BA, MA, North Dakota State University

# PERSONNEL DIRECTORY

**Jane Beinke**

Business and Industry Center Secretary  
AA, Stevens Henager College of Business  
AAS, Clinton Community College

**Joan Berkey**

Clinical Nursing Instructor  
RN, Eastern Iowa Community Colleges  
BSN, University of Iowa

**Anthony Bielski**

Transition Advisor  
AA, Illinois Valley Community College  
BS, Western Illinois University

**Gina Bielski**

Speech Instructor  
BA, Eastern Illinois University  
MA, Eastern Illinois University

**Dawn Boettcher**

Nursing Instructor  
ADN, Kirkwood Community College  
BSN, Mt. Mercy College  
MSN, Walden University

**Martha Brown**

English Instructor  
BS, Drake University  
MS, University of Iowa

**Craig Burken**

Welding Instructor

**Patrick Cheak**

Graphic Arts Instructor  
BS, Southern Illinois University  
MFA, Southern Illinois University

**Alicia Clark**

Evening College Assistant  
AA, Clinton Community College

**Thalia Clement**

Resource Development Assistant  
BA, Ashford University

**Tim Cottle**

Associate Director for Business and  
Industry Center  
BA, Clemson University

**Charlotte Darsidan**

Library Specialist  
AAS, Clinton Community College

**Mary Dierksen**

Lead Custodian

**Melanie Drury**

Accounts Clerk I  
AA, Clinton Community College  
BA, Mount St. Clare College

**Amy Dykstra**

Secretary I/Special Projects  
AAS, Clinton Community College  
BS, Mount St. Clare College

**Mike Edwards**

Lab Assistant II  
AA, Clinton Community College

**Ann Eisenman**

Assistant to the President/Foundation  
Director  
BBA, University of Iowa

**Vincent D. Enslein**

Business Instructor  
BBA, University of Cincinnati  
MS PM, Florida Institute of Technology

**Jody Feller**

Custodian I

**Susan K. Geerts**

Financial Aid Specialist  
AAS, Mount St. Clare College

**Rachel Grager**

Switchboard/Receptionist

**Debby Gosnell**

GED Instructor/Adjunct Instructor  
BA, Illinois State University

**Jennifer Green**

Executive Assistant  
Student Services  
AA, Clinton Community College

**Lauren Guemmer**

Administrative and Office Support  
Instructor  
BA, Northwestern College  
MA, University of Northern Iowa

**Gayla Haferbier**

Switchboard/Receptionist

**Beth Hafner**

English/Journalism Instructor  
BA, University of Iowa  
MA, Western Illinois University

**Shawn Hamerlinck**

Humanities/Social Sciences Instructor  
BA, Loras College  
MA, Loyola University

**Marcus Harris**

Academic Advisor/Job Placement  
Coordinator  
AA, Wabash Valley Community College  
BA, Mount St. Clare College

**Joe Jarvis**

Career Academic Advisor  
BA, Upper Iowa University  
MA, Upper Iowa University  
ED.S, Western Illinois University

**Amy Johnson**

Library Assistant  
MLS, University of Iowa

**Brian Johnson**

Construction Trades Instructor

**Ann E. Koenes**

Secretary II

**Susan Kunde**

Lab Assistant I/ Math and Science  
AAS, Clinton Community College  
BS, St. Ambrose University

**Sydney Kurtz**

Literacy Coordinator

**Joyce Lansing**

GED Instructor  
BS, Eastern Illinois University  
MS, Clarke University

**Marcia Larson**

Academic Advisor/ADA Liaison/  
Retention Specialist  
AA, Clinton Community College  
BA, Ashford University

**Marcia Lathrop**

Developmental Education Instructor  
BS, Judson Baptist College  
MA, City University

**Christopher Legel**

Graphic Arts/Multimedia Instructor  
BA, University of Wisconsin-Madison

**Vickie A. Lehmann**

Financial Aid Assistant  
AA, Clinton Community College

**Gail Levsen**

Executive Assistant,  
President/Dean's Offices

# PERSONNEL DIRECTORY

---

**Karen Lueders**

Administrative Assistant I  
BA, University of Northern Iowa

**Becky MacLearn**

Library Technician

**Amy Madsen-Smith**

Biology/Math/Science Instructor  
BA, St. Louis University  
MA, Western Illinois University

**Jane Marlowe**

Developmental Education  
Department Coordinator/Instructor  
AA, Mount St. Clare College  
BA, Marycrest College  
MA, The Franciscan University

**Michelle Maze-Hughes**

HSE Instructor  
BA, University of Dubuque

**Lisa Miller**

Dean of Student Development  
AA, Scott Community College  
BA, Western Illinois University  
M.Ed., Iowa State University

**Jeff Minner**

Custodian I

**Heather Mohler**

Admissions Officer  
AA, Clinton Community College  
BA, University of Iowa

**Mardell Mommsen**

Manager of Records and Registration  
AA, Clinton Community College

**Sally Myers**

Assistant Dean of Library  
BA, Cornell College  
MA, University of Iowa

**Samantha Nelson**

English Instructor  
BA, St. Ambrose University  
MA, Bradley University

**Tammy Nodarse**

Nursing Instructor  
RN, Allen School of Nursing  
BSN, Clarke University

**Kerry Notz**

ESL Instructor  
AA, Normandale Community College  
BA, University of South Dakota

**Roxanne Otto**

Switchboard/Receptionist  
Secretarial Services Assistant  
AA, Clinton Community College

**Kathy Paasch**

Computer Technology  
Support Specialist  
Diploma, Clinton Community College

**Penny Plautz**

Continuing Education Specialist  
(Maquoketa)  
BA, University of Northern Iowa

**Jeff Reid**

Maintenance Custodian  
Certificate, Highland Community College

**Deborah E. Richter**

Assistant to the President for  
Administration  
AA, Mount St. Clare College  
BBA, St. Ambrose University

**Karen Schnoor**

Evening College Assistant

**Ron Serpliss**

Dean of the College  
BA, Central Connecticut State University  
MA, Wheaton College

**Amanda Schaver**

Library Technician II  
Switchboard/Receptionist  
AAS, Clinton Community College

**Joe Shovlain**

Academic Advisor/Volleyball Coach  
BA, MBA, St. Ambrose University

**Robyn Smith**

Art Instructor  
BA University of Iowa  
MA, University of Iowa

**Bianca Sole'-Perkins**

ABE Instructor - Lead Teacher  
BA, Loras College  
MA, Northern Arizona University  
PhD, Edgewood College

**Ruth Sueverkruebbe**

District Nursing Department Dean  
AA, Scott Community College  
BSN, Marycrest College  
MS, Northern Illinois University

**Stephen Teney**

Business Instructor  
PhD, University of South Dakota

**Teresa A. Thiede**

Financial Aid Officer  
AA, AAS, Clinton Community College

**Peggy Thoms**

Psychology Instructor  
BA, Coe College, MA, Loras College

**Shirley Turnis**

Mathematics Instructor  
BS, University of Dubuque  
MSM, Iowa State University  
MA, Franciscan University

**Sarah Vawter**

GED Instructor  
AA, Clinton Community College  
BA, University of Northern Iowa

**Karen Vickers**

President/Vice Chancellor of Student  
Development  
BS, Iowa State University  
MSEd, Western Illinois University  
PhD, Iowa State University

**Mark Wade**

Facilities Manager

**Wanda Walker**

Records Clerk I

**Dave Wallace**

Mechatronics Technology Instructor  
AAS, Clinton Community College

**Ryan Welch**

Math/Science Instructor  
BA, MS, University of Northern Iowa

**Christine Whipple**

Nursing Instructor  
BSN, University of Maryland/  
Walter Reed  
Medical Army Institute of Nursing

**Glenn Williams**

Information Technology Instructor  
AA, BA, BS, University of Maryland

**Beth Wood**

Mathematics Instructor  
BS, Western Illinois University  
MS, University of Illinois

**Wanda Wyatt-Harwick**

Career Navigator

## Muscatine Community College

**Barbara Adlam**

Nursing Clinical Instructor  
AAS, Scott Community College  
BSSN, University of Iowa  
MSN, University of Phoenix

**Rachel Anderson**

Child Care Aide

**Robert Allbee**

President of MCC  
AA, Muscatine Community College  
BA, University of Northern Iowa  
MA, University of Iowa

**Michael Anson**

Maintenance/Custodian

**David Barb**

Baseball Coach/College Assistant/  
Athletic Director  
BS, Davis and Elkins College, WV

**William Barwick**

Registration Clerk

**Erika Battern**

Executive Assistant  
BA, University of Northern Iowa

**Debra Beatty**

Financial Aid Officer  
AA, Muscatine Community College

**Scott Beatty**

Softball Coach/College Assistant

**Jody Beltran**

Skills Center Facilitator  
BA, University of Iowa  
MBA, Columbia Southern University, AL

**Chad Bishop**

Media Production Specialist  
BA, University of Iowa

**Richard Boyer**

Science Department Coordinator  
Biology/ Anatomy/Physiology Instructor  
Doctorate, Palmer College of Chiropractic

**Danielle Brandt**

Agronomy Instructor  
AS, Black Hawk College  
BS, St. Ambrose University  
MS, South Dakota State University

**Renae Britt**

Library Technician II  
AA, AS, Muscatine Community College  
BA, Marycrest College

**Elias Calderon**

Custodian I

**Anabelia Calderon-Flores**

Career Services/Academic Adviser  
AA, Muscatine Community College  
BS, Iowa State University

**Mary Grace Carlson**

AgriBusiness Instructor  
BS, Southern Illinois University-  
Carbondale

**David Carson**

Transition Adviser  
BS, Canisius College, Buffalo, NY  
MDiv, Christian Theological  
Seminary, IN

**Leakhena Chhim**

Accounts Clerk I  
AAS, Scott Community College

**James Compton**

English/Literature/Communications  
Instructor  
BA, University of Illinois  
MA, Northern Illinois University

**Shelly Cram Rahlf**

Dean of Student Development  
AA, AS, Kirkwood Community College  
BA, Coe College  
MA, Iowa State University

**John A. Dabeet**

Business Department Coordinator  
Economics/Statistics Instructor  
BA, Bethlehem University, PA  
MPA, Kutztown University, PA

**Daniel Drahos**

Vet Tech Program Veterinarian  
BS, Iowa State University  
DVM, Iowa State University

**Angela Einfeldt**

Child Care Aide  
AA, Muscatine Community College

**Sipra Eko**

Math Instructor  
BA, University of Northern Iowa  
M Ed, University of Maine

**James Elias**

Business Instructor  
BS, University of South Dakota  
MBA, St. Ambrose University

**Heather Elliott**

Preschool Teacher  
AAS, Muscatine Community College

**Paula Finch**

Psychology Faculty  
AA, Scott Community College  
BA, Marycrest International University  
MS Ed., Western Illinois University

**Jana Fowler**

Science Instructor  
BS Iowa State University  
MS, University of Iowa

**Corinne Frad**

Accounting Instructor  
BA, Oklahoma Panhandle State  
University  
MBA, Upper Iowa University

# PERSONNEL DIRECTORY

---

**Janet Freeborn**

Horticulture Instructor  
BS, Western Illinois University

**Jesse Gomez**

Custodian I

**Cheryl Reidenouer**

PACE Navigator  
M.Ed., University of Illinois

**Angela Henning**

Information Technology Instructor  
AAS, Muscatine Community College  
BA, St. Ambrose University  
MS, St. Ambrose University

**Blaine Hill**

Maintenance/Custodian

**Robin Jennings**

Financial Aid Officer  
Management & Supervision  
Certificate, Scott Community College

**Kenneth T. Johnson**

Physics/Physical Sciences/Environmental  
Sciences Instructor  
BS, University of Wisconsin – Madison  
MS, University of Iowa

**Sue Kahl**

Administrative Assistant I  
Diploma, Scott Community College

**Jeffrey A. Kaufmann**

History/Psychology Instructor  
Social Science Department Coordinator  
BA, University of Iowa  
MA, University of Iowa  
PhD, University of Iowa

**Lesa Khedr**

English Instructor  
Department Coordinator  
BSE, Emporia State University, KS  
MA, New Mexico State University

**Art Kistler**

Industrial Technology Instructor  
AAS, Kirkwood Community College

**Cindy Kress**

Secretarial Services Assistant  
AAS, Muscatine Community College

**Kathy Kurriger**

Lab Assistant II  
BS, Northeast Missouri State University

**David Lane**

Speech and Theatre Instructor  
BBA, University of Iowa  
MA, Fontbonne University, MO

**Brandon Lange**

Chemistry Instructor  
BA, Concordia College, MN  
MS, University of Illinois  
Urbana-Champaign

**Randy Lear**

Evening College Assistant  
AA, Muscatine Community College

**Jim Liljequist**

Computer Technology Support Specialist  
AAS, Muscatine Community College

**Julie Lloyd**

Executive Assistant

**Janine Loveless**

Information Technology Program  
Instructor  
Software Development Specialist,  
Universidade do Vale do Rio dos Sinos –  
Brazil  
MA, University of Iowa  
MS, Capella University

**Nancy Bird Luikart**

Assistant Dean for Library Services  
BS, Louisiana State University  
MLIS, Louisiana State University

**James Lyon**

Automotive Instructor  
ASE Certified

**Paul Martin**

Agri-Business Instructor  
AAS, Muscatine Community College  
BS, Southern Illinois University

**Laura Martinez**

Child Care Cook/Nutritionist  
AA, Muscatine Community College

**Wayne Merrell**

Assistant Director, DOL Grants  
BS, Brigham Young University  
MS, University of Central Missouri  
Ed.D., Utah State University

**Jo Miller**

Switchboard Typist  
AA, Muscatine Community College

**Sandra Miller**

Custodian I

**Robin Mitchell**

Manager of Registration and Records  
AA, Muscatine Community College

**Ruth Moorhead**

Lab Assistant I  
BS, St. Ambrose University

**Becky Morrissey**

Custodian I

**Jennifer Parker**

Academic Advisor – International Grant  
BA, Iowa State University

**Joan M. Paul**

Preschool Teacher  
BA, Marycrest College

**Melissa Paulsen**

Child Care Teacher

**Mary Pelzer**

GED Instructor  
BS, Iowa State University  
Melissa Paulsen  
Preschool Teacher  
AA, Muscatine Community College

**Melissa Peterson**

Child Care Aide  
BA, University of Northern Iowa

**Elida Perales**

Academic Adviser/Testing Site Supervisor  
BA, Western Illinois University  
MS, Western Illinois University

**Janet Phillips**

Music Instructor  
AA, Muscatine Community College  
BA, Marycrest College  
MA, University of Iowa

**Lisa Powell**

English Instructor  
BA, University of South Carolina  
MFA, University of Alabama

**Lindsay Ramsey**

Academic Advisor  
BA, The Franciscan University of  
the Prairies  
MA, Ashford University

**Cheryl Reidenouer**

PACE Navigator  
M.Ed., University of Illinois

**Kay Roof-Steffen**

Humanities/Fine Arts  
Department Coordinator  
Humanities/Communication/  
Spanish Instructor  
BA, University of Northern Iowa  
MA, University of Iowa

**Virginia Rud, CVT**

Program Director - Veterinary Technology  
AAS, National American University, SD

**Mary Rummery**

Custodian I

**Patricia Salyars**

Learning Tree Preschool Manager  
BA, Iowa Wesleyan College  
AA, Muscatine Community College

**Marvin Smith**

Associate Director, Business and Industry  
Center  
AA, Muscatine Community College  
BA, Iowa Wesleyan College

**Tonya Smith**

Child Care Aide  
AA, Muscatine Community College

**Ellie Sweet**

Nursing Instructor  
BSN, Marycrest College  
MSN, Northern Illinois University

**Gail Spies**

Dean of the College  
BS, Southern Illinois University  
MS, Colorado State University

**William Trotter**

Mathematics Instructor  
BS, University of Massachusetts – Boston  
MS, Western Illinois University

**Robert Warner**

Facilities Manager

**Katherine Watson**

Career Navigator  
AAS, Muscatine Community College  
BA, Western Illinois University

**Lisa Wiegel**

Assistant to the President  
AA, Muscatine Community College

**Paul Wilts**

Manufacturing Technology Instructor  
AA, Fort Dodge Community College  
BS, University of Northern Iowa

**Chris Young**

Custodian I

## Scott Community College

**Barb Adlam, RN, MSN**

Nursing Clinical Instructor  
LPN, Muscatine Community College  
ADN, Scott Community College  
BSN, University of Iowa  
MSN, Univ of Phoenix

**Michelle Allmendinger**

Athletic Director/Campus Activities  
Specialist  
BA, Knox College  
MS, University of Wisconsin

**Heather Anderson**

Early Childhood ED/Interpreter Training  
Department Coordinator  
BA, Augustana College  
MS, Western Illinois University

**Lorene Anderson**

VA Certifying Official  
AAS, Austin Community College

**Rhonda Anderson-Paxton**

Nursing Instructor  
AS, Muscatine Community College  
BSN, Marycrest College  
MSN, University of Iowa

**Diana Archer**

Administrative Assistant,  
Registrar's Office

**Tom Arends**

Auto Tech Lab Assistant  
AS, Accounting

**Sarahy Arriaga de Castro**

ESL Instructor, Career Assistance Center

**Mark Aronson**

Biology Instructor  
BA, BM, University of Iowa  
MA, University of Montana

**Laura Asleson**

Account Clerk I  
AA, Scott Community College

**Michelle Bailey**

Assistant Dean of Library/  
Learning Resources  
BA, University of Iowa  
MLIS, University of Iowa

**Bruce Bainbridge**

Drafting Instructor  
BS, University of Wisconsin - Stout

**Andrew Bair**

Maintenance/Custodian,  
Kahl Educational Center  
AAS, Scott Community College

**John F. Baker, Jr.**

Biology Instructor  
BA, Aurora College  
MA, PhD, University of Iowa

**Mary K. Baker**

Nursing Instructor  
Diploma, Creighton Memorial  
St. Joseph's Hospital School of Nursing  
BSN, University of Illinois-Chicago  
MA, Western Illinois University

**Dan Baldwin**

English Instructor  
BA, Northeast Missouri State University  
MA, Western Illinois University

**Tina L. Ball**

Dental Assisting Instructor  
Diploma, Robert Morris College,  
RDA, CDA

**Tatiana Ballentine**

CASS Housing Specialist,  
International Programs  
Certificate, ESAN University, Lima, Peru  
BBA, IPAE University, Lima, Peru

**Chris Banker**

Assistant Director/Career Link  
BBA (2), University of Iowa  
MA, National University

**Jan Barkdoll**

Executive Assistant to the Dean of  
Student Development  
AA, Black Hawk College

**Pamela D. Bass**

Biological Sciences Instructor  
BS, MS, University of Iowa

**Anna Beck**

END Instructor/Program Director  
AAS, Blackhawk Community College  
BS, Bellevue University

# PERSONNEL DIRECTORY

---

**Candice E. Beever-England**

Academic Transfer Advisor, TRIO  
BA, Western Illinois University

**Bret Benson**

Business Management/Accounting  
Management Instructor, Accounting  
Specialist and Administrative and Office  
Support Instructor  
AA, Black Hawk College  
BA, MBA, Western Illinois University

**Stephen R. Bergren**

Academic Advisor/Facilitator of  
International Students  
BA, Augustana College  
MA, Western Illinois University

**John Blair**

Heating, Ventilation and Air  
Conditioning Instructor  
Diploma, Scott Community College

**Dawn Boettcher**

Nursing Instructor  
ADN, Kirkwood Community College  
BSN, Mount Mercy University  
MSN, Walden University

**Sharon Bonis**

College Customer Service Specialist  
AAS, Scott Community College

**Carol A. Brade**

Library Technician II  
BA, MA, University of Iowa

**Jim Breitbach**

Assistant Director/Industrial Technology

**Charity Brinkley**

ABE/GED Instructor  
Career Assistance Center

**Jill M. Brodersen**

Mathematics Instructor  
BA, St. Ambrose University  
MSM, Iowa State University

**Lisa Brown**

Dean of Student Development  
BS, University of Iowa  
MS, Western Illinois University

**Gary T. Buckley**

Psychology Instructor  
BS, Northeast Missouri State University  
MA, Assumption College

**Colleen Buehner**

PACE Navigator  
Blong Technology Center  
BA, University of Michigan

**Jim Burden**

Welding Instructor,  
Blong Technology Center  
Journeyman Welder/Pipefitter

**R. Andrew Burt**

English Instructor  
AA, Seward County Community College  
BA, MA, Emporia State University  
PhD, Capella University

**Carrie Butler**

Administrative Assistant to Financial Aid  
AS, Scott Community College

**Eric Carr**

Social Science Instructor  
BA, University of Texas at Austin  
MPA, Texas Tech University  
MA, Rice University

**Wayne Carter**

Electronics/Hydraulics Instructor  
AAS, Black Hawk College

**Theresa Carton**

Accounts Clerk II  
BA, St. Ambrose University

**Donna Clarquist**

Health Information Technology Instructor  
AAS, Illinois Central College  
BA, Western Illinois University

**Stephanie Coble-Day**

Alternative High School Curriculum  
Manager  
BA, University of Northern Iowa

**Kathy Coiner**

Psychology Instructor  
BS, University of Iowa  
MS, Central Missouri State University

**Wayne Cole**

Job Placement/Student Success Specialist  
BS, Iowa State University

**Kathleen Conway**

Faculty Mentor  
BA, Marycrest College  
MA, University of Iowa

**Janet Coogan**

Dean of Instruction  
BS, Iowa State University  
MEd, University of Illinois - Champaign

**Wavie Cox**

Administrative Assistant I  
Kahl Educational Center

**Julie Cutler**

Nursing Instructor

**Stephen Daley**

ABE/ GED Instructor,  
Career Assistance Center

**Kimberly Darling**

Industrial and Design Technologies  
Department Coordinator/Interior  
Design Instructor  
BFA, MA, University of Iowa

**Kenneth Darmody**

Machining/CNC Instructor  
AS, Western Kentucky University

**Terri DeClerck**

Nursing Instructor  
Eve/ Weekend Facilitator  
AAS, Scott Community College  
BSN, University of Illinois  
MSN, Walden University

**Julie Dittmer**

Nursing Instructor  
MSN, University of Iowa

**Janice Dolan**

PACE Navigator  
Blong Technology Center  
AA, Clinton Community College  
BA, Mount St. Clare University  
MS, St. Ambrose University

**Nancy Drucker**

Financial Aid Specialist  
AAS, Black Hawk College

**Armond (Russ) Dunn**

Biology Instructor  
BS, Western Michigan University  
MS, Iowa State University

**Alicia Duyvejonck RN, BSN**

Nursing Instructor  
BSN, University of Iowa

**Susan Edwards**

ABE/ GED Instructor,  
Career Assistance Center

**Mike Erwin**

Truck Driving Instructor

# PERSONNEL DIRECTORY

**Karree Fah**

ESL Instructor  
BS, Truman State University

**Michael Fall**

Evening College Assistant  
AA, Kirkwood Community College  
BA, Western Illinois University

**Amy Falvey**

English Instructor  
BA, St. Ambrose University  
PhD, State University of New York -  
Story Brook

**Veronique Fernandez**

ESL Instructor  
BA, Creighton University

**Dean Figg**

HVAC Lab Assistant

**Cindy A. Flanders**

Business Administration and Speech  
Department Coordinator/Instructor  
BA, JD, MA, University of Iowa

**Steve Flanigin**

Drama Instructor  
BA, Marycrest College  
MFA, University of North Carolina-  
Greensboro

**Randy Ford**

Chemistry Instructor  
BS, St. Cloud State University  
MS, University of Minnesota-  
Minneapolis

**Barbara A. Foster**

Allied Health Services Department  
Coordinator/Health Information  
Technology/ Cancer Information  
Management Instructor  
AA, Indian Hills Community College  
BA, Marycrest International University

**Jazmin Fountain**

ABE/GED Instructor  
St. Ambrose University

**Margo Fox**

Building Manager/ Blong Technology  
Center

**Ruth Ann Gallagher**

Developmental Education Instructor  
BS, MEd, Western Illinois University

**Bhaswati Gangopadhyay**

Physical Science & Computer Science  
Department Coordinator/Physics  
Instructor  
BS, MS, University of Calcutta  
MS, PhD, Rensselaer Polytechnic  
Institute

**Karen Ganzer**

Nursing Instructor  
RN, Lutheran Hospital School of Nursing  
BSN, University of St. Francis

**Peg Garrison**

Dean, ABE/HSE/ESL  
BA, University of Nebraska  
MS, Western Illinois University

**Angie Ghrist**

Biology Instructor  
AA, Southeastern Community College  
BA, University of Iowa  
MS, Iowa State University

**Ezequiel Gonzalez**

Facilities Manager, Kahl  
AAS, Scott Community College

**Sandra F. Griffith**

Registration & Records Administrative  
Assistant  
Kahl Educational Center

**Rebecca Geiken**

Military & Veteran Student Affairs  
Facilitator  
BA, Lenior-Rhyne University  
MS, Western Illinois University

**Cathy Hackney**

Administrative Assistant, Nursing  
Department

**Kirk Hakanson**

Student Built Home Instructor  
Master Carpenter

**Darrell Hanan**

Automotive Technology Department/  
Instructor  
AAS, Southeastern Community College  
BT, University of Northern Iowa  
ASE Master Certified

**Jane A. Haugland**

District Financial Aid Officer  
BA, University of Northern Iowa

**Sharon Heesch**

ABE/ GED Alternate High School  
Instructor, Career Assistance Center

**Lysa Hegland**

Assistant to the President/  
Foundation Director  
AA, Scott Community College  
BA, St. Ambrose University

**Amy Herrig**

PACE Navigator  
BA, St. Ambrose University

**Susan E. Hess**

Assistant to Dean for International  
Programs  
BS, University of Wisconsin-  
Stevens Point

**Raymond Hitchcock**

Truck Driving Program Facilitator  
BS, University of Dubuque

**Barbara Hixon**

Biology Instructor  
AS, Holyoke Community College  
BS, MS, PhD, University of  
Massachusetts-Amherst

**David Hollingsworth**

Maintenance  
Diploma, Scott Community College

**Michelle Holmes**

Testing Center Administrative Assistant

**Thea Holmon-Ellis**

Transition Advisor-SCC  
BA, University of Missouri

**Jeanne Holuba**

Financial Aid Specialist  
AAS, Scott Community College

**Ann Horan**

Registration Center Assistant

**Rich Horst**

Director of Development/  
Blong Technology Center  
BS, Iowa State University

# PERSONNEL DIRECTORY

---

**Hans Humbarger**  
Mathematics Instructor  
BS, Purdue University  
MA, University of Wisconsin at  
Madison

**Kenneth L. Hunter**  
Department Coordinator -  
Transportation/Diesel Instructor  
AA, Scott Community College

**Ben Huntington**  
Admissions Officer  
BA, University of Iowa

**Jonathan Ikoba**  
Social Science Department Coordinator/  
Economics Instructor  
BS, University of Liberia  
MS, University of Cincinnati  
MA, PhD, Northern Illinois University

**Jeannine E. Ingelson**  
Financial Aid Officer  
BA, Augustana College

**Larry Jackson**  
Special Needs Specialist  
BGS/MA, University of Iowa

**Jan M. Jacobs**  
Director/Radiologic Technology  
Instructor  
AAS, Carl Sandburg College  
BS, University of St. Francis  
MA, St. Xavier University

**Susan Jones-Miller**  
Mathematics Instructor  
BS, Northern Illinois University  
MS, Penn State University

**Jennifer Kelly**  
Biology Lab Assistant  
BS, Truman State University  
M.A.T. University of Iowa

**Katherine Kelley**  
English Instructor  
BA, University of Iowa  
MA, Western Illinois University

**Ben Kettering**  
Electrical/Department Chair Instructor  
BSEE, University of Illinois  
MSEE, Bradley University

**Dee Kilby**  
Surgical Tech Instructor/Program Director  
ADN, Scott Community College  
Diploma, Kirkwood Community College

**Craig R. Klein**  
English Instructor  
BS, MA, Iowa State University

**Gabe Knight**  
Business Coordinator/Instructor  
MBA, St. Ambrose University

**Marysue Knoblauch**  
TRIO Executive Assistant

**Leland R. Kothenbeutel**  
Maintenance

**Amy Kramer**  
Nursing Instructor  
BSN, University of Phoenix

**Doug Kutzli**  
Instructional Media Telecommunications  
Technician  
AAS, Scott Community College

**M. Lionel Lance**  
Accounts Clerk II  
AAS, Scott Community College

**Cathy Langdon**  
Associate Dean of Students  
BS, Illinois State University  
MSEd, Western Illinois University

**Ann Lawler**  
Mathematics Department  
Coordinator/Instructor  
AA, Southeastern Community College  
BA, MA, University of Iowa

**Mary Lee**  
ABE Instructor, Career Assistance Center

**Richard Lindbom**  
Security, Career Assistance Center

**John Lindberg**  
Geography Instructor  
BA/MS, St. Cloud State University

**Robert Lipnick**  
Humanities Department Coordinator/  
Art Instructor  
BS, University of Maryland  
MFA, University of Notre Dame

**Clara Littig**  
Facilities Manager, Kahl Educational  
Center  
Certificate of Management Development,  
St. Ambrose University

**Kevin L. Lucas**  
GED Alt. Chief Examiner  
Career Assistance Center  
AS, Scott Community College

**Georgeann D. Lucewich**  
Financial Aid Specialist  
AA, Scott Community College

**Robert Majchrzak**  
HSET Facilitator and District Safety  
Compliance Facilitator  
BA, University of Colorado - Boulder  
MS, University of Illinois

**Dan Martin**  
Director of Operations/  
Blong Technology Center  
BS, Middle Tennessee State University

**Susan K. Massick**  
Executive Assistant,  
Kahl Educational Center  
Diploma, American Institute  
of Commerce  
BA, St. Ambrose University

**Lori J. Matthew**  
Psychology Instructor  
BA, Rockford College  
MS, EdD, Northern Illinois University

**Dan Maxwell**  
Math Instructor  
BS, Pensacola Christian College  
BS, Iowa State University  
MAT, University of Idaho

**Thomas McAninch**  
Criminal Justice/Sociology Instructor  
BA, MS, Marshall University  
MA, University of Illinois  
PhD, Illinois State University

**Brad McConnell**  
Industrial Engineering Technology/  
CAD-ProE Instructor  
AAS, Morrison Institute of Technology

**Sharon McCubbin**  
Executive Assistant to the President  
AAS, Scott Community College

**Reese McRae**  
Clinary Instructor  
AAS, Scott Community College  
Certificate – Cunlinary Institute of  
America  
Certificate – Department of Labor

# PERSONNEL DIRECTORY

**Heather (Mattern) Meissen**

Biology Instructor  
BS, Iowa State University  
PhD, University of Missouri-Columbia

**Ryan Melbard**

Mathematics Instructor  
BS, University of Wisconsin Platteville  
MS, University of Wisconsin Platteville  
MS, Texas A&M

**Herbert Meyer**

Accounting & Business Management  
Instructor  
BA, MS, Eastern Washington University  
CPA

**Ken Mirocha**

Facilities Manager

**Melissa Morgan**

Accounts Clerk II  
AA, Scott Community College  
AS, Scott Community College

**Christine Mulvania**

Bookstore Assistant Manager

**Nathan Murray**

Mail Room/Copy Center Clerk

**Katia Nardini**

ESL Instructor, Career Assistance Center

**Craig Nelson**

Renewable Energy Instructor  
AAS, Scott Community College

**Stephanie Newell**

English Instructor  
AA, Iowa Western Community College  
BA, University of Iowa  
MA, University of Nebraska

**Isaac Newman**

Psychology/Sociology Instructor  
AAS, Sauk Valley Community College  
BA, BS, MA, Western Illinois University

**Barb Nichol**

Dental Assisting Instructor  
AA, Scott Community College  
RDA, CDA

**Jana Nichols**

Nursing Instructor ADN,  
Scott Community College  
BSN, St. Ambrose University

**Amy O'Shaughnessy**

Administrative Assistant II,  
Placement Office  
BA, St. Ambrose University

**Molly Osmun**

Student Services Advisor/  
Blong Technology Center  
AAS, Kirkwood Community College  
BS, Mount Mercy University  
MEd, Iowa State University

**Julia Oxyer**

ABE/GED Instructor  
Career Assistance Center

**Teresa Paper**

President  
BS, MEd, Kearney State College  
EdD, University of Nebraska - Lincoln

**Catherine Petersen**

Special Needs Specialist for  
ACCESS Program  
BA, MA Illinois State University

**Linda Plummer**

Academic Advisor  
BA, St. Ambrose University

**Brandy Poston**

Executive Assistant to Dean of Operations  
AAS, Black Hawk College

**Jay Rakus**

Radiologic Technology instructor/Clinical  
Coordinator  
BA, Western Illinois University

**Desmond Rigg**

HVAC Instructor/Interior Design  
Journeyman Electrician  
National Joint Apprenticeship and  
Training Committee for the Electrical  
Industry  
AAS, RETS Electronics School

**William H. Roba**

History Instructor  
BA, Augustana College  
MA, Cornell University  
PhD, University of Iowa

**Jennifer Robb**

Facilitator, TRIO Program  
BA, St. Ambrose University  
MPS, St. Ambrose University

**Diane Roebuck**

Interpreter Training  
BA, Maryville College

**Thais Rowland**

ESL Instructor  
Career Assistance Center

**Katy Rush**

Financial Aid Specialist  
BA, St. Ambrose University

**Jan Russell**

Volunteer Coordinator  
Career Assistance Center

**Christine Sandstrom**

Biology Instructor  
BA, Augustana College  
MS, Northern Illinois University

**Raji Sankar**

Tutor - Mentor Specialist, TRIO

**Abigail Sawyer**

TRiO Tutorial Specialist/Adjunct  
Instructor, English and Humanities  
BA, University of Iowa  
MA, University of Otago

**Matt J. Schmit**

Dean of Operations  
BA, Cornell College  
MPA, Drake University

**James Schneider**

Project Director TRiO Support Center  
BS, Illinois State University  
MSED, University of Kansas

**Michelle Schoenfelder**

Executive Assistant, Dean of Instruction

**Brad Schofield**

Maintenance/Custodian  
AAS, Scott Community College

**Anna M. Schony**

Speech Instructor  
BA, MA, Western Illinois University

# PERSONNEL DIRECTORY

---

**Jennifer Schueller**

Building Manager,  
West Davenport Center  
BA, College of St. Scholastica

**Bradley Scott**

Culinary Arts Apprenticeship Facilitator/  
Department Coordinator  
ACF Certified

**Dennis Seaman**

Learning Center Mentor/Blong  
Technology Center  
AA, Black Hawk College  
AAS Black Hawk College  
BS, Western Illinois University

**Alan Shaw**

Auto Mechanics Instructor  
BA, University of Northern Iowa  
ASE Master Certified

**Reg Shoemith**

Faculty Facilitator  
BA, University of Northern Iowa  
MA, Marycrest College  
EdS, Western Illinois University

**Sandra Simon**

Dental Assisting Instructor  
Diploma, Scott Community College

**Kanchan Singh**

Mathematics Instructor  
BEd, University of Calgary  
MS, University of Western Ontario

**Steve Sinn**

Automotive Technology Lab Technician  
AAS, Indian Hills Community College

**Tina Solheim**

Department Coordinator/Administrative  
and Office Support Instructor  
AA, Scott Community College  
BA, Mount St. Clare College  
MS, Western Illinois University

**Diane Stanley**

Hospitality Program Instructor/Facilitator  
AA, Black Hawk College

**Mary Stavnes**

Advisor Student Services  
BS, Upper Iowa University

**Kristen Stradt**

Administrative Assistant/Blong  
Technology Center  
BA, Western Illinois University

**Ruth Sueverkruebbe**

Dean of Nursing  
AAS, Scott Community College  
BSN, Marycrest College  
MSN, Northern Illinois University

**Scott Swanson**

Manager of ESL and Foreign Languages  
BA, University of Iowa  
MEd, Temple University

**Ellie Sweet RN, MSN**

Nursing Instructor  
BSN, Marycrest College  
MSN, Northern Illinois University

**Jamal Tayh**

Physics Instructor  
BS, Tanta University-Egypt  
MS, Eastern Michigan University  
PhD, Northern Illinois University

**Paula Telford RN, BSN**

Nursing Clinical Instructor  
BSN, University of Iowa

**Arnold Thode**

Manager of Registration and Records  
BA, Carthage College

**Glenn Trafford**

Lab Assistant I  
Chemical Sciences Department

**Mary Treacy**

ESL Instructor  
Career Assistance Center

**Susan Trudell**

English Instructor  
BA, Augustana College  
MAT, University of Iowa

**Anna Tunncliff**

Library Assistant I  
BA, Augustana College

**John R. Turner**

English/Literature Instructor  
BJ, University of Missouri  
MA, University of Northern Iowa

**Nnachi Julius Umennachi**

Philosophy Instructor  
BA, Bigard Memorial Seminary-Nigeria  
MA, PhD, University of Nebraska

**Joe Utter**

Career Academy Advisor  
BA, University of Northern Iowa  
MS Ed, EdS, Western Illinois University

**Edward Valle**

Auto Collision Repair Instructor  
AAS, Scott Community College

**Scott VanZuiden**

Mathematics Instructor  
BS, Northwest Missouri State University  
MS, University of Kansas  
MS, Walden University

**Roy VenHorst**

Auto Collision Repair Instructor  
Diploma, Scott Community College  
ICAR, ASE Certified

**Tamara Vesselovskaia-Mandadori**

Administrative and Office Support  
Instructor  
AAS, Scott Community College  
MA, Nizhny Novgorod State Linguistic  
University, Russia

**Peg Walker**

Associate Director/Soft Skill Training  
Instructor  
AAS, Black Hawk College  
BOG, Western Illinois University

**Lori Walljasper**

Information Technology Coordinator/  
Instructor  
BOG/BA, Western Illinois University  
MA, University of Iowa

**Janice Weis**

Disabilities Resource Person  
AA, Scott Community College  
BA, St. Ambrose University  
MEd, St. Ambrose University

**Lynn Welch**

Resource Development Assistant  
AAS, Scott Community College

**Christine Whipple**

Nursing Instructor  
BSN, University of Maryland/Walter  
Reed Medical Army Institute of Nursing

**Andrea Williams**

Speech Instructor  
BA, MA, University of Northern Iowa

**John Wingert**

Automotive/Diesel Technology Instructor  
AAS, Scott Community College  
ASE Certified





## A

Academic Honors	15
Academic Load	10
Academic Requirements	13
Academic Standing	13
Accounting	50, 73, 127
Accounting/Business Administration	50
Accounting Management	73
Accreditation	6
Administrative and Office Support	75
Administrative Assistant	128
Admissions	8
Adult Basic Education (ABE)	25
Advising	19, 21, 22
Agriculture	47, 76, 129
Alternative Delivery	15
American Sign Language	137
Anthropology	138
Application Procedures	8
Articulation	14
Art	55, 138
Arts and Sciences Concentration Listing	40
Associate Degree Nursing	114
Associate in Applied Science Degree	13
Associate in Arts Degree	12
Associate in Science Degree	12
Associate in Science in Pre-Engineering Degree	13
Athletics	18, 20, 22
Audit	9
Auto Collision Repair Technology	78
Automation Technology	141
Auto Technology	80, 142
Aviation	143

## B

Banking	48
Biology	49, 144
Books and Supplies	10
Business Administration/Accounting	50
Business and Industry Center	25
Business Management	82, 198

## C

Calendar	2
Campuses	4
Cancer Information Management	84, 148
Career Assistance	18, 21, 23
Career Technology Areas	69
Catalog Requirements	15
Centrile Sterile Processing	149
Certificate Programs	13
Chemistry	51, 150
Class Attendance	10
Class Standing	15
Clinton Community College	18
Clubs and Organizations	18, 20, 22
CNC/Machining	85
Collision Repair/Refinish	151
Communications	57, 153
Computer Aided Drafting	153
Computer Forensics	154
Computer Networking	105, 154

Computer Programming	159
Computer Science	162
Concurrent Enrollment	8
Confidentiality of Student Records	16
Conservation	52, 162
Construction	162
Continuing Education Units (CEU)	9, 24
Course Descriptions	127
Course Repeats	10
Credit, Types of	14
Credit for Prior Learning	15
Credit Transfer	14
Criminal Justice	52, 163
Culinary Arts	87, 189
Cultural Studies	164

## D

Dental Assisting	89, 164
Diesel Technology	91, 164
Diploma	13
Drafting	166
Drama	55, 166

## E

Early Childhood Education	92, 167
Early Registration/Fee	10
Eastern Iowa Job Training	26
Economics	168
Economic Development	26
Education	53, 168
Educational Costs	10
Electrical Technology	169
Electroneurodiagnostic Technology	93, 171
Electronics	172
Emergency Medical Services	94, 173
Engineering	95, 174
Engineering Technology	175
English	53, 176
English as a Second Language (ESL)	25, 177
Entrepreneurship	83
Environmental Science	54, 180

## F

Farm Management	97
Federal Supplemental Educational Opportunity Grant (FSEOG)11	180
Finance	180
Financial Aid	11
Fine Arts/Art	55
Fine Arts/Drama	55
Fine Arts/Music	56
French	180
Fresh Start	15

# INDEX

## G

General Education Requirements	.41, 72
Geography	.181
German	.181
Global Studies	.181
Grading Designations	.13
Graduation Application	.10
Graduation Requirements	.12, 15
Graphic Arts Technology	.98, 181

## H

Health	.183
Health Information Technology	.99, 184
Health, Safety and Environmental Technology	.100,186
Heating and Air Conditioning	.101, 188
High School Completion	.25
History	.57, 190
Honor Graduates	.15
Honors Program	.18, 20, 22
Horticulture	.103
Hospitality Management	.104, 191
Housing	.18, 20, 22
Humanities	.194

## I

Incomplete Grades	.15
Industrial Technology	.195
Information Technology	.105
Database	.105
Games	.105
Networking	.106
Programming	.107
Security/Forensics	.108
Web Development	.108
Insurance	.11
Interior Design	.109, 196
International Student Admissions	.9
International Trade	.110
Internet	.19, 21, 23
Interpreter Training	.110, 197
Iowa Grant	.12
Iowa Vocational-Technical Tuition Grant	.11

## J

Joint Admission	.15
Journalism/Communication	.57, 198

## K-L

Late Registration Fee	.10
Liberal Arts	.58
Library	.18, 21, 23
Literature	.199
Locations	.4
Logistics	.111

## M

Management and Supervision	.60, 83, 200
Mandatory Programs	.25
Manufacturing	.202
Marketing/Sales/Retailing	.60, 83, 204
Marking System	.14
Mass Media Studies	.205
Mathematics	.61, 205
Mechanical Design Technology	.113
Mission Statement	.6
Military Personnel Admission	.9
Muscatine Community College	.20
Muscatine Community College Foundation	.21
Music	.56, 208

## N

Newspaper	.18, 20
Nursing	.66, 114

## O-P

Paul B. Sharar Foundation	.19
Pell Grant	.11
Personnel Directory	.223
Philosophy	.209
Phi Theta Kappa	.18, 20, 22
Physical Education/Recreation	.61, 209
Physical Science	.62, 210
Physical Therapist Assistant	.115
Physics	.63, 210
Political Science	.64, 210
Practical Nursing	.211
Pre-Chiropractic	.65
Pre-Engineering	.65
Pre-Health Professional	.66
Pre-Law	.66
Prerequisite Recommendation	.14
Professional Development	.24
Program of Study Listings	.28
Psychology	.67, 213

## Q

Quality Vision .....6

## R

Radiologic Technology .....116, 214  
 Reading .....216  
 Re-enrollment .....9  
 Registration .....10  
 Religion .....216  
 Renewable/Sustainable Energy .....172, 217  
 Residency .....11, 15  
 Respiratory Care .....117  
 Restricted Status .....9

## S

Satisfactory Progress .....14  
 Schedule Card .....5  
 Scholarships .....11  
 Scott Community College .....22  
 Scott Community College Foundation .....23  
 Senior Citizens .....9  
 Short Term Skills Training .....25  
 Skills Center/Shop .....20, 23  
 Small Business Development Center .....25  
 Social Work .....67  
 Sociology .....68, 216  
 Spanish .....217  
 Special Needs .....20, 22  
 Speech .....68, 218  
 State of Iowa Scholarship .....12  
 Student Development .....218  
 Student Government .....18, 20, 22  
 Student Learning Assessment .....16  
 Student Records, Confidentiality .....16  
 Student Services .....18, 20, 22  
 Surgical Technology .....118, 219  
 Sustainable Energy .....220

## T

Technical Studies .....119  
 Transcript Designations .....13  
 Transcript Recording Fees .....10  
 Transfer Credit .....9  
 Transfer Guarantee .....14  
 Truck Driving .....120, 220  
 Tuition .....10  
 Tuition Grant (EICC) .....12  
 Tuition Refunds .....10

## U-V

Veterans Admission .....9  
 Veterans Educational Benefits .....12  
 Veterinary Technician Program .....121

## W

Web Development .....221  
 Welding .....122, 221  
 Withdrawal .....10  
 Work Study .....11

## X-Y-Z

