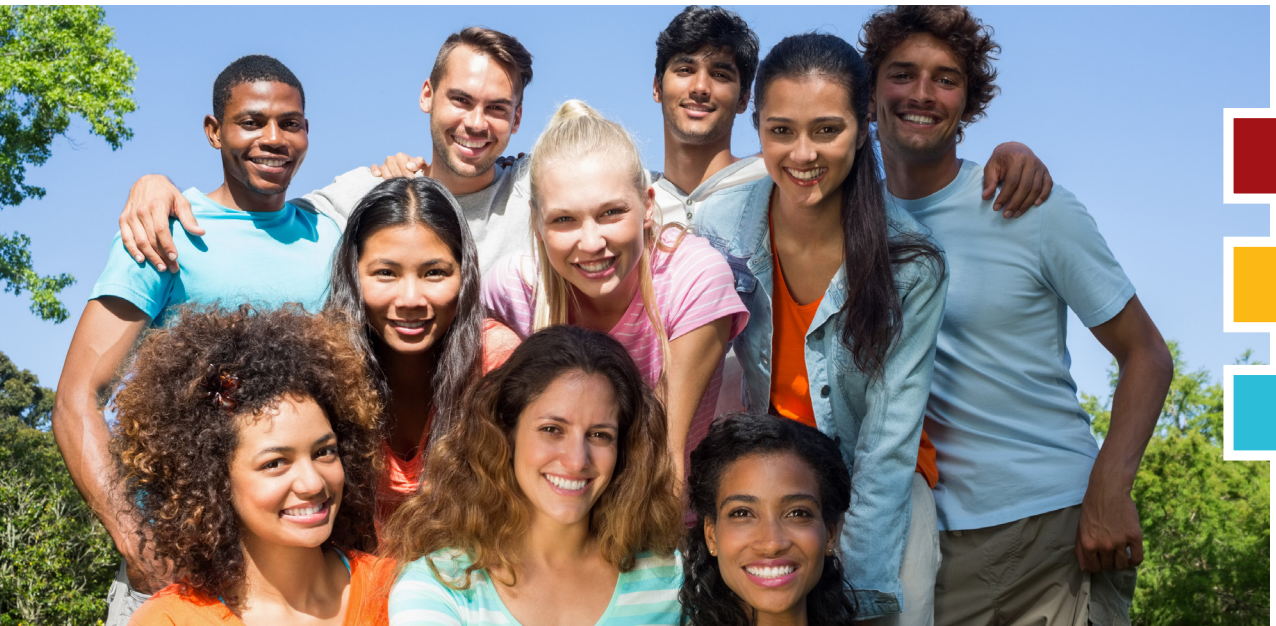
# College Catalog 2017-2018

EASTERN IOWA COMMUNITY COLLEGES

CLINTON • MUSCATINE • SCOTT



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EASTERN IOWA
COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT



The information in this catalog applies to Clinton, Muscatine and Scott Community Colleges for the 2017–2018 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.

Equal Educational Opportunities: It is the policy of Eastern Iowa Community Colleges not to discriminate on the basis of race, color, national origin, sex, disability, age (employment), sexual orientation, gender identity, creed, religion, and actual or potential parental, family or marital status in its programs, activities, or employment practices as required by the Iowa Code §§ 216.6 and 216.9, Titles VI and VII of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d and 2000e), the Equal Pay Act of 1973 (29 U.S.C. § 206, et seq.) Title IX (Educational Amendments, 20 U.S.C. §§ 1681 - 1688), Section 504 (Rehabilitation Act of 1973, 29 U.S.C. § 794), and Title II of the Americans with Disabilities Act (42 U.S.C. § 12101, et seq.).

If you have questions or complaints related to compliance with the policy, please contact Debora J. Sullivan, Equity Coordinator, 306 W. River Drive, Davenport, Iowa 52801, 563/336-3487, djsullivan@eicc.edu or the Director of the Office for Civil Rights, U.S. Department of Education, Citigroup Center, 500 West Madison, Suite 1475, Chicago, IL 60661, phone number 312/730-1560, fax 312/730-1576.

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# WELCOME TO YOUR COMMUNITY COLLEGE

## A MESSAGE FROM THE CHANCELLOR

Welcome to Eastern Iowa Community Colleges, THE Community's College. Thank you for choosing us to further your education.

There are many reasons why we are considered the community's college: we're the sixth largest college in the state of Iowa; we serve 1 in 10 area residents every year; we are fully accredited by the Higher Learning Commission, and much, much more.

But the number one reason is people. It's our faculty who dedicate themselves to their students and aren't afraid to spend extra time making sure you succeed. It's our staff who put service to our students at the top of their list of priorities.

And, most of all, it's our great students. We have the best students any college would ever hope for and are excited about the enthusiasm and energy each and every one of them brings to our classes.

Whether you are taking classes at Clinton, Muscatine or Scott Community Colleges, online, or at one of our 14 satellite locations, we welcome you to our family. You are the reason we proudly say Eastern Iowa Community Colleges is THE Community's College!

Sincerely,

Don Doucette

Chancellor

EASTERN IOWA COMMUNITY COLLEGES

CLINTON • MUSCATINE • SCOTT

## 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 approved by the Iowa Department of Education and the Board of Regents. Individual programs are accredited by associations within their respective fields.

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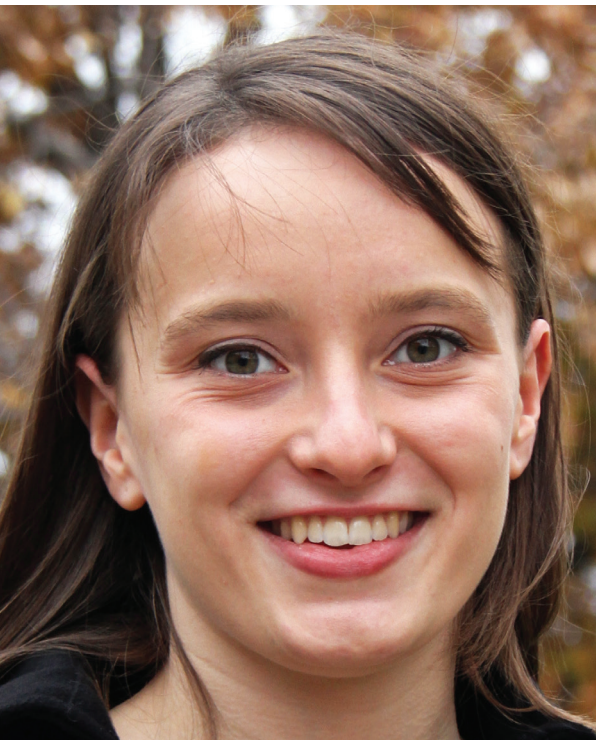
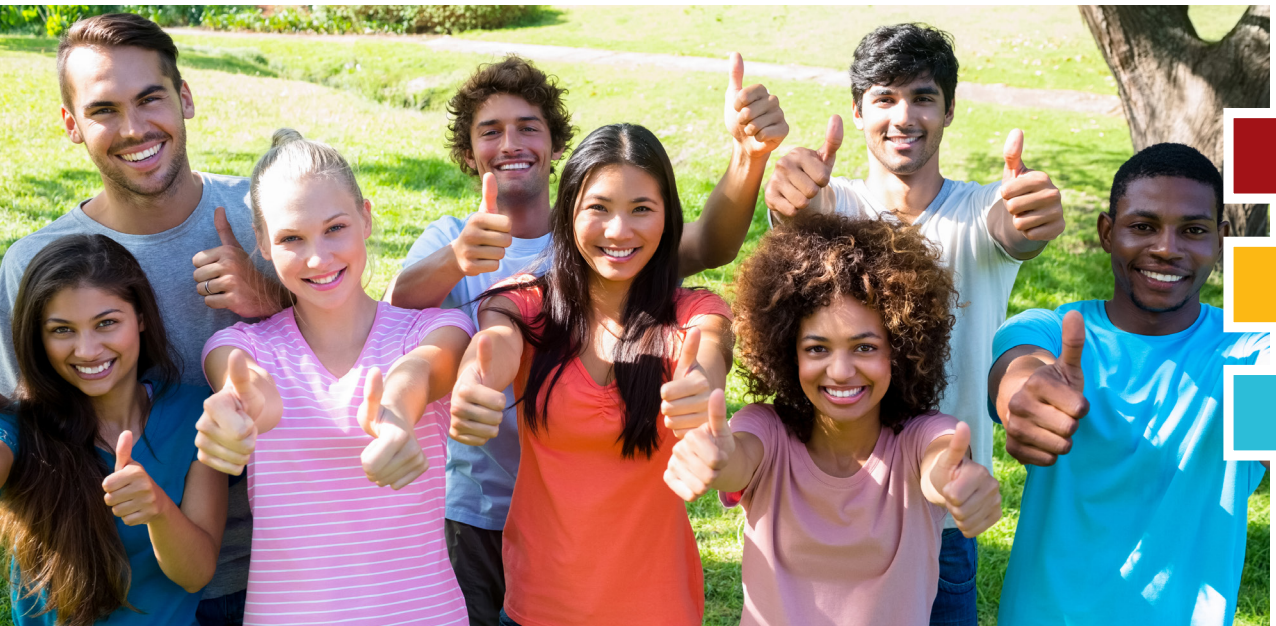
# Student Information

EASTERN IOWA COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT





# Academic Calendar

## FALL SEMESTER 2017

| | |
|---|---|
| Aug. 7 | Fall Tuition and Fees Due |
| Aug. 21 | Fall Classes Begin |
| Aug. 22 | Last Day for 75% Tuition Refund/To Adjust Fall First Eight Week Classes |
| Aug. 25 | Fall 2017 Graduation Applications Due |
| Aug. 25 | Last Day for 50% Tuition Refund for First Eight Week Classes |
| Aug. 25 | Last Day for 75% Tuition Refund/To Adjust Fall 16 Week Classes |
| Sept. 1 | Last Day for 50% Tuition Refund for 16 Week Classes |
| Sept. 4 | Labor Day (College Closed) |
| Sept. 18 | 12 Week Classes Begin |
| Sept. 19 | Last Day for 75% Refund/to Adjust 12 Week Classes |
| Sept. 22 | Last Day for 50% Refund for 12 Week Classes |
| Sept. 29 | District Staff Development Day – College CLOSED |
| Oct. 6 | Last Day to Withdraw from First Eight Week Classes |
| Oct. 13 | Mid-Term |
| Oct. 13 | First Eight Week Classes End |
| Oct. 16 | Second Eight Week Classes Begin |
| Oct. 17 | Last Day for 75% Tuition Refund/To Adjust Fall Second Eight Week Classes |
| Oct. 20 | Last Day for 50% Tuition Refund for Second Eight Week Classes |
| Nov. 7 | Faculty In-Service Day (No Classes) |
| Nov. 22-25 | Thanksgiving - College CLOSED |
| Nov. 27 | Last Day to Withdraw from 16 Week Classes |
| Dec. 8 | Last Day to Withdraw from Second Eight & 12 Week Classes |
| Dec. 12, 13, 14 | Final Exams |
| Dec. 15 | Fall Term Ends |
| Dec. 18 | Grades Due by 12 p.m. |

**Online Class Dates**

| | |
|---|---|
| 16 Weeks: | Aug. 21 - Dec. 8, 2017 |
| 1st 8 Weeks: | Aug. 21 - Oct. 13, 2017 |
| 12 Weeks: | Sept. 18 - Dec. 8, 2017 |
| 2nd 8 Weeks: | Oct. 16 - Dec. 8, 2017 |

## WINTERIM 2017-2018

**Only Online Classes Offered**

| | |
|---|---|
| 4 Weeks: | Dec. 22, 2017 - Jan. 18, 2018 |

## SPRING SEMESTER 2018

| | |
|---|---|
| Dec. 25 - Jan. 1 | College Closed |
| Jan. 3 | Spring Tuition and Fees Due |
| Jan. 15 | Martin Luther King Day - College CLOSED |
| Jan. 16 | Spring Classes Begin |
| Jan. 17 | Last Day for 75% Tuition Refund/To Adjust First Eight Week Classes |
| Jan. 22 | Spring/Summer 2017 Graduation Applications Due |
| Jan. 22 | Last Day for 50% Tuition Refund for First Eight Week Classes |
| Jan. 22 | Last Day for 75% Tuition Refund/To Adjust Spring 16 Week Classes |
| Jan. 29 | Last Day for 50% Tuition Refund for 16 Week Classes |
| Feb. 12 | 12 Week Classes Begin |
| Feb. 13 | Last Day for 75% Tuition Refund/To Adjust 12 Week Classes |
| Feb. 16 | District Spring Symposium – College CLOSED |
| Feb. 19 | Last Day for 50% Tuition Refund for 12 Week Classes |
| Mar. 2 | Last Day to Withdraw from First Eight Week Classes |
| Mar. 9 | Mid-Term |
| Mar. 9 | First Eight Week Classes End |
| Mar. 12-16 | Spring Break |
| Mar. 19 | Second Eight Week Classes Begin |
| Mar. 20 | Last Day for 75% Tuition Refund/To Adjust Spring Second Eight Week Classes |
| Mar. 23 | Last Day for 50% Tuition Refund for Second Eight Week Classes |
| Apr. 10 | Faculty In-Service Day (No Classes) |
| Apr. 23 | Last Day to Withdraw from 16 Week Classes |
| May 4 | Last Day to Withdraw from Second Eight & 12 Week Classes |
| May 8, 9, 10 | Final Exams |
| May 8 | Commencement-Clinton Community College 6 p.m. |
| May 9 | Commencement-Muscatine Community College 6 p.m. |
| May 10 | Commencement-Scott Community College 6 p.m. |
| May 11 | Spring Term Ends |
| May 14 | Grades Due by 12 p.m. |
| May 28 | Memorial Day – College CLOSED |

**Online Class Dates**

| | |
|---|---|
| 16 Weeks: | Jan. 16 - May 4, 2018 |
| 1st 8 Weeks: | Jan. 16 - Mar. 9, 2018 |
| 12 Weeks: | Feb. 12 - May 4, 2018 |
| 2nd 8 Weeks: | Mar. 12 - May 4, 2018 |

## SUMMER TERM 2018

**First Four Week & Eight Week Summer Sessions**

| | |
|---|---|
| May 14 | Summer Tuition and Fees Due |
| May 29 | First Four Week & Eight Week Summer Sessions Begin |
| May 30 | Last Day for 75% Tuition Refund/To Adjust Classes to First Four Week & Eight Week Summer Sessions |
| June 4 | Last Day for 50% Tuition Refund for First Four Week & Eight Week Summer Sessions |
| June 15 | Last Day to Withdraw from First Four Week Session |
| June 22 | First Four Week Session Ends |
| June 25 | First Four Week Session Grades Due by 11:59 p.m. |
| July 4 | College CLOSED |
| July 13 | Last Day to Withdraw from Eight Week Session |
| July 20 | Eight Week Session Ends |
| July 23 | Eight Week Session Grades Due by 12 p.m. |

**Second Four Week Session**

| | |
|---|---|
| June 25 | Second Four Week Session Begins |
| June 26 | Last Day for 75% Tuition Refund/To Adjust Second Four Week Classes |
| June 29 | Last Day for 50% Tuition Refund for Second Four Week Classes |
| July 4 | College CLOSED |
| July 13 | Last Day to Withdraw from Second Four Week Classes |
| July 20 | Second Four Week Session Ends |
| July 23 | Second Four Week Session Grades Due by 12 p.m. |

**Online Class Dates**

| | |
|---|---|
| 1st 8 Weeks: | May 29 - July 23, 2018 |
| 2nd 8 Weeks: | June 11 - Aug. 5, 2018 |
| 4 Weeks: | July 9 - Aug. 5, 2018 |

# 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

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

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

**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

**Muscatine Community College – Outreach Center**
1208 Colton Street
Columbus Junction, IA 52737

**Muscatine Community College – Wilton Center**
1215 Cypress Street
Wilton, IA 52778
563-732-2038

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

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

**New Student Information**
**Call Toll Free (from anywhere):**
**1-888-336-3907**

# 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.

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 deny admission, re-admission or re-enrollment to anyone who may pose a risk to the best interests of the college community. The colleges reserve the right to guide your placement in programs and courses based on assessment interviews and past academic experience.

All new students must complete an 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 entering assessments. 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. Submit the written approval form signed by a parent/guardian and the high school counselor or principal,
3. Complete entering assessment or submit ACT scores. Course placement will be mandatory based on entering assessment 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 is determined and a student who is not at least a freshman in high school is enrolled.

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 entering assessments 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.

## Home School Students - Special Status Admission

EICC will consider the admission of a student to credit classes who is not attending a public or private school, and is currently enrolled as a home school student. 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. Students must complete an Admission Application.
2. Students 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, applicants who do not have a high school diploma will be required to demonstrate that they possess specific pre-requisite skills by taking the entering assessments or submitting ACT scores.
4. The College reserves the right to limit the number of courses and the 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.

### 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 take the assessment required.

Please contact the Admissions Office for more information.

### International Student Admissions

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

1. 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 completed Statement of Financial Support. Forms are available from the Admissions Office.

International students are required to maintain health insurance coverage while enrolled.

### 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. A current class schedule from home college,
2. A copy of I-20,
3. A copy of VISA/Passport, and
4. An unofficial home school transcript.

### Re-enrollment

To be re-admitted to Eastern Iowa Community Colleges, 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 Higher Learning Commission or its regional counterparts. 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 to Eastern Iowa Community Colleges 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 and 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.

Eastern Iowa Community Colleges have been approved and listed with the Department of Defense Memorandum of Understanding and the President's Executive Order of the 'Principles of Excellence' as in compliance with the guidelines of best practices to support our Military and Veteran Students and their family members.

We work closely with Education Service Officers from all five branches for active-duty, reservists, and Iowa National Guard members with their state and federal tuition assistance. Our certificate and degree programs are listed in the GOARMYED website.

EICC is named as a CHAMPS (Certified Higher Academic Military Partner School) by the Iowa Home-based initiative signed by Governor Branstad on November 12, 2013.

Our Career and Technical Education certificate and degree programs are listed with the Service Member's Opportunity College in partnership with the DOD MOU to recruit students into the high-demand jobs per the U.S. Department of Labor.

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.

Gold Star family members and spouses/children of Veterans who are 100% disabled due to service connected disabilities are entitled to the Dependent's Education Assistance program. In addition, there are other financial opportunities for all Veterans/Military and their family members at your campus and in the community.

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 to answer other questions about veteran students, see your VA Certifying Official.

### Residency Status for Military Personnel and Veterans

Active duty military personnel and military service veterans as well as their spouses and dependent children are considered to be Iowa residents for admission, tuition and fee purposes at EICC.

### Senior Citizens

If you are 62 years or older and live in our service area, you may register for on-campus 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.

### Guest Students

Guest students are students attending EICC for either winterim or summer courses only. If you are a guest student, please work with an academic advisor from your home school on appropriate placement and their acceptance of the planned EICC courses.

### 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 for a course you chose to audit.

## REGISTRATION

### New Student Bridge Orientation

New students are required to complete a Bridge Orientation. During the orientation, students will be provided an orientation to the College and available services, meet with an advisor, start an academic degree plan, and register for their first term of classes.

### 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 and follow the link to enroll online. Students may enroll in a maximum of six 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.

### 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 willl 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 may graduate.

## EDUCATIONAL COSTS

We work hard to provide the highest quality instruction at the lowest possible cost. Costs at EICC 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.

### Illinois Border County Tuition

Beginning with the FY2016 acceptance year, the tuition rate for Illinois residents residing in Carroll, Henry, Mercer, Rock Island and Whiteside counties will be the same rate as the tution rate for online courses.

### Books and Supplies

Your costs will vary depending on the program you choose, but you should expect books and supplies 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 Education 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% During the first week of term
  - 50% During the second week of term
- Courses that meet for one week or less:
  - 100% Prior to the official start date of the course
- 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 days of the session

See the Registration Center for the 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, and by the second day of the summer and short 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,while enrolled at EICC. Please visit www.healthcare.gov for available insurance coverage.

## 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.

### Financial Aid 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.

# STUDENT INFORMATION

## 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 students may earn is based on their 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.

## State Assistance

**Iowa Vocational – Technical Tuition Grant –** a state-funded grant for Iowa residents enrolled in Iowa community college Career and Technical Education programs who show financial need and meet the state's priority deadline.

**Iowa Skilled Workforce Shortage Tuition Grant (Kibbie Grant) –** a state-funded program for Iowa residents enrolled in specified Career and Technical Education programs who show financial need and meet the state's priority deadline.

**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.

**Iowa National Guard Tuition Assistance**

**GEAR UP Iowa Scholarship –** The GEAR UP Iowa Scholarship provides awards of up to $2,600 per year to students who are part of the GEAR UP Iowa state-wide cohort.

## EICC Programs

**EICC Tuition Grant –** funded by EICC, this grants 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.

## State-based Student Complaints Process

The Iowa College Student Aid Commission (the Commission) has overarching, statutory authority under Iowa Code Chapter 261B to determine the registration (i.e., licensure or authorization) status of postsecondary educational institutions that operate at a physical location within the State of Iowa or that offer distance education courses and programs to Iowa residents. In addition, the Commission administers provisions of Iowa's student consumer protection laws in Iowa Code Section 714, 18, 714.19, 714.23, 714.24 that address financial responsibility for certain educational institutions, and, for proprietary institutions, a tuition refund policy for withdrawn students.

Persons who have questions about a postsecondary educational institution's compliance with Iowa Code Chapter 261B, and Iowa Code Sections 714.18, 714.19, 714.23, and 714.24 should contact:

J. Carolyn Small
Postsecondary Registration Administrator
Iowa College Student Aid Commission
(515) 725-3413
Carolyn.small@iowa.gov

In addition, the Iowa College Student Aid Commission maintains a Constituent Request for Review process that meets the conditions of federal regulations in 34 CFR 600.9(a)(1). These regulations state that a postsecondary educational institution located in a State is legally authorized by the State, in part, if the State has a process to review and appropriate act on complaints concerning the institution. The Commission accepts complaints from any student attending any postsecondary educational institution located in Iowa, and from any Iowa resident attending a postsecondary educational institution located in any other State.

A student may initiate the Constituent Request for Review process at http://www.iowacollegeaid.gov/constituentrequest.asp.

# 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 | 6.00 |
| Speech | 3.00 |
| Arts and Humanities | |
| Literature | 3.00 |
| Humanities | 3.00 |
| Arts | 3.00 |
| Cultural/Historical Perspective | |
| Western Perspectives | 3.00 |
| Intercultural Perspectives | 3.00 |
| Social Science | |
| Economics or Political Science | 3.00 |
| Psychology or Sociology | 3.00 |
| Natural Sciences | |
| Life Sciences | 4.00 |
| Physical Sciences | 3.00-4.00 |
| Mathematics | 3.00 |
| Computer Skills (1) | 3.00 |
| Concentration Courses and | |
| Electives (2,3,4) | 18.00-19.00 |
| TOTAL | 62.00 |

Courses that satisfy specific requirements for A.A. concentration areas are listed on pages 45-46.

1. You may choose to demonstrate proficiency in computer skills.
2. A maximum of 16 credit hours of Career and Technical Education credit may be accepted as electives.
3. A maximum of four credit hours of Student Development (SDV) 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 are listed below.

| Area | Credits |
|---|---|
| Communications | |
| Written Composition | 6.00 |
| Speech | 3.00 |
| Arts and Humanities | 6.00 |
| Literature | |
| Humanities | |
| Arts | |
| Cultural/Historical Perspective | 3.00 |
| Western Perspectives | |
| Intercultural Perspectives | |
| Social Science | 3.00 |
| Economics or Political Science | |
| Psychology or Sociology | |
| Mathematics & Natural Sciences | 24.00 |
| Life Sciences | |
| Physical Sciences | |
| Mathematics | |
| Computer Skills | |
| Demonstrate Proficiency | |
| Concentration Courses | |
| and Electives (1,2,3) | 17.00 |
| TOTAL | 62.00 |

Courses that satisfy requirements for specific A.S. concentration areas are listed on pages 47-48.

1. A maximum of 16 credit hours of Career and Technical Education credit may be accepted as electives.
2. A maximum of four credit hours of Student Development (SDV) 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 four-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 | 6.00 |
| Speech | 3.00 |
| Arts and Humanities | 0.00 - 9.00 |
| Literature | |
| Humanities | |
| Arts | |
| Cultural/Historical Perspectives | 0.00 - 9.00 |
| Western Perspectives | |
| Intercultural Perspectives | |
| Social Science | 3.00 |
| Economics or Political Science | |
| Psychology or Sociology | |
| Natural Sciences | 8.00 - 20.00 |
| Life Sciences | |
| Physical Sciences | |
| Mathematics | 21.00 |
| Mathematics | |
| Computer Skills | 3.00 - 6.00 |
| Electives (1,2,3) | 0.00 - 11.00 |
| TOTAL | 62.00 |

Courses that satisfy specific requirements for A.S. in Pre-Engineering concentration areas are listed on pages 49-50.

1. A maximum of 11 credit hours of Career and Technical Education credit may be accepted as electives.
2. A maximum of four credit hours of Student Development (SDV) courses may be counted toward the Pre-Engineering A.S. degree.
3. All course work for the Pre-Engineering 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, you 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 15 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. See specific requirements for A.A.S. program later in the catalog.

## Diploma Programs

Diplomas are awarded if you 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 three 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 diploma programs 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. The certificate means you have attained the minimum competencies in your chosen area. All course work must be at the 100 level or above. See specific requirements listed for certificate 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 calculate 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 Grading Symbols and Definitions Agreement.

## Marking System

A – Excellent Performance

B – Above Average Performance

C – Average Performance

D – Below Average Performance

F – Failure. No credit granted or grade points is awarded, but the 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.

R – Course has been repeated.

O – Fresh Start Grade

## 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 6 to 11 credit hours, you will need to successfully complete at least 6 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.

# STUDENT INFORMATION

## 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 Career and Technical Educaiton 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

EICC is accredited by the Higher Learning Commission of the North Central Association, so your Arts and Sciences credits from here will normally transfer to any regionally accredited U.S. 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 the requirements so that if any of the credits in your Associate of Arts degree do not transfer to the seven participating colleges and universities, you will be able to retake coursework at no cost at EICC. These institutions are Iowa State University, Iowa Wesleyan 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 EICConnect.

## Joint Admission

By applying for joint admission, you may be admitted to both EICC and a transfer institution at the same time. Advisors from both colleges will help you plan your course work to ensure a smooth transfer process. 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.

## Class Standing

Freshmen are students who have completed no more than 29 credit hours; students with 30 or more 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 will 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 may 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 (A.A.S. 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 EICC.

## 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 Academic Dean for more information concerning Credit for Prior Learning.

## Online Options

Since 2001, EICC has been offering affordable, quality online education through a supporting, innovative partnership with Iowa Community Colleges Online Consortium (ICCOC). Through ICCOC EICC offers courses, degrees, certificates, and diplomas online.

Many of EICC's programs have courses that can be taken online, and several of EICC's Career and Technical programs are completely online: Cancer Information Management, Health Information Technology, and Environmental Health and Safety.

To register for an online class, a student must first apply for admission at EICC. The schedule of online courses is on the EICC website. An academic advisor can answer any questions about the online courses being offered, as well as what courses that may be taken to complete a degree or program. The academic advisor can also assist students in their enrollment in online courses and programs.

## Alternative Delivery

EICC offers many options for course delivery. Visit 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/studenthandbook.

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 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, EICC uses other tools to measure the effectiveness of its programs. Examples of program assessment include the Collegiate Assessment of Academic Proficiency (CAAP) and Career and Technical Education program tests of critical technical and employment skills. You will receive your academic testing results.

You may also be surveyed regarding your satisfaction level with college programs and services. These assessments help the District target areas to improve student services and also ensure the College complies with Iowa and Higher Learning Commission 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.

Students 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 they first enroll during that year. It is necessary for students to renew their objection at the beginning of each school year.

Students wishing to review the entire EICC policy on student rights may request the EICC 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**

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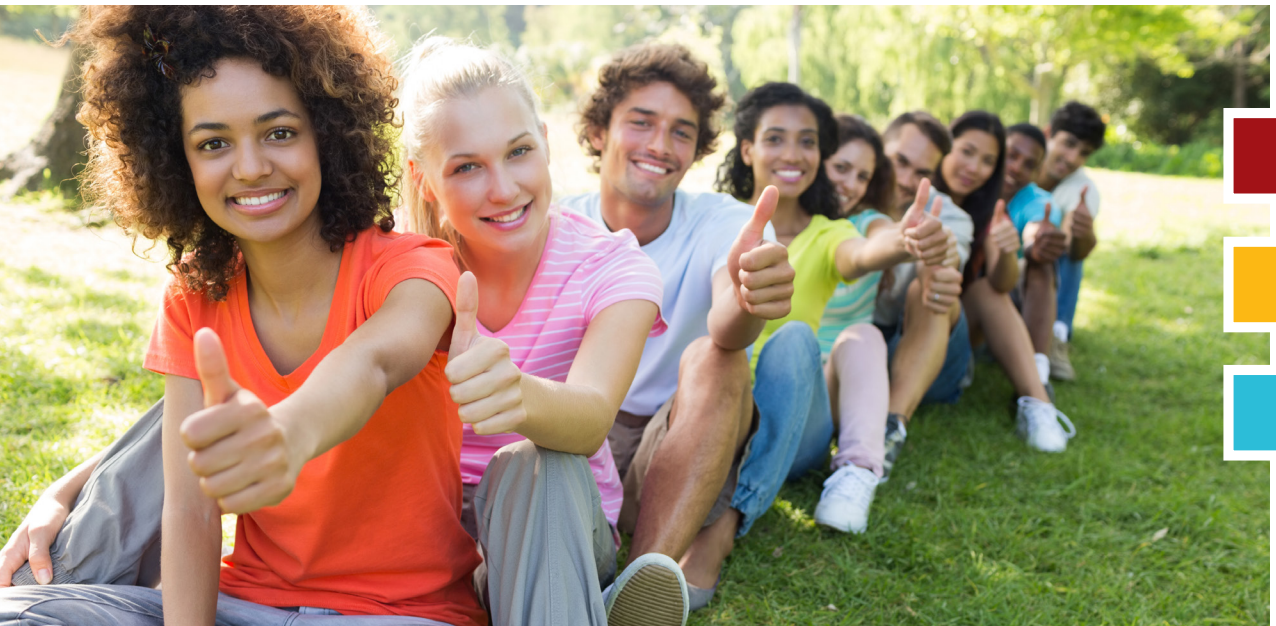
# College Information

EASTERN IOWA COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT



# CLINTON COMMUNITY COLLEGE

## 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-aged 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 Clinton campus. For more information, visit the Web Site at www.eicc.edu/ccc/sharar/index.html**

## 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 and Technical Education program options. The College's faculty offer quality, personalized education with a student-instructor ratio of 20 to 1.

Approximately two-thirds of Clinton Community College students are enrolled on a part-time basis. 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 Clinton Community College. In addition, the Alumni Association supports four different scholarships for Clinton Community College 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.

## STUDENT ACTIVITIES

### Chi Alpha Campus Fellowship

Chi Alpha is an opportunity for students to gather, share stories, pray about problems and discuss biblical issues and their relevancy to contemporary life. Weekly meetings are held during the academic year and are open to the College community.

### Graphic Arts Club

The mission of the Graphic Arts Club is to promote the printing industry and the College to other students and the public. Membership is open to all students willing to work as a team. Activities include speaker presentations and field trips.

### Intercollegiate and Intramural Athletics

There are a wide variety of intramural sports offered to Clinton Community College Students. With student involvement, a variety of intramurals are offered such as board game tournaments, card tournaments, volleyball, golf and bowling. For more information about intramurals and to sign up, see Student Engagement Coordinator.

### Engineering Technology Club

The Engineering Technology Club helps members keep up with new developments in their career fields and allows them to explore career opportunities in engineering technology. Membership is open to any person enrolled in the Engineering Technology program.

### Nursing Club

The Nursing Club offers pre-nursing, freshman, and sophomore nursing program students an opportunity to interact and work together in a group setting. Membership is open to all pre-nursing and nursing students. Members organize group meetings for nursing program students, attend nursing conferences, workshops, and participate in field trips related to nursing and health care.

### Phi Theta Kappa

PTK is an honorary fraternity for the recognition of academic achievement. Membership is earned by qualifications, honor and service. PTK recognizes and encourages scholarships for community college students and stimulates interest in continuing academic excellence.

### Small Group Sessions
Small Group Sessions on Learning Styles, Study Skills, Time and Stress Management and Test-taking Tips are held each semester. Discover how you learn so you can make the most of your class time and your study time. Also discover where you should study. Learn specific ways to study using your personal learning style. Receive handouts that can help you study efficiently and effectively. Learn some tips on how to reduce stress and make efficient use of your time while juggling your roles as a student, employee, family member, etc.; learning test-taking skills, which are related to your learning style and attitude toward taking tests of different types. These Sessions are 30 minutes in length.

### Special Interest Groups
There are currently three special interest groups in which students can participate. The groups are Music, Board Games and River Talk (a podcast group).

### Students Networking and Programming Club (SNAP)
SNAP fosters a better understanding and knowledge of computer networks and the networks role. The club actively participates in field trips, fund-raising projects, conferences, and brings guest speakers to campus.

### Student Government/Senate
The Senate plans, coordinates and directs a variety of events and activities throughout the year. This active organization provides students with a positive educational and fun atmosphere on and off campus. Senators attend workshops and conferences throughout the state promoting Clinton Community College and gain valuable leadership and networking opportunities. Be sure to watch for your monthly calendar that highlights all the upcoming activities and events on campus.

### Student Veterans of America
The Student Veterans chapter is the "Boots on the Ground" that helps veterans reintegrate into campus life and succeed. Student Veterans of America is the nation's largest coalition of SVO's united under shared vision that all student veterans will succeed in post-secondary programs and contribute to society in meaningful ways. Membership is open to all military and veteran students and their families.

### Student Newspaper
The Gallery is a monthly newspaper edited and written by students. It reports and provides commentary on campus life and activities. Membership is open to all students, especially those who are interested in journalism, expressive and creative writing, advertising, production and sales.

## STUDENT SERVICES

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

### Library Services
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 two million items available in area academic and public libraries. The library Web site is www.eicc.edu/library and its phone number is 563-244-7046.

### Career Services
The College's staff offers interest assessments and career services to set 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 EICC website includes an online credit class schedule database, general college information and links to other EICC sites. The address is: 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

## 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 and Technical Education programs. The college has an annual enrollment of more than 2,200 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.

## 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/Senate

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.

### Intramural Athletics

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. It 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 student apartments are 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 by contacting the Residential Life Coordinator at 563-549-0203.

# COLLEGE INFORMATION

## Test Center

Make-up testing is given upon instructor request. Special testing such as CLEP, 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, adjust to college, 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.

## 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 Director for more information.

## Library Services

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 website includes an online credit class schedule database, general college information and links to other EICC sites. The address is: 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 Kahl Educational Center.

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

## 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 cities 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 7,700 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 College's business programs 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 7,700 students in college transfer and Career Technical Education 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/Senate

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.

### Intercollegiate and Intramural Athletics

Students can participate in these intercollegiate sports at Scott Community College: women's soccer, men's soccer, women's cross county and men's cross country. More information is available in the Student 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 563-441-4001.

## Guidance

Student Services staff can help students with educational, personal and career-related concerns. 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 441-4181 or go to room 2204.

## Advising

Professional staff advisors and faculty advise students on appropriate courses for their educational programs. Contact the Student Services Office, Room 2204, for more information, or call 441-4181.

## Housing

Located one 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 119) 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.

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 and the phone number is 563-441-4150.

## Events Publications

Calendars are published monthly by the Student 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 online soon after mid-term. Contact the Admissions Office or the Student Services Office.

## 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 website includes an online credit class schedule database, general college information and links to other EICC sites. The address is: www.eicc.edu.

# COLLEGE INFORMATION

**Eastern Iowa Community Colleges' Continuing Education and Business Solutions** 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 32,000 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 Training Solutions | |
| Davenport | 563-336-3444 |
| Clinton | 563-244-7064 |
| Muscatine | 563-288-6161 |
| Small Business Development Center | 563-336-3401 |

## COSTS

Continuing Education tuition and fees are determined for each activity to assure quality programs are offiered at an affordable price. 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 colleges' Continuing Education Office for specific information.

## REGISTRATION

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

### Cancelled Classes

Classes without sufficient registrations 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 College holds 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), Learning Resources Network (LERN), 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 Leadership –** Programs include Leadership Training, which provides a practical approach to enhancing communication and team-building skills, 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.

**Technical Training –** Emphasis is on new skill development and/or retraining. EICC has two advanced manufacturing technology centers – in Davenport and Muscatine – to provide state-of-the-art, hands-on training in such areas as welding, statistical process control, lean manufacturing, basic and advanced electricity, mechanical design, programmable logic control, basic and advanced CNC, engineering technology, 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 and Business Solutions 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, 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

EICC offers 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.

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

## Adult Educational Services

**ABE –** Adult Basic Education (ABE) provides learning experiences in reading, writing, math and other basic skills. Regardless of level, small classes and personalized attention let students progress at their own rate to meet your goals. Class content is geared toward developing basic life skills and knowledge.

**HSE –** The High School Equivalency(HSE) program prepares individuals to pass the High School Equivalency Tests (HiSET) in the areas of Math, Science, Reading, Writing and Social Studies. The coursework also serves as preparation for entering college or the job market. Instruction is applied to real-world scenarios to help students make personal connections with their learning.

**ESL –** English as a Second Language (ESL) is a program to help refugees, immigrants and others with limited English skills learn to live and function in the United States. Classes will provide content on reading, writing and speaking the language as it relates to common life and workforce concepts..

## 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 our 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, 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 professions.

# BUSINESS AND INDUSTRY TRAINING SOLUTIONS

Since 1987 EICC has provided companies with solutions to enhance employee skills and productivity. Our Business Solutions consultants offer expert assessment of training needs and work with companies to deliver a customized, hands-on, state-of-the-art training program tailored to the 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.

Business Solutions consultants 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 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.

## IowaWORKS

IowaWorks is the one-stop office 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, now the Workforce Innovation Opportunity (WIOA) and Promise Jobs. The one-stop office is to provide job seekers with a wide range of services and support in one location.

IowaWORKS also offers services in Clinton, Jackson, and Muscatine counties in collaboration with core partners – Voc Rehab, Department for the Blind, and Adult Education.

# COLLEGE INFORMATION

## 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. 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. The test is free for Iowa residents and veterans. NCRC testing is offered in all Region 9 counties every month. To register, call 563.445.3200, x43310. 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 proofread your resume. Stop in and check out the IowaWORKS Skills Lab. Staff is on-hand to assist job seekers. Mondays, Tuesdays, Thursdays, and Fridays from 8:30 a.m. - 4:30 p.m., and Wednesdays from 9:00 a.m. - 4:30 p.m.

## WHAT SERVICES ARE AVAILABLE FOR JOB SEEKERS?

IowaWORKS offers a wide array of services. Items marked (*) are available only to eligible WIOA 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 WIOA 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
- Rapid response support for companies that are closing or down-sizing

### 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

# COLLEGE INFORMATION

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

### Scott Community College
**West Davenport Center**
2950 Fairmount Street
Davenport, IA 52806
563-326-5319

## EICC FOUNDATION

The Eastern Iowa Community Colleges 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 EICC Foundation, call 563-336-3302.**

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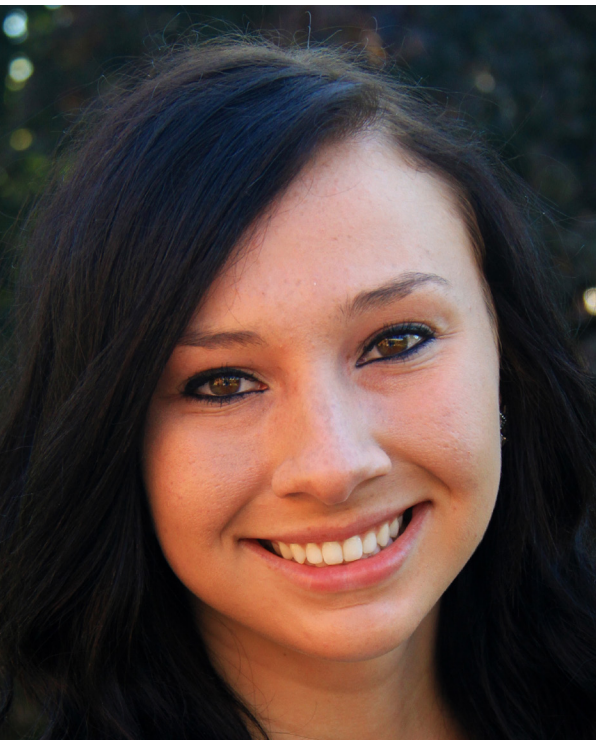
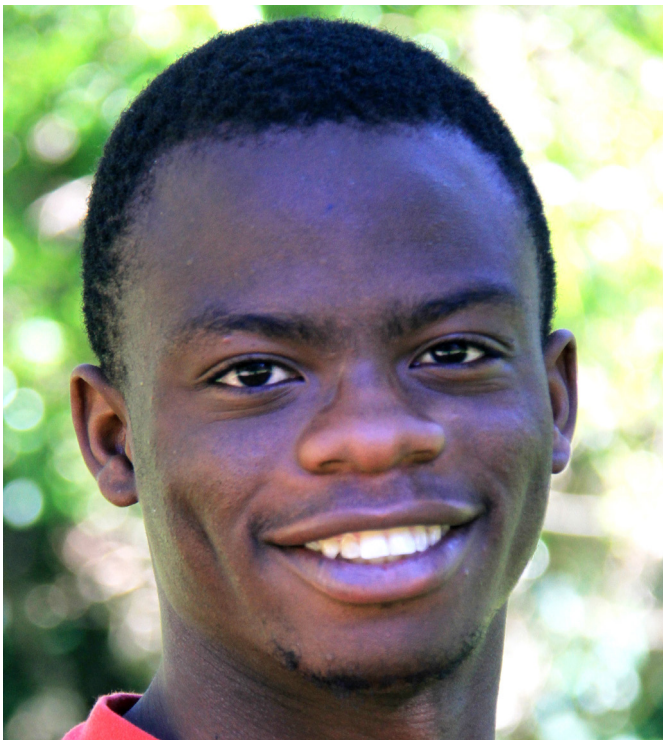
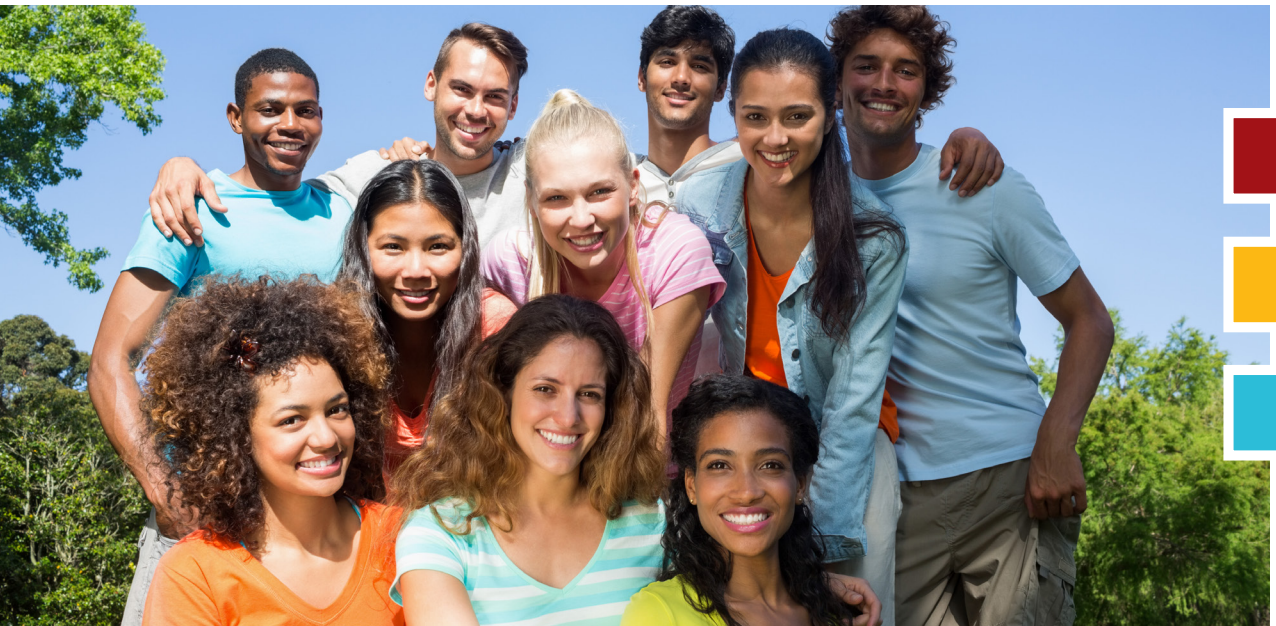
# EICC Programs

EASTERN IOWA
COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT







# EICC DEGREES

## 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.

| EMPHASIS | LOCATION |
|---|---|
| Agriculture | MCC |
| Banking | CCC, MCC, SCC |
| Biology | CCC, MCC, SCC |
| Business A | CCC, MCC, SCC |
| Chemistry | CCC, MCC, SCC |
| Criminal Justice | CCC, MCC, SCC |
| Education | CCC, MCC, SCC |
| English | CCC, MCC, SCC |
| Environmental Science | CCC, MCC, SC |
| Fine Arts - Art | CCC, MCC, SCC |
| Fine Arts - Drama | MCC, SCC |
| Fine Arts - Music | MCC |
| History | CCC, MCC, SCC |
| Journalism/Communication | CCC, MCC, SC |
| 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 |
| Political Science | CCC, MCC, SCC |
| Pre-Chiropractic | CCC, MCC, SCC |
| Pre-Engineering | 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.) - Emphasis 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.

| EMPHASIS | LOCATION |
|---|---|
| Agriculture | MCC |
| Biology | CCC, MCC, SCC |
| Chemistry | CCC, MCC, SCC |
| Chemistry Laboratory Processes | CCC, MCC, SCC |
| Conservation | CCC, MCC, SCC |
| 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 |

# PROGRAMS OF STUDY BY DEGREE & LOCATION

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

An Associates 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 and Office Support | CCC, MCC, SCC |
| Agribusiness Management | MCC |
| Agribusiness Management – Agribusiness Equipment Technician | MCC |
| American Sign Language – English Interpreting | SCC |
| Auto Collision Repair Technology | SCC |
| Automotive Technology | SCC |
| Business Management | CCC, MCC, SCC |
| Cancer Information Management | SCC |
| CNC/Machining | SCC |
| Culinary Arts Apprenticeship | MCC, SCC |
| Culinary Arts | MCC, SCC |
| Dental Hygiene** | CCC, MCC, SCC/CSC |
| Diesel Technology | SCC |
| Early Childhood Education | SCC |
| Electroneurodiagnostic Technology | SCC |
| Emergency Medical Services | CCC, MCC, SCC |
| Engineering Technology – Automation, Electromechanical or Process Control | CCC, MCC, SCC |
| Environmental, Health and Safety | CCC, MCC, SCC |
| Farm Management | MCC |
| Graphic Arts Technology | CCC |
| Health Information Technology | SCC |
| Heating, Ventilation and Air Conditioning | SCC |
| Hospitality Management | MCC, SCC |
| Information Technology – Database | CCC, MCC, SCC |
| Information Technology – Games and Simulations | CCC, MCC, SCC |
| Information Technology – Hardware/Help Desk Administration | CCC, MCC, SCC |
| Information Technology – Networking | CCC, MCC, SCC |
| Information Technology – Programming | CCC, MCC, SCC |
| Information Technology – Security and Forensics | CCC, MCC, SCC |
| Information Technology – Server Administration | CCC, MCC, SCC |
| Information Technology – Web Development | CCC, MCC, SCC |
| Mechanical Design Technology | SCC |
| Nursing, Associates Degree | CCC, SCC |
| Radiologic Technology | SCC |
| Renewable Energy Systems Specialist | SCC |
| Respiratory Care*** | CCC, MCC, SCC/NICC |
| Sonography – Diagnostic Cardiac | SCC |
| Sonography – Diagnostic Medical | SCC |
| Supply Chain and Logistics | CCC, MCC, SCC |
| Surgical Technology | SCC |
| Technical Studies | CCC, MCC, SCC |
| Veterinary Technician | MCC |
| Welding | SCC |

# PROGRAMS OF STUDY BY DEGREE & LOCATION

## Diploma

A diploma is a program of coursework which may be completed in less than 2 years. 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 |
| Agribusiness Management – Agribusiness Equipment Sales and Service | MCC |
| Agribusiness Management – Agronomy | MCC |
| Agribusiness Management – Sales and Service | MCC |
| Auto Collision Repair Technology | SCC |
| Automotive Technology | SCC |
| Cancer Information Management | SCC |
| Culinary Arts | MCC, SCC |
| Dental Assisting | SCC |
| Diesel Technology | SCC |
| Early Childhood Education | MCC, SCC |
| Engineering Technology – Electromechanical | CCC, MCC, SCC |
| Environmental, Health and Saftey | CCC, MCC, SCC |
| Graphic Arts Technology | CCC |
| Health Information Technology | SCC |
| Heating, Ventilation and Air Conditioning | SCC |
| Hospitality Management – Hospitality Skills | MCC, SCC |
| Information Technology – Networking | CCC, MCC, SCC |
| Information Technology – Programming | MCC, SCC |
| Mechanical Design Technology | SCC |
| Practical Nursing | CCC, MCC, SCC |
| Supply Chain and Logistics* | CCC, MCC, SCC |
| Surgical Technology – Central Sterile Processing | SCC |
| Welding | SCC |

* Pending state approval

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

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

# PROGRAMS OF STUDY BY DEGREE & LOCATION

## Certificate

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

| PROGRAM OF STUDY | LOCATION |
|---|---|
| Administrative and Office Support | CCC, MCC, SCC |
| American Sign Language - English Interpreting - Deaf Studies | SCC |
| Auto Collision Repair Technology | SCC |
| Automotive Technology – Basic Service | SCC |
| Automotive Technology – General Service | SCC |
| Business Management – Entrepreneurship | CCC, MCC, SCC |
| Business Management – Management Supervision | CCC, MCC, SCC |
| Business Management – Marketing | CCC, MCC, SCC |
| Business Management – Small Business Management | CCC, MCC, SCC |
| Cancer Information Management | SCC |
| CNC/Machining – CNC Programming | SCC |
| CNC/Machining – Manual Machining | SCC |
| Culinary Arts | MCC, SCC |
| Culinary Arts – Baking | MCC, SCC |
| Dental Assisting – Dental Assisting Expanded Functions | SCC |
| Diesel Technology – Heavy Duty Train | SCC |
| Diesel Technology – Truck Electrical | SCC |
| Early Childhood Education | MCC, SCC |
| Emergency Medical Services – Emergency Medical Technician | CCC, MCC, SCC |
| Emergency Medical Services – Advanced Emergency Medical Technician | CCC, MCC, SCC |
| Engineering Technology – Basic Electricity | CCC, SCC |
| Engineering Technology – Basic Electronics | CCC, SCC |
| Engineering Technology – Electrical Systems | CCC, SCC |
| Engineering Technology – Process Control Technology | CCC, SCC |
| Environmental, Health and Saftey | CCC, MCC, SCC |
| Heating, Ventilation and Air Conditioning | SCC |
| Hospitality Management – Skills | MCC, SCC |
| Hospitality Management – Event Management | MCC, SCC |
| Mechanical Design Technology | SCC |
| Supply Chain and Logistics – Inventory Control* | CCC, MCC, SC |
| Supply Chain and Logistics – Logistics and Transportation* | CCC, MCC, SCC |
| Surgical Technology – Central Sterile Processing and Distribution Technician | SCC |
| Truck Driving | SCC |
| Truck Driving – Truck Driving and Transportation Training | SCC |
| Welding – Basic Welding | MCC, SCC |
| Welding – General Maintenance Welding | SCC |
| Welding – Production Welding | CCC, SCC |
| Welding – Structural Welding | SCC |

* Pending state approval

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

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

# PROGRAMS OF STUDY BY CAREER CLUSTER

## EICC DEGREES BY CAREER CLUSTER

| PROGRAM OF STUDY | DEGREE | LOCATION |
|---|---|---|
| **AGRICULTURE, FOOD AND NATURAL RESOURCES** | | |
| Agribusiness Management – Agribusiness Equipment Technician | A.A.S. | MCC |
| Agribusiness Management – Agribusiness Equipment Sales and Service | Diploma | MCC |
| Agribusiness Management | A.A.S. | MCC |
| Agribusiness Management – Agronomy | Diploma | MCC |
| Agribusiness Management – Sales and Service | Diploma | MCC |
| Agriculture (Transfer) | A.A., A.S. | MCC |
| Conservation (Transfer) | A.S. | MCC |
| Environmental, Health and Safety | A.A.S., Diploma, Certificate | CCC, MCC, SCC |
| Farm Management | A.A.S. | MCC |
| Renewable Energy Systems Specialist | A.A.S. | SCC |
| **ARCHITECTURE AND CONSTRUCTION** | | |
| Heating, Ventilation and Air Conditioning | A.A.S., Diploma, Certificate | SCC |
| **ARTS, A/V TECHNOLOGY AND COMMUNICATIONS** | | |
| English (Transfer) | A.A. | CCC, MCC, SCC |
| Fine Arts – Arts, (Transfer) | A.A. | CCC, MCC, SCC |
| Fine Arts – Drama (Transfer) | A.A. | MCC, SCC |
| Fine Arts – Music (Transfer) | A.A. | MCC |
| Graphic Arts Technology | A.A.S., Diploma | CCC |
| Journalism/Communications (Transfer) | A.A. | CCC, MCC, SCC |
| Speech (Transfer) | A.A. | CCC, MCC, SCC |
| **BUSINESS, MANAGEMENT AND SUPERVISION** | | |
| Accounting Management | A.A.S., Diploma | MCC, SCC |
| Administrative and Office Support | A.A.S., Diploma, Certificate | CCC, MCC, SCC |
| Business (Transfer) | A.A. | CCC, MCC, SCC |
| Business Management | A.A.S. | CCC, MCC, SCC |
| Business Management – Entrepreneurship | Certificate | CCC, MCC, SCC |
| Business Management – Management Supervision | Certificate | CCC, MCC, SCC |
| Business Management – Marketing | Certificate | CCC, MCC, SCC |
| Business Management – Small Business Management | Certificate | CCC, MCC, SCC |
| **EDUCATION AND TRAINING** | | |
| Early Childhood Education | A.A.S., Diploma, Certificate | SCC |
| Education (Transfer) | A.A. | CCC, MCC, SCC |
| Physical Education and Recreation (Transfer) | A.A. | CCC, MCC, SCC |
| **FINANCE** | | |
| Accounting Management | A.A.S., Diploma | MCC, SCC |
| Banking (Transfer) | A.A. | CCC, MCC, SCC |
| Business (Transfer) | A.A. | CCC, MCC, SCC |

# PROGRAMS OF STUDY BY CAREER CLUSTER

| PROGRAM OF STUDY | DEGREE | LOCATION |
|---|---|---|
| **GOVERNMENT AND PUBLIC ADMINISTRATION** | | |
| History (Transfer) | A.A. | CCC, MCC, SCC |
| Political Science (Transfer) | A.A. | CCC, MCC, SCC |
| **HEALTH SCIENCE** | | |
| Cancer Information Management | A.A.S., Diploma, Certificate | SCC |
| Dental Assisting | Diploma | SCC |
| Dental Assisting Expanded Functions | Certificate | SCC |
| Dental Hygiene** | A.A.S. | CCC, MCC, SCC/CSC |
| Electroneurodiagnostic Technology | A.A.S. | SCC |
| Emergency Medical Services | A.A.S. | CCC, MCC, SCC |
| Emergency Medical Services – Advanced Emergency Medical Technician | Certificate | CCC, MCC, SCC |
| Emergency Medical Services –Emergency Medical Technician | Certificate | CCC, MCC, SCC |
| Health Information Technology | A.A.S., Diploma | SCC |
| Nursing, Associates Degree | A.A.S. | CCC, SCC |
| Practical Nursing | Diploma | CCC, MCC, SCC |
| Pre-Chiropractic (Transfer) | A.A., A.S. | CCC, MCC, SCC |
| Pre-Health Professional (Transfer) | A.A., A.S. | CCC, MCC, SCC |
| Radiologic Technology | A.A.S. | SCC |
| Respiratory Care*** | A.A.S. | CCC, MCC, SCC/NICC |
| Sonography – Diagnostic Cardiac | A.A.S. | SCC |
| Sonography – Diagnostic Medical | A.A.S. | SCC |
| Surgical Technology | A.A.S. | SCC |
| Surgical Technology – Central Sterile Processing | Diploma | SCC |
| Surgical Technology – Central Sterile Processing and Distribution Technician | Certificate | SCC |
| Veterinary Technician | A.A.S. | MCC |
| **HOSPITALITY AND TOURISM** | | |
| Culinary Arts Apprenticeship | A.A.S. | MCC, SCC |
| Culinary Arts | A.A.S., Diploma, Certificate | MCC, SCC |
| Culinary Arts – Baking | Certificate | MCC, SCC |
| Hospitality Management | A.A.S. | MCC, SCC |
| Hospitality Management – Event Management | Certificate | MCC, SCC |
| Hospitality Management – Hospitality Skills | Diploma, Certificate | MCC, SCC |
| Physical Education and Recreation (Transfer) | A.A. | CCC, MCC, SCC |
| **HUMAN SERVICES** | | |
| American Sign Language - English Interpreting | A.A.S. | SCC |
| American Sign Language - English Interpreting - Deaf Studies | Certificate | SCC |
| Early Childhood Education | A.A.S., Diploma, Certificate | MCC, SCC |
| Psychology (Transfer) | A.A. | CCC, MCC, SCC |
| Social Work (Transfer) | A.A. | CCC, MCC, SCC |
| Sociology (Transfer) | A.A. | CCC, MCC, SCC |

# PROGRAMS OF STUDY BY CAREER CLUSTER

| PROGRAM OF STUDY | DEGREE | LOCATION |
|---|---|---|
| **INFORMATION TECHNOLOGY** | | |
| Information Technology – Database | A.A.S. | CCC, MCC, SCC |
| Information Technology – Games and Simulations | A.A.S. | CCC, MCC, SCC |
| Information Technology – Hardware/Helpdesk Administration | A.A.S. | CCC, MCC, SCC |
| Information Technology – Networking | A.A.S., Diploma | CCC, MCC, SCC |
| Information Technology – Programming | A.A.S., Diploma | MCC, SCC |
| Information Technology – Security and Forensics | A.A.S. | CCC, MCC, SCC |
| Information Technology – Server Administration | A.A.S. | CCC, MCC, SCC |
| Information Technology – Web Development | A.A.S. | CCC, MCC, SCC |
| **LAW, PUBLIC SAFETY AND SECURITY** | | |
| Criminal Justice (Transfer) | A.A. | CCC, MCC, SCC |
| Pre-Law (Transfer) | A.A. | CCC, MCC, SCC |
| **MANUFACTURING** | | |
| CNC/Machining | A.A.S. | SCC |
| CNC/Machining – CNC Programming | Certificate | SCC |
| CNC/Machining – Manual Machining | Certificate | SCC |
| Engineering Technology – Automation, Electromechanical or Process Control | A.A.S. | CCC, MCC, SCC |
| Engineering Technology – Basic Electricity | Certificate | SCC |
| Engineering Technology – Basic Electronics | Certificate | SCC |
| Engineering Technology – Electrical Systems | Certificate | CCC, SCC |
| Engineering Technology – Electromechanical | Diploma | CCC, MCC, SCC |
| Engineering Technology – Process Control Technology | Diploma, Certificate | CCC, MCC, SCC |
| Mechanical Design Technology | A.A.S., Diploma, Certificate | CCC, MCC, SCC |
| Technical Studies | A.A.S. | CCC, MCC, SCC |
| Welding | A.A.S., Diploma | CCC, MCC, SCC |
| Welding – Basic Welding | Certificate | MCC, SCC |
| Welding – General Maintenance Welding | Certificate | SCC |
| Welding – Production Welding | Certificate | CCC, SCC |
| Welding – Structural Welding | Certificate | SCC |
| **MARKETING, SALES AND SERVICES** | | |
| Business Management – Marketing | Certificate | CCC, MCC, SCC |
| Marketing (Transfer) | A.A. | CCC, MCC, SCC |
| **SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS** | | |
| Biology (Transfer) | A.A., A.S. | CCC, MCC, SCC |
| Chemistry (Transfer) | A.A., A.S. | CCC, MCC, SCC |
| Chemistry Laboratory Processes (Transfer) | A.S. | CCC, MCC, SCC |
| Engineering Technology | A.A.S. | CCC, MCC, SCC |
| Environmental Science (Transfer) | A.A., A.S. | CCC, MCC, SCC |
| Mathematics (Transfer) | A.A., A.S. | CCC, MCC, SCC |
| Physical Science (Transfer) | A.A., A.S. | CCC, MCC, SCC |
| Pre-Engineering (Transfer) | A.S. | CCC, MCC, SCC |

# PROGRAMS OF STUDY BY CAREER CLUSTER

| PROGRAM OF STUDY | DEGREE | LOCATION |
|---|---|---|
| **TRANSPORTATION, DISTRIBUTION AND LOGISTICS** | | |
| Auto Collision Repair Technology | A.A.S., Diploma, Certificate | SCC |
| Automotive Technology | A.A.S., Diploma | SCC |
| Automotive Technology – Basic Service | Certificate | SCC |
| Automotive Technology – General Service | Certificate | SCC |
| Diesel Technology | A.A.S., Diploma | SCC |
| Diesel Technology – Heavy Duty Train | Certificate | SCC |
| Diesel Technology – Truck Electrical | Certificate | SCC |
| Supply Chain and Logistics* | A.A.S., Diploma | CCC, MCC, SCC |
| Supply Chain and Logistics – Inventory Control* | Certificate | CCC, MCC, SCC |
| Supply Chain and Logistics – Logistics and Transportation* | Certificate | CCC, MCC, SCC |
| Truck Driving | Certificate | SCC |
| Truck Driving – Truck Driving and Transportation Training | Certificate | SCC |
| **UNDECIDED** | | |
| Transfer | A.A. | CCC, MCC, SCC |
| Transfer, Interest in Science or Math | A.S. | CCC, MCC, SCC |

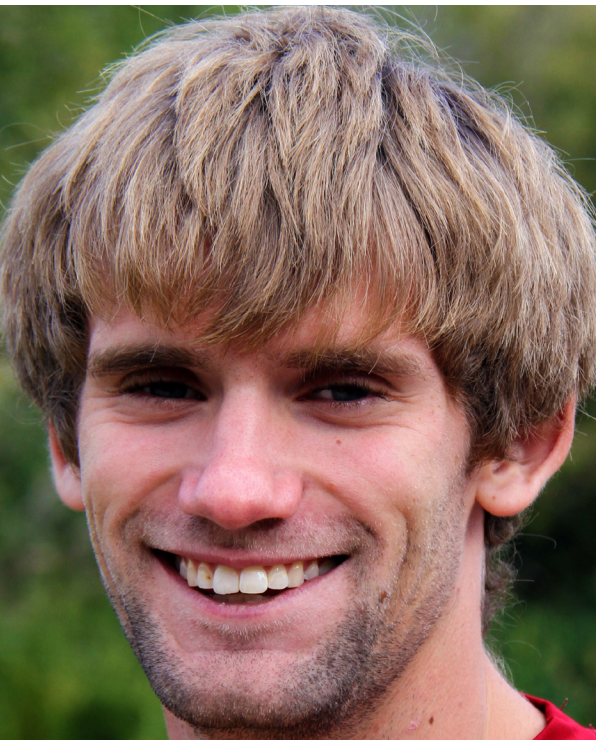
* Pending state approval

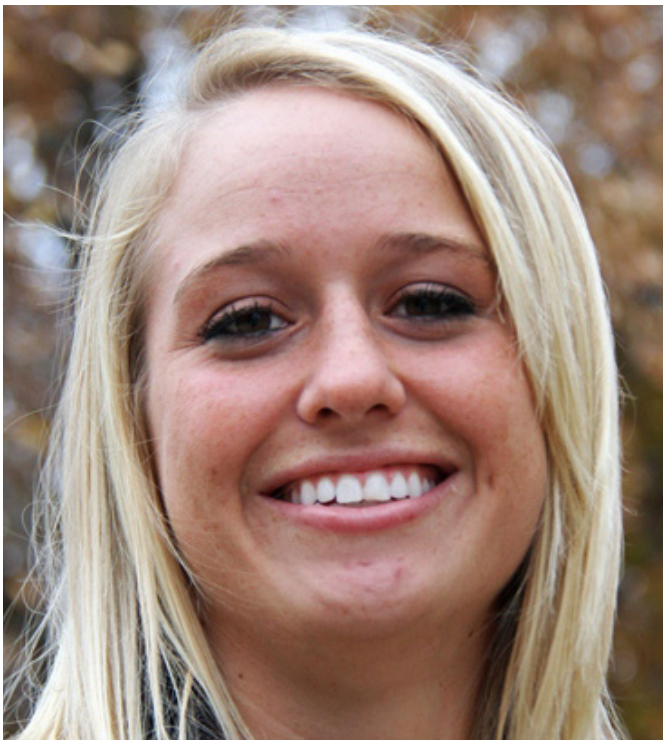
** CCC, MCC, SCC/CSC is a program offered cooperatively with Carl Sandburg College in Galesburg, Illinois

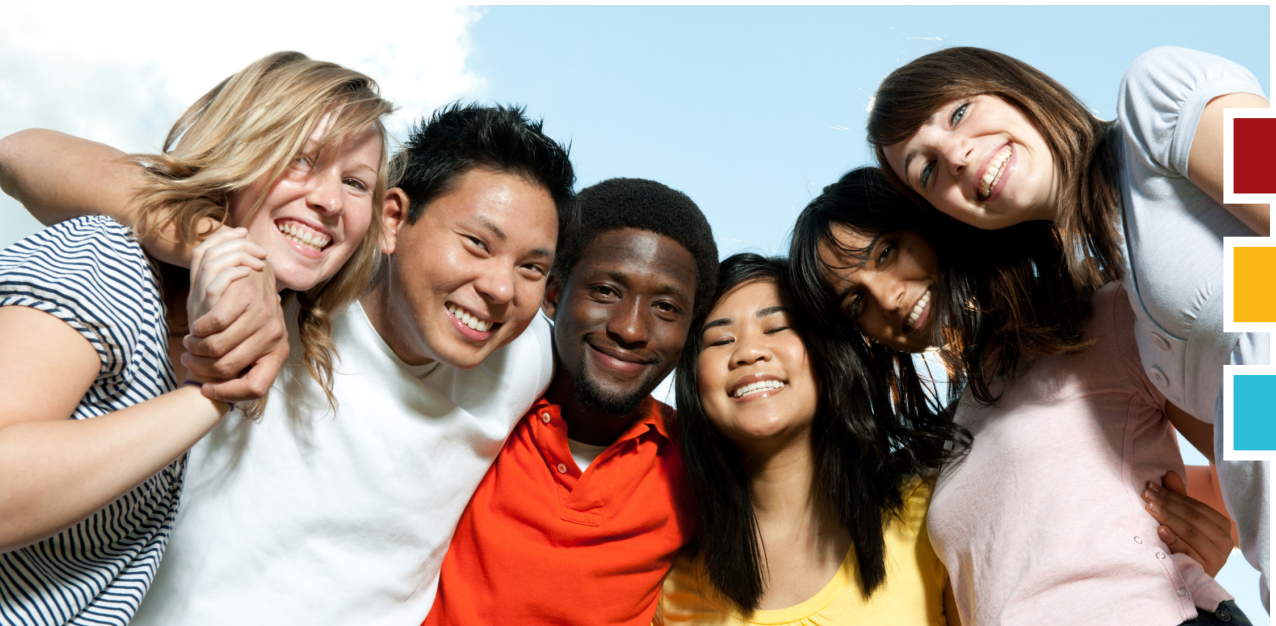
*** CCC, MCC, SCC/NICC is a program offered cooperatively with Northeast Iowa Community College in Peosta, Iowa

# Arts & Sciences

EASTERN IOWA
COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT







# ARTS & SCIENCES LISTINGS



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 - A.A. DEGREE

As a result of students' experiences with the entire general education coursework at EICC, they will develop proficiencies that are specific to unique disciplines as well as competencies that result from the assimilation of knowledge, information and skills taken from a variety of disciplines. Students will be expected to develop:

1. An understanding of human behavior in order to deal effectively and ethically with self, other individuals and groups;
2. Strategies to adapt to change and achieve goals;
3. Critical thinking and problem-solving skills to be applied to a variety of situations;
4. The ability to comprehend, communicate and apply information at the college level; and
5. An appreciation and understanding of the physical/biological environment and humanity's relationship to it.

**All students pursuing an Associate of Arts degree must fulfill general education requirements as outlined on page 15. The courses that will fulfill these requirements are listed below.**

## Communications (9 credits required)

| **Select one of these courses:** | | **Credits** |
|---|---|---|
| ENG:105 | Composition I | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| **Select one of these courses:** | | |
| ENG:106 | Composition II | 3.00 |
| ENG:108 | Composition II: Technical Writing | 3.00 |
| **Select one of these courses:** | | |
| SPC:112 | Public Speaking | 3.00 |
| SPC:170 | Professional Communication | 3.00 |

## Arts and Humanities (9 credits required)

| **Select one Literature course:** | | |
|---|---|---|
| LIT:101 | Introduction to Literature | 3.00 |
| LIT:111 | American Literature since Mid-1800's | 3.00 |
| LIT:183 | Masterpieces: Neoclassical to Modern | 3.00 |
| LIT:185 | Contemporary Literature | 3.00 |
| **Select one Humanities course:** | | |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:110 | Changes and Choices | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| PHI:101 | Introduction to Philosophy | 3.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PHI:110 | Introduction to Logic | 3.00 |
| REL:101 | Survey of World Religions | 3.00 |

| **Select one course in the Fine Arts:** | | **Credits** |
|---|---|---|
| ART:101 | Art Appreciation | 3.00 |
| DRA:101 | Introduction to Theatre | 3.00 |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:135 | Humanities of the Early World | 3.00 |
| HUM:136 | Humanities of the Renaissance | 3.00 |
| HUM:137 | Humanities of the Modern World | 3.00 |
| MUS:100 | Music Appreciation | 3.00 |

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

## Cultural/Historical Perspectives (6 credits required)

| **Select one course from the Western perspective:** | | |
|---|---|---|
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:151 | U.S. History to 1877 | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |
| **Select one course from an Intercultural perspectives or language:** | | |
| ANT:105 | Cultural Anthropology | 3.00 |
| ASL:151 | American Sign Language 1 | 3.00 |
| CLS:150 | Latin American History and Culture | 3.00 |
| FL_:___ | Foreign Language - One Semester | 3.00-4.00 |
| GEO:121 | World Regional Geography | 3.00 |
| GLS:100 | Contemporary World Issues | 3.00 |
| GLS:120 | Education Experience Abroad | 1.00-3.00 |
| HIS:211 | Modern Asia History | 3.00 |
| HIS:231 | Contemporary World Affairs | 3.00 |

## Social Sciences (6 credits required)

| **Select one Economics or Political Science course:** | | |
|---|---|---|
| ECN:120 | Principles of Macroeconomics | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| POL:111 | American National Government | 3.00 |
| **Select one Psychology or Sociology course:** | | |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

Note: Requirements continue on next page.

# GENERAL EDUCATION REQUIREMENTS - A.A. DEGREE

## Natural Sciences (8 credits required)

| Select one course in the Life Sciences: | | Credits |
|---|---|---|
| BIO:105 | Introductory Biology | 4.00 |
| BIO:114 | General Biology IA | 4.00 |
| BIO:125 | Plant Biology | 4.00 |
| BIO:157 | Human Biology | 4.00 |
| BIO:163 | Essentials of Anatomy and Physiology | 4.00 |
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| ENV:111* | Environmental Science | 4.00 |
| ENV:145 | Conservation Biology | 4.00 |
| **Select one course in the Physical Sciences:** | | |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| CHM:165 | General Chemistry I | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| CHM:179 | Principles of General Chemistry | 6.00 |
| ENV:111* | Environmental Science | 4.00 |
| ENV:139 | Energy and the Environment | 4.00 |
| PHS:120 | Exploring Physical Science | 4.00 |
| PHS:152 | Astronomy | 4.00 |
| PHS:166 | Meteorology: Weather and Climate | 4.00 |
| PHS:172 | Physical Geology | 4.00 |
| PHY:110 | Survey of Physics I | 3.00 |
| PHY:162 | College Physics I | 4.00 |
| PHY:212 | Classical Physics I | 5.00 |

* ENV:111 Environmental Science can fulfill either the Life Scienes or the Physical Sciences requirement, but not both.

## Mathematics (3 credits required)

| | | |
|---|---|---|
| MAT:110 | Math for Liberal Arts | 3.00 |
| MAT:117 | Math for Elementary Teachers* | 3.00 |
| MAT:128 | Precalculus | 4.00 |
| MAT:140 | Finite Mathematics | 3.00 |
| MAT:156 | Statistics | 3.00 |
| MAT:165 | Business Calculus | 3.00 |
| MAT:210 | Calculus I | 4.00 |

* Only students majorin in Elementary Education may select this course option.

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

| | | |
|---|---|---|
| CSC:107 | Computer Literacy | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |

* To demonstrate proficiency, students would need to complete the Computer Skills Proficiency Exam with a passing score.

## Electives (Up to 19 credits required)

19.00

**A.A.S. Total ..... 62.00**

## Electives

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; 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 - A.S. DEGREE

As a result of students' experiences with the entire general education coursework at EICC, they will develop proficiencies that are specific to unique disciplines as well as competencies that result from the assimilation of knowledge, information and skills taken from a variety of disciplines. Students will be expected to develop:

1. An understanding of human behavior in order to deal effectively and ethically with self, other individuals and groups;
2. Strategies to adapt to change and achieve goals;
3. Critical thinking and problem-solving skills to be applied to a variety of situations;
4. The ability to comprehend, communicate and apply information at the college level; and
5. An appreciation and understanding of the physical/biological environment and humanity's relationship to it.

**All students pursuing an Associates in Science degree must fulfill general education requirements as outlined on page 15. The courses that will fulfill these requirements are listed below.**

## Communications (9 credits required)

| **Select one course in English:** | | **Credits** |
|---|---|---|
| ENG:105 | Composition I | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| **Select one course in English:** | | |
| ENG:106 | Composition II | 3.00 |
| ENG:108 | Composition II: Technical Writing | 3.00 |
| **Select one course in Speech:** | | |
| SPC:112 | Public Speaking | 3.00 |
| SPC:170 | Professional Communication | 3.00 |

## Arts and Humanities (6 credits required)

**Select one course from any two of the following three categories:**

| **Literature:** | | |
|---|---|---|
| LIT:101 | Introduction to Literature | 3.00 |
| LIT:111 | American Literature since the Mid-1800's | 3.00 |
| LIT:183 | Masterpieces: Neoclassical to Modern | 3.00 |
| LIT:185 | Contemporary Literature | 3.00 |
| **Humanities:** | | |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:110 | Changes and Choices | 3.00 |
| HUM:183 | Living with Space, Time & Tech. | 3.00 |
| PHI:101 | Introduction to Philosophy | 3.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PHI:110 | Introduction to Logic | 3.00 |
| REL:101 | Survey of World Religions | 3.00 |

| **Fine Arts:** | | **Credits** |
|---|---|---|
| ART:101 | Art Appreciation | 3.00 |
| DRA:101 | Introduction to Theatre | 3.00 |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:135 | Humanities of the Early World | 3.00 |
| HUM:136 | Humanities of the Renaissance | 3.00 |
| HUM:137 | Humanities of the Modern World | 3.00 |
| MUS:100 | Music Appreciation | 3.00 |

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

## Cultural/Historical Perspectives (3 credit required)

| **Select one course:** | | |
|---|---|---|
| ANT:105 | Cultural Anthropology | 3.00 |
| CLS:150 | Latin Am. History and Culture | 3.00 |
| FL_:___ | Foreign Language - One Semester | 3.00-4.00 |
| GEO:121 | World Regional Geography | 3.00 |
| GLS:100 | Contemporary World Issues | 3.00 |
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:151 | U.S. History to 1877 | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |
| HIS:211 | Modern Asian History | 3.00 |
| HIS:231 | Contemporary World Affairs | 3.00 |

## Social Sciences (3 credits required)

| **Select one course:** | | |
|---|---|---|
| ECN:120 | Principles of Macroeconomics | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| POL:111 | American National Government | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

Note: Requirements continue on next page.

# GENERAL EDUCATION REQUIREMENTS - A.S. DEGREE

## Mathematics & Natural Sciences (24 credits required)

| Select at least two Natural Sciences courses: | | Credits |
|---|---|---|
| BIO:105 | Introductory Biology | 4.00 |
| BIO:114 | General Biology IA | 4.00 |
| BIO:115 | General Biology IIA | 4.00 |
| BIO:125 | Plant Biology | 4.00 |
| BIO:157 | Human Biology | 4.00 |
| BIO:163 | Essenials of Anatomy and Physiology | 4.00 |
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| BIO:186 | Microbiology | 4.00 |
| BIO:255 | Neuroanatomy | 3.00 |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| CHM:132 | Introduction to Organic and Biochemistry | 4.00 |
| CHM:165 | General Chemistry I | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| CHM:175 | General Chemistry II | 4.00 |
| CHM:176 | General Chemistry II | 5.00 |
| CHM:179 | Principles of General Chemistry | 6.00 |
| CHM:261 | Organic Chemistry I | 4.00 |
| CHM:263 | Organic Chemistry I | 5.00 |
| CHM:271 | Organic Chemistry II | 4.00 |
| CHM:273 | Organic Chemistry II | 5.00 |
| ENV:111 | Environmental Science | 4.00 |
| ENV:139 | Energy and the Environment | 4.00 |
| ENV:145 | Conservation Biology | 4.00 |
| PHS:120 | Exploring Physical Science | 4.00 |
| PHS:152 | Astronomy | 4.00 |
| PHS:166 | Meteorology: Weather & Climate | 4.00 |
| PHS:172 | Physical Geology | 4.00 |
| PHY:110 | Survey of Physics I | 3.00 |
| PHY:111 | Survey of Physics II | 3.00 |
| PHY:162 | College Physics I | 4.00 |
| PHY:172 | College Physics II | 4.00 |
| PHY:212 | Classical Physics I | 5.00 |
| PHY:222 | Classical Physics II | 5.00 |
| **Select at least one Mathematics course:** | | |
| MAT:128 | Precalculus | 4.00 |
| MAT:140 | Finite Mathematics | 3.00 |
| MAT:156 | Statistics | 3.00 |
| MAT:165 | Business Calculus | 3.00 |
| MAT:210 | Calculus I | 4.00 |
| MAT:216 | Calculus II | 4.00 |
| MAT:219 | Calculus III | 4.00 |
| MAT:227 | Differential Equations | 4.00 |

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

| | | |
|---|---|---|
| CSC:110 | Introduction to Computers | 3.00 |

* To demonstrate proficiency, students would need to complete the Computer Skills Proficiency Exam with a passing score.

## Electives (Up to 17 credits required)

17.00

**A.S. Total ..... 62.00**

## Electives

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, Chemistry Laboratory Processes, Computer Science, Conservation, Mathematics, Physics, Pre-Chiropractor, Pre-Health Professional.

# GENERAL EDUCATION REQUIREMENTS - A.S. IN PRE-ENGINEERING

As a result of students' experiences with the entire general education coursework at EICC, they will develop proficiencies that are specific to unique disciplines as well as competencies that result from the assimilation of knowledge, information and skills taken from a variety of disciplines. Students will be expected to develop:

1. An understanding of human behavior in order to deal effectively and ethically with self, other individuals and groups;
2. Strategies to adapt to change and achieve goals;
3. Critical thinking and problem-solving skills to be applied to a variety of situations;
4. The ability to comprehend, communicate and apply information at the college level; and
5. An appreciation and understanding of the physical/biological environment and humanity's relationship to it.

**Students pursuing an Associate in Science in Pre-Engineering degree must fulfill general education requirements as outlined on page 16. The courses that will fulfill these requirements are listed below.**

## Communications (9 credits required)

| **Select one of these courses:** | | **Credits** |
|---|---|---|
| ENG:105 | Composition I | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| **Select one of these courses:** | | |
| ENG:106 | Composition II | 3.00 |
| ENG:108 | Composition II: Technical Writing | 3.00 |
| **Select one of these courses:** | | |
| SPC:112 | Public Speaking | 3.00 |
| SPC:170 | Professional Communication | 3.00 |

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

**Select one course from any two of the following threecategories:**

| **Literature course:** | | |
|---|---|---|
| LIT:101 | Introduction to Literature | 3.00 |
| LIT:111 | American Literature since Mid-1800's | 3.00 |
| LIT:183 | Masterpieces: Neoclassical to Modern | 3.00 |
| LIT:185 | Contemporary Literature | 3.00 |
| **Humanities course:** | | |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:110 | Changes and Choices | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| PHI:101 | Introduction to Philosophy | 3.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PHI:110 | Introduction to Logic | 3.00 |
| REL:101 | Survey of World Religions | 3.00 |
| **Fine Arts:** | | **Credits** |
| ART:101 | Art Appreciation | 3.00 |
| DRA:101 | Introduction to Theatre | 3.00 |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:135 | Humanities of the Early World | 3.00 |
| HUM:136 | Humanities of the Renaissance | 3.00 |
| HUM:137 | Humanities of the Modern World | 3.00 |
| MUS:100 | Music Appreciation | 3.00 |

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

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

| | | |
|---|---|---|
| ANT:105 | Cultural Anthropology | 3.00 |
| CLS:150 | Latin Am. History and Culture | 3.00 |
| FL_:___ | Foreign Language - One Semester | 3.00-4.00 |
| GEO:121 | World Regional Geography | 3.00 |
| GLS:100 | Contemporary World Issues | 3.00 |
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:151 | U.S. History to 1877 | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |
| HIS:211 | Modern Asian History | 3.00 |
| HIS:231 | Contemporary World Affairs | 3.00 |

## Social Sciences (3 credits required)

| **Select one course:** | | |
|---|---|---|
| ECN:120 | Principles of Macroeconomics | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| POL:111 | American National Government | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

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

| | | |
|---|---|---|
| BIO:105 | Introductory Biology | 4.00 |
| BIO:114 | General Biology IA | 4.00 |
| BIO:115 | General Biology IIA | 4.00 |
| BIO:125 | Plant Biology | 4.00 |
| BIO:157 | Human Biology | 4.00 |
| BIO:163 | Essentials of Anatomy and Physiology | 4.00 |
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| CHM:132 | Introduction to Organic and Biochemistry | 4.00 |
| CHM:165 | General Chemistry I | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| CHM:175 | General Chemistry II | 4.00 |
| CHM:176 | General Chemistry II | 5.00 |
| CHM:179 | Principles of General Chemistry | 6.00 |

Note: Requirements continue on next page.

# GENERAL EDUCATION REQUIREMENTS - A.S. IN PRE-ENGINEERING

| | | |
|---|---|---|
| CHM:261 | Organic Chemistry I | 4.00 |
| CHM:263 | Organic Chemistry I | 5.00 |
| CHM:271 | Organic Chemistry II | 4.00 |
| CHM:273 | Organic Chemistry II | 5.00 |
| ENV:111 | Environmental Science | 4.00 |
| ENV:139 | Energy and the Environment | 4.00 |
| ENV:145 | Conservation Biology | 4.00 |
| PHS:120 | Exploring Physical Science | 4.00 |
| PHS:152 | Astronomy | 4.00 |
| PHS:166 | Meteorology: Weather & Climate | 4.00 |
| PHS:172 | Physical Geology | 4.00 |
| PHY:110 | Survey of Physics I | 3.00 |
| PHY:111 | Survey of Physics II | 3.00 |
| PHY:162 | College Physics I | 4.00 |
| PHY:172 | College Physics II | 4.00 |
| PHY:212 | Classical Physics I | 5.00 |
| PHY:222 | Classical Physics II | 5.00 |

## Mathematics (21 credits required)*

| | | |
|---|---|---|
| MAT:128 | Precalculus | 4.00 |
| MAT:140 | Finite Mathematics | 3.00 |
| MAT:156 | Statistics | 3.00 |
| MAT:165 | Business Calculus | 3.00 |
| MAT:210 | Calculus I | 4.00 |
| MAT:216 | Calculus II | 4.00 |
| MAT:219 | Calculus III | 4.00 |
| MAT:227 | Differential Equations | 4.00 |

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

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

| | | |
|---|---|---|
| CSC:110 | Introduction to Computers | 3.00 |

* To demonstrate proficiency, students would need to complete the Computer Skills Proficiency Exam with a passing score.

## Electives (Up to 11 credits required)

11.00

**A.S. Total ..... 62.00**

## Electives

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.

# AGRICULTURE

**CAMPUS** MUSCATINE COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF ARTS OR ASSOCIATE OF SCIENCE

## A.A./A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Communications:** | | **Credits** |
|---|---|---|
| SPC:112 | Public Speaking | 3.00 |
| **Social Sciences:** | | |
| ECN:130 | Principles of Microeconomics | 3.00 |
| **Natural Sciences:** | | |
| BIO:114 | General Biology IA | 4.00 |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| **Mathematics:** | | |
| MAT:140 | Finite Math | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| AGA:285 | Crop Protection | 3.00 |
| AGA:349 | Fertilizers | 1.50 |
| AGA:351 | Soil Science | 1.50 |
| AGA:881 | Grain Science | 1.75 |
| AGB:231 | Futures and Options | 1.50 |
| AGB:232 | Livestock and Grain Marketing | 3.00 |
| AGS:119 | Livestock Management | 2.00 |
| AGS:180 | Sheep Production | 1.50 |
| AGS:315 | Principles of Animal Nutrition | 3.00 |
| AGS:401 | Swine Production | 3.00 |
| AGS:410 | Swine Production II | 1.50 |
| AGS:554 | Beef Production | 3.00 |
| AGS:881 | Feeds | 1.75 |

# BANKING

**CAMPUS** CLINTON, MUSCATINE, & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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 | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| **Math:** | | |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| ACC:142 | Financial Accounting | 3.00 |
| ACC:146 | Managerial Accounting | 3.00 |
| ACC:221 | Cost Accounting | 3.00 |
| BUS:180 | Business Ethics | 3.00 |
| BUS:185 | Business Law I | 3.00 |
| FIN:106 | AIB Principles of Banking | 3.00 |
| FIN:121 | Personal Finance | 3.00 |
| FIN:130 | Principles of Finance | 3.00 |

# BIOLOGY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Natural Sciences: Life** | | **Credits** |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| **Natural Sciences: Physical** | | |
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| **Mathematics:** | | |
| MAT:210 | Calculus I | 4.00 |
| **Computer Skills:** | | |
| CSC:107 | Computer Literacy OR | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| BIO:115 | General Biology IIA | 4.00 |
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemistry II OR | 5.00 |
| CHM:132 | Introduction to Organic & Biochemistry OR | 4.00 |
| CHM:261 | Organic Chemistry I OR | 4.00 |
| CHM:263 | Organic Chemistry I | 5.00 |
| PHY:162 | College Physics I | 4.00 |
| PHY:172 | College Physics II | 4.00 |
| MAT:156 | Statistics | 3.00 |

# BIOLOGY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF SCIENCE

## A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| BIO:115 | General Biology IIA | 4.00 |
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemistry II | 5.00 |
| CHM:261 | Organic Chemistry I OR | 4.00 |
| CHM:263 | Organic Chemistry I | 5.00 |
| **Mathematics:** | | **Credits** |
| MAT:210 | Calculus I | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| MAT:156 | Statistics | 3.00 |
| PHY:162 | College Physics I AND | 4.00 |
| PHY:172 | College Physics II OR | 4.00 |
| PHY:212 | Classical Physics I AND | 5.00 |
| PHY:222 | Classical Physics II | 5.00 |

# BUSINESS

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:** | | **Credits** |
|---|---|---|
| Check with your transfer institution for which math course you will need | | |
| MAT:140 | Finite Math OR | 3.00 |
| MAT:156 | Statistics OR | 3.00 |
| MAT:165 | Business Calculus OR | 3.00 |
| MAT:210 | Calculus I | 4.00 |
| **Social Sciences:** | | |
| ECN:120 | Principles of Macroeconomics | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |

### CONCENTRATION ELECTIVES

Business 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:** | | **Credits** |
|---|---|---|
| ACC:142 | Financial Accounting | 3.00 |
| ACC:146 | Managerial Accounting | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| BUS:185 | Business Law I | 3.00 |
| BUS:210 | Business Statistics | 3.00 |
| FIN:130 | Principles of Finance | 3.00 |
| MGT:101 | Principles of Management | 3.00 |
| MKT:110 | Principles of Marketing | 3.00 |

# CHEMISTRY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Natural Sciences: Physical** | | **Credits** |
|---|---|---|
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| **Mathematics:** | | |
| MAT:210 | Calculus I | 4.00 |
| **Computer Skills:** | | |
| CSC:107 | Computer Literacy OR | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemistry II | 5.00 |
| CHM:261 | Organic Chemistry I OR | 4.00 |
| CHM:263 | Organic Chemistry I | 5.00 |
| CHM:271 | Organic Chemistry II OR | 4.00 |
| CHM:273 | Organic Chemistry II | 5.00 |
| MAT:216 | Calculus II | 4.00 |
| MAT:219 | Calculus II | 4.00 |
| PHY:162 | College Physics I AND | 4.00 |
| PHY:172 | College Physics II OR | 4.00 |
| PHY:212 | Classical Physics I AND | 5.00 |
| PHY:222 | Classical Physics II | 5.00 |

# CHEMISTRY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF SCIENCE

## A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemistry II | 5.00 |
| CHM:261 | Organic Chemistry I OR | 4.00 |
| CHM:263 | Organic Chemistry I | 5.00 |
| CHM:271 | Organic Chemistry II OR | 4.00 |
| CHM:273 | Organic Chemistry II | 5.00 |
| **Mathematics:** | | **Credits** |
| MAT:210 | Calculus I | 4.00 |
| MAT:216 | Calculus II | 4.00 |
| MAT:219 | Calculus III | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| PHY:162 | College Physics I AND | 4.00 |
| PHY:172 | College Physics II OR | 4.00 |
| PHY:212 | Classical Physics I AND | 5.00 |
| PHY:222 | Classical Physics II | 5.00 |

# CHEMISTRY LABORATORY PROCESSES

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF SCIENCE

## A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| **Mathematics:** | | |
| MAT:121 | College Algebra | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |
| **Communications:** | | **Credits** |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| ENG:108 | Composition II: Technical Writing | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| **Humanities:** | | |
| PHI:105 | Introduction to Ethics | 3.00 |
| **Fine Arts:** | | |
| MUS:100 | Music Appreciation | 3.00 |
| **Social Sciences:** | | |
| ECN:130 | Principles of Microeconomics | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

### CONCENTRATION ELECTIVES

Chemistry Laboratory Processes 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:** | | **Credits** |
|---|---|---|
| BIO:115 | General Biology IIA | 4.00 |
| BIO:186 | Mircrobiology | 4.00 |
| BUS:106 | Employment Strategy | 3.00 |
| BUS:161 | Human Relations | 3.00 |
| CHM:132 | Introduction to Organic and Biochemistry | 4.00 |
| CHM:176 | General Chemistry II | 4.00 |
| SOC:115 | Social Problems | 3.00 |
| SOC:261 | Human Sexuality | 3.00 |

# CONSERVATION

**CAMPUS** MUSCATINE COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF SCIENCE

## A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BIO:114 | General Biology I | 4.00 |
| CNS:105 | Conservation | 2.00 |
| CNS:150 | Occupations in Conservation | 1.00 |
| ENG:105 | Composition I | 3.00 |
| ENV:111 | Environmental Science | 4.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| BIO:115 | General Biology II | 4.00 |
| BIO:226 | Local Flora | 3.00 |
| CNS:137 | Fisheries Management | 2.00 |
| ENG:106 | Composition II | 3.00 |
| ___:___ | Cultural/Historical Perspectives | 3.00 |
| | | 15.00 |

| TERM 3 | | Credits |
|---|---|---|
| CNS:901 | Wilderness Experience | 2.00 |
| ENV:949 | Special Topics | 1.00-3.00 |
| | | 3.00-5.00 |

| TERM 4 | | |
|---|---|---|
| ___:___ | Arts/Humanities | 3.00 |
| BIO:133 | Ecology | 3.00 |
| BIO:134 | Ecology Lab | 1.00 |
| CHM:122 | Introduction to Chemistry | 4.00 |
| PHS:173 | Physical Geology | 4.00 |
| | | 15.00 |

| TERM 5 | | |
|---|---|---|
| ___:___ | Arts/Humanities | 3.00 |
| CNS:109 | Wildlife Ecology | 3.00 |
| MAT:156 | Statistics | 3.00 |
| POL:111 | American National Government OR | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 15.00 |

**A.S. Total.....62.00-65.00**

# CRIMINAL JUSTICE

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Cultural/Historical Perspectives:** | | **Credits** |
|---|---|---|
| HIS:152 | U.S. History since 1877 | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| **Mathematics:** | | |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| CRJ:100 | Introduction to Criminal Justice | 3.00 |
| CRJ:118 | Law Enforcement | 3.00 |
| CRJ:120 | Introduction to Corrections | 3.00 |
| CRJ:130 | Criminal Law | 3.00 |
| CRJ:141 | Criminal Investigation | 3.00 |
| CRJ:142 | Criminalistics | 3.00 |
| CRJ:200 | Criminology | 3.00 |
| CRJ:201 | Juvenile Delinquency | 3.00 |
| CRJ:230 | Evidence | 3.00 |
| CRJ:295 | Contemporary Issues in Criminal Justice | 3.00 |
| SOC:115 | Social Problems | 3.00 |

# EDUCATION

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Communications:** | | **Credits** |
|---|---|---|
| ENG:105 | Composition I | 3.00 |
| ENG:106 | Composition II | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| **Cultural/Historical Perspectives:** | | |
| GEO:121 | World Regional Geography | 3.00 |
| HIS:151 | U.S. History to 1877 OR | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |
| **Social Sciences:** | | **Credits** |
| POL:111 | American National Government | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| **Science:** | | |
| ___:___ | Biology lab course | 4.00 |
| **Math:** | | |
| MAT:110 | Math for Liberal Arts OR | 3.00 |
| MAT:117 | Math for Elementary Teachers* | 3.00 |

*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:** | | **Credits** |
|---|---|---|
| EDU:110 | Exploring Teaching | 3.00 |
| EDU:212 | Educational Foundations | 3.00 |
| EDU:220 | Human Relations for the Classroom | 3.00 |
| EDU:235 | Children's Literature | 3.00 |
| EDU:245 | Exceptional Learner | 3.00 |
| EDU:255 | Technology in the Classroom | 3.00 |
| PSY:121 | Developmental Psychology | 3.00 |
| PSY:222 | Child Psychology OR | 3.00 |
| PSY:224 | Adolescence Psychology | 3.00 |
| PSY281 | Educational Psychology | 3.00 |

# ENGLISH

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Communications:** | | **Credits** |
|---|---|---|
| ENG:105 | Composition I | 3.00 |
| ENG:106 | Composition II | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| **Arts and Humanities:** | | |
| LIT:101 | Introduction to Literature | 3.00 |
| PHI:101 | Introduction to Philosophy | 3.00 |
| **Cultural/Historical Perspectives:** | | |
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| **Computer Skills:** | | **Credits** |
| CSC:107 | Computer Literacy OR | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| Choose a minimum of three courses | | |
| ENG:221 | Creative Writing | 3.00 |
| ENG:230 | Creative Writing: Fiction | 3.00 |
| ENG:238 | Creative Writing: Non-Fiction | 3.00 |
| LIT:110 | American Literature to Mid-1800's | 3.00 |
| LIT:111 | American Literature since Mid-1800's | 3.00 |
| LIT:183 | Masterpieces: Neoclassical to Modern | 3.00 |
| LIT:185 | Contemporary Literature | 3.00 |
| LIT:200 | Studies in Literary Form | 3.00 |
| FL_:___ | Foreign Language - Two Semesters | 8.00 |

# ENVIRONMENTAL SCIENCE

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Natural Sciences: Life** | | **Credits** |
|---|---|---|
| ENV:111 | Environmental Science | 4.00 |
| **Natural Sciences: Physical** | | |
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| **Mathematics:** | | |
| MAT:210 | Calculus I | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| CHM:132 | Introduction to Organic & Biochemistry | 4.00 |
| PHS:172 | Physical Geology | 4.00 |
| PHY:162 | College Physics I OR | 4.00 |
| PHY:212 | Classical Physics I | 5.00 |
| MAT:156 | Statistics | 3.00 |
| MAT:216 | Calculus II | 4.00 |

# ENVIRONMENTAL SCIENCE

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF SCIENCE

## A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| CHM:132 | Introduction to Organic & Biochemistry | 4.00 |
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| ENV:111 | Environmental Science | 4.00 |
| PHS:172 | Physical Geology | 4.00 |
| **Mathematics:** | | **Credits** |
| MAT:210 | Calculus I | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| PHY:162 | College Physics I OR | 4.00 |
| PHY:212 | Classical Physics I | 5.00 |
| MAT:156 | Statistics | 3.00 |
| MAT:216 | Calculus II | 4.00 |

# FINE ARTS - ART

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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** |
|---|---|---|
| ART:101 | Art Appreciation | 3.00 |
| PHI:101 | Introduction to Philosophy | 3.00 |
| **Cultural/Historical Perspectives:** | | |
| HIS:117 | Western Civilization I: Ancient and Medieval OR | 3.00 |
| HIS:118 | Western Civilization II: Early Modern OR | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| ART:120 | 2-D Design | 3.00 |
| ART:133 | Drawing | 3.00 |
| ART:143 | Painting | 3.00 |
| ART:157 | Printmaking | 3.00 |
| ART:163 | Sculpture | 3.00 |
| ART:173 | Ceramics | 3.00 |
| ART:203 | Art History I | 3.00 |
| ART:204 | Art History II | 3.00 |

# FINE ARTS - DRAMA

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Communications:** | | **Credits** |
|---|---|---|
| SPC:112 | Public Speaking | 3.00 |
| **Arts and Humanities:** | | |
| PHI:101 | Introduction to Philosophy | 3.00 |
| ART:101 | Art Appreciation | 3.00 |
| DRA:101 | Introduction to Theatre | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| DRA:130 | Acting I | 3.00 |
| DRA:131 | Acting II OR | 2.00 |
| DRA:132 | Acting II | 3.00 |
| DRA:136 | Rehearsal and Performance OR | 2.00 |
| DRA:137 | Rehearsal and Performance | 3.00 |
| DRA:172 | Technical Theatre Lab OR | 2.00 |
| DRA:173 | Technical Theatre Lab | 3.00 |
| DRA:237 | Acting Lessons | 1.00 |
| DRA:250 | Directing | 3.00 |
| SPC:122 | Interpersonal Communication | 3.00 |

# FINE ARTS - MUSIC

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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 | 3.00 |
| MUS:100 | Music Appreciation | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| MUA:101 | Applied Voice | 1.00 |
| MUA:120 | Applied Piano | 1.00 |
| MUA:147 | Applied Instrumental | 1.00 |
| MUS:120 | Music Theory I | 4.00 |
| MUS:123 | Music Theory II | 4.00 |
| MUS:147 | College Community Orchestra | 2.00 |
| MUS:151 | Pop Singers | 1.00 |
| MUS:154 | Chorus | 1.00 |
| MUS:158 | Civic Chorale | 1.00 |
| MUS:222 | Music Theory III | 4.00 |
| MUS:223 | Music Theory IV | 4.00 |

# HISTORY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Cultural/Historical Perspectives:** | | **Credits** |
|---|---|---|
| HIS:151 | U.S. History to 1877 | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| FL_:___ | Foreign Language - Two Semesters | 8.00 |
| ECN:110 | Introduction to Economics | 3.00 |
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |

# JOURNALISM/ COMMUNICATION

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Communications:** | | **Credits** |
|---|---|---|
| SPC:112 | Public Speaking | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| **Computer:** | | **Credits** |
| CSC:107 | Computer Literacy OR | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| COM:140 | Introduction to Mass Media | 3.00 |
| JOU:120 | Beginning Newswriting | 3.00 |
| JOU:123 | Intermediate Newswriting | 3.00 |
| JOU:941 | Practicum in Communication | 1.00-3.00 |

# LIBERAL ARTS

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

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 | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| **Select one of these courses:** | | |
| ENG:106 | Composition II | 3.00 |
| ENG:108 | Composition II: Technical Writing | 3.00 |
| **Select one of these courses:** | | |
| SPC:112 | Public Speaking | 3.00 |
| SPC:170 | Professional Communication | 3.00 |

### ARTS AND HUMANITIES (9 credits required)

| **Select one Literature course:** | | **Credits** |
|---|---|---|
| LIT:101 | Introduction to Literature | 3.00 |
| LIT:111 | American Literature since Mid-1800's | 3.00 |
| LIT:183 | Masterpieces: Neoclassical to Modern | 3.00 |
| LIT:185 | Contemporary Literature | 3.00 |
| **Select one Humanities course:** | | |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:110 | Changes and Choices | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| PHI:101 | Introduction to Philosophy | 3.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PHI:110 | Introduction to Logic | 3.00 |
| REL:101 | Survey of World Religions | 3.00 |

Note: Requirements continue on next page.

# LIBERAL ARTS (CONTINUED)

| Select one course in the Fine Arts: | | Credits |
|---|---|---|
| ART:101 | Art Appreciation | 3.00 |
| DRA:101 | Introduction to Theatre | 3.00 |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:135 | Humanities of the Early World | 3.00 |
| HUM:136 | Humanities of the Renaissance | 3.00 |
| HUM:137 | Humanities of the Modern World | 3.00 |
| MUS:100 | Music Appreciation | 3.00 |

| Select one course in the Fine Arts: | | Credits |
|---|---|---|
| ART:101 | Art Appreciation | 3.00 |
| DRA:101 | Introduction to Theatre | 3.00 |
| DRA:110* | Introduction to Film | 3.00 |
| HUM:135 | Humanities of the Early World | 3.00 |
| HUM:136 | Humanities of the Renaissance | 3.00 |
| HUM:137 | Humanities of the Modern World | 3.00 |
| MUS:100 | Music Appreciation | 3.00 |

* 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: | | Credits |
|---|---|---|
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:151 | U.S. History to 1877 | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |
| **Select one course from an Intercultural perspective or language:** | | |
| ANT:105 | Cultural Anthropology | 3.00 |
| ASL:151 | American Sign Language 1 | 5.00 |
| CLS:150 | Latin American History and Culture | 3.00 |
| FL_:___ | Foreign Language - One Semester | 3.00–4.00 |
| GEO:121 | World Regional Geography | 3.00 |
| GLS:100 | Contemporary World Issues | 3.00 |
| GLS:120 | Education Experience Abroad | 1.00–3.00 |
| HIS:211 | Modern Asia History | 3.00 |
| HIS:231 | Contemporary World Affairs | 3.00 |

## SOCIAL SCIENCES (6 credits required)

| Select one Economics or Political Science course: | | Credits |
|---|---|---|
| ECN:120 | Principles of Macroeconomics | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| POL:111 | American National Government | 3.00 |
| **Select one Psychology or Sociology course:** | | |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

## NATURAL SCIENCES (8 credits required)

| Select one course in the Life Sciences: | | Credits |
|---|---|---|
| BIO:105 | Introductory Biology | 4.00 |
| BIO:114 | General Biology IA | 4.00 |
| BIO:125 | Plant Biology | 4.00 |
| BIO:157 | Human Biology | 4.00 |
| BIO:163 | Essentials of Anatomy and Physiology | 4.00 |
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| ENV:111* | Environmental Science | 4.00 |
| ENV:145 | Conservation Biology | 4.00 |
| **Select one course in the Physical Sciences:** | | |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| CHM:165 | General Chemistry I | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| CHM:179 | Principles of General Chemistry | 6.00 |
| PHY:110 | Survey of Physics I | 3.00 |
| PHY:162 | College Physics I | 4.00 |
| PHY:212 | Classical Physics I | 5.00 |
| PHS:120 | Exploring Physical Science | 4.00 |
| PHS:152 | Astronomy | 4.00 |
| PHS:166 | Meteorology: Weather and Climate | 4.00 |
| PHS:172 | Physical Geology | 4.00 |
| ENV:111* | Environmental Science | 4.00 |
| ENV:139 | Energy and the Environment | 4.00 |

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

## MATHEMATICS (3 credits required)

| Select one of these courses: | | Credits |
|---|---|---|
| MAT:110 | Math for Liberal Arts | 3.00 |
| MAT:117 | Math for Elementary Teachers* | 3.00 |
| MAT:128 | Precalculus | 4.00 |
| MAT:140 | Finite Math | 3.00 |
| MAT:156 | Statistics | 3.00 |
| MAT:165 | Business Calculus | 3.00 |
| MAT:210 | Calculus I | 4.00 |

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

## COMPUTER SKILLS (3 credits or demonstrated proficiency* required)

| Select one of these courses: | | Credits |
|---|---|---|
| CSC:107 | Computer Literacy | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |

* To demonstrate proficiency, students would need to complete the Computer Skills Proficiency Exam with a passing score.

## 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 Aasociate 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

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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 | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| **Mathematics:** | | |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| ACC:142 | Financial Accounting | 3.00 |
| ACC:146 | Managerial Accounting | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| BUS:180 | Business Ethics | 3.00 |
| BUS:185 | Business Law I | 3.00 |
| MGT:101 | Principles of Management | 3.00 |
| MGT:110 | Small Business Management | 3.00 |
| MKT:110 | Principles of Marketing | 3.00 |

# MARKETING

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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 | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| **Mathematics:** | | |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| ACC:142 | Financial Accounting | 3.00 |
| ACC:146 | Managerial Accounting | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| BUS:180 | Business Ethics | 3.00 |
| BUS:185 | Business Law I | 3.00 |
| MKT:110 | Principles of Marketing | 3.00 |
| MKT:140 | Principles of Selling | 3.00 |
| MKT:150 | Principles of Advertising | 3.00 |

# MATHEMATICS

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS OR ASSOCIATE OF SCIENCE

## A.A./A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| PHY:212 | Classical Physics I | 5.00 |
| **Mathematics:** | | |
| MAT:156 | Statistics | 3.00 |
| MAT:210 | Calculus I | 4.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| MAT:216 | Calculus II | 4.00 |
| MAT:219 | Calculus III | 4.00 |
| MAT:227 | Differential Equations | 4.00 |

# PHYSICAL EDUCATION/ RECREATION

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Cultural/Historical Perspectives:** | | **Credits** |
|---|---|---|
| HIS:151 | U.S. History to1877 | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| **Natural Sciences:** | | |
| BIO:168 | Human Anatomy and Physiology I | 4.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| EDU:110 | Exploring Teaching | 3.00 |
| EDU:212 | Educational Foundations | 3.00 |
| PSY:281 | Educational Psychology | 3.00 |

# PHYSICAL SCIENCE

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Natural Sciences: Physical** | | **Credits** |
|---|---|---|
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| **Mathematics:** | | |
| MAT:128 | Precalculus OR | 4.00 |
| MAT:210 | Calculus I | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemistry II | 5.00 |
| MAT:216 | Calculus II | 4.00 |
| PHS:152 | Astronomy | 4.00 |
| PHS:166 | Meteorology Weather and Climate | 4.00 |
| PHS:172 | Physical Geology | 4.00 |
| PHY:162 | College Physics I | 4.00 |
| PHY:172 | College Physics II | 4.00 |

# PHYSICAL SCIENCE

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF SCIENCE

## A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemistry II | 5.00 |
| PHS:172 | Physical Geology | 4.00 |
| PHY:162 | College Physics I | 4.00 |
| PHY:172 | College Physics II | 4.00 |

| **Mathematics:** | | **Credits** |
|---|---|---|
| MAT:210 | Calculus I | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| MAT:216 | Calculus II | 4.00 |

# PHYSICS

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Natural Sciences: Physical** | | **Credits** |
|---|---|---|
| PHY:212 | Classical Physics I | 5.00 |
| **Mathematics:** | | |
| MAT:210 | Calculus I | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemistry II | 5.00 |
| MAT:216 | Calculus II | 4.00 |
| MAT:219 | Calculus III | 4.00 |
| PHY:222 | Classical Physics II | 5.00 |

# PHYSICS

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF SCIENCE

## A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| PHY:212 | Classical Physics I | 5.00 |
| PHY:222 | Classical Physics II | 5.00 |
| **Mathematics:** | | |
| MAT:210 | Calculus I | 4.00 |
| MAT:216 | Calculus II | 4.00 |
| MAT:219 | Calculus III | 4.00 |
| **Computer Skills:** | | |
| CSC:110 | Introduction to Computers | 3.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemstry II | 5.00 |

# POLITICAL SCIENCE

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Cultural/Historical Perspectives:** | | **Credits** |
|---|---|---|
| HIS:152 | U.S. History since 1877 | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| **Mathematics:** | | **Credits** |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:151 | U.S. History to 1877 | 3.00 |
| ECN:120 | Principles of Macroeconomics | 3.00 |
| POL:112 | American State and Local Government | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |

# PRE-CHIROPRACTIC

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS OR ASSOCIATE OF SCIENCE

## A.A./A.S. DEGREE

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 45–48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I OR | 5.00 |
| CHM:179 | Principles of General Chemistry | 6.00 |

| **Mathematics:** | | **Credits** |
|---|---|---|
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| BIO:163 | Essentials of Anatomy and Physiology | 4.00 |
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| BIO:255 | Neuroanatomy | 3.00 |
| CHM:175 | General Chemistry II (if not CHM:179) | 4.00 |
| CHM:176 | General Chemistry II (if not CHM:179) | 5.00 |
| CHM:261 | Organic Chemistry I OR | 4.00 |
| CHM:263 | Organic Chemistry I AND | 5.00 |
| CHM:271 | Organic Chemistry II OR | 4.00 |
| CHM:273 | Organic Chemistry II | 5.00 |
| PHY:110 | Survey of Physics I AND | 3.00 |
| PHY:111 | Survey of Physics II OR | 3.00 |
| PHY:162 | College Physics I AND | 4.00 |
| PHY:172 | College Physics II | 4.00 |

# PRE-ENGINEERING

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS OR ASSOCIATE OF SCIENCE

## A.S. DEGREE

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 49-50 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:** | | **Credits** |
|---|---|---|
| MAT:210 | Calculus I | 4.00 |
| MAT:216 | Calculus II | 4.00 |
| MAT:219 | Calculus III | 4.00 |
| MAT:227 | Differential Equations | 4.00 |
| **Chemistry:** | | **Credits** |
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| **Physics:** | | |
| PHY:212 | Classical Physics I | 5.00 |
| PHY:222 | Classical Physics II | 5.00 |

### 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.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| EGR:180 | Engineering Statics | 3.00 |
| EGR:280 | Dynamics | 3.00 |
| EGR:285 | Introduction to Electrical Science | 3.00 |
| EGR:290 | Thermodynamics | 3.00 |
| EGR:380 | Mechanics of Deformable Bodies | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:115 | Social Problems | 3.00 |

# PRE-HEALTH PROFESSIONAL

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS OR ASSOCIATE OF SCIENCE

## A.A./A.S. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45-48 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:

| **Natural Sciences:** | | **Credits** |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| CHM:165 | General Chemistry I OR | 4.00 |
| CHM:166 | General Chemistry I | 5.00 |
| **Mathematics:** | | |
| MAT:140 | Finite Math OR | 3.00 |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| BIO:115 | General Biology IIA | 4.00 |
| BIO:151 | Nutrition | 3.00 |
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| BIO:186 | Microbiology | 4.00 |
| CHM:175 | General Chemistry II OR | 4.00 |
| CHM:176 | General Chemsitry II | 5.00 |
| CHM:261 | Organic Chemistry I OR | 4.00 |
| CHM:263 | Organic Chemistry I | 5.00 |
| CHM:271 | Organic Chemistry II OR | 4.00 |
| CHM:273 | Organic Chemistry II | 5.00 |
| MAT:156 | Statistics | 3.00 |
| PHY:162 | College Physics I | 4.00 |
| PHY:172 | College Physics II | 4.00 |

# PRE-LAW

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Cultural/Historical Perspectives:** | | **Credits** |
|---|---|---|
| HIS:151 | U.S. History to 1877 | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| ECN:120 | Principles of Macroeconomics | 3.00 |
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |

# PSYCHOLOGY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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** |
|---|---|---|
| PSY:111 | Introduction to Psychology | 3.00 |
| **Natural Sciences: Life** | | |
| BIO:114 | General Biology IA OR | 4.00 |
| BIO:105 | Introduction to Biology | 4.00 |
| **Mathematics:** | | |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| BIO:114 | General Biology IA OR | 4.00 |
| BIO:157 | Human Biology | 4.00 |
| PSY:121 | Developmental Psychology | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

Other Psychology or Sociology electives as recommended by advisors.

# SOCIAL WORK

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Cultural/Historical Perspectives:** | | **Credits** |
|---|---|---|
| HIS:117 | Western Civilization I: Ancient and Medieval OR | 3.00 |
| ANT:105 | Cultural Anthropology | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| **Mathematics:** | | |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| ECN:120 | Principles of Macroeconomics | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:115 | Social Problems | 3.00 |
| SOC:160 | Introduction to Social Work | 3.00 |

# SOCIOLOGY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Cultural/Historical Perspectives:** | | **Credits** |
|---|---|---|
| HIS:117 | Western Civilization I: Ancient and Medieval OR | 3.00 |
| ANT:105 | Cultural Anthropology | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| **Mathematics:** | | |
| MAT:156 | Statistics | 3.00 |

### 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:** | | **Credits** |
|---|---|---|
| ECN:120 | Principles of Macroeconomics | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:152 | U.S. History since 1877 | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:115 | Social Problems | 3.00 |

# SPEECH

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF ARTS

## A.A. DEGREE

### GENERAL EDUCATION REQUIREMENTS

Choose from the General Education Curriculum listed on pages 45–48 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:

| **Communications:** | | Credits |
|---|---|---|
| SPC:112 | Public Speaking | 3.00 |
| **Arts and Humanities:** | | |
| PHI:101 | Introduction to Philosophy OR | 3.00 |
| PHI:110 | Introduction to Logic OR | 3.00 |
| REL:101 | Survey of World Religions | 3.00 |
| **Cultural/Historical Perspectives:** | | **Credits** |
| CLS:150 | Latin American History and Culture | 3.00 |
| **Social Sciences:** | | |
| POL:111 | American National Government | 3.00 |

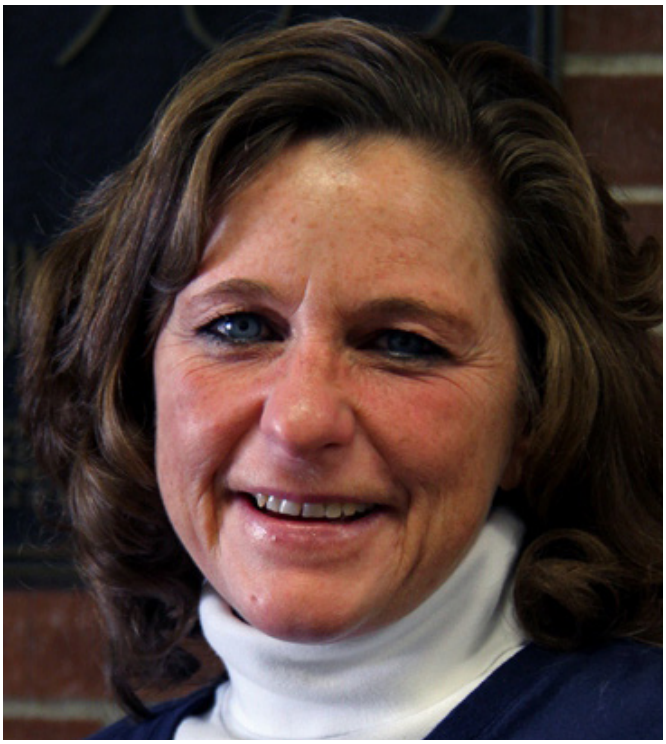
### CONCENTRATION ELECTIVES

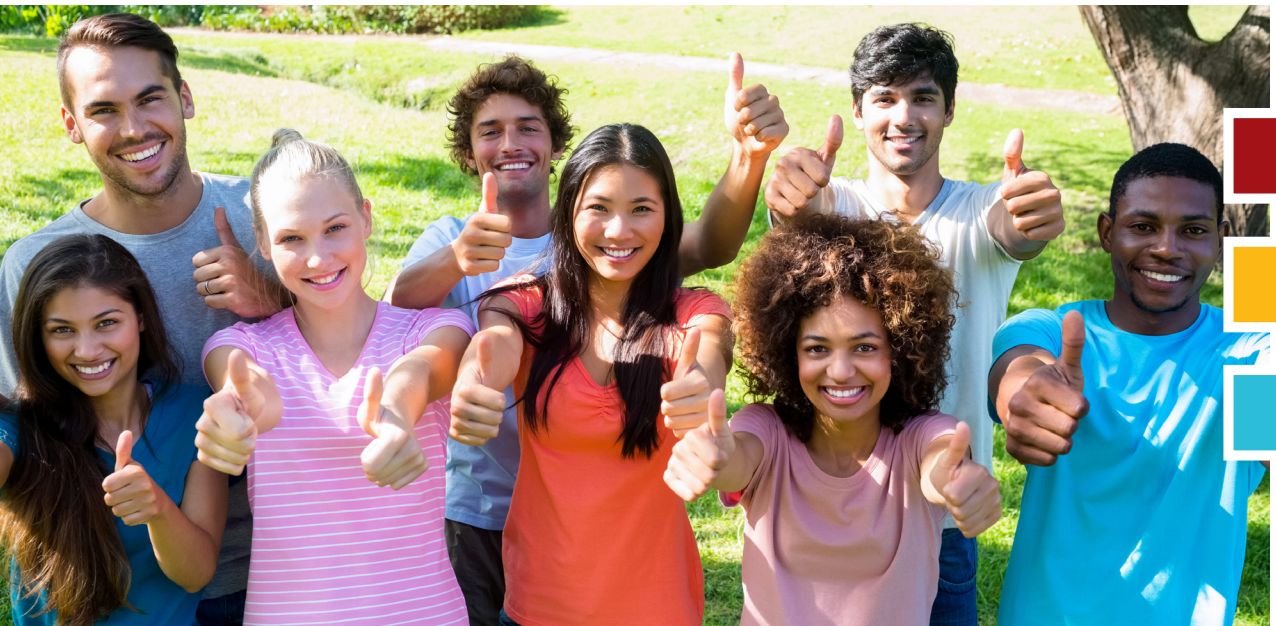
Speech requirements vary depending on the transfer institution. It is important to plan your course selection carefully with both your community college advisor and your intended transfer institution. Choose elective courses as needed to complete the 62 credit hours required of an Associate Degree.

| **Recommended Electives:** | | **Credits** |
|---|---|---|
| DRA:101 | Introduction to Theatre | 3.00 |
| SPC:114 | Advanced Public Speaking | 2.00 |
| SPC:122 | Interpersonal Communication | 3.00 |
| SPC:170 | Professional Communication | 3.00 |

# Career Technology

EASTERN IOWA
COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT





# GENERAL EDUCATION REQUIREMENTS

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

To earn an Associate in Applied Science (A.A.S.) degree, you 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. 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. See specific requirements for A.A.S. program later in the catalog.

A minimum of 15 credit hours of general education is required for the A.A.S. 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.

| Career Technology Concentration Areas | Award | College(s) | Pages |
|---|---|---|---|
| Accounting Management* | A.A.S. Degree, Diploma | MCC, SCC | 74 |
| Administrative and Office Support | A.A.S. Degree, Diploma, Certificate | CCC, MCC, SCC | 76 |
| Agribusiness Equipment Technician | A.A.S. Degree | MCC | 77 |
| Sales and Service | Diploma | MCC | |
| Agribusiness Management | A.A.S. Degree, Diploma | MCC | 77 |
| Agronomy | Diploma | MCC | |
| Sales and Service | Diploma | MCC | |
| American Sign Language – English Interpreting | A.A.S. Degree | SCC | 80 |
| Deaf Studies | Certificate | SCC | |
| Auto Collision Repair Technology | A.A.S. Degree, Diploma, Certificate | SCC | 81 |
| Automotive Technology | A.A.S. Degree, Diploma, Certificate | SCC | 83 |
| Basic Service | Certificate | SCC | |
| General Service | Certificate | SCC | |
| Business Management* | A.A.S. Degree, Certificates | CCC, MCC, SCC | 85 |
| 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* | A.A.S. Degree, Diploma, Certificate | SCC | 87 |
| CNC/Machining | A.A.S. Degree | SCC | 89 |
| CNC Programming | Certificate | SCC | |
| Manual Machining | Certificate | SCC | |
| Culinary Arts Apprenticeship | A.A.S. Degree | MCC, SCC | 91 |
| Culinary Arts Degree | A.A.S. Degree | MCC, SCC | 92 |
| Culinary Arts | Certificate | MCC, SCC | |
| Baking | Certificate | MCC, SCC | |
| Dental Assisting | Diploma, Certificate | SCC | 93 |
| Dental Assisting Expanded Functions | Certificate | SCC | |
| Dental Hygiene | A.A.S. Degree | CCC, MCC, SCC/CSC** | 94 |
| Diesel Technology | A.A.S. Degree, Diploma | SCC | 95 |
| Heavy Duty Train | Certificate | SCC | |
| Truck Electrical | Certificate | SCC | |
| Early Childhood Education | A.A.S. Degree, Diploma, Certificate | SCC, MCC | 97 |
| Electroneurodiagnostic Technology | A.A.S. Degree | SCC | 98 |
| Emergency Medical Services | A.A.S. Degree | CCC, MCC, SCC | 99 |
| EMT | Certificate | CCC, MCC, SCC | |
| Advanced EMT | Certificate | CCC, MCC, SCC | |

| | | | |
|---|---|---|---|
| Engineering Technology | A.A.S. Degree | CCC, MCC, SCC | 100 |
| Automation | A.A.S. Degree | CCC, MCC, SCC | |
| Electromechanical | A.A.S. Degree | CCC, MCC, SCC | |
| Process Control | A.A.S. Degree | CCC, MCC, SCC | |
| Basic Electricity | Certificate | CCC, MCC, SCC | |
| Basic Electronics | Certificate | CCC, MCC, SCC | |
| Electromechanical | Diploma | CCC, MCC, SCC | |
| Electrical Systems | Certificate | CCC, MCC, SCC | |
| Process Control Technology | Certificate | CCC, MCC, SCC | |
| Environmental, Health and Safety* | A.A.S. Degree, Diploma, Certificate | CCC, MCC, SCC | 103 |
| Farm Management | A.A.S. Degree | MCC | 104 |
| Graphic Arts Technology | A.A.S. Degree, Diploma | CCC | 105 |
| Health Information Technology* | A.A.S. Degree, Diploma | CCC, MCC, SCC | 106 |
| Heating, Ventilation and Air Conditioning | A.A.S. Degree, Diploma, Certificate | SCC | 107 |
| Heating, Ventilation and Air Conditioning Apprentcieship | Certificate | SCC | |
| Hospitality Management | A.A.S. Degree | MCC, SCC | 109 |
| Event Management | Certificate | MCC, SCC | |
| Hospitality Skills | Diploma, Certificate | MCC, SCC | |
| Information Technology | A.A.S. Degree, Diploma | CCC, MCC, SCC | 110 |
| Database | A.A.S. Degree | CCC, MCC, SCC | |
| Games and Simulations | A.A.S. Degree | CCC, MCC, SCC | |
| Hardware/Helpdesk | A.A.S. Degree | CCC, MCC, SCC | |
| Networking | A.A.S. Degree, Diploma | CCC, MCC, SCC | |
| Programming | A.A.S. Degree, Diploma | CCC, MCC, SCC | |
| Security and Forensics | A.A.S. Degree | CCC, MCC, SCC | |
| Server Administration | A.A.S. Degree | CCC, MCC, SCC | |
| Web Development | A.A.S. Degree | CCC, MCC, SCC | |
| Mechanical Design Technology | A.A.S. Degree, Diploma, Certificate | SCC | 115 |
| Nursing | | CCC, MCC, SCC | 117 |
| Associate Degree Nursing | A.A.S. Degree | CCC, SCC | |
| Practical Nursing | Diploma | CCC, MCC, SCC | |
| Radiologic Technology | A.A.S. Degree | SCC | 118 |
| Renewable Energy System Specialist | A.A.S. Degree | SCC | 119 |
| Respiratory Care | A.A.S. Degree | CCC, MCC, SCC/NICC*** | 120 |
| Sonography | A.A.S. Degree | SCC | 122 |
| Supply Chain and Logistics | A.A.S. Degree, Diploma | CCC, MCC, SCC | 124 |
| Logistics and Transportation | Certificate | CCC, MCC, SCC | |
| Inventory Control | Certificate | CCC, MCC, SCC | |
| Surgical Technology | A.A.S. Degree, Diploma | SCC | 126 |
| Central Sterile Processing | Diploma | SCC | |
| Central Sterile Processing and Distribution Technician | Certificate | SCC | |
| Technical Studies | A.A.S. Degree | CCC, MCC, SCC | 127 |
| Truck Driving | Certificate | SCC | 128 |
| Veterinary Technician | A.A.S. Degree | MCC | 129 |
| Welding | A.A.S. Degree, Diploma | SCC | 130 |
| Basic Welding | Certificate | MCC, SCC | |
| General Maintenance | Certificate | SCC | |
| Production Welding | Certificate | CCC, SCC | |
| Structural Welding | Certificate | SCC | |

* Available 100% online
** CCC, MCC, SCC/CSC is a program offered cooperatively with Carl Sandburg College in Galesburg, Illinois.
*** CCC, MCC, SCC/NICC is a program offered cooperatively with Northeast Iowa Community College in Peosta, Iowa.

# ACCOUNTING MANAGEMENT

**CAMPUS** MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & DIPLOMA

The Accounting Management program provides the fundamentals necessary to be able to solve business-oriented accounting problems. Students obtain extensive hands-on experience working "real-world" accounting problems including: payroll, cost and tax. Students learn how to maintain reliable accounting records both manually and in a computerized environment. Perhaps more importantly, students learn how to interpret and communicate accounting information to non-accounting personnel for organizational use.

As an Accounting Management graduate, you will be prepared for a position as an entry-level, junior or paraprofessional accountant. Training in accounting is invaluable for management at all levels.

## A.A.S. DEGREE

### TERM 1

| | | Credits |
|---|---|---|
| ACC:121 | Principles of Accounting I OR | 3.00 |
| ACC:142 | Financial Accounting | 3.00 |
| ADM:157 | Business English OR | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| SPC:170 | Professional Communication OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| ___:___ | Technical or Business Skill Elective* | 3.00 |
| | | 15.00 |

### TERM 2

| | | |
|---|---|---|
| ACC:146 | Managerial Accounting | 3.00 |
| BUS:110 | Business Math and Calculators OR | 3.00 |
| MAT:110 | Math for Liberal Arts OR | 3.00 |
| MAT:121 | College Algebra | 4.00 |
| BUS:185 | Business Law | 3.00 |
| HUM:105 | Working in America OR | 3.00 |
| HUM:110 | Changes & Choices OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| MKT:110 | Principles of Marketing | 3.00 |
| ___:___ | Technical or Business Skill Elective* | 3.00 |
| | | 18.00 |

### TERM 3 - SUMMER

| | | |
|---|---|---|
| ___:___ | Accounting Elective ** (Recommend ACC:312) | 4.00 |
| | | 4.00 |

### TERM 4

| | | Credits |
|---|---|---|
| ACC:237 | Intermediate Accounting | 4.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| ECN:110 | Introduction to Economics OR | 3.00 |
| ECN:120 | Principles of Macroeconomics OR | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| MGT:101 | Principles of Management | 3.00 |
| ___:___ | Accounting Elective** | 3.00 |
| | | 16.00 |

### TERM 5

| | | |
|---|---|---|
| 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** | 3.00 |
| | | 14.00 |

**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 | Basic 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 10 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 | 2.00 |
| BUS:908 | Cooperative Education | 1.00 |

# ACCOUNTING MANAGEMENT
(CONTINUED)

## DIPLOMA

| TERM 1 | | Credits |
|---|---|---|
| ACC:121 | Principles of Accounting I OR | 3.00 |
| ACC:142 | Financial Accounting | 3.00 |
| ACC:332 | Computer Accounting-QuickBooks | 2.00 |
| BUS:110 | Business Math and Calculators OR | 3.00 |
| MAT:110 | Math for Liberal Arts OR | 3.00 |
| MAT:121 | College Algebra | 4.00 |
| BUS:185 | Business Law I | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| ACC:146 | Managerial Accounting | 3.00 |
| ACC:161 | Payroll Accounting | 3.00 |
| ACC:265 | Income Tax Accounting | 4.00 |
| ADM:157 | Business English OR | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| SPC:170 | Professional Communication OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 16.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| ACC:312 | Computer Accounting | 4.00 |
| | | 4.00 |

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

Gainful employment information for the Accounting Management program is located at www.eicc.edu/gainfulemployment

# ADMINISTRATIVE AND OFFICE SUPPORT

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

Administrative and Office Support is comprised of three programs, allowing students the option of completing their course of study at three different levels. The courses in the first two semesters of each of these programs (and the third semesters of the diploma and degree programs) are identical, thereby allowing students to complete the courses in those semesters before making the decision whether they will exit at that point or continue working toward the diploma or degree. The three AOS programs provide up-to-date computer training, using the most popular softwares currently found in area businesses. Students receive intense training on document formatting, word processing, spreadsheets, databases, desktop publishing and presentation software, internet and e-mail. Equal emphasis is placed on grammar and on written and oral communication skills. Students are also trained in business math, filing systems and transcription; and they learn about time and stress management, conflict resolution, human relations, cultural differences, business etiquette, telephone skills, problem solving and customer service – the "soft skills" absolutely necessary to succeed in today's business world.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| ADM:105 | Introduction to Keyboarding | 1.00 |
| ADM:122 | Document Formatting | 2.00 |
| ADM:157 | Business English | 3.00 |
| ADM:179 | Records Management | 3.00 |
| BCA:120 | Computer Orientation | 1.00 |
| BCA:129 | Basic Word Processing | 2.00 |
| BCA:147 | Basic Spreadsheets | 2.00 |
| MKT:181 | Customer Service Strategies | 3.00 |
| | | 16.00 |

**Certificate Awarded ..... 16.00**

| TERM 2 | | Credits |
|---|---|---|
| BCA:130 | Advanced Word Processing | 2.00 |
| BCA:148 | Advanced Spreadsheets | 2.00 |
| BCA:165 | Basic Databases | 2.00 |
| BCA:711 | Introduction to Microsoft PowerPoint | 1.00 |
| BCA:732 | Getting Organized with Outlook | 1.00 |
| BUS:106 | Employment Strategy | 2.00 |
| BUS:110 | Business Math and Calculators | 3.00 |
| MGT:151 | Management Communication I | 3.00 |
| | | 16.00 |

**Diploma Total ..... 32.00**

| TERM 3 | | |
|---|---|---|
| ACC:111 | Introduction to Accounting OR | 3.00 |
| ACC:121 | Principles of Accounting I | 3.00 |
| ADM:149 | Transcription | 3.00 |
| ADM:940 | Leadership Seminar OR | 2.00 |
| ADM:254 | Business Professionalism AND | 2.00 |
| ADM:255 | Business Professionalism II OR | 1.00 |
| MGT:130 | Principles of Supervision | 3.00 |
| BCA:220 | Integrated Computer Business Applications | 2.00 |
| BUS:161 | Human Relations | 3.00 |
| ECN:130 | Principles of Microeconomics OR | 3.00 |
| HUM:110 | Changes and Choices OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 16.00 |

| TERM 4 | | |
|---|---|---|
| ACC:332 | Computer Accounting – QuickBooks | 2.00 |
| ADM:222 | Capstone OR | 3.00 |
| ADM:936 | Occupational Experience | 3.00 |
| BCA:250 | Desktop Publishing | 3.00 |
| SPC:170 | Professional Communication | 3.00 |
| ___:___ | AOS Elective* | 3.00 |
| | | 14.00 |

**A.A.S. Total ..... 62.00**

### *AOS ELECTIVES

(Must select a minimum of 3 credit hours)

| | | |
|---|---|---|
| ACC:161 | Payroll Accounting | 3.00 |
| BCA:722 | Introduction to the Internet | 1.00 |
| BUS:102 | Introduction to Business | 3.00 |
| BUS:130 | Introduction to Entrepreneurship | 3.00 |
| BUS:180 | Business Ethics | 3.00 |
| BUS:185 | Business Law I | 3.00 |
| FIN:121 | Personal Finance | 3.00 |
| FLS:141 | Elementary Spanish I | 4.00 |
| GEO:121 | World Regional Geography | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| MGT:165 | Principles of Quality | 3.00 |
| MKT:110 | Principles of Marketing | 3.00 |

Gainful employment information for the Administrative and Office Support program is located at www.eicc.edu/gainfulemployment

# AGRIBUSINESS MANAGEMENT

**CAMPUS** MUSCATINE COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

The Agribusiness Management program is a comprehensive two-year retail agricultural and input/supply business management program.

- Professional training – classroom and real world experiences.
- Highly technical coursework based on industry standards.
- Feed, Seed, Fertilizer, Fuel, Crop Protection, Grain, Operations and Management – these are emphasized and critical to retail agribusiness success.
- Professional organizations for developing technical skills and leadership.
- Agricultural leaders serve as advisory committee members to guide the program.
- The human capital and technical sector of American agriculture.
  - Develop Career Skills
  - Sales and Human Relations
  - Marketing and Management
  - Merchandising and Marketing
  - Precision Agriculture
  - Animal Nutrition and Management
  - Application of Plant Nutrients and Crop Protection Programs

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| 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:143 | Applied Agribusiness Accounting I | 1.25 |
| AGB:191 | Agricultural Sales I | 1.50 |
| AGC:941 | Employment Experience I | 3.00 |
| AGS:315 | Principles of Animal Nutrition | 3.00 |
| COM:102 | Communication Skills | 3.00 |
| | | 18.25 |

| TERM 2 | | |
|---|---|---|
| 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:915 | Alpha Mu Sigma I | 1.00 |
| AGC:942 | Employment Experience II | 3.50 |
| MAT:104 | Applied Math Topics | 3.00 |
| | | 17.00 |

| TERM 3 - SUMMER | | Credits |
|---|---|---|
| AGA:373 | Integrated Crop Management | 2.00 |
| AGB:144 | Applied Agribusiness Accounting II | 1.00 |
| AGS:119 | Advanced Animal Science | 2.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| | | 8.00 |

| TERM 4 | | |
|---|---|---|
| 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 | 1.75 |
| AGB:231 | Futures and Options | 1.50 |
| AGB:280 | Business Law for Agriculture | 1.50 |
| AGC:943 | Employment Experience III | 3.00 |
| AGS:352 | Genetics | 1.50 |
| AGS:554 | Beef Production (Optional) | (3.00) |
| | | 13.75 |

| TERM 5 | | |
|---|---|---|
| AGA:349 | Fertilizers | 1.50 |
| AGB:193 | Agricultural Sales III | 1.25 |
| AGB:357 | Agribusiness Marketing and Retailing | 3.00 |
| AGC:916 | Alpha Mu Sigma II | 1.00 |
| AGC:944 | Employment Experience IV | 3.50 |
| AGP:243 | Precision Agricultural Applications | 3.00 |
| ENV:115 | Environmental Science | 3.00 |
| AGM:423 | Equipment & Diesel Performance (Optional) | (2.00) |
| | | 16.25 |

**A.A.S. Total ..... 73.25**

## AGRIBUSINESS EQUIPMENT TECHNICIAN A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| AGB 103 | Agricultural Economics | 1.50 |
| AGB 105 | Business Principles for Agriculture I | 1.75 |
| AGB 108 | Human Relations I | 1.50 |
| AGB 180 | Agribusiness Ethics | 1.50 |
| AGB 190 | Customer Relations in Agriculture | 1.50 |
| AGB 191 | Agricultural Sales I | 1.50 |
| AGB 195 | Upselling in Agriculture | 1.00 |
| AGC 941 | Employment Experience I | 3.00 |
| COM 102 | Communication Skills OR | 3.00 |
| ENG 105 | Composition I | 3.00 |
| | | 16.25 |

# AGRIBUSINESS MANAGEMENT
(CONTINUED)

| TERM 2 | | Credits |
|---|---|---|
| AGB:112 | Human Relations II | 1.75 |
| AGB:192 | Agricultural Sales II | 1.75 |
| AGC:915 | Alpha Mu Sigma I | 1.00 |
| AGC:942 | Employment Experience II | 3.50 |
| AGM:157 | Machinery Management | 3.00 |
| AGM:423 | Equipment & Diesel Performance | 2.00 |
| AUT:115 | Automotive Shop Safety | 1.00 |
| WEL:124 | Maintenance Welding | 3.00 |
| | | 17.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| DSL:340 | Diesel Engine Repair | 5.00 |
| | | 5.00 |

| TERM 4 | | |
|---|---|---|
| CSC:110 | Introduction to Computers | 3.00 |
| 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 | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| PSY:213 | Industrial & Organizational Psychology OR | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 17.00 |

| TERM 5 | | |
|---|---|---|
| AUT:606 | Basic Auto Electricity/Electronics | 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 | 1.00 |
| DSL:905 | Cooperative Experience | 2.00 |
| | | 18.00 |

**A.A.S. Total ..... 73.25**

## AGRIBUSINESS EQUIPMENT SALES AND SERVICE DIPLOMA

| TERM 1 | | Credits |
|---|---|---|
| AGB:103 | Agricultural Economics | 1.50 |
| AGB:105 | Business Principles for Agriculture I | 1.75 |
| AGB:108 | Human Relations I | 1.50 |
| AGB:180 | Agribusiness Ethics | 1.50 |
| AGB:190 | Customer Relations in Agriculture | 1.50 |
| AGB:191 | Agricultural Sales I | 1.50 |
| AGB:195 | Upselling in Agriculture | 1.00 |
| AGC:941 | Employment Experience I | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| | | 16.25 |

| TERM 2 | | |
|---|---|---|
| AGB:112 | Human Relations II | 1.75 |
| AGB:192 | Agricultural Sales II | 1.75 |
| AGC:915 | Alpha Mu Sigma I | 1.00 |
| AGC:942 | Employment Experience II | 3.50 |
| AGM:157 | Machinery Management | 3.00 |
| AGM:423 | Equipment & Diesel Performance | 2.00 |
| AUT:115 | Automotive Shop Safety | 1.00 |
| WEL:124 | Maintenance Welding | 3.00 |
| | | 17.00 |

**Diploma Total ..... 33.25**

## AGRONOMY DIPLOMA

| TERM 1 | | Credits |
|---|---|---|
| AGA:351 | Soil Science | 1.50 |
| AGA:890 | Soil Chemistry | 1.50 |
| AGA:881 | Grain Science | 1.75 |
| AGA:901 | Seed Science | 1.50 |
| AGB:105 | Business Principles for Agriculture I | 1.75 |
| AGB:190 | Customer Relations in Agriculture | 1.50 |
| AGC:941 | Employment Experience I | 3.00 |
| AGS:352 | Genetics | 1.50 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| AGA:210 | Corn & Soybean Production | 3.00 |
| AGA:285 | Crop Protection | 3.00 |
| AGC:915 | Alpha Mu Sigma I | 1.00 |
| AGC:942 | Employment Experience II | 3.50 |
| AGP:243 | Precision Ag Applications | 3.00 |
| ENG:105 | Composition I OR | 3.00 |
| COM:102 | Communication Skills | 3.00 |
| MAT:104 | Applied Math Topics | 3.00 |
| | | 19.50 |

**Diploma Total ..... 33.50**

# AGRIBUSINESS MANAGEMENT
(CONTINUED)

## SALES AND SERVICE DIPLOMA

| TERM 1 | | Credits |
|---|---|---|
| AGB:103 | Agricultural Economics | 1.50 |
| AGB:105 | Business Principles for Agriculture I | 1.75 |
| AGB:108 | Human Relations I | 1.50 |
| AGB:143 | Applied Agribusiness Accounting I | 1.25 |
| AGB:191 | Agricultural Sales I | 1.50 |
| AGB:231 | Futures and Options | 1.50 |
| AGB:280 | Business Law for Agriculture | 1.50 |
| AGB:399 | Farm Business Analysis | 1.50 |
| AGB:304 | Agricultural Finance | 1.50 |
| AGC:941 | Employment Experience I | 3.00 |
| | | 16.50 |

| TERM 2 | | |
|---|---|---|
| AGA:285 | Crop Protection | 3.00 |
| AGB:112 | Human Relations II | 1.75 |
| AGB:192 | Agricultural Sales II | 1.75 |
| AGC:915 | Alpha Mu Sigma I | 1.00 |
| AGC:942 | Employment Experience II | 3.50 |
| MAT:104 | Applied Math Topics | 3.00 |
| ENG:105 | Composition I OR | 3.00 |
| COM:102 | Communication Skills | 3.00 |
| | | 17.00 |

**Diploma Total ..... 33.50**

Gainful employment information for the Agribusiness Management program is located at www.eicc.edu/gainfulemployment

# AMERICAN SIGN LANGUAGE - ENGLISH INTERPRETING

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

The American Sign Language – English Interpreting program begins as an intensive program that begins with coursework to complete the Deaf Studies Certificate. The A.A.S. in American Sign Language – English Interpreting consisits of coursework to gain proficiency in sign language, interpreting skills and professional decison.

After the completion of the program, students can begin work at an entry-level position in the educational setting or freelance as a sign language interpreter. As professional interpreters, they will provide access for consumers through communication facilitation and cultural mediation in a variety of settings.

## DEAF STUDIES CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| ASL:151 | American Sign Language I | 5.00 |
| ITP:129 | Deaf Studies | 4.00 |
| | | 9.00 |

| TERM 2 | | |
|---|---|---|
| ASL:181 | American Sign Language II | 5.00 |
| DRA:130 | Acting | 3.00 |
| ITP:131 | Deaf Culture | 4.00 |
| | | 12.00 |

**Deaf Studies Certificate ..... 21.00**

## A.A.S. DEGREE

Students must complete the Deaf Studies Certificate prior to beginning the ASL A.A.S.

| TERM 1 | | Credits |
|---|---|---|
| ASL:251 | American Sign Language III | 5.00 |
| ITP:141 | English Vocab and Grammar for Interpreters | 4.00 |
| ITP:142 | Comparative Discourse Analysis | 3.00 |
| ANT:105 | Cultural Anthropology OR | 3.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| ASL:281 | American Sign Language IV | 4.00 |
| ITP:121 | Introduction to Interpreting I | 4.00 |
| ITP:135 | Introduction to Language | 3.00 |
| ITP:209 | Skills Lab | 1.00 |
| ENG:105 | Composition I | 3.00 |
| | | 15.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| MAT:110 | Math for Liberal Arts | 3.00 |
| PSY:121 | Developmental Psychology | 3.00 |
| | | 6.00 |

| TERM 4 | | |
|---|---|---|
| ASL:296 | American Sign Language V | 4.00 |
| ITP:124 | Introduction to Interpreting II | 3.00 |
| ITP:209 | Skills Lab | 1.00 |
| ITP:230 | Transliteration I | 4.00 |
| ITP:253 | Practical Issues | 3.00 |
| | | 15.00 |

| TERM 5 | | |
|---|---|---|
| ASL:297 | American Sign Language VI | 4.00 |
| ITP:209 | Skills Lab | 1.00 |
| ITP:231 | Transliteration II | 3.00 |
| ITP:256 | Interpreter Certificate Preparation | 2.00 |
| ITP:941 | Practicum | 2.00 |
| | | 12.00 |

**A.A.S. Total ..... 63.00**

Gainful employment information for the American Sign Language program is located at www.eicc.edu/gainfulemployment

# AUTO COLLISION REPAIR TECHNOLOGY

**CAMPUS** SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

The Auto Collision Repair Technology program prepares student for the repair and refinishing of automotive vehicle bodies. The field has become an increasingly complex industry. The changing design of the automobile has resulted in an increased application of ultra-sensitive high-strength steel parts and the expanded use of molded composition and plastics for exterior panels.

The program has consistently achieved master certification from the National Institute for Automotive Service Excellence (ASE/ NATEF Master Certification).

## A.A.S. DEGREE

| TERM 1 - FALL START | | Credits |
|---|---|---|
| CRR:103 | Survey of Auto Collision Repair (Optional) | (1.50) |
| 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 Service | 2.00 |
| CRR:801 | Refinishing I | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| | | 18.00 |

| TERM 2 | | |
|---|---|---|
| CRR:114 | Welding Systems and Techniques | 2.00 |
| CRR:200 | Plastic Repair | 1.00 |
| CRR:405 | Nonstructural Panel Repair and Replacement | 5.00 |
| CRR:507 | Structural Panel Repair and Replacement | 5.00 |
| MAT:104 | Applied Math Topics OR | 3.00 |
| PSY:213 | Industrial & Organizational Psychology | 3.00 |
| | | 16.00 |

| TERM 3 | | |
|---|---|---|
| CRR:743 | Estimating | 3.00 |
| CRR:825 | Refinishing Principles | 5.00 |
| | | 8.00 |

**Diploma Total ..... 42.00**

| TERM 4 | | Credits |
|---|---|---|
| AUT:404 | Automotive Suspension and Steering | 4.00 |
| AUT:606 | Basic Electricity / Electronic | 3.00 |
| AUT:614 | Automotive Electrical I | 3.00 |
| MAT:104 | Applied Math Topics OR | 3.00 |
| PSY:213 | Industrial & Organizational Psychology | 3.00 |
| | | 13.00 |

| TERM 5 | | |
|---|---|---|
| AUT:524 | Auto Brake Systems and Service | 4.00 |
| BCA:188 | Computer Fundamentals for Technicians | 3.00 |
| CRR:908 | Cooperative Education | 3.00 |
| DSL:710 | Heating A/C and Refrigerant | 4.00 |
| | | 14.00 |

**A.A.S Total ..... 69.00**

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

## A.A.S. DEGREE

| TERM 1 - SPRING START | | Credits |
|---|---|---|
| AUT:524 | Auto Brake Systems and Service | 4.00 |
| BCA:188 | Computer Fundamentals for Technicians | 3.00 |
| CRR:103 | Survey of Auto Collision Repair (Optional) | (1.50) |
| CRR:140 | Orientation and Safety | 3.00 |
| DSL:710 | Heating A/C and Refrigerant | 4.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| CRR:113 | Welding Survey | 2.00 |
| CRR:322 | Basic Metal Bumping and Repair | 5.00 |
| CRR:452 | Trim and Component Panel Service | 2.00 |
| CRR:801 | Refinishing I | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| | | 15.00 |

| TERM 3 | | |
|---|---|---|
| CRR:114 | Welding Systems and Techniques | 2.00 |
| CRR:200 | Plastic Repair | 1.00 |
| CRR:405 | Nonstructural Panel Repair and Replacement | 5.00 |
| CRR:507 | Structural Panel Repair and Replacement | 5.00 |
| MAT:104 | Applied Math Topics OR | 3.00 |
| PSY:213 | Industrial & Organizational Psychology | 3.00 |
| | | 16.00 |

| TERM 4 | | |
|---|---|---|
| CRR:743 | Estimating | 3.00 |
| CRR:825 | Refinishing Principles | 5.00 |
| | | 8.00 |

# AUTO COLLISION REPAIR TECHNOLOGY (CONTINUED)

| TERM 5 | | Credits |
|---|---|---|
| AUT:404 | Automotive Suspension and Steering | 4.00 |
| AUT:606 | Basic Electricity / Electronic | 3.00 |
| AUT:614 | Automotive Electrical I | 3.00 |
| CRR:908 | Cooperative Education | 3.00 |
| PSY:213 | Industrial & Organizational Psychology OR | 3.00 |
| MAT:104 | Applied Math Topics | 3.00 |
| | | 16.00 |
| **A.A.S Total** | | **69.00** |

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

## AUTO COLLISION REPAIR TECHNOLOGY CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| 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 Service | 2.00 |
| CRR:801 | Refinishing I | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| CRR:114 | Welding Systems and Techniques | 2.00 |
| CRR:200 | Plastic Repair | 1.00 |
| CRR:405 | Nonstructural Panel Repair and Replacement | 5.00 |
| CRR:507 | Structural Panel Repair and Replacement | 5.00 |
| | | 13.00 |
| **Certificate Total** | | **28.00** |

Gainful employment information for the Auto Collision Repair Technology program is located at www.eicc.edu/gainfulemployment

# AUTOMOTIVE TECHNOLOGY

**CAMPUS** SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

The Automotive Technology Program admits students in the Fall and Spring semester every year. The program has attained master certification in Automotive Service Excellence (ASE). Graduates from our program are prepared to pass certification exams in all of the following eight areas: Engine Repair, Manual Drive Train & Axles, Brakes, Heating & Air Conditioning, Automatic Transmission/Transaxle, Suspension & Steering, Electrical/Electronic Systems, and Engine Performance.

Some of the graduates of this program will work in shops as general line technicians performing work on all systems of the vehicle. Others will work in specialty shops that specialize in just certain areas of the vehicle such as brakes or transmissions. Graduates may also work in related areas such as service advising or parts distribution.

## A.A.S. DEGREE

| TERM 1 - FALL START | | Credits |
|---|---|---|
| AUT:103 | Survey of Automotive Technology (Optional) | (1.50) |
| AUT:115 | Automotive Shop Safety | 1.00 |
| AUT:164 | Automotive Engine Repair | 4.00 |
| AUT:606 | Basic Automotive Electricity/Electronics | 3.00 |
| AUT:614 | Automotive Electrical I | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| MAT:104 | Applied Math Topics OR | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| | | 17.00 |

| TERM 2 | | |
|---|---|---|
| AUT:232 | Automotive Transmissions I | 3.00 |
| AUT:304 | Automotive Manual Drive Train and Axles | 4.00 |
| AUT:524 | Auto Brake Systems and Service | 4.00 |
| AUT:802 | Engine Performance I | 3.00 |
| | | 14.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| AUT:404 | Automotive Suspension and Steering | 4.00 |
| AUT:704 | Automotive Heating and Air Conditioning | 4.00 |
| | | 8.00 |

**Diploma Total ..... 39.00**

| TERM 4 | | Credits |
|---|---|---|
| AUT:233 | Automotive Transmissions II | 3.00 |
| AUT:811 | Engine Performance II | 4.00 |
| BCA:188 | Computer Fundamentals for Technicians OR | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| HUM:105 | Working in America OR | 3.00 |
| PSY:213 | Industrial & Organizational Psychology | 3.00 |
| | | 13.00 |

| TERM 5 | | |
|---|---|---|
| AUT:656 | Automotive Electrical II | 4.00 |
| AUT:817 | Automotive Engine Performance III | 3.00 |
| AUT:911 | Cooperative/Internship | 4.00 |
| WEL:331 | Welding Fundamentals | 2.00 |
| | | 13.00 |

**A.A.S. Total ..... 65.00**

## A.A.S. DEGREE

| TERM 1 - SPRING START | | Credits |
|---|---|---|
| AUT:115 | Automotive Shop Safety | 1.00 |
| AUT:232 | Automotive Transmissions I | 3.00 |
| AUT:606 | Basic Automotive Electricity/Electronics | 3.00 |
| AUT:614 | Automotive Electrical I | 3.00 |
| AUT:802 | Engine Performance I | 3.00 |
| | | 13.00 |

| TERM 2 - SUMMER | | |
|---|---|---|
| AUT:811 | Engine Performance II | 4.00 |
| AUT:817 | Automotive Engine Performance III | 3.00 |
| | | 7.00 |

| TERM 3 | | |
|---|---|---|
| AUT:164 | Automotive Engine Repair | 4.00 |
| AUT:233 | Automotive Transmissions II | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| MAT:104 | Applied Math Topics OR | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| | | 13.00 |

| TERM 4 | | |
|---|---|---|
| AUT:304 | Automotive Manual Drive Train and Axles | 4.00 |
| AUT:524 | Auto Brake Systems and Service | 4.00 |
| AUT:656 | Automotive Electrical II | 4.00 |
| | | 12.00 |

| TERM 5 - SUMMER | | |
|---|---|---|
| AUT:404 | Automotive Suspension and Steering | 4.00 |
| AUT:704 | Automotive Heating and Air Conditioning | 4.00 |
| | | 8.00 |

# AUTOMOTIVE TECHNOLOGY
(CONTINUED)

| TERM 6 | | Credits |
|---|---|---|
| AUT:911 | Cooperative/Internship | 4.00 |
| BCA:188 | Computer Fundamentals for Technicians OR | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| HUM:105 | Working in America OR | 3.00 |
| PSY:213 | Industrial & Organizational Psychology | 3.00 |
| WEL:331 | Welding Fundamentals | 2.00 |
| | | 12.00 |

**A.A.S. Total ..... 65.00**

## AUTOMOTIVE TECHNOLOGY BASIC SERVICE CERTIFICATE

| TERM 1 - FALL START | | Credits |
|---|---|---|
| AUT:115 | Automotive Shop Safety | 1.00 |
| AUT:606 | Basic Automotive Electricity/Electronics | 3.00 |
| AUT:614 | Automotive Electrical I | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| | | 10.00 |

| TERM 2 | | |
|---|---|---|
| AUT:524 | Auto Brake Systems and Service | 4.00 |
| | | 4.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| AUT:404 | Automotive Suspension and Steering | 4.00 |
| | | 4.00 |

**Certificate Total ..... 18.00**

| TERM 1 - SPRING START | | Credits |
|---|---|---|
| AUT:115 | Automotive Shop Safety | 1.00 |
| AUT:524 | Automotive Brake Systems and Service | 4.00 |
| AUT:606 | Basic Automotive Electricity/Electronics | 3.00 |
| AUT:614 | Automotive Electrical I | 3.00 |
| BCA:188 | Computer Fundamentals for Technicians OR | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| | | 14.00 |

| TERM 2 - SUMMER | | |
|---|---|---|
| AUT:404 | Automotive Suspension and Steering | 4.00 |
| | | 4.00 |

**Certificate Total ..... 18.00**

## AUTOTMOTIVE TECHNOLOGY GENERAL SERVICE CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| AUT:115 | Automotive Shop Safety | 1.00 |
| AUT:164 | Automotive Engine Repair | 4.00 |
| AUT:606 | Basic Automotive Electricity/Electronics | 3.00 |
| AUT:614 | Automotive Electrical I | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| AUT:232 | Automotive Transmissions I | 3.00 |
| AUT:304 | Automotive Manual Drive Train and Axles | 4.00 |
| AUT:524 | Auto Brake Systems and Service | 4.00 |
| AUT:802 | Engine Performance I | 3.00 |
| | | 14.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| AUT:404 | Automotive Suspension and Steering | 4.00 |
| AUT:704 | Automotive Heating and Air Conditioning | 4.00 |
| | | 8.00 |

**Certificate Total ..... 36.00**

Gainful employment information for the Automotive Technology program is located at www.eicc.edu/gainfulemployment

# BUSINESS MANAGEMENT

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & CERTIFICATE

The Business Management program is designed especially for students interested a two-year, or shorter, degree to enter into the workplace. (Although some of this degree transfers, students interested in a four-year Bachelor's Degree will want to check out our transfer Business Administration/Accounting program for a better transfer option.)

This program provides the fundamentals necessary to be able to solve business-oriented problems. Students obtain extensive hands-on experience working "real-world" business problems relating to management and supervision. Students graduating from the program will have a solid business background necessary to enter or advance in the business job market in a variety of positions.

As a Business Management graduate you will be prepared to enter a company as a manager/supervisor trainee. If you are currently working in a business management position, you will--through updated skills, knowledge and techniques--be able to move up the career ladder to higher supervisory positions.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| ADM:157 | Business English OR | 3.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| MGT:101 | Principles of Management | 3.00 |
| ___:___ | Business Specialty Course* | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| BUS:110 | Business Math & Calculators OR | 3.00 |
| MAT:110 | Math for Liberal Arts OR | 3.00 |
| MAT:121 | College Algebra | 4.00 |
| BUS:161 | Human Relations | 3.00 |
| BUS:180 | Business Ethics | 3.00 |
| MKT:110 | Principles of Marketing | 3.00 |
| ___:___ | Business Specialty Course* | 3.00 |
| | | 15.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| ___:___ | Business Specialty Course* | 3.00 |
| | | 3.00 |

| TERM 4 | | Credits |
|---|---|---|
| ACC:121 | Principles of Accounting I OR | 3.00 |
| ACC:142 | Financial Accounting | 3.00 |
| ECN:110 | Introduction to Economics OR | 3.00 |
| ECN:120 | Principles of Macroeconmics OR | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| SPC:170 | Professional Communication OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| ___:___ | Business Specialty Course* | 3.00 |
| ___:___ | Business Skill Elective** | 3.00 |
| | | 15.00 |

| TERM 5 | | |
|---|---|---|
| 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 | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| ___:___ | Business Specialty Course* | 3.00 |
| ___:___ | Business Skill Elective** | 3.00 |
| | | 17.00 |

**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 MANAGEMENT
## (CONTINUED)

### **BUSINESS SKILL ELECTIVES
(Must select a minimum of 6 credit hours)

| | | |
|---|---|---|
| ACC:332 | Computer Accounting – QuickBooks | 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 |

## ENTREPRENEURSHIP CERTIFICATE

| | | Credits |
|---|---|---|
| BUS:130 | Introduction to Entrepreneurship | 3.00 |
| BUS:135 | Managing the Entrepreneurship Venture | 3.00 |
| BUS:147 | The Successful Entrepreneur | 3.00 |
| | | 9.00 |

**Certificate Total ..... 9.00**

## MANAGEMENT SUPERVISION CERTIFICATE

| | | Credits |
|---|---|---|
| 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* | 3.00 |
| | | 15.00 |

**Certificate Total ..... 15.00**

## MARKETING CERTIFICATE

| | | Credits |
|---|---|---|
| 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* | 3.00 |
| | | 15.00 |

**Certificate Total ..... 15.00**

## SMALL BUSINESS MANAGEMENT CERTIFICATE

| | | Credits |
|---|---|---|
| ACC:121 | Principles of Accounting I OR | 3.00 |
| ACC:142 | Financial Accounting | 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* | 3.00 |
| | | 15.00 |

**Certificate Total ..... 15.00**

# CANCER INFORMATION MANAGEMENT

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

The Cancer Information Management program prepares students for a career working in hospital-based cancer registries or population-based, central registries. Cancer registration is the basic method by which information about the incidence, type, extent of disease at time of diagnosis, treatment methods used and survival of patients with cancer is systematically collected.

Scott Community College offers both an Associate in Applied Science Degree and Diploma and Certificate programs in Cancer Information Management. These programs meet the state of Iowa A.A.S. and Certificate degree requirements and the National Cancer Registrar's Association (NCRA) formal education requirements. All program courses are offered in the online format only.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| ENG:105 | Composition I | 3.00 |
| HIT:139 | Math for Healthcare Professionals | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| HIT:120 | Pharmacology for HIT | 1.00 |
| HIT:170 | Principles of Human Disease | 3.00 |
| HIT:370 | Health Records in Acute Care | 3.00 |
| HUM:110 | Changes and Choices OR | 3.00 |
| ART:101 | Art Appreciation OR | 3.00 |
| PHI:101 | Introduction to Philosophy OR | 3.00 |
| PHI:110 | Introduction to Logic | 3.00 |
| | | 14.00 |

| TERM 3 | | |
|---|---|---|
| CIM:205 | Cancer Pathophysiology | 3.00 |
| PSY:111 | Introduction to Pscyhology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 6.00 |

| TERM 4 | | Credits |
|---|---|---|
| CIM:200 | Registry Organization and Operations | 3.00 |
| CIM:210 | Oncology Coding and Staging Systems | 4.00 |
| CIM:240 | Cancer Patient Follow-Up | 2.00 |
| HIT:312 | Health Informatics and Information Systems | 3.00 |
| HIT:422 | Medico-Legal Ethics | 3.00 |
| SPC:170 | Professional Communication OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 18.00 |

| TERM 5 | | |
|---|---|---|
| CIM:215 | Abstracting Principles and Practices I | 2.00 |
| CIM:220 | Abstracting Principles and Practices II | 2.00 |
| CIM:250 | Cancer Statistics and Epidemiology | 3.00 |
| CIM:260 | CIM Seminar | 1.00 |
| CIM:270 | Cancer Registry Practicum | 4.00 |
| HIT:440 | Quality Management | 3.00 |
| | | 15.00 |

**A.A.S. Total ..... 68.00**

## CANCER INFORMATION MANAGEMENT DIPLOMA

For students with previous AAS degree in non-health major or higher

| TERM 1 | | Credits |
|---|---|---|
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| ENG:105 | Composition I | 3.00 |
| HIT:120 | Pharmacology for HIT | 1.00 |
| HIT:139 | Math for Healthcare Professionals | 3.00 |
| HIT:170 | Principles of Human Disease | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| | | 19.00 |

| TERM 2 | | |
|---|---|---|
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| CIM:200 | Registry Organization and Operations | 3.00 |
| CIM:205 | Cancer Pathophysiology | 3.00 |
| CIM:210 | Oncology Coding and Staging Systems | 4.00 |
| CIM:215 | Abstracting Principles and Practices I | 2.00 |
| CIM:240 | Cancer Patient Follow-Up | 2.00 |
| CIM:250 | Cancer Statistics and Epidemiology | 3.00 |
| | | 21.00 |

| TERM 3 | | |
|---|---|---|
| CIM:220 | Abstracting Principles and Practices II | 2.00 |
| CIM:260 | CIM Seminar | 1.00 |
| CIM:270 | Cancer Registry Practicum | 4.00 |
| | | 7.00 |

**Diploma Total ..... 47.00**

# CANCER INFORMATION MANAGEMENT (CONTINUED)

## CANCER INFORMATION MANAGEMENT CERTIFICATE

For students with previous AAS degree in nursing and/or allied health major or higher

| TERM 1 | | Credits |
|---|---|---|
| CIM:200 | Registry Organization and Operations | 3.00 |
| CIM:205 | Cancer Pathophysiology | 3.00 |
| CIM:210 | Oncology Coding and Staging Systems | 4.00 |
| CIM:240 | Cancer Patient Follow-Up | 2.00 |
| | | 12.00 |

| TERM 2 | | |
|---|---|---|
| CIM:215 | Abstracting Principles and Practices I | 2.00 |
| CIM:220 | Abstracting Principles and Practices II | 2.00 |
| CIM:250 | Cancer Statistics and Epidemiology | 3.00 |
| CIM:260 | CIM Seminar | 1.00 |
| CIM:270 | Cancer Registry Practicum | 4.00 |
| | | 12.00 |

**Certificate Total ..... 24.00**

Gainful employment information for the Cancer Information Management program is located at www.eicc.edu/gainfulemployment

# CNC/MACHINING

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & CERTIFICATE

The Blong Technology Center (BTC) offers manual machining and Computer Numerical Control (CNC) machining. Certificate programs are available in both manual and CNC programming; the Associate in Applied Science degree program is available in CNC machining. Learning is hands-on in the modern laboratory furnished with the same types of equipment used by local manufacturing plants. Classes are offered in an eight-week format with a flexible schedule of attendance during day and evening hours.

## A.A.S. DEGREE

### TERM 1

| | | Credits |
|---|---|---|
| **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 |
| | | 14.00 |

### TERM 2

| | | |
|---|---|---|
| **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 Tolerance (Optional) | (1.00) |
| **Session II** | | |
| MFG:113 | Vertical/Horizontal Mills | 5.50 |
| MFG:115 | Lathe Work | 4.50 |
| | | 16.00 |

### TERM 3 - SUMMER

| | | Credits |
|---|---|---|
| ECN:120 | Principles of Macroeconomics OR | 3.00 |
| ECN:130 | Principles of Microeconomics OR | 3.00 |
| HUM:105 | Working in America OR | 3.00 |
| HUM:110 | Changes and Choices OR | 3.00 |
| POL:111 | American National Government OR | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| MFG:111 | Machinery's Handbook | 1.00 |
| MFG:117 | Cylindrical Grinding | 1.50 |
| MFG:190 | Metallurgy | 2.00 |
| | | 7.50 |

### TERM 4

| | | |
|---|---|---|
| **Session I** | | |
| ENG:105 | Composition I OR | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| 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 |
| | | 15.50 |

### TERM 5

| | | |
|---|---|---|
| **Session I** | | |
| MFG:201 | CNC Turning 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 | 3.00 |
| | | 14.00 |

### TERM 6

| | | |
|---|---|---|
| **Session I** | | |
| MFG:229 | CNC Project | 4.00 |
| | | 4.00 |

**A.A.S. Total ..... 71.00**

# CNC/MACHINING (CONTINUED)

## CNC PROGRAMMING CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| 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 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| 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 | 2.00 |
| | | 13.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| MFG:229 | CNC Project | 4.00 |
| | | 4.00 |

**Certificate Total ..... 31.00**

## MANUAL MACHINING CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| 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 |
| **Session II** | | |
| MAT:734 | Math for Manufacturing Technologies B | 1.50 |
| MFG:105 | Machine Shop Measuring | 3.00 |
| | | 11.00 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| MFG:112 | Drills and Saws | 2.00 |
| **Session II** | | |
| MFG:113 | Vertical/Horizontal Mills | 5.50 |
| MFG:115 | Lathe Work | 4.50 |
| | | 12.00 |

| TERM 3 | | |
|---|---|---|
| **Session I** | | |
| MFG:114 | Surface Grinding | 2.50 |
| MFG:117 | Cylindrical Grinding | 1.50 |
| **Session II** | | |
| MFG:118 | Machine Tool Project | 4.00 |
| | | 8.00 |

**Certificate Total ..... 31.00**

Gainful employment information for the CNC Machining program is located at www.eicc.edu/gainfulemployment

# CULINARY ARTS

**CAMPUS** MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & CERTIFICATE

Since 1991, the program and Scott Community College have operated in conjunction with the Chefs de Cuisine Association of the Quad Cities. Apprentices work at one of the chapter's 65 approved apprenticeship sites under the supervision of the executive chef to complete a total of 6,000 hours on the job. The apprentice takes general education requirement classes and classes in culinary arts at Scott Community College and other selected class sites.

## APPRENTICESHIP A.A.S. DEGREE

| TERM 1 - FALL OR SPRING START | | Credits |
|---|---|---|
| CSC:107 | Computer Literacy | 3.00 |
| HCM:100 | Sanitation and Safety | 2.00 |
| HCM:154 | Basic Food Preparation | 2.00 |
| HCM:180 | Food Fundamentals | 2.00 |
| HCM:501 | Culinary Practicum I | 3.00 |
| | | 12.00 |

| TERM 2 | | |
|---|---|---|
| HCM:156 | Intermediate Food Prep | 3.00 |
| HCM:233 | Menu Planning and Nutrition | 3.00 |
| HCM:265 | Mathematics for Hospitality | 3.00 |
| HCM:502 | Culinary Practicum II | 3.00 |
| | | 12.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| HCM:255 | Purchasing | 3.00 |
| HCM:503 | Culinary Practicum III | 1.50 |
| | | 4.50 |

| TERM 4 | | |
|---|---|---|
| HCM:116 | Fundamentals of Baking | 3.00 |
| HCM:280 | Food Cost Accounting | 3.00 |
| HCM:504 | Culinary Practicum IV | 3.00 |
| HUM:105 | Working in America | 3.00 |
| | | 12.00 |

| TERM 5 | | Credits |
|---|---|---|
| HCM:160 | Advanced Food Preparation | 3.00 |
| HCM:212 | Industry Management | 3.00 |
| HCM:241 | Menu Planning and Sales Promotion | 3.00 |
| HCM:505 | Culinary Practicum V | 3.00 |
| PSY:213 | Industrial & Organizational Psychology OR | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 15.00 |

| TERM 6 - SUMMER | | |
|---|---|---|
| HCM:155 | Garde Manger | 3.00 |
| HCM:506 | Culinary Practicum VI | 1.50 |
| | | 4.50 |

| TERM 7 | | |
|---|---|---|
| HCM:301 | Beverage Control | 3.00 |
| HCM:507 | Culinary Practicum VII | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 9.00 |

| TERM 8 | | |
|---|---|---|
| HCM:508 | Culinary Practicum VIII | 3.00 |
| | | 3.00 |

| TERM 9 - SUMMER | | |
|---|---|---|
| HCM:509 | Culinary Practicum IX | 1.50 |
| | | 1.50 |

**A.A.S. Total ..... 73.50**

# CULINARY ARTS (CONTINUED)

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| CSC:107 | Computer Literacy | 3.00 |
| HCM:100 | Sanitation and Safety | 2.00 |
| HCM:116 | Fundamentals of Baking | 3.00 |
| HCM:154 | Basic Food Preparation | 2.00 |
| HCM:180 | Food Fundamentals | 2.00 |
| HCM:265 | Mathematics for Hospitality | 3.00 |
| HCM:932 | Internship | 1.00 |
| | | 16.00 |

| TERM 2 | | |
|---|---|---|
| HCM:156 | Intermediate Food Prep | 3.00 |
| HCM:182 | Intermediate Baking | 3.00 |
| HCM:212 | Industry Management | 3.00 |
| HCM:233 | Menu Planning & Nutrition | 3.00 |
| HCM:589 | Introduction to Restaurant Management | 3.00 |
| HCM:932 | Internship | 1.00 |
| | | 16.00 |

**Diploma Total ..... 32.00**

| TERM 3 | | |
|---|---|---|
| HCM:255 | Purchasing | 3.00 |
| | | 3.00 |

| TERM 4 | | |
|---|---|---|
| HCM:199 | Batch Cooking | 2.00 |
| HCM:280 | Food Cost Accounting | 3.00 |
| HCM:932 | Internship | 2.00 |
| HCM:958 | Hospitality Lab II | 2.00 |
| HUM:105 | Working in America | 3.00 |
| SPC:112 | Public Speaking OR | 3.00 |
| SPC:170 | Professional Communication | 3.00 |
| | | 15.00 |

| TERM 5 | | |
|---|---|---|
| HCM:160 | Advanced Food Preparation | 3.00 |
| HCM:241 | Menu Planning and Sales Promotion | 3.00 |
| HCM:301 | Beverage Control | 3.00 |
| HCM:932 | Internship | 2.00 |
| PSY:213 | Industrial & Organizational Psychology OR | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 14.00 |

| TERM 6 | | |
|---|---|---|
| HCM:155 | Garde Manger | 3.00 |
| | | 3.00 |

**A.A.S Total ..... 67.00**

## CULINARY ARTS CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| CSC:107 | Computer Literacy | 3.00 |
| HCM:100 | Sanitation and Safety | 2.00 |
| HCM:116 | Fundamentals of Baking | 3.00 |
| HCM:154 | Basic Food Preparation | 2.00 |
| HCM:180 | Food Fundamentals | 2.00 |
| HCM:265 | Mathematics for Hospitality | 3.00 |
| HCM:932 | Internship | 1.00 |
| | | 16.00 |

**Certificate Total ..... 16.00**

## BAKING CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| HCM:100 | Sanitation and Safety | 2.00 |
| HCM:116 | Fundamentals of Baking | 3.00 |
| HCM:180 | Food Fundamentals | 2.00 |
| | | 7.00 |

| TERM 2 | | |
|---|---|---|
| HCM:182 | Intermediate Baking | 3.00 |
| HCM:224 | Artisan Breads | 2.00 |
| | | 5.00 |

| TERM 3 | | |
|---|---|---|
| HCM:125 | Basic Cake Decorating | 1.00 |
| HCM:183 | Advanced Baking | 3.00 |
| | | 4.00 |

**Certificate Total ..... 16.00**

Gainful employment information for the Culinary Arts program is located at www.eicc.edu/gainfulemployment

# DENTAL ASSISTING

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** DIPLOMA, CERTIFICATE

The Dental Assisting program prepares students to seek career opportunities in private dental offices and specialty practices such as orthodontics, pediatric dentistry, periodontics, endodontics and oral surgery. The dental assistant performs a wide range of tasks requiring both interpersonal and technical skills.

The program in Dental Assisting is accredited by the Commission on Dental Accreditation [and has been granted the accreditation status of "approval with reporting requirements"]. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611. The Commission's web address is: http://www.ada.org/100.aspx.

## DIPLOMA

### TERM 1 - FALL START

| | | Credits |
|---|---|---|
| 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 | 6.00 |
| | | 19.50 |

### TERM 2

| | | |
|---|---|---|
| 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 | 3.00 |
| COM:102 | Communications Skills OR | 3.00 |
| SPC:122 | Interpersonal Communication | 3.00 |
| | | 16.50 |

### TERM 3 - SUMMER

| | | |
|---|---|---|
| DEA:211 | Nutrition for Dental Assisting | 1.00 |
| DEA:268 | Pharmacology and Emergency Procedures for Dental Assisting | 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 | 3.00 |
| | | 10.00 |

**Diploma Total ..... 46.00**

## DIPLOMA

### TERM 1 - SPRING START

| | | Credits |
|---|---|---|
| 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 | 6.00 |
| | | 19.50 |

### TERM 2 - 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 | 3.00 |
| | | 10.00 |

### TERM 3

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

### TERM 1

| | | Credits |
|---|---|---|
| DEA:810 | RDA Expanded Functions I | 2.00 |
| DEA:820 | RDA Expanded Functions II | 1.00 |
| DEA:830 | RDA Nitrous Oxide Monitoring | 1.00 |
| | | 4.00 |

**Certificate Total ..... 4.00**

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.

Gainful employment information for the Dental Assisting program is located at www.eicc.edu/gainfulemployment

# DENTAL HYGIENE

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGE/CARL SANDBURG COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

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://sandburg.edu/academics/dental-hygiene).

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

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* | 4.00 |
| CHM:122 | Introduction to General Chemistry | 4.00 |

* 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 | 3.00 |
| BIO:168 | Human Anatomy & Physiology I | 4.00 |
| BIO:173 | Human Anatomy & Physiology II | 4.00 |
| BIO:186 | Microbiology | 4.00 |
| ENG:105 | English Composition I | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 27.00 |

## A.A.S. DEGREE

### PRIOR TO ADMISSION

| | | Credits |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| | | 8.00 |

### TERM 1

| | | Credits |
|---|---|---|
| BIO:168 | Human Anatomy & Physiology I | 4.00 |
| DHY:109 | Preclinic Lab | 1.50 |
| DHY:112 | Head, Neck, & Oral Anatomy | 3.00 |
| DHY:115 | Dental Hygiene Practice I | 2.00 |
| DHY:161 | Oral Radiology | 3.00 |
| DHY:170 | Principles of Dental Hygiene | 2.00 |
| DHY:228 | Clinical Preventive Dentistry | 2.00 |
| | | 17.50 |

### TERM 2

| | | |
|---|---|---|
| BIO:173 | Human Anatomy & Physiology II | 4.00 |
| DHY:118 | Oral Histology & Embryology | 1.00 |
| DHY:125 | Dental Hygiene Practice II | 4.00 |
| DHY:211 | Periodontology | 2.00 |
| DHY:281 | Dental Hygiene II | 2.00 |
| ENG:105 | Composition I | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 19.00 |

### TERM 3

| | | |
|---|---|---|
| DHY:291 | Dental Hygiene III | 2.00 |
| | | 2.00 |

### TERM 4

| | | |
|---|---|---|
| BIO:186 | Microbiology | 4.00 |
| DHY:205 | Dental Hygiene Practice III | 3.00 |
| | | 7.00 |

### TERM 5

| | | |
|---|---|---|
| BIO:151 | Nutrition | 3.00 |
| DHY:131 | Pharmacology | 2.00 |
| DHY:140 | General & Oral Pathology | 2.00 |
| DHY:215 | Dental Hygiene Practice IV | 5.00 |
| DHY:257 | Community Dental Health | 2.00 |
| DHY:301 | Dental Hygiene IV | 2.00 |
| | | 16.00 |

### TERM 6

| | | |
|---|---|---|
| DHY:212 | Periodontology II | 2.00 |
| DHY:218 | Dental Office Management & Jurisprudence | 2.00 |
| DHY:225 | Dental Hygiene Practice V | 5.00 |
| DHY:270 | Local Anesthesia for Dental Hygienists | 1.00 |
| DHY:311 | Dental Hygiene V | 2.00 |
| PSY:111 | Intro to Psychology | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 18.00 |

**A.A.S. Total ..... 79.50**

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.

# DIESEL TECHNOLOGY

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

Diesel Technology is a two-year program admitting students in the Fall and Spring semester every year. Students are prepared to diagnose, adjust, repair, or overhaul buses and trucks, and maintain and repair any type of diesel engines. Program graduates will have a working knowledge of hydraulic systems, and computers, and good electrical troubleshooting skills.

The program curriculum is written to ASE standards and graduates are prepared to pass ASE certification exams in the following seven areas: Brakes, Diesel Engines, Suspension & Steering, Drive Train, Electrical/Electronics Systems, Heating, Ventilation & Air Conditioning, and Preventive Maintenance Inspection.

## A.A.S. DEGREE

| TERM 1 - FALL START | | Credits |
|---|---|---|
| AUT:115 | Automotive Shop Safety | 1.00 |
| AUT:164 | Automotive Engine Repair | 4.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| DSL:103 | Survey of Diesel Technology (Optional) | (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 | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| | | 19.00 |

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

| TERM 2 | | |
|---|---|---|
| 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 | 1.00 |
| | | 16.00 |

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

* If completed in Term 1, student need not take this course.

| TERM 3 - SUMMER | | Credits |
|---|---|---|
| DSL:340 | Diesel Engine Repair | 5.00 |
| DSL:625 | Heavy Duty Alignment | 3.00 |
| | | 8.00 |

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

| TERM 4 | | |
|---|---|---|
| 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 | 3.00 |
| WEL:331 | Welding Fundamentals | 2.00 |
| | | 12.00 |

| TERM 5 | | |
|---|---|---|
| BCA:188 | Computer Fundamentals for Technicians OR | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| DSL:519 | Automatic Drive Train | 4.00 |
| DSL:710 | Heating, Air Conditioning and Refrigeration | 4.00 |
| DSL:905 | Cooperative Experience | 2.00 |
| | | 13.00 |

**A.A.S. Total ..... 68.00**

## A.A.S. DEGREE

| TERM 1 - SPRING START | | Credits |
|---|---|---|
| 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 | 1.00 |
| | | 17.00 |

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

| TERM 2 - SUMMER | | |
|---|---|---|
| DSL:340 | Diesel Engine Repair | 5.00 |
| DSL:625 | Heavy Duty Alignment | 3.00 |
| | | 8.00 |

# DIESEL TECHNOLOGY (CONTINUED)

| TERM 3 | | Credits |
|---|---|---|
| AUT:115 | Automotive Shop Safety* | 1.00 |
| AUT:164 | Automotive Engine Repair | 4.00 |
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| 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 | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| | | 19.00 |

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

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

* If completed in Term 1, student need not take this course.

| TERM 4 | | |
|---|---|---|
| BCA:188 | Computer Fundamentals for Technicians OR | 3.00 |
| BUS:102 | Introduction to Business | 3.00 |
| DSL:519 | Automatic Drive Train | 4.00 |
| DSL:710 | Heating, Air Conditioning and Refrigeration | 4.00 |
| DSL:905 | Cooperative Experience | 2.00 |
| | | 13.00 |

| TERM 5 – 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 | 3.00 |
| WEL:331 | Welding Fundamentals | 2.00 |
| | | 12.00 |

**A.A.S. Total ..... 68.00**

Gainful employment information for the Diesel Technology program is located at www.eicc.edu/gainfulemployment

# EARLY CHILDHOOD EDUCATION

**CAMPUS** MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** A.A.S., DIPLOMA, CERTIFICATE

The Early Childhood Education program is designed to provide students with a comprehensive background in early childhood education. Meaningful, on-site, practical experiences along with lecture, hands-on learning and theory round out the basic education provided.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| ECE:103 | Intro to Early Childhood Education* | 3.00 |
| ECE:133 | Child Health, Safety, and Nutrition* | 3.00 |
| ECE:158 | Early Childhood Curriculum I* | 3.00 |
| ECE:170 | Child Growth and Development* | 3.00 |
| ECE:243 | Early Childhood Guidance* | 3.00 |
| ENG:105 | Composition I OR | 3.00 |
| COM:102 | Communication Skills | 3.00 |
| | | 18.00 |

**Certificate Total ..... 18.00**

| TERM 2 | | |
|---|---|---|
| ECE:159 | Early Childhood Curriculum II* | 3.00 |
| EDU:220 | Human Relations for the Classroom Teacher | 3.00 |
| EDU:235 | Children's Literature | 3.00 |
| EDU:245 | Exceptional Learner | 3.00 |
| HUM:105 | Working in America OR | 3.00 |
| HUM:287 | Leadership Development Studies OR | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 15.00 |

**Diploma Total ..... 33.00**

| TERM 3 - SUMMER | | |
|---|---|---|
| ECE:920 | Field Experience/ECE** | 2.00 |
| | | 2.00 |

| TERM 4 | | |
|---|---|---|
| BUS:110 | Business Math & Calculators OR | 3.00 |
| ENV:111 | Environmental Science OR | 4.00 |
| ENV:115 | Environmental Science | 3.00 |
| CSC:110 | Introduction to Computers OR | 3.00 |
| SPC:170 | Professional Communication | 3.00 |
| ECE:169 | Art and Music Activities for Young Children | 3.00 |
| ECE:193 | Dynamics of the Family | 3.00 |
| ECE:920 | Field Experience/ECE** | 2.00 |
| SDV:174 | Critical and Creative Thinking | 3.00 |
| | | 17.00-18.00 |

| TERM 5 | | Credits |
|---|---|---|
| ECE:221 | Infant/Toddler Care and Education | 3.00 |
| ECE:290 | Early Childhood Program Administration | 3.00 |
| ECE:920 | Field Experience/ECE** | 2.00 |
| ___:___ | Early Childhood Elective | 6.00 |
| | | 14.00 |

**A.A.S. Total ..... 66.00-67.00**

* 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.

### EARLY CHILDHOOD ELECTIVES

(Must select 6 credit hours)

| | | |
|---|---|---|
| BUS:102 | Introduction to Business | 3.00 |
| ECE:168 | Math and Science for Young Children | 3.00 |
| EDU:125 | Making a Difference | 3.00 |
| EDU:212 | Educational Foundations | 3.00 |
| EDU:255 | Technology in the Classroom | 3.00 |
| PSY:121 | Developmental Psychology | 3.00 |
| SDV:114 | Strategies for Academic Success | 3.00 |

Gainful employment information for the Early Childhood Education program is located at www.eicc.edu/gainfulemployment

# ELECTRONEURODIAGNOSTIC TECHNOLOGY

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

The Electroneurodiagnostic Technology program prepares students to conduct electroneurodiagnostic (END) tests such as electroencephalograms, evoked potentials, polysomnograms, and electronystagmograms. This scientific field is devoted to the recording and study of electrical activity of the brain and nervous system. Used for medical evaluation and research, it includes procedures that assess the function of the nervous system.

The Electroneurodiagnostic Technology (END) program is accredited by the Commission on Accreditation of Allied Health Education Programs.

**The Electroneurodiagnostic Technology (END) program is no longer accepting new students as of April 18, 2016.**

## A.A.S. DEGREE

| TERM 0 | | Credits |
|---|---|---|
| ENG:105 | Composition I | 3.00 |
| HIT:139 | Math for Health Care Professionals | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| | | 8.00 |

| TERM 1 | | |
|---|---|---|
| BIO:168 | Human Anatomy & Physiology I | 4.00 |
| END:111 | Introduction to Electroneurodiagnostics | 6.00 |
| END:211 | Electronics and Instrumentation | 4.00 |
| HIT:422 | Medico-Legal Ethics | 3.00 |
| | | 17.00 |

| TERM 2 | | |
|---|---|---|
| BIO:173 | Human Anatomy & Physiology II | 4.00 |
| BIO:225 | Neuroanatomy | 3.00 |
| END:301 | Electroneurodiagnostics I | 6.00 |
| END:330 | Electroneurodiagnostic Clinical Science | 2.00 |
| END:800 | Clinical Practicum I | 2.00 |
| | | 17.00 |

| TERM 3 | | |
|---|---|---|
| CSC:110 | Introduction to Computers OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| END:320 | Electroneurodiagnostics II | 2.00 |
| END:820 | Clinical Practicum II | 4.00 |
| | | 9.00 |

| TERM 4 | | Credits |
|---|---|---|
| END:340 | Electroneurodiagnostics III | 3.00 |
| END:345 | Special Studies | 4.00 |
| END:402 | Nerve Conduction Studies | 4.00 |
| END:840 | Clinical Practicum III | 4.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| | | 18.00 |

| TERM 5 | | |
|---|---|---|
| END:510 | Polysomnography | 4.00 |
| END:860 | Clinical Practicum IV | 8.00 |
| | | 12.00 |

**A.A.S. Total ..... 81.00**

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 www.eicc.edu/future-students/our-programs.

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

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & CERTIFICATE

The Clinton, Muscatine and Scott Community College Emergency Medical Services (EMS) programs prepare students for successful completion of the Iowa/National Emergency Medical Technician Basic and Paramedic certifying exams. The EMS program provides graduates with the tools to adapt to public expectations and to take leadership roles in the evolution of prehospital patient care.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| EMS:202 | Emergency Medical Technician | 9.50 |
| ENG:105 | Composition I OR | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| MAT:___ | Math Elective (Above 100 level) | 3.00 |
| | | 17.50 |

| TERM 2 | | |
|---|---|---|
| BIO:168 | Human Anatomy & Physiology I | 4.00 |
| BUS:102 | Introduction to Business | 3.00 |
| BUS:161 | Human Relations | 3.00 |
| PNN:210 | Principles of Pharmacology-Module A | 1.00 |
| PNN:211 | Principles of Pharmacology-Module B | 1.00 |
| PSY:121 | Developmental Psychology | 3.00 |
| | | 15.00 |

| TERM 3 | | |
|---|---|---|
| EMS:238 | Advanced Emergency Medical Technician | 15.00 |
| | | 15.00 |

| TERM 4 | | |
|---|---|---|
| CSC:110 | Introduction to Computers | 3.00 |
| EMS:810 | Advanced Cardiac Life Support | 1.00 |
| EMS:815 | Advanced Pediatric Life Support | 1.00 |
| EMS:816 | Pediatric Education for Prehospital Professionals | 1.00 |
| EMS:817 | Basic Cardiac Life Support Instructor | 1.00 |
| EMS:818 | Neonatal Resuscitation | 1.00 |
| EMS:820 | Prehospital Trauma Life Support | 1.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 15.00 |

**A.A.S. Total ..... 62.50**

## EMERGENCY MEDICAL TECHNICIAN CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| EMS:202 | Emergency Medical Technician | 9.50 |
| | | 9.50 |

**Certificate Total ..... 9.50**

Upon completion of the EMT Certificate, the student is eligible to sit for the National Registry EMT certification exam.

## ADVANCED EMERGENCY MEDICAL TECHNICIAN CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| EMS:202 | Emergency Medical Technician | 9.50 |
| EMS:238 | Advanced Emergency Medical Technician | 15.00 |
| | | 24.50 |

**Certificate Total ..... 24.50**

Upon completion of the Advanced Emergency Medical Technician Certificate, the student is eligible to sit for the National Registry AEMT certification exam.

Gainful employment information for the Emergency Medical Services program is located at www.eicc.edu/gainfulemployment

# ENGINEERING TECHNOLOGY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

The Engineering Technology program trains students to be specialists in the practical application and implementation of existing technology within the field engineering. The program provides a great deal of flexibility, making it ideal for students coming out of high school as well as those already in the workforce. It includes flexible scheduling, hybrid courses (a combination of in-class and online learning), and a model of eight-week modules that allow numerous start times during the year.

The first 4 terms of the program provide a common core, after which student can choose coursework in the 5th term to specialize in Automation, Electromechanical or Process Control.

## A.A.S. DEGREE

### TERM 1 - ALL TRACKS

| | | Credits |
|---|---|---|
| **Session I** | | |
| ELE:101 | Industrial Safety | 1.00 |
| ELE:216 | DC Circuit Analysis | 3.00 |
| MAT:705 | Industrial Math & Measurement I | 2.00 |
| **Session II** | | |
| ELE:217 | AC Circuit Analysis | 3.00 |
| IND:134 | Print Reading | 2.00 |
| MAT:706 | Industrial Math & Measurement II | 2.00 |
| | | 13.00 |

**Basic Electricity Certificate ..... 13.00**

Note: If planning a Bachelor's Degree transfer, substitute MAT:705 and MAT:706 for MAT:128 PreCalculus or MAT:210 Calculus I

### TERM 2 - ALL TRACKS

| | | |
|---|---|---|
| **Session I** | | |
| CSC:112 | Computer Fundamentals for Technicians I/A | 2.00 |
| 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 |
| ELT:309 | Digital Circuits | 3.00 |
| PHY:185 | Conceptual Physics Fundamentals I | 2.00 |
| | | 14.00-15.00 |

**Basic Electronics Certificate ..... 27.00-28.00**

Note: CSC:110 may be substituted for CSC:112 and CSC:113

### TERM 3 - SUMMER - ALL TRACKS

| | | Credits |
|---|---|---|
| ECN:120 | Principles of Macroeconomics OR | 3.00 |
| ECN:130 | Principles of Microeconomics OR | 3.00 |
| HUM:105 | Working in America OR | 3.00 |
| HUM:110 | Changes and Choices OR | 3.00 |
| POL:111 | American National Government OR | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| ENG:105 | Composition I OR | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| PHY:186 | Conceptual Physics Fundamentals II | 2.00 |
| | | 8.00 |

**Engineering Technology Electromechanical Diploma ..... 35 .00-36.00**

### TERM 4 - ALL TRACKS

| | | |
|---|---|---|
| **Session I** | | |
| EGT:117 | Fluid Power Fundamentals | 2.00 |
| ELT:123 | Programmable Logic Controllers | 3.00 |
| **Session II** | | |
| ELT:125 | Advanced PLC | 3.00 |
| IND:143 | Motors and Drives | 3.00 |
| MFG:505 | Lean Manufacturing | 1.00 |
| | | 12.00 |

## AUTOMATION

### TERM 5

| | | Credits |
|---|---|---|
| **Session I** | | |
| ATR:105 | Industrial Robotics | 3.00 |
| ATR:106 | Motion Control | 3.00 |
| ELT:177 | Microcontrollers | 3.00 |
| **Session II** | | |
| (Must select a minumum of 6 credit hours) | | |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| EGT:137 | Fluid Power Control | 4.00 |
| EGT:145 | Fluid Power Maintenance | 4.00 |
| IND:136 | Process Control I | 3.00 |
| IND:137 | Process Control II | 3.00 |
| | | 15.00 |

**A.A.S. Total ..... 62.00-63.00**

# ENGINEERING TECHNOLOGY
(CONTINUED)

## ELECTROMECHANICAL

| TERM 5 | | Credits |
|---|---|---|
| **Session I** | | |
| ATR:106 | Motion Control | 3.00 |
| EGT:137 | Fluid Power Control | 4.00 |
| EGT:145 | Fluid Power Maintenance | 4.00 |
| **Session II** | | |
| (Must select a minumum of 6 credit hours) | | |
| ATR:105 | Industrial Robotics | 3.00 |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| ELT:177 | Microcontrollers | 3.00 |
| IND:136 | Process Control I | 3.00 |
| IND:137 | Process Control II | 3.00 |
| | | 17.00 |
| **A.A.S. Total** | | **64.00-65.00** |

## PROCESS CONTROL

| TERM 5 | | Credits |
|---|---|---|
| **Session I** | | |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| IND:136 | Process Control I | 3.00 |
| **Session II** | | |
| IND:137 | Process Control II | 3.00 |
| (Must select a minimum of 6 credit hours from below) | | |
| ATR:105 | Industrial Robotics | 3.00 |
| ATR:106 | Motion Control | 3.00 |
| EGT:137 | Fluid Power Control | 4.00 |
| EGT:145 | Fluid Power Maintenance | 4.00 |
| ELT:177 | Microcontrollers | 3.00 |
| | | 16.00 |
| **A.A.S. Total** | | **63.00-64.00** |

## ELECTRICAL SYSTEMS CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| CSC:112 | Computer Fundamentals for Technicians I/A | 2.00 |
| CSC:113 | Computer Fundamentals for Technicians I/B | 2.00 |
| ELE:101 | Industrial Safety | 1.00 |
| ELE:216 | DC Circuit Analysis | 3.00 |
| **Session II** | | |
| ELE:217 | AC Circuit Analysis | 3.00 |
| MAT:705 | Industrial Math and Measurement I | 2.00 |
| MFG:505 | Lean Manufacturing | 1.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| ATR:105 | Industrial Robotics | 3.00 |
| ELE:225 | Electrical Motor Control & PowerDistribution | 3.00 |
| **Session II** | | |
| ELT:123 | Programmable Logic Controllers | 3.00 |
| ELT:309 | Digital Circuits | 3.00 |
| ELT:312 | Solid State Devices and Systems | 3.00 |
| | | 15.00 |

| TERM 3 | | |
|---|---|---|
| ATR:106 | Motion Control | 3.00 |
| ELT:125 | Advanced PLC | 3.00 |
| IND:143 | Motors and Drives | 3.00 |
| | | 9.00 |
| **Certificate Total** | | **38.00** |

## PROCESS CONTROL TECHNOLOGY CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| ELE:101 | Industrial Safety | 1.00 |
| ELE:216 | DC Circuit Analysis | 3.00 |
| MAT:705 | Industrial Math and Measurement I | 2.00 |
| **Session II** | | |
| ELE:217 | AC Circuit Analysis | 3.00 |
| IND:134 | Print Reading | 2.00 |
| MAT:706 | Industrial Math and Measurement II | 2.00 |
| | | 13.00 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| ELE:225 | Electrical Motor Controls & Power Distribution | 3.00 |
| **Session II** | | |
| ELT:312 | Solid State Devices and Systems | 3.00 |
| IND:136 | Process Control I | 3.00 |
| | | 13.00 |

| TERM 3 | | |
|---|---|---|
| EGT:137 | Fluid Power Control | 3.00 |
| EGT:902 | Coop/Internship (Recommended Optional) | (2.00) |
| | | 3.00 |

**Certificate Total ..... 29.00**

The Engineering Technology Program is funded in part by the Trade Ajustment 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.

Gainful employment information for the Engineering Technology program is located at www.eicc.edu/gainfulemployment

# ENVIRONMENTAL, HEALTH AND SAFETY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & CERTIFICATE

The Environmental, Health and Safety (EHS) program prepares students to be safety and environmental technicians who protect employees and the public by controlling hazards in the workplace. EHS professionals apply the principles of math, science, engineering, communications and economics to the protection of people, property and the environment. The EHS program focuses on environmental, health and safety regulations and compliance. Graduates are trained to assist an organization in the management of hazardous materials and wastes, to protect workers and the environment, and to minimize the organization's Worker's Compensation. The entire degree and various certificates can be completed online.

## A.A.S. DEGREE

EHS courses are delivered via the Internet:
http://www.eicc.edu/environmentalcareers

| TERM 1 | | Credits |
|---|---|---|
| CHM:122 | Introduction to General Chemistry | 4.00 |
| HSE:100 | Occupational Safety | 3.00 |
| HSE:105 | Characteristics of Hazardous Materials | 3.00 |
| HSE:110 | Industrial Processes | 3.00 |
| HSE:200 | Waste & Remediation* | 3.00 |
| | | 16.00 |

**Certificate ..... 16.00**

* The Resource Conservation Recovery Act (RCRA) Certificate is embedded in HSE:200. Certification is awarded upon complete of the course.

| TERM 2 | | |
|---|---|---|
| ENG:107 | Composition I:Technical Writing OR | 3.00 |
| ENG:105 | Composition I | 3.00 |
| HSE:205 | Air and Water Quality | 3.00 |
| HSE:230 | Transportation of Hazardous Materials** | 3.00 |
| HSE:270 | Sampling & Monitoring Procedures | 4.00 |
| HSE:280 | Hazardous Materials Health Effects | 3.00 |
| | | 16.00 |

**Diploma ..... 32.00**

** The DOT Hazardous Material Certificate is embedded in HSE:230. Certification is awarded upon complete of the course.

| TERM 3 | | Credits |
|---|---|---|
| CHM:132 | Introduction to Organic and Biochemistry | 4.00 |
| CSC:110 | Introduction to Computers OR | 3.00 |
| CSC:107 | Computer Literacy | 3.00 |
| ENG:108 | Composition II: Technical Writing OR | 3.00 |
| ENG:106 | Composition II | 3.00 |
| HSE:210 | Contingency Planning/Incident Management | 3.00 |
| HSE:225 | Legal Aspects of Environmental and Safety | 3.00 |
| | | 16.00 |

| TERM 4 | | |
|---|---|---|
| ENV:111 | Environmental Science | 4.00 |
| HSE:285 | Industrial Hygiene | 3.00 |
| HUM:110 | Changes and Choices OR | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| MAT:104 | Applied Math Topics | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 16.00 |

**A.A.S. Total ..... 64.00**

Students are recommended to sit for their OSHA certifications separate from Environmental, Health and Safety courses.

Students enrolled in the Environmental, Health and Safety program can complete the OSHA certification through EICC"s Continuing Education courses at a reduced cost of half-price.

Recommended progression of OSHA Certification

Upon completion of Term 1
- OSHA 10-hour Construction
- OSHA 10-hour General Industry

Upon completion of Term 2
- OSHA 24-hour Spill Response
- OSHA 40-hour Waste Site Worker

Upon completion of Term 4
- OSHA 30-hour Construction
- OSHA 30-hour General Industry

Gainful employment information for the Environmental, Health and Safety program is located at www.eicc.edu/gainfulemployment

# FARM MANAGEMENT

**CAMPUS** MUSCATINE COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

The Farm Management program is a comprehensive two-year agricultural production program that includes professional training in the classroom and real world experiences. The areas of marketing, risk management, and financial management are emphasized.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| AGB:108 | Human Relations I | 1.50 |
| AGB:301 | Applied Accounting for Farm Management I | 1.50 |
| AGC:861 | Farm Experience I | 3.00 |
| AGS:315 | Principles of Animal Nutrition | 3.00 |
| AGS:352 | Genetics | 1.50 |
| AGS:401 | Swine Production OR | 3.00 |
| AGA:881 | Grain Science OR | 1.75 |
| AGB:103 | Agricultural Economics | 1.50 |
| COM:102 | Communication Skills | 3.00 |
| | | 16.50 |

| TERM 2 | | |
|---|---|---|
| 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:918 | Seminar I | 1.00 |
| MAT:104 | Applied Math Topics | 3.00 |
| | | 15.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| AGA:336 | Forage Production | 1.50 |
| AGA:373 | Integrated Crop Management | 2.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| AGM:160 | Farm Structures (Optional) | (1.50) |
| | | 6.50 |

| TERM 4 | | Credits |
|---|---|---|
| AGA:351 | Soil Science | 1.50 |
| AGA:890 | Soil Chemistry | 1.50 |
| AGA:901 | Seed Science | 1.50 |
| AGB:231 | Futures and Options | 1.50 |
| AGB:299 | Farm Business Analysis | 1.50 |
| AGB:304 | Agricultural Finance | 1.50 |
| AGB:305 | Agricultural Law | 1.50 |
| AGC:864 | Farm Experience IV | 3.00 |
| AGS:324 | Dairy Production (Optional) | (1.50) |
| AGS:410 | Swine Production II (Optional) | (1.50) |
| AGS:554 | Beef Production (Optional) | (3.00) |
| | | 13.50 |

| TERM 5 | | |
|---|---|---|
| AGB:232 | Livestock and Grain Marketing | 3.00 |
| AGB:306 | Risk Management | 1.50 |
| AGC:865 | Farm Experience V | 3.50 |
| AGC:919 | Seminar II | 1.00 |
| AGM:157 | Machinery Management | 3.00 |
| AGP:243 | Precision Agricultural Applications | 3.00 |
| ENV:115 | Environmental Science | 3.00 |
| AGA:349 | Fertilizers (Optional) | (1.50) |
| AGM:130 | Farm Electrification (Optional) | (1.25) |
| AGM:423 | Equipment & Diesel Performance (Optional) | (2.00) |
| AGS:180 | Sheep Production (Optional) | (1.50) |
| | | 18.00 |

**A.A.S. Total ..... 69.50**

# GRAPHIC ARTS TECHNOLOGY

**CAMPUS** CLINTON COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & DIPLOMA

The Graphic Arts Technology Program provides training for students with an interest in the field of graphic arts. Student will learn to prepare typescript and graphic elements using computer software to produce publication-ready material.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| ART:120 | 2-D Design | 3.00 |
| GRA:103 | Introduction to Macintosh | 1.00 |
| GRA:173 | Typography | 3.00 |
| GRD:463 | Photoshop | 3.00 |
| GRT:107 | Introduction to Graphic Arts Technology | 3.00 |
| GRT:169 | Color Theory | 2.00 |
| GRA:134 | Digital Photography (Optional) | (3.00) |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| ART:161 | Digital Art OR | 3.00 |
| CIS:140 | Introduction to Game Design OR | 3.00 |
| CSC:110 | Introduction to Computers OR | 3.00 |
| JOU:172 | Intermediate Photography OR | 3.00 |
| JOU:941 | Practicum in Communication OR | 3.00 |
| NET:303 | Windows Workstation Operating Systems OR | 3.00 |
| WDV:155 | Web Prototyping | 3.00 |
| ENG:105 | Composition I OR | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| GRD:415 | InDesign I | 3.00 |
| GRD:459 | Illustrator | 3.00 |
| GRT:110 | Calculations and Measurements for Graphic Arts | 3.00 |
| WDV:101 | Intro HTML and CSS | 3.00 |
| | | 18.00 |

**Diploma Total ..... 33.00**

| TERM 3 | | Credits |
|---|---|---|
| ART:101 | Art Appreciation OR | 3.00 |
| ART:133 | Drawing OR | 3.00 |
| MUS:100 | Music Appreciation | 3.00 |
| GRT:245 | Issues in Graphic Arts Technology | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Principles of Sociology | 3.00 |
| (Must select a minimum of 6 credit hours from below) | | |
| CIS:606 | Visual BASIC.NET I | 3.00 |
| GRA:134 | Digital Photography | 3.00 |
| GRD:430 | InDesign II | 3.00 |
| GRT:230 | Advanced Electronic Color Control | 3.00 |
| GRT:237 | Packaging Design | 3.00 |
| JOU:120 | Beginning Newswriting | 3.00 |
| JOU:941 | Practicum | 3.00 |
| NET:167 | Computer Systems and Networking | 3.00 |
| WDV:261 | Flash | 3.00 |
| WDV:245 | Content Management Systems I | 3.00 |
| WDV:221 | JavaScript | 3.00 |
| | | 15.00 |

| TERM 4 | | |
|---|---|---|
| BUS:102 | Introduction to Business OR | 3.00 |
| MKT:110 | Principles of Marketing OR | 3.00 |
| MKT:150 | Principles of Advertising | 3.00 |
| CIS:140 | Introduction to Game Design OR | 3.00 |
| CSC:110 | Introduction to Computers OR | 3.00 |
| GRT:222 | Acrobat OR | 3.00 |
| NET:303 | Windows Workstation Operating Systems OR | 3.00 |
| WDV:155 | Web Prototyping | 3.00 |
| GRA:900 | Portfolio | 3.00 |
| GRT:266 | Technology Changes in the Graphic Arts | 2.00 |
| GRT:805 | Graphic Arts Process Production Co-op | 5.00 |
| | | 16.00 |

**A.A.S. Total ..... 64.00**

Gainful employment information for the Graphic Arts Technology program is located at www.eicc.edu/gainfulemployment

# HEALTH INFORMATION TECHNOLOGY

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & DIPLOMA

The Health Information Technology program prepares technicians to be the individuals who compile the data for medical-related agencies. They determine specifically how that data is compiled and reported to insurance companies, government agencies and others for reimbursement, research, and quality monitoring. Graduates can be employed in nearly every medical setting: hospitals, outpatient clinics, nursing homes, health insurance organizations, physician's offices, hospices and mental health facilities.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BIO:163 | Essentials of Anatomy and Physiology | 4.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| ENG:105 | Composition I | 3.00 |
| HIT:139 | Math for Healthcare Professionals | 3.00 |
| HIT:370 | Health Records in Acute Care | 3.00 |
| | | 16.00 |

| TERM 2 | | |
|---|---|---|
| HIT:120 | Pharmacology for HIT | 1.00 |
| HIT:250 | Coding I | 3.00 |
| HIT:251 | Coding II | 3.00 |
| HIT:380 | Health Records in Alternate Care Settings | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 15.00 |

| TERM 3 | | |
|---|---|---|
| HIT:170 | Principles of Human Disease | 3.00 |
| HIT:270 | ICD-10 Procedural Coding | 2.00 |
| HIT:596 | HIT Practicum I | 2.00 |
| | | 7.00 |

**Diploma Total ..... 38.00**

| TERM 4 | | Credits |
|---|---|---|
| HIT:312 | Health Informatics and Information Management Systems | 3.00 |
| HIT:422 | Medico-Legal Ethics | 3.00 |
| HIT:485 | Medical Billing and Reimbursement Systems | 3.00 |
| SPC:170 | Professional Communication OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| | | 12.00 |

| TERM 5 | | |
|---|---|---|
| HIT:252 | Coding III | 3.00 |
| HIT:400 | Clinical Documentation Improvement | 2.00 |
| HIT:440 | Quality Management | 3.00 |
| HIT:451 | Allied Health Statistics | 3.00 |
| HIT:598 | Health Information Technology Practicum II | 2.00 |
| HIT:946 | Seminar | 1.00 |
| | | 14.00 |

**A.A.S. Total ..... 64.00**

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.

Gainful employment information for the Health Information Technology program is located at www.eicc.edu/gainfulemployment

# HEATING, VENTILATION AND AIR CONDITIONING

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

The Heating, Ventilation and Air Conditioning program provides all of the skills necessary to gain meaningful employment as an entry-level Heating, Ventilation and Air Conditioning (HVAC) technician. Students obtain extensive hands-on experience in the repair, maintenance and installation of a wide variety of heating, air conditioning, refrigeration and ventilation systems.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I OR | 3.00 |
| SPC:122 | Interpersonal Communication | 3.00 |
| HCR:260 | HVAC Trade Skills I | 3.00 |
| HCR:308 | Refrigeration Fundamentals | 5.00 |
| HCR:405 | Basic Electricity for HVAC Technicians | 5.00 |
| HCR:851 | HVAC-R Industrial Safety | 2.00 |
| | | 18.00 |

| TERM 2 | | |
|---|---|---|
| HCR:116 | Domestic Heating | 5.00 |
| HCR:441 | HVAC Controls and Circuitry | 5.00 |
| HCR:525 | Welding for HVAC/R Trades (Fall Term Only) OR | 3.00 |
| HCR:261 | HVAC Trade Skills II (Spring Term Only) OR | 3.00 |
| CSC:110 | Introduction to Computers OR | 3.00 |
| EGT:400 | PLTW – Introduction to Engineering Design | 3.00 |
| CON:170 | Building Construction Techniques I OR | 6.00 |
| MAT:104 | Applied Math Topics OR | 3.00 |
| MAT:110 | Math for Liberal Arts OR | 3.00 |
| MAT:121 | College Algebra | 4.00 |
| | | 16.00 |

| TERM 3 – SUMMER | | |
|---|---|---|
| HCR:271 | Advanced Domestic Heating and Air Conditioning | 5.00 |
| HCR:880 | Industry Competency Exam (ICE)-Residential | 1.00 |
| | | 6.00 |

| TERM 4 | | Credits |
|---|---|---|
| HCR:291 | Commercial Systems | 3.00 |
| HCR:802 | Control Systems for HVAC | 4.00 |
| HCR:860 | HVAC Mgmt and Business Fundamentals | 3.00 |
| HUM:105 | Working in America OR | 3.00 |
| HUM:110 | Changes and Choices | 3.00 |
| | | 13.00 |

| TERM 5 | | |
|---|---|---|
| HCR:320 | Light Commercial Refrigeration | 6.00 |
| HCR:805 | Environmental Controls and Equipment | 5.00 |
| HCR:811 | Computer-Aided Control System Design | 3.00 |
| HCR:885 | Light Commercial Competency Exam | 1.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 18.00 |

**A.A.S. Total ..... 71.00**

## DIPLOMA

| TERM 1 | | Credits |
|---|---|---|
| COM:102 | Communication Skills OR | 3.00 |
| ENG:105 | Composition I OR | 3.00 |
| SPC:122 | Interpersonal Communication | 3.00 |
| HCR:260 | HVAC Trade Skills (I) | 3.00 |
| HCR:308 | Refrigeration Fundamentals | 5.00 |
| HCR:405 | Basic Electricity for HVAC Technicians | 5.00 |
| | | 16.00 |

| TERM 2 | | |
|---|---|---|
| HCR:116 | Domestic Heating | 5.00 |
| HCR:441 | HVAC Controls and Circuitry | 5.00 |
| HCR:851 | HVAC-R Industrial Safety | 2.00 |
| MAT:104 | Applied Math Topics OR | 3.00 |
| MAT:110 | Math for Liberal Arts OR | 3.00 |
| MAT:121 | College Algebra | 4.00 |
| | | 15.00 |

| TERM 3 – SUMMER | | |
|---|---|---|
| HCR:271 | Advanced Domestic Heating and Air Conditioning | 5.00 |
| HCR:880 | Industry Competency Exam (ICE)-Residential | 1.00 |
| | | 6.00 |

**Diploma Total ..... 37.00**

# HEATING, VENTILATION AND AIR CONDITIONING (CONTINUED)

## CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| HCR:308 | Refrigeration Fundamentals | 5.00 |
| HCR:405 | Basic Electricity for HVAC Technicians | 5.00 |
| HCR:851 | HVAC-R Industrial Safety | 2.00 |
| | | 12.00 |
| **TERM 2** | | |
| HCR:116 | Domestic Heating | 5.00 |
| HCR:441 | HVAC Controls and Circuitry | 5.00 |
| | | 10.00 |
| **Certificate Total** | | **22.00** |

## HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION APPRENTICESHIP CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| HCR:406 | Basic Electricity/Apprenticeship | 3.00 |
| HCR:442 | HVAC Controls and Circuitry/Apprenticeship | 3.00 |
| | | 6.00 |
| **TERM 2** | | |
| HCR:852 | HVAC/R Industry Safety/Apprenticeship | 2.00 |
| | | 2.00 |
| **TERM 3** | | |
| HCR:309 | Refrigeration Fundamentals/Apprenticeship | 3.00 |
| | | 3.00 |
| **TERM 4** | | |
| HCR:118 | Domestic Heating/Apprenticeship | 3.00 |
| | | 3.00 |
| **TERM 5** | | |
| HCR:804 | Controls for HVAC/Apprenticeship | 3.00 |
| | | 3.00 |
| **TERM 6** | | |
| HCR:812 | Environmental Controls & Equipment/ Apprenticeship | 3.00 |
| | | 3.00 |
| **TERM 7** | | |
| HCR:292 | Commercial Systems/Apprenticeship | 2.00 |
| | | 2.00 |
| **TERM 8** | | |
| HCR:321 | Light Commercial Refrigeration/ Apprenticeship | 4.00 |
| | | 4.00 |
| **Certificate Total** | | **26.00** |

The Heating, Ventilation, Air Conditioning and Refrigeration Apprenticeship certificate requires 6,000 hours of apprenticeship work to complete.

Gainful employment information for the Heating, Ventilation and Air Conditioning program is located at www.eicc.edu/gainfulemployment

# HOSPITALITY MANAGEMENT

**CAMPUS** MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

More than ever before, people have disposable income that can be put toward leisure activities such as traveling and dining out. The Hospitality Management program at Scott Community College can prepare you in nearly every aspect of this growing industry. Graduates will be ready to go to work in front-line supervision/management at hotels, restaurants, and clubs anywhere in the United States or in other countries, including luxury resorts or cruise ships.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| COM:102 | Communication Skills OR | 3.00 |
| SPC:112 | Public Speaking OR | 3.00 |
| SPC:170 | Professional Communication | 3.00 |
| 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 | 3.00 |
| HCM:931 | Hospitality Internship | 2.00 |
| HCM:957 | Hospitality Lab I | 2.00 |
| ___:___ | Hospitality Management Elective* | 2.00 |
| | | 17.00 |

**Hospitality Skills Certificate Total..... 17.00**

| TERM 2 | | |
|---|---|---|
| HCM:265 | Mathematics for Hospitality OR | 3.00 |
| BUS:110 | Business Math & Calculators OR | 3.00 |
| MAT:140 | Finite Mathematics | 3.00 |
| HCM:331 | Workplace Human Relations OR | 3.00 |
| BUS:161 | Human Relations | 3.00 |
| HCM:606 | Hospitality Management Practices | 3.00 |
| HCM:931 | Hospitality Internship | 2.00 |
| HCM:958 | Hospitality Lab II | 2.00 |
| | | 13.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| HUM:105 | Working in America OR | 3.00 |
| HUM:110 | Changes and Choices | 3.00 |
| ___:___ | Hospitality Management Elective* | 2.00 |
| | | 5.00 |

**Hospitality Skills Diploma Total..... 35.00**

| TERM 4 | | Credits |
|---|---|---|
| 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 |
| ___:___ | Hospitality Management Elective* | 3.00 |
| | | 15.00 |

| TERM 5 | | |
|---|---|---|
| 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 |
| | | 12.00 |

**A.A.S. Total..... 62.00**

### *HOSPITALITY MANAGEMENT ELECTIVES

| | | |
|---|---|---|
| BUS:106 | Employment 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 |
| MKT:181 | Customer Service Strategies | 2.00 |
| PSY:213 | Industrial & Organizational Psychology | 3.00 |

## EVENT MANAGEMENT CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| HCM:100 | Sanitation and Safety | 2.00 |
| HCM:335 | Introduction to Event Planning | 3.00 |
| HCM:932 | Event Management Internship | 2.00 |
| | | 7.00 |

| TERM 2 | | |
|---|---|---|
| COM:102 | Communication Skills | 3.00 |
| HCM:265 | Mathematics for Hospitality | 3.00 |
| HCM:932 | Event Management Internship | 2.00 |
| HCM:958 | Hospitality Lab II | 2.00 |
| | | 10.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| HCM:932 | Event Management Internship | 2.00 |
| PSY:213 | Industrial & Organizational Psychology | 3.00 |
| | | 5.00 |

**Certificate Total..... 22.00**

Gainful employment information for the Hospitality Management programs is located at www.eicc.edu/gainfulemployment

# INFORMATION TECHNOLOGY

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & CERTIFICATE

Computers and information technology (IT) touch nearly every aspect of modern life. IT enables integration, communication, database management, complex computing and coordination of tasks and information. This involves many different technical applications: hardware, software, programming, networking and more. An Information Technology Technician applies practical knowledge, skills, and abilities by performing aspects of software development networking, production, trouble shooting, user support, maintenance, and systems management. EICC offers IT curriculum options that prepare students for a concentration in the following areas: Database, Games and Simulations, Hardware/Help Desk, Networking, Programming, Security and Forensics, Server Administration and Web Development.

## DATABASE CONCENTRATION A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| CIS:121 | Introduction to Programming Logic | 3.00 |
| CIS:606 | Visual BASIC.NET I | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| CIS:169 | C# | 3.00 |
| CIS:185 | Oracle Academy: Database Design | 5.00 |
| CIS:210 | Web Development I | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| | | 17.00 |

| TERM 3 | | |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CIS:149 | Advanced MS Access | 3.00 |
| CIS:186 | Oracle Academy: Database Development with SQL | 5.00 |
| CIS:353 | Database Models and Design Strategies | 3.00 |
| CIS:750 | Project Management | 3.00 |
| | | 15.00 |

| TERM 4 | | Credits |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| CIS:196 | Oracle Database Programming with PL/SQL | 5.00 |
| CIS:331 | Microsoft SQL Server | 3.00 |
| NET:860 | Information Technology Specialist Capstone | 3.00 |
| NET:932 | Internship | 3.00 |
| | | 15.00 |

**A.A.S. Total ..... 62.00**

## GAMES AND SIMULATIONS CONCENTRATION A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| CIS:121 | Introduction to Programming Logic | 3.00 |
| CIS:606 | Visual BASIC.NET I | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| CIS:169 | C# | 3.00 |
| CIS:185 | Oracle Academy: Database Design | 5.00 |
| CIS:210 | Web Development I | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| | | 17.00 |

| TERM 3 | | |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CIS:140 | Introduction to Game Design | 3.00 |
| CIS:148 | 3D Modeling and Character Animation | 3.00 |
| CIS:222 | Games and Simulations | 3.00 |
| CIS:280 | Client Side Scripting | 3.00 |
| CIS:750 | Project Management | 3.00 |
| | | 16.00 |

| TERM 4 | | |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| CIS:248 | 3D Modeling and Character Animation II | 3.00 |
| CIS:322 | Games and Simulations II | 3.00 |
| CIS:711 | Audio Programming for Games | 3.00 |
| NET:860 | Information Technology Specialist Capstone OR | 3.00 |
| NET:932 | Internship | 3.00 |
| WDV:132 | Mobile Application Development | 3.00 |
| | | 16.00 |

**A.A.S. Total ..... 64.00**

# INFORMATION TECHNOLOGY
(CONTINUED)

## HARDWARE/HELP DESK ADMINISTRATION CONCENTRATION A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| NET:114 | Foundations of Information Technology | 3.00 |
| NET:198 | Networking I | 5.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| NET:679 | TCP/IP Subnetting | 1.00 |
| | | 16.00 |

| TERM 2 | | |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| NET:280 | Copper, Fiber, and Wireless Connectivity | 3.00 |
| NET:298 | Networking II | 5.00 |
| NET:305 | Introduction to Network Operating Systems | 3.00 |
| | | 15.00 |

| TERM 3 | | |
|---|---|---|
| CIS:653 | Operating Systems and User Software Support | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| NET:167 | Computer Systems and Troubleshooting | 4.00 |
| NET:619 | Network Attacks, Detection, Analysis and Countermeasures | 3.00 |
| NET:785 | Fundamentals of Desktop Support | 3.00 |
| | | 16.00 |

| TERM 4 | | |
|---|---|---|
| CIS:750 | Project Management | 3.00 |
| HUM:183 | Living with Space, Time, and Technology | 3.00 |
| NET:105 | Printer Maintenance and Repair | 3.00 |
| NET:474 | Certificate Preparation | 1.00 |
| NET:860 | IT Specialist Capstone | 3.00 |
| NET:932 | Internship | 3.00 |
| | | 16.00 |

**A.A.S. Total ..... 63.00**

## NETWORKING CONCENTRATION A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| NET:114 | Foundations of Information Technology | 3.00 |
| NET:198 | Networking I | 5.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| NET:679 | TCP/IP Subnetting | 1.00 |
| | | 16.00 |

| TERM 2 | | |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| NET:280 | Copper, Fiber, and Wireless Connectivity | 3.00 |
| NET:298 | Networking II | 5.00 |
| NET:305 | Introduction to Network Operating Systems | 3.00 |
| | | 15.00 |

| TERM 3 | | |
|---|---|---|
| MAT:110 | Math for Liberal Arts | 3.00 |
| NET:155 | Introduction to Wireless Networks | 3.00 |
| NET:300 | IP Telephony (VoIP) | 3.00 |
| NET:302 | Health Information Networking | 3.00 |
| NET:398 | Networking III | 5.00 |
| | | 17.00 |

| TERM 4 | | |
|---|---|---|
| HUM:183 | Living with Space, Time, and Technology | 3.00 |
| NET:474 | Certificate Preparation | 1.00 |
| NET:498 | Networking IV | 5.00 |
| NET:860 | IT Specialist Capstone | 3.00 |
| NET:932 | Internship | 3.00 |
| | | 15.00 |

**A.A.S. Total ..... 63.00**

# INFORMATION TECHNOLOGY
(CONTINUED)

## NETWORKING DIPLOMA

| TERM 1 | | Credits |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| NET:114 | Foundations of Information Technology | 3.00 |
| NET:198 | Networking I | 5.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| NET:679 | TCP/IP Subnetting | 1.00 |
| | | 16.00 |

| TERM 2 | | |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| NET:280 | Copper, Fiber, and Wireless Connectivity | 3.00 |
| NET:298 | Networking II | 5.00 |
| NET:305 | Introduction to Network Operating Systems | 3.00 |
| NET:474 | Certificate Preparation | 1.00 |
| | | 16.00 |

**Diploma Total ..... 32.00**

## PROGRAMMING CONCENTRATION A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| CIS:121 | Introduction to Programming Logic | 3.00 |
| CIS:606 | Visual BASIC.NET I | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| CIS:169 | C# | 3.00 |
| CIS:185 | Oracle Academy: Database Design | 5.00 |
| CIS:210 | Web Development I | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| | | 17.00 |

**Diploma Total ..... 32.00**

| TERM 3 | | |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CIS:171 | Java | 3.00 |
| CIS:280 | Client Side Scripting | 3.00 |
| CIS:624 | .NET Development II | 3.00 |
| CIS:750 | Project Management | 3.00 |
| | | 13.00 |

| TERM 4 | | |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| CIS:224 | Server Side Scripting | 4.00 |
| CIS:626 | .NET Development III | 3.00 |
| NET:860 | Information Technology Specialist Capstone | 3.00 |
| NET:932 | Internship | 3.00 |
| WDV:132 | Mobile Application Development | 3.00 |
| | | 17.00 |

**A.A.S. Total ..... 62.00**

# INFORMATION TECHNOLOGY
(CONTINUED)

## SECURITY AND FORENSICS CONCENTRATION A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| NET:114 | Foundations of Information Technology | 3.00 |
| NET:198 | Networking I | 5.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| NET:679 | TCP/IP Subnetting | 1.00 |
| | | 16.00 |

| TERM 2 | | |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| NET:280 | Copper, Fiber, and Wireless Connectivity | 3.00 |
| NET:298 | Networking II | 5.00 |
| NET:305 | Introduction to Network Operating Systems | 3.00 |
| | | 15.00 |

| TERM 3 | | |
|---|---|---|
| CFR:100 | Introduction to Computer Forensics | 3.00 |
| CIS:274 | E-Commerce Design | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| NET:612 | Fundamentals of Network Security | 3.00 |
| NET:619 | Network Attacks, Detections, Analysis, and Countermeasures | 3.00 |
| | | 15.00 |

| TERM 4 | | |
|---|---|---|
| CIS:750 | Project Management | 3.00 |
| HUM:183 | Living with Space, Time, and Technology | 3.00 |
| NET:474 | Certification Preparation | 1.00 |
| NET:635 | Ethical Hacking | 3.00 |
| NET:860 | IT Specialist Capstone | 3.00 |
| NET:932 | Internship | 3.00 |
| | | 16.00 |

**A.A.S. Total ..... 62.00**

## SERVER ADMINISTRATION CONCENTRATION A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| NET:114 | Foundations of Information Technology | 3.00 |
| NET:198 | Networking I | 5.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| NET:679 | TCP/IP Subnetting | 1.00 |
| | | 16.00 |

| TERM 2 | | |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| NET:280 | Copper, Fiber, and Wireless Connectivity | 3.00 |
| NET:298 | Networking II | 5.00 |
| NET:305 | Introduction to Network Operating Systems | 3.00 |
| | | 15.00 |

| TERM 3 | | |
|---|---|---|
| MAT:110 | Math for Liberal Arts | 3.00 |
| NET:313 | Windows Server | 3.00 |
| NET:420 | Introduction to Linux OS | 3.00 |
| NET:612 | Fundamentals of Network Security | 3.00 |
| NET:639 | SANs and Data Arrays | 3.00 |
| | | 15.00 |

| TERM 4 | | |
|---|---|---|
| CIS:750 | Project Management | 3.00 |
| HUM:183 | Living with Space, Time, and Technology | 3.00 |
| NET:474 | Certification Preparation | 1.00 |
| NET:652 | Microsoft Exchange Server | 3.00 |
| NET:860 | IT Specialist Capstone | 3.00 |
| NET:932 | Internship | 3.00 |
| | | 16.00 |

**A.A.S. Total ..... 62.00**

# INFORMATION TECHNOLOGY
(CONTINUED)

## WEB DEVELOPMENT CONCENTRATION A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| CIS:121 | Introduction to Programming Logic | 3.00 |
| CIS:606 | Visual BASIC.NET I | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| NET:303 | Windows Workstation Operating Systems | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| CIS:169 | C# | 3.00 |
| CIS:185 | Oracle Academy: Database Design | 5.00 |
| CIS:210 | Web Development I | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| | | 17.00 |

| TERM 3 | | |
|---|---|---|
| BUS:167 | Leadership and Professionalism | 1.00 |
| CIS:251 | Fundamentals of Web Design I | 3.00 |
| CIS:280 | Client Side Scripting | 3.00 |
| CIS:750 | Project Management | 3.00 |
| WDV:233 | Web Servers | 3.00 |
| WDV:245 | Content Management Systems I | 3.00 |
| | | 16.00 |

| TERM 4 | | |
|---|---|---|
| BUS:168 | Leadership and Professionalism II | 1.00 |
| CIS:224 | Server Side Scripting | 4.00 |
| CIS:626 | .NET Development III | 3.00 |
| NET:932 | Internship OR | 3.00 |
| NET:860 | Information Technology Specialist Capstone | 3.00 |
| WDV:132 | Mobile Application Development | 3.00 |
| | | 14.00 |

**A.A.S Total ..... 62.00**

Gainful employment information for the Information Technology program is located at www.eicc.edu/gainfulemployment

### INDUSTRY-RECOGNIZED CREDENTIALS

Note: Industry-Recognized Credentials are embedded in Information Technology coursework

- Windows Operating System Fundamentals
- Network +
- MTA 98-366 Networking Fundamentals
- Cisco Certified Entry Networking Technician (CCENT)
- Cisco Certified Network Associate (CCNA)
- CCNA Voice
- Certified Wireless Network Professional (CWNP)
- Project +
- Server +
- MTA 98-365 Windows Server Admin Fundamentals
- Storage +
- Microsoft Certified Solutions Associate (MCSA)
- Microsoft Certified Solutions Expert (MCSE)
- A+
- CompTIA IT Fundamentals
- Microsoft Certified Solutions Associate (MCSA)
- Microsoft Office Specialist (MOS)
- Microsoft Certified Technology Specialist (MCTS)
- Microsoft Certified IT Professional (MCITP)
- Security +
- MTA 98-367 Security Fundamentals
- CCNA Security
- Certified Forensics Analyst (GCFA)
- MTA 98-363 Web Development Fundamentals
- MTA 98-361 Software Development Fundamentals
- MTA 98-349 Widows Operating System Fundamentals
- MTA 98-364 Database Fundamentals
- IZO-047 Oracle Database SQL Expert
- IZO-147 Oracle Database 11g: Programming with PL/SQL
- MTA 98-375 HTML5 Application Developer Fundamentals
- JAVA

# MECHANICAL DESIGN TECHNOLOGY

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

The Mechanical Design Technology program prepares students with the skills of computer-aided design (CAD), critical thinking, problem-solving, math, science, team building and communication, needed for today's manufacturing jobs.

The Mechanical Design Technology program includes proficiencies require by industry, delivered in a practical hands-on method that applies directly to the world of work.

## A.A.S. DEGREE

### TERM 1

| | | Credits |
|---|---|---|
| **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 Modeling | 3.00 |
| DRF:132 | Basic Drafting & Design II | 3.00 |
| MAT:143 | Technical Mathematics II | 1.50 |
| | | 15.00 |

### TERM 2

| | | |
|---|---|---|
| **Session I** | | |
| CAD:264 | SolidWorks – Detailing | 4.00 |
| CSC:112 | Computer Fundamentals for Technicians I/A | 2.00 |
| MAT:144 | Technical Mathematics III | 1.50 |
| **Session II** | | |
| CAD:287 | SolidWorks – Applications | 3.00 |
| CSC:113 | Computer Fundamentals for Technicians I/B | 2.00 |
| IND:222 | Geometric Tolerancing and Dimensioning | 3.00 |
| MAT:145 | Technical Mathematics IV | 1.50 |
| | | 17.00 |

**Certificate Total ..... 32.00**

### TERM 3 - SUMMER

| | | |
|---|---|---|
| DRF:161 | Descriptive Geometry | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| | | 6.00 |

**Diploma Total ..... 38.00**

### TERM 4

| | | Credits |
|---|---|---|
| **Session I** | | |
| DRF:331 | Mechanical Drafting & Design I | 3.00 |
| EGT:161 | Strength of Materials I/A | 1.50 |
| MFG:186 | Plant Safety | 1.00 |
| 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 |
| PHY:135 | Applied Physics II | 1.50 |
| | | 13.00 |

### TERM 5

| | | |
|---|---|---|
| **Session I** | | |
| EGT:163 | Strength of Materials II/A | 1.50 |
| MFG:371 | Manual Projects | 3.00 |
| ___:___ | Social Science/Humanities Course* | 3.00 |
| **Session II** | | |
| CAD:288 | SolidWorks – CSWA Preparation | 3.00 |
| EGT:164 | Strength of Materials II/B | 1.50 |
| MFG:372 | SolidWorks/MasterCam Applications | 3.00 |
| | | 15.00 |

**A.A.S. Total ..... 66.00**

### *SOCIAL SCIENCE/HUMANITIES COURSES

| | | |
|---|---|---|
| DRA:110 | Introduction to Film | 3.00 |
| ECN:120 | Principles of Macroeconomics | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| HUM:110 | Changes and Choices | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| PHI:101 | Introduction to Philosophy | 3.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PHI:110 | Introduction to Logic | 3.00 |
| POL:111 | American National Government | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| REL:101 | Survey of World Religions | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

# MECHANICAL DESIGN TECHNOLOGY (CONTINUED)

## SOLID MODELING CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| DRF:131 | Basic Drafting & Design I | 3.00 |
| **Session II** | | |
| CAD:286 | SolidWorks – Modeling | 3.00 |
| | | 6.00 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| CAD:263 | SolidWorks – Assembly Modeling | 3.00 |
| **Session II** | | |
| CAD:264 | SolidWorks – Detailing | 4.00 |
| | | 7.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| **Session I** | | |
| CAD:287 | SolidWorks – Applications | 3.00 |
| **Session II** | | |
| CAD:288 | SolidWorks – CSWA Preparation | 3.00 |
| | | 6.00 |

**Certificate Total ..... 19.00**

Gainful employment information for the Mechanical Design Technology program is located at www.eicc.edu/gainfulemployment

# NURSING

**CAMPUS** CLINTON & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & DIPLOMA

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** PRACTICAL NURSING DIPLOMA

Eastern Iowa Community Colleges provide students with the choice of either the Associate Degree Nursing (ADN) program or the Practical Nursing Diploma program.

Registered nurses work to promote health, prevent disease and help patients cope with illness .The practical nurse cares for the sick, injured, convalescent, and disabled, under the supervision of physicians and registered nurses.

The program is accredited by the Iowa Board of Nursing.

## A.A.S. DEGREE

| PREREQUISITE TERM | | Credits |
|---|---|---|
| HSC:172 | Nurse Aide OR<br>Proof of CNA designation | 3.00 |

| TERM 1 | | |
|---|---|---|
| ADN:109 | Introduction to Health Concepts | 10.00 |
| ADN:220 | Pharmacology | 2.00 |
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| | | 19.00 |

| TERM 2 | | |
|---|---|---|
| ADN:301 | Holistic Health Illness Concepts | 9.00 |
| BIO:151 | Nutrition | 3.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| PSY:121 | Developmental Psychology | 3.00 |
| | | 19.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| ENG:105 | Composition I | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 6.00 |

| TERM 4 | | |
|---|---|---|
| ADN:302 | Holistic Family Health Concepts | 10.00 |
| ADN:451 | Health Systems Concepts | 3.00 |
| BIO:186 | Microbiology | 4.00 |
| | | 17.00 |

| TERM 5 | | Credits |
|---|---|---|
| ADN:452 | Complex Health Concepts Module A | 5.00 |
| ADN:453 | Complex Health Concepts Module B | 5.00 |
| | | 10.00 |

| TERM 6 | | |
|---|---|---|
| ADN:905 | Preceptorship | 2.50 |
| | | 2.50 |

**A.A.S. Total ..... 73.50**

## PRACTICAL NURSING DIPLOMA

Proof of CNA designation

| TERM 1 | | Credits |
|---|---|---|
| BIO:168 | Human Anatomy and Physiology I w/Lab | 4.00 |
| PNN:165 | Nursing Fundamentals Module A | 5.00 |
| PNN:166 | Nursing Fundamentals Module B | 5.00 |
| PNN:210 | Principles of Pharmacology Module A | 1.00 |
| PNN:211 | Principles of Pharmacology Module B | 1.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| | | 19.00 |

| TERM 2 | | |
|---|---|---|
| BIO:151 | Nutrition | 3.00 |
| BIO:173 | Human Anatomy and Physiology II w/Lab | 4.00 |
| PNN:511 | Concepts in Clinical Nursing Module A | 4.00 |
| PNN:512 | Concepts in Clinical Nursing Module B | 5.00 |
| PSY:121 | Developmental Psychology | 3.00 |
| | | 19.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| ENG:105 | Composition I | 3.00 |
| PNN:641 | Transition to Practice | 6.00 |
| | | 9.00 |

**Diploma Total ..... 47.00**

The application process and admission requirements for the Nursing program can be found at www.eicc.edu/future-students/our-programs. 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 diploma program, students are academically qualified to take the NCLEX (National Council Licensure Examination) for Practical Nursing.

After completion of the two-year ADN A.A.S. 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 www.eicc.edu/gainfulemployment

# RADIOLOGIC TECHNOLOGY

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

The Radiation Technology program prepares students to maintain and use the equipment and supplies necessary to demonstrate portions of the human body on x-ray film or fluoroscopic screen for diagnostic purposes. X-ray technologists use radiation to make images of internal organs of the body to aid radiologists in diagnosing a patient's illness or injury.

The Radiology Technology program is accredited by the American Registry of Radiologic Technologists (ARRT).

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BIO:168 | Human Anatomy and Physiology I w/Lab* | 4.00 |
| RAD:100 | Introduction to Radiography and Patient Care | 5.00 |
| RAD:123 | Radiographic Procedures I | 5.00 |
| RAD:350 | Imaging | 3.00 |
| | | 17.00 |

| TERM 2 | | |
|---|---|---|
| BIO:173 | Human Anatomy & Physiology II w/Lab* | 4.00 |
| HSC:113 | Medical Terminology* | 2.00 |
| RAD:143 | Radiographic Procedures II | 5.00 |
| RAD:210 | Clinical Education I | 4.00 |
| RAD:300 | Radiographic Exposure | 4.00 |
| | | 19.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| RAD:183 | Special Procedures | 3.00 |
| RAD:220 | Clinical Education II | 3.00 |
| | | 6.00 |

| TERM 4 | | |
|---|---|---|
| PSY:111 | Introduction to Psychology* OR | 3.00 |
| SOC:110 | Introduction to Sociology* | 3.00 |
| RAD:500 | Clinical Education III | 6.00 |
| RAD:761 | Film Evaluation I | 3.00 |
| RAD:800 | Physics for Radiographers | 3.00 |
| | | 15.00 |

| TERM 5 | | Credits |
|---|---|---|
| RAD:510 | Clinical Education IV | 6.00 |
| RAD:750 | Radiographic Pathology | 3.00 |
| RAD:790 | Film Evaluation II | 2.00 |
| RAD:850 | Radiation Protection and Biology | 3.00 |
| SPC:112 | Public Speaking* OR | 3.00 |
| ENG:105 | Composition I* | 3.00 |
| | | 17.00 |

| TERM 6 - SUMMER | | |
|---|---|---|
| RAD:540 | Clinical Education V | 3.00 |
| RAD:890 | Quality Assurance | 1.00 |
| RAD:946 | Seminar | 2.00 |
| | | 6.00 |

**A.A.S. Total ..... 80.00**

* Courses may be taken while waiting to enter the program.

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 www.eicc.edu/future-students/our-programs.

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).

# RENEWABLE ENERGY SYSTEM SPECIALIST

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

The Renewable Energy Systems Specialist program focuses on the new and growing field of solar power generation, wind power generation, hydroelectric power and the creation of biofuels. Students learn electronics, circuitry and electrical theory before learning how to design systems which benefit residential, small business or industrial applications.

The first three terms of this program is identical to the Engineering Technology program after which the program courses differ. Classes are offered in an eight-week format with a flexible schedule of attendance during day and evening hours.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| ELE:101 | Industrial Safety | 1.00 |
| ELE:216 | D.C. Circuit Analysis | 3.00 |
| ELE:217 | A.C. Circuit Analysis | 3.00 |
| IND:134 | Print Reading | 2.00 |
| MAT:705 | Industrial Math & Measurement I | 2.00 |
| MAT:706 | Industrial Math & Measurement II | 2.00 |
| | | 12.00 |

| TERM 2 | | |
|---|---|---|
| CSC:110 | Introduction to Computers OR | 3.00 |
| CSC:112 | Fundamental Computers for Technicians I AND | 2.00 |
| CSC:113 | Fundamental Computers for Technicians II | 2.00 |
| ELE:225 | Electrical Motor Control and Power Distribution | 3.00 |
| ELT:309 | Digital Circuits | 3.00 |
| ELT:312 | Solid State Devices and Systems | 3.00 |
| PHY:185 | Conceptual Physics Fundamentals I | 2.00 |
| | | 14.00 |

| TERM 3 - SUMMER | | Credits |
|---|---|---|
| ECN:120 | Principles of Macroeconomics OR | 3.00 |
| ECN:130 | Principles of Microeconomics OR | 3.00 |
| HUM:105 | Working in America OR | 3.00 |
| HUM:110 | Changes and Choices OR | 3.00 |
| POL:111 | American National Government OR | 3.00 |
| PSY:110 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| ENG:105 | Composition I OR | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| PHY:186 | Conceptual Physics Fundamentals II | 2.00 |
| | | 8.00 |

| TERM 4 | | |
|---|---|---|
| EGT:117 | Fluid Power Fundamentals | 2.00 |
| ELT:123 | Programmable Logic Controllers | 3.00 |
| IND:136 | Process Control I | 3.00 |
| SER:100 | Introduction to Renewable Energy Applications | 2.00 |
| SER:102 | History of Power Generation | 3.00 |
| SER:103 | Renewable Energy Site Assessment | 3.00 |
| | | 16.00 |

| TERM 5 | | |
|---|---|---|
| SER:104 | Residential Renewable Energy Power Systems | 3.00 |
| SER:105 | Residential Renewable Energy Mounting and Tower Systems | 3.00 |
| SER:108 | Inverters, Chargers and Storage Devices | 3.00 |
| SER:109 | Monitoring & Maintenance | 3.00 |
| SER:306 | Sustainable Energy Capstone | 3.00 |
| | | 15.00 |

**A.A.S. Total ..... 66.00**

# RESPIRATORY CARE

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES/NORTHEAST IOWA COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

The Respiratory Care program prepares students to be respiratory care practitioners who play a crucial role within the health care team. Working closely with physicians and other health care professionals, they care for patients with respiratory and cardiovascular conditions. Under the supervision of a physician, they are involved with the assessment, treatment, diagnostic testing, rehabilitation, and prevention of conditions that affect the respiratory and cardiovascular systems. Employment opportunities are found in hospitals, clinics, home health care agencies, product support and sales, education, rehabilitation and continuing care, and health/disease prevention programs.

This program is delivered in partnership with Northeast Iowa Community College. It is accredited by the Committee.

## PARTNERSHIP BETWEEN EICC AND NICC

A Respiratory Therapy program is available to our students through a cooperative partnership between Eastern Iowa Community Colleges 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).

## 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.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BIO:168 | Human Anatomy & Physiology I* | 4.00 |
| RCP:270 | Respiratory Therapy Techniques I** | 8.00 |
| RCP:320 | Respiratory Therapy Science I | 3.50 |
| | | 15.50 |

| TERM 2 | | |
|---|---|---|
| MAT:041 | Basic Math Skills OR | 3.00 |
| ___:___ | Higher level math course* | 3.00 |
| PSY:111 | Introduction to Psychology* | 3.00 |
| RCP:460 | Respiratory Science II | 3.50 |
| RCP:540 | Respiratory Therapy Techniques II | 8.00 |
| | | 17.50 |

| TERM 3 | | Credits |
|---|---|---|
| BIO:173 | Human Anatomy & Physiology II* | 4.00 |
| CSC:110 | Introduction to Computers* | 3.00 |
| RCP:350 | Pulmonary Pathology *** | 3.00 |
| RCP:490 | Respiratory Therapy Science III*** | 6.00 |
| | | 16.00 |

| TERM 4 | | |
|---|---|---|
| BIO:186 | Microbiology* | 4.00 |
| ENG:105 | Composition I* | 3.00 |
| RCP:600 | Neonatal/Pediatric Respiratory Therapy | 3.00 |
| RCP:820 | Respiratory Therapy Techniques IV | 7.50 |
| | | 17.50 |

| TERM 5 | | |
|---|---|---|
| HSC:136 | Advanced Life Support (ACLS/PALS) | 1.50 |
| RCP:830 | Respiratory Therapy V | 12.00 |
| RCP:840 | Innovations in Respiratory Care | 5.50 |
| | | 19.00 |

**A.A.S. Total ..... 85.50**

* Courses that may be completed at Clinton, Muscatine and Scott Community College.

** 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.

### 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).

### COSTS OF PROGRAM

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.

# RESPIRATORY CARE (CONTINUED)

## 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.

Graduates of the Respiratory Care A.A.S. are eligible for credentialing exams offered by the National Board for Respiratory Care (NBRC).

# SONOGRAPHY

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

Sonography is a program that prepares individuals who under the supervision of physicians utilize medical ultrasound techniques to gather sonographic data used to diagnose a variety of conditions and diseases. The program includes instruction in obtaining, reviewing, and integrating patient histories and data; patient instruction and care; anatomic, physiologic and pathologic data recording; sonographic data processing; sonography equipment operation; and professional standards and ethics.

For admission to the Sonography program, students are required to have previously earned an Associate in Applied Science (AAS) or higher level degree in a health-related field.

The application process and admission requirements for the Sonography program can be found at www.eicc.edu/future-students/our-programs.

## DIAGNOSTIC MEDICAL SONOGRAPHY A.A.S. DEGREE

| PRE-REQUISITE COURSES | | Credits |
|---|---|---|
| PHY:162 | College Physics | 4.00 |
| PHY:172 | College Physics II OR | 4.00 |
| RAD:800 | Physics for Radiographers | 3.00 |
| | | 8.00 |

| TERM 1 - FALL START | | |
|---|---|---|
| BIO:157 | Human Biology OR | 4.00 |
| BIO:168 | Human Anatomy and Physiology I OR | 4.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| ENG:105 | Composition I OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| ADI:111 | Sonography Principles and Instrumentation I | 2.00 |
| ADI:262 | Sectional Anatomy for Diagnostic Imaging | 3.00 |
| ADI:321 | Abdominal Sonography I | 5.00 |
| ADI:800 | Sonography Clinical Education I | 9.00 |
| | | 19.00 |

| TERM 3 | | Credits |
|---|---|---|
| ADI:326 | Abdominal Sonography II | 4.00 |
| ADI:805 | Sonography Clinical Education II | 6.00 |
| | | 10.00 |

| TERM 4 | | |
|---|---|---|
| ADI:211 | Sonography Principles and Instrumentation II | 2.00 |
| ADI:357 | Obstetrical and Gynecological Sonography | 6.00 |
| ADI:811 | Sonography Clinical Education III | 9.00 |
| | | 17.00 |

| TERM 5 | | |
|---|---|---|
| ADI:330 | Sonography Interpretation and Critique | 2.00 |
| ADI:349 | Vascular Sonography | 5.00 |
| ADI:817 | Sonography Clinical Education IV | 9.00 |
| | | 16.00 |

**A.A.S Total ..... 85.00**

## DIAGNOSTIC MEDICAL SONOGRAPHY A.A.S. DEGREE

| PRE-REQUISITE COURSES | | Credits |
|---|---|---|
| PHY:162 | College Physics | 4.00 |
| PHY:172 | College Physics II OR | 4.00 |
| RAD:800 | Physics for Radiographers | 3.00 |
| | | 8.00 |

| TERM 1 - SPRING START | | |
|---|---|---|
| BIO:157 | Human Biology OR | 4.00 |
| BIO:168 | Human Anatomy and Physiology I OR | 4.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| ENG:105 | Composition I OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| ADI:111 | Sonography Principles and Instrumentation I | 2.00 |
| ADI:262 | Sectional Anatomy for Diagnostic Imaging | 3.00 |
| ADI:321 | Abdominal Sonography I | 5.00 |
| ADI:800 | Sonography Clinical Education I | 9.00 |
| | | 19.00 |

| TERM 3 | | |
|---|---|---|
| ADI:211 | Sonography Principles and Instrumentation II | 2.00 |
| ADI:326 | Abdominal Sonography II | 4.00 |
| ADI:811 | Sonography Clinical Education III | 9.00 |
| | | 15.00 |

| TERM 4 | | |
|---|---|---|
| ADI:357 | Obstetrical and Gynecological Sonography | 6.00 |
| ADI:805 | Sonography Clinical Education II | 6.00 |
| | | 12.00 |

# SONOGRAPHY (CONTINUED)

| TERM 5 | | Credits |
|---|---|---|
| ADI:330 | Sonography Interpretation and Critique | 2.00 |
| ADI:349 | Vascular Sonography | 5.00 |
| ADI:817 | Sonography Clinical Education IV | 9.00 |
| | | 16.00 |

**A.A.S Total..... 85.00**

## DIAGNOSTIC CARDIAC SONOGRAPHY A.A.S. DEGREE

| PRE-REQUISITE COURSES | | Credits |
|---|---|---|
| PHY:162 | College Physics | 4.00 |
| PHY:172 | College Physics II OR | 4.00 |
| RAD:800 | Physics for Radiographers | 3.00 |
| | | 8.00 |

| TERM 1 - FALL START | | |
|---|---|---|
| BIO:157 | Human Biology OR | 4.00 |
| BIO:168 | Human Anatomy and Physiology I OR | 4.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| ENG:105 | Composition I OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| ADI:111 | Sonography Principles and Instrumentation I | 2.00 |
| ADI:262 | Sectional Anatomy for Diagnostic Imaging | 3.00 |
| ADI:256 | Cardiac Sonography I | 4.00 |
| ADI:803 | Cardiac Sonography Clinical Education I | 9.00 |
| | | 18.00 |

| TERM 3 | | |
|---|---|---|
| ADI:266 | Cardiac Sonography II | 4.00 |
| ADI:808 | Cardiac Sonography Clinical Education II | 6.00 |
| | | 10.00 |

| TERM 4 | | |
|---|---|---|
| ADI:211 | Sonography Principles and Instrumentation II | 2.00 |
| ADI:276 | Cardiac Sonography III | 4.00 |
| ADI:814 | Cardiac Sonography Clinical Education III | 9.00 |
| | | 15.00 |

| TERM 5 | | Credits |
|---|---|---|
| ADI:277 | Cardiac Imaging and Critique | 2.00 |
| ADI:286 | Cardiac Sonography IV | 4.00 |
| ADI:824 | Cardiac Sonography Clinical Education IV | 9.00 |
| | | 15.00 |

**A.A.S. Total..... 81.00**

## DIAGNOSTIC CARDIAC SONOGRAPHY A.A.S. DEGREE

| PRE-REQUISITE COURSES | | Credits |
|---|---|---|
| PHY:162 | College Physics | 4.00 |
| PHY:172 | College Physics II OR | 4.00 |
| RAD:800 | Physics for Radiographers | 3.00 |
| | | 8.00 |

| TERM 1 - SPRING START | | |
|---|---|---|
| BIO:157 | Human Biology OR | 4.00 |
| BIO:168 | Human Anatomy and Physiology I OR | 4.00 |
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| ENG:105 | Composition I OR | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| PHI:105 | Introduction to Ethics | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| ADI:111 | Sonography Principles and Instrumentation I | 2.00 |
| ADI:262 | Sectional Anatomy for Diagnostic Imaging | 3.00 |
| ADI:256 | Cardiac Sonography I | 4.00 |
| ADI:803 | Cardiac Sonography Clinical Education I | 9.00 |
| | | 18.00 |

| TERM 3 | | |
|---|---|---|
| ADI:211 | Sonography Principles and Instrumentation II | 2.00 |
| ADI:266 | Cardiac Sonography II | 4.00 |
| ADI:814 | Cardiac Sonography Clinical Education III | 9.00 |
| | | 15.00 |

| TERM 4 | | |
|---|---|---|
| ADI:276 | Cardiac Sonography III | 4.00 |
| ADI:808 | Cardiac Sonography Clinical Education II | 6.00 |
| | | 10.00 |

| TERM 5 | | |
|---|---|---|
| ADI:277 | Cardiac Imaging and Critique | 2.00 |
| ADI:286 | Cardiac Sonography IV | 4.00 |
| ADI:824 | Cardiac Sonography Clinical Education IV | 9.00 |
| | | 15.00 |

**A.A.S. Total..... 81.00**

# SUPPLY CHAIN AND LOGISTICS

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE & CERTIFICATE

The Supply Chaing and Logistics program is designed for individuals wishing to enter the job market with the skills to perform a variety of job functions in the logistics and supply chain field. Logistics professionals are responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery and final disposal of resources.

Supply Chain and Logistics graduates work in the logistics field incorporating such tasks as transportation, warehousing, inventory control, purchasing, scheduling, safety, management, electronic data interchange, order processing, traffic management, security, packaging and location site analysis.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| CSC:110 | Introduction to Computers | 3.00 |
| MFG:106 | Workplace Safety | 3.00 |
| MGT:260 | Introduction to Business Logistics | 3.00 |
| **Session II** | | |
| MAT:110 | Math for Liberal Arts OR | 3.00 |
| MAT:156 | Statistics | 3.00 |
| MGT:263 | Principles of Distribution and Warehouse Management | 3.00 |
| MGT:269 | Introduction to Inventory Management | 3.00 |
| | | 18.00 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| BUS:300 | Introduction to Radio Frequency Identification (RFID) | 3.00 |
| MGT:130 | Principles of Supervision | 3.00 |
| MGT:261 | Principles of Transportation Management | 3.00 |
| **Session II** | | |
| BUS:302 | RFID Software | 3.00 |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| MFG:505 | Lean Manufacturing | 1.00 |
| | | 16.00 |

| TERM 3 | | Credits |
|---|---|---|
| **Session I** | | |
| MGT:265 | International Transportation and Logistics | 3.00 |
| MGT:268 | Principles of Logistics Operations Management | 3.00 |
| **Session II** | | |
| BUS:180 | Business Ethics | 3.00 |
| BUS:293 | Principles of Workforce Competitive Advantage | 3.00 |
| MGT:165 | Principles of Quality | 3.00 |
| | | 15.00 |

| TERM 4 | | |
|---|---|---|
| **Session I** | | |
| BUS:161 | Human Relations | 3.00 |
| MKT:110 | Principles of Marketing | 3.00 |
| PSY:213 | Industrial & Organizational Psychology | 3.00 |
| **Session II** | | |
| BUS:185 | Business Law 1 | 3.00 |
| MGT:910 | Supply Chain Internship | 3.00 |
| PSY:213 | Industrial & Organizational Psychology (Cont.) | |
| | | 15.00 |

**A.A.S. Total ..... 64.00**

## SUPPLY CHAIN AND LOGISTICS DIPLOMA

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| CSC:110 | Introduction to Computers | 3.00 |
| MFG:106 | Workplace Safety | 3.00 |
| MGT:260 | Introduction to Business Logistics | 3.00 |
| **Session II** | | |
| MAT:110 | Math for Liberal Arts OR | 3.00 |
| MAT:156 | Statistics | 3.00 |
| MGT:263 | Principles of Distribution and Warehouse Management | 3.00 |
| MGT:269 | Introduction to Inventory Management | 3.00 |
| | | 18.00 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| BUS:300 | Introduction to Radio Frequency Identification (RFID) | 3.00 |
| MGT:130 | Principles of Supervision | 3.00 |
| MGT:261 | Principles of Transportation Management | 3.00 |
| **Session II** | | |
| BUS:302 | RFID Software | 3.00 |
| MFG:505 | Lean Manufacturing | 1.00 |
| | | 13.00 |

# SUPPLY CHAIN AND LOGISTICS
(CONTINUED)

| TERM 3 | | Credits |
|---|---|---|
| **Session I** | | |
| MGT:165 | Principles of Quality | 3.00 |
| MGT:265 | International Transportation and Logistics | 3.00 |
| MGT:268 | Principles of Logistics Operations Management | 3.00 |
| | | 9.00 |
| **Diploma Total** | | **40.00** |

## LOGISTICS AND TRANSPORTATION CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| CSC:110 | Introduction to Computers | 3.00 |
| MFG:106 | Workplace Safety | 3.00 |
| MGT:260 | Introduction to Business Logistics | 3.00 |
| **Session II** | | |
| MGT:261 | Principles of Transportation Management | 3.00 |
| MGT:263 | Principles of Distribution and Warehouse Management | 3.00 |
| MGT:269 | Introduction to Inventory Management | 3.00 |
| | | 18.00 |

| TERM 2 | | Credits |
|---|---|---|
| **Session I** | | |
| MFG:505 | Lean Manufacturing | 1.00 |
| MGT:265 | International Transportation & Logistics | 3.00 |
| MGT:268 | Principles of Logistics Operations Management | 3.00 |
| | | 7.00 |
| **Certificate Total** | | **25.00** |

## INVENTORY CONTROL CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| CSC:110 | Introduction to Computers | 3.00 |
| MFG:106 | Workplace Safety | 3.00 |
| MGT:260 | Introduction to Business Logistics | 3.00 |
| **Session II** | | |
| BUS:300 | Introduction to Radio Frequency Identification (RFID) | 3.00 |
| MGT:263 | Principles of Distribution and Warehouse Management | 3.00 |
| MGT:269 | Introduction to Inventory Management | 3.00 |
| | | 18.00 |

| TERM 2 | | Credits |
|---|---|---|
| **Session I** | | |
| BUS:302 | RFID Software | 3.00 |
| MFG:505 | Lean Manufacturing | 1.00 |
| MGT:165 | Principles of Quality | 3.00 |
| | | 7.00 |
| **Diploma Total** | | **25.00** |

Pending state approval

Gainful employment information for the Logistics program is located at www.eicc.edu/gainfulemployment

# SURGICAL TECHNOLOGY

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, CERTIFICATE & DIPLOMA

The Surgical Technology program prepares students to be an integral part of the team of medical practitioners providing surgical care to patients. Surgical technologists work under the supervision of a surgeon to facilitate the safe and effective conduct of invasive surgical procedures, ensuring that the operating room is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.

The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| BIO:168 | Human Anatomy and Physiology I | 4.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| CSP:110 | Infection Control/Health Regulations | 2.00 |
| ENG:105 | Composition I | 3.00 |
| HSC:113 | Medical Terminology | 2.00 |
| SUR:122 | Introduction to Surgical Technology | 4.00 |
| | | 18.00 |

| TERM 2 | | |
|---|---|---|
| BIO:173 | Human Anatomy and Physiology II | 4.00 |
| BIO:186 | Microbiology | 4.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SUR:225 | Surgical Technology II | 4.00 |
| SUR:421 | Surgical Tech Pharmacology | 1.00 |
| SUR:518 | Surgical Technology Practicum I | 2.50 |
| | | 18.50 |

| TERM 3 | | |
|---|---|---|
| SUR:330 | Surgical Technology Specialties | 3.00 |
| SUR:524 | Surgical Technology Advanced Practicum II | 6.50 |
| | | 9.50 |

**Central Sterile Processing Diploma Total..... 46.00**

| TERM 4 | | Credits |
|---|---|---|
| BUS:161 | Human Relations | 3.00 |
| FLS:141 | Elementary Spanish | 4.00 |
| MAT:110 | Math for Liberal Arts | 3.00 |
| SPC:112 | Public Speaking | 3.00 |
| SUR:450 | Advanced Concepts in Surgical Technology | 4.00 |
| | | 17.00 |

**A.A.S. Total..... 63.00**

## CENTRAL STERILE PROCESSING AND DISTRIBUTION TECHNICIAN CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| CHM:110 | Introduction to Chemistry | 3.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| CSP:110 | Infection Control/Health Regulations | 2.00 |
| HSC:113 | Medical Terminology | 2.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| BIO:157 | Human Biology | 4.00 |
| BIO:186 | Microbiology | 4.00 |
| CSP:115 | Instrument Use, Care, & Handling | 3.00 |
| CSP:120 | Sterile Processing & Distribution | 3.00 |
| | | 14.00 |

| TERM 3 | | |
|---|---|---|
| CSP:210 | Clinical Practicum | 2.00 |
| | | 2.00 |

**Certificate Total..... 30.00**

To be admitted to the Surgical Technology program students must have the following prerequisite courses completed: BIO:114, CHM:110 and MAT:047. Students must also have a current BCLS card.

**Commission on Accreditation of Allied Health Education Programs**

25400 U.S. Highway 19 North, Suite 158
Clearwater, FL 33763
Phone: 727-210-2350 / Fax: 727-210-2354
Please contact mail@caahep.org if you have general questions about CAAHEP.

**ARC/STSA**

6 West Dry Creek Circle, Suite #110
Littleton, CO 80120
Phone: 303-694-9262 / Fax: 303-741-3655
info@arcstsa.org

Gainful employment information for the Surgical Technology program is located at www.eicc.edu/gainfulemployment

# TECHNICAL STUDIES

**CAMPUS** CLINTON, MUSCATINE & SCOTT COMMUNITY COLLEGES

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

You have skills, knowledge and abilities gained from years on the job, participation in an apprenticeship, an on-the-job training program, or from general life and work experiences. Those skills and abilities can be validated through Clinton, Muscatine or Scott Community College Technical Skills degree.

Validation means that skills are evaluated, and, if they meet the criteria, credits are awarded and put toward completion of a degree. Credits are judged in a variety of ways, depending upon which method works best for your field of study. This could be a written test, a performance test or a evaluation of a portfolio of your work called Credit for Prior Learning.

The end result is an Associate in Applied Science degree in the career field in which you have the most experience and interest.

## A.A.S. DEGREE

The A.A.S. degree in Technical Studies consists of a total of 64 credits. Some of these will come from Credit for Prior Learning and be combined with credits earned from the following components:

### CORE CONCENTRATION

24 credit hours of this degree program must come from one program-specific area (for example, Auto Technology).

### 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 | 3.00 |
| ___:___ | Math or Science | 3.00 |
| ___:___ | Microcomputer Applications | 3.00 |
| ___:___ | Arts and Humanities | 3.00 |
| ___:___ | Cultural/Historical Perspectives | 3.00 |
| ___:___ | Social Sciences | 3.00 |
| | | 18.00 |

| TERM 1 | | Credits |
|---|---|---|
| ___:___ | Technical Core Electives | 9.00 |
| ___:___ | Math Elective (above 100 level) OR | 3.00 |
| ___:___ | Biology Elective OR | 3.00 |
| ___:___ | Chemistry Elective OR | 3.00 |
| ___:___ | Environmental Science OR | 3.00 |
| ___:___ | Physical Science Elective OR | 3.00 |
| ___:___ | Physics Elective | 3.00 |
| ENG: 105 | Composition I OR | 3.00 |
| ENG:107 | Composition I: Technical Writing OR | 3.00 |
| SPC: 112 | Public Speaking OR | 3.00 |
| SPC:117 | Professional Communication | 3.00 |
| | | 15.00 |

| TERM 2 | | |
|---|---|---|
| ___:___ | Technical Core Electives | 12.00 |
| CSC:110 | Introduction to Computers | 3.00 |
| ___:___ | Cultural/Historical Perspectives Elective | 3.00 |
| | | 18.00 |

| TERM 3 | | |
|---|---|---|
| ___:___ | Technical Core Electives | 12.00 |
| ___:___ | Arts and Humanities Elective | 3.00 |
| | | 15.00 |

| TERM 4 | | |
|---|---|---|
| ___:___ | Technical Core Electives | 13.00 |
| ECN:120 | Principles of Macroeconomics OR | 3.00 |
| ECN:130 | Principles of Microeconomics OR | 3.00 |
| POL:111 | American National Government OR | 3.00 |
| PSY:111 | Introduction to Psychology OR | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |
| | | 16.00 |

**A.A.S. Total ..... 64.00**

# TRUCK DRIVING

**CAMPUS** SCOTT COMMUNITY COLLEGE
**DEGREE** CERTIFICATE

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.

## TRUCK DRIVING AND TRANSPORTATION TRAINING CERTIFICATE - DAY

| TERM | | Credits |
|---|---|---|
| TDT:111 | Commercial Drivers License Regulations | 3.00 |
| TDT:130 | Commercial Vehicle Operation | 7.00 |
| | | 10.00 |

**Certificate Total ..... 10.00**

Day sessions start every seven weeks beginning in February and ending in November.

## TRUCK DRIVING CERTIFICATE - EVENING

| TERM | | Credits |
|---|---|---|
| TDT:112 | Commercial Drivers License Regulations | 2.50 |
| TDT:131 | Commercial Vehicle Operatoin | 5.00 |
| | | 7.50 |

**Certificate Total ..... 7.50**

Evening sessions are offered in April and July.

# VETERINARY TECHNICIAN

**CAMPUS** MUSCATINE COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE

The Veterinary Technician program prepares students to enter the job market as assistants to veterinarians. New technologies in anesthesia, laboratory equipment, diagnostic testing, and medical treatment have vastly improved animal care. To prepare for these responsibilities, the vet tech program at MCC is designed to enable its graduates to perform a variety of functions necessary for the care of animals.

The program is accredited by the AVMA Committee on Veterinary Technician Education and Activities.

## A.A.S. DEGREE

| PREREQUISITE TERM | | Credits |
|---|---|---|
| BIO:114 | General Biology IA | 4.00 |
| CHM:122 | Introduction to General Chemistry | 4.00 |
| | | 8.00 |
| **Prerequisite Total** | | **8.00** |

| TERM 1 | | |
|---|---|---|
| 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 | 3.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| 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 | 3.00 |
| | | 16.00 |

| TERM 3 - SUMMER | | |
|---|---|---|
| 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 | 3.00 |
| | | 10.00 |

| TERM 4 | | Credits |
|---|---|---|
| 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 | 4.00 |
| | | 16.00 |

| TERM 5 | | |
|---|---|---|
| AGV:159 | Surgical Nursing | 3.00 |
| AGV:170 | Veterinary Anesthesiology | 3.00 |
| AGV:933 | Internship | 6.00 |
| | | 12.00 |
| **A.A.S. Total** | | **76.00** |

Graduates are eligible to sit for the Iowa Veterinary Technician Examination and the National Veterinary Technician Exam (NVTE).

# WELDING

**CAMPUS** SCOTT COMMUNITY COLLEGE

**DEGREE** ASSOCIATE OF APPLIED SCIENCE DEGREE, DIPLOMA & CERTIFICATE

The Welding program provides options in certificate, diploma, or degree programs in a range of industrial welding techniques: ARC, MIG, TIG, core wire, gas. Certificate programs are offered in production welding, basic welding, and structural welding. The welding lab is equipped to provide each student with hands-on learning opportunities, with instructors present and available for guidance. Courses are offered in an eight-week format with flexible schedule of attendance during the day or evening.

## A.A.S. DEGREE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| MAT:733 | Math for Technologies A | 1.50 |
| MFG:186 | Plant Safety | 1.00 |
| WEL:123 | Welding Symbols | 1.00 |
| WEL:274 | Shielded Metal Arc Welding I: SENSE1 | 3.00 |
| **Session II** | | |
| MAT: 734 | Math for Technologies B | 1.50 |
| MFG:192 | Blueprint Reading | 3.00 |
| WEL:275 | Shielded Metal Arc Welding II: SENSE1 | 3.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| CSC:112 | Computer Fundamentals for Technicians I/A | 2.00 |
| WEL:256 | Gas Metal Arc Welding | 4.50 |
| **Session II** | | |
| CSC:113 | Computer Fundamentals for Technicians I/B | 2.00 |
| WEL:215 | Shielded Metal Arc Welding Advanced I | 5.00 |
| | | 13.50 |

| TERM 3 | | |
|---|---|---|
| **Session I** | | |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| WEL:192 | Gas Tungsten Arc Welding | 4.00 |
| ___:___ | Humanities /Social Science Elective | 3.00 |
| **Session II** | | |
| WEL:257 | Flux Core Arc Welding | 2.50 |
| ___:___ | Technical Elective | 3.00 |
| | | 15.50 |

| TERM 4 | | Credits |
|---|---|---|
| **Session I** | | |
| WEL:258 | Shielded Metal Arc Welding Advanced II | 5.00 |
| ___:___ | Technical Elective | 3.00 |
| **Session II** | | |
| WEL:416 | Advanced Gas Metal Arc Welding (GMAW) | 2.00 |
| ___:___ | Humanities/Social Science Elective | 3.00 |
| ___:___ | Technical Elective | 2.00 |
| | | 15.00 |

| TERM 5 | | |
|---|---|---|
| WEL:259 | Oxy-Acetylene Arc Welding | 1.00 |
| ___:___ | Technical Electives | 3.00 |
| | | 4.00 |

**A.A.S. Total ..... 62.00**

### HUMANITIES / SOCIAL SCIENCE ELECTIVES

| | | |
|---|---|---|
| ANT:105 | Cultural Anthropology | 3.00 |
| CLS:150 | Latin American History and Culture | 3.00 |
| ECN:120 | Principles of Macroeconomics | 3.00 |
| ECN:130 | Principles of Microeconomics | 3.00 |
| FLS:141 | Elementary Spanish I | 4.00 |
| GEO:121 | World Regional Geography | 3.00 |
| GLS:100 | Contemporary World Issues | 3.00 |
| HIS:117 | Western Civilization I: Ancient and Medieval | 3.00 |
| HIS:118 | Western Civilization II: Early Modern | 3.00 |
| HIS:119 | Western Civilization III: The Modern Period | 3.00 |
| HIS:151 | U.S. History to 1877 | 3.00 |
| HIS:152 | U.S. History Since 1877 | 3.00 |
| HIS:211 | Modern Asian History | 3.00 |
| HIS:231 | Contemporary World Affairs | 3.00 |
| HUM:105 | Working in America | 3.00 |
| HUM:110 | Changes and Choices | 3.00 |
| HUM:183 | Living with Space, Time and Technology | 3.00 |
| POL:111 | American National Government | 3.00 |
| PSY:111 | Introduction to Psychology | 3.00 |
| SOC:110 | Introduction to Sociology | 3.00 |

### TECHNICAL ELECTIVES

| | | |
|---|---|---|
| CAD:286 | SolidWorks - Modeling | 3.00 |
| CAD:287 | SolidWorks - Applications | 3.00 |
| 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's Handbook | 1.00 |
| MFG:112 | Drills & Saws | 2.00 |
| MFG:116 | Carbide Tooling | 1.00 |
| MFG:190 | Metallurgy | 2.00 |

## WELDING DIPLOMA

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| MAT:733 | Math for Technologies A | 1.50 |
| MFG:186 | Plant Safety | 1.00 |
| WEL:123 | Welding Symbols | 1.00 |
| WEL:274 | Shielded Metal Arc Welding I: SENSE1 | 3.00 |
| **Session II** | | |
| MAT: 734 | Math for Technologies B | 1.50 |
| MFG:192 | Blueprint Reading | 3.00 |
| WEL:275 | Shielded Metal Arc Welding II: SENSE1 | 3.00 |
| | | 14.00 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| ENG:107 | Composition I: Technical Writing | 3.00 |
| WEL:256 | Gas Metal Arc Welding | 4.50 |
| **Session II** | | |
| WEL:192 | Gas Tungsten Arc Welding | 4.00 |
| ___:___ | Humanities/Social Science Elective | 3.00 |
| | | 14.50 |

| TERM 3 | | |
|---|---|---|
| WEL:257 | Flux Core Arc Welding | 2.50 |
| WEL:259 | Oxy-Acetylene Arc Welding | 1.00 |
| | | 3.50 |

**Diploma Total ..... 32.00**

## BASIC WELDING CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| MFG:186 | Plant Safety | 1.00 |
| MFG:192 | Blueprint Reading | 3.00 |
| WEL:274 | Shielded Metal Arc Welding I: SENSE1 | 3.00 |
| **Session II** | | |
| WEL:257 | Flux Core Arc Welding | 2.50 |
| WEL:275 | Shielded Metal Arc Welding II: SENSE1 | 3.00 |
| | | 12.50 |

| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| WEL:256 | Gas Metal Arc Welding | 4.50 |
| **Session II** | | |
| WEL:192 | Gas Tungsten Arc Welding | 4.00 |
| WEL:259 | Oxy-Acetylene Arc Welding | 1.00 |
| | | 9.50 |

**Certificate Total ..... 22.00**

## GENERAL MAINTENANCE WELDING CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **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 OR | 4.75 |
| WEL:274 | Shielded Metal Arc Welding I: SENSE1 AND | 3.00 |
| WEL:275 | Shielded Metal Arc Welding II: SENSE1 | 3.00 |
| **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 Welding-Basic OR | 4.25 |
| WEL:256 | Gas Metal Arc Welding | 4.50 |
| | | 20.00 |

| TERM 2 | | |
|---|---|---|
| EGT:133 | Hydraulics/Pneumatics I | 2.00 |
| ELE:115 | Basic Electricity I | 2.00 |
| WEL:136 | Oxy-Acetylene Welding and Cutting | 4.25 |
| WEL:259 | Oxy-Acetylene Arc Welding (Optional) | (1.00) |
| | | 8.25 |

**Certificate Total ..... 28.25**

## PRODUCTION WELDING CERTIFICATE

| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| MAT:733 | Math for Technologies A | 1.50 |
| MFG:186 | Plant Safety | 1.00 |
| WEL:123 | Welding Symbols | 1.00 |
| WEL:256 | Gas Metal Arc Welding | 4.50 |
| **Session II** | | |
| MAT: 734 | Math for Technologies B | 1.50 |
| MFG:192 | Blueprint Reading | 3.00 |
| WEL:416 | Gas Metal Arc Welding Advanced I | 2.00 |
| | | 14.50 |

| TERM 2 | | |
|---|---|---|
| WEL:257 | Flux Core Arc Welding | 2.50 |
| WEL:259 | Oxy-Acetylene Arc Welding | 1.00 |
| | | 3.50 |

**Certificate Total ..... 18.00**

## STRUCTURAL WELDING CERTIFICATE

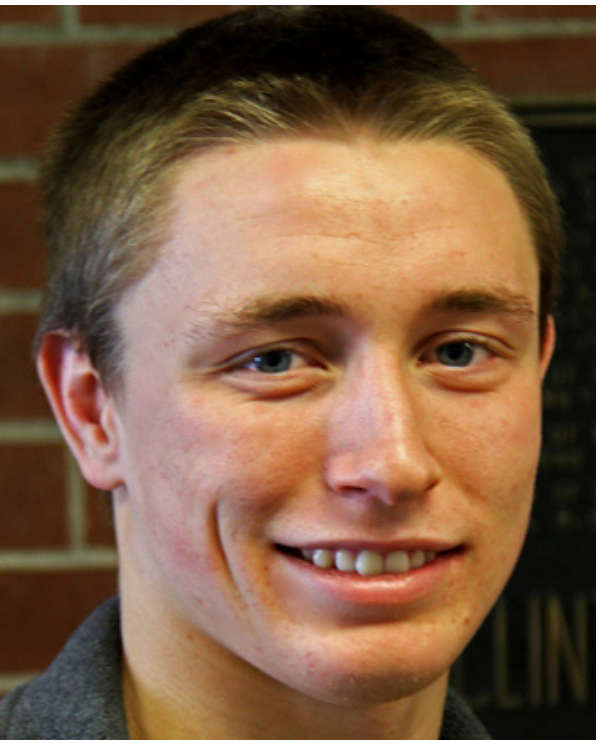
| TERM 1 | | Credits |
|---|---|---|
| **Session I** | | |
| MAT:733 | Math for Technologies A | 1.50 |
| MFG:186 | Plant Safety | 1.00 |
| WEL:259 | Oxy-Acetylene Arc Welding | 1.00 |
| WEL:274 | Shielded Metal Arc Welding I: SENSE1 | 3.00 |
| **Session II** | | |
| MAT: 734 | Math for Technologies B | 1.50 |
| MFG:192 | Blueprint Reading | 3.00 |
| WEL:275 | Shielded Metal Arc Welding II: SENSE1 | 3.00 |
| | | 14.00 |

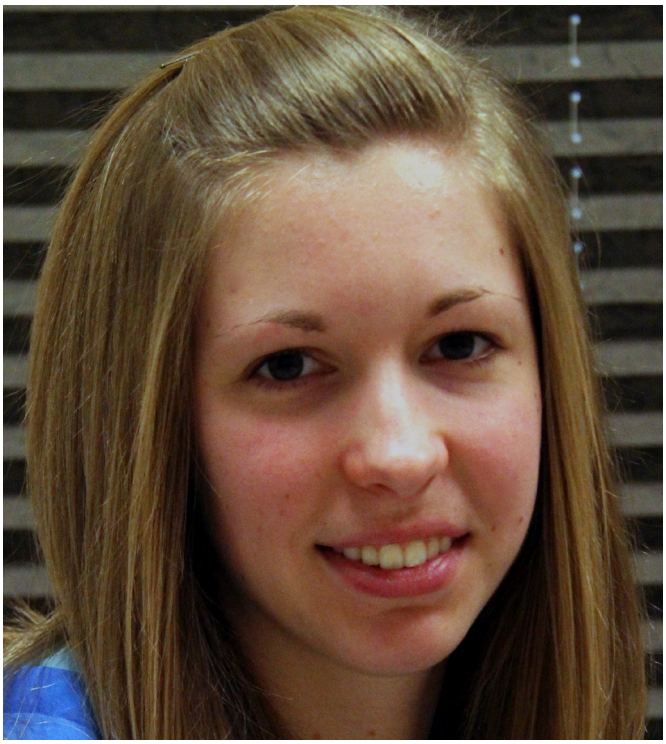
| TERM 2 | | |
|---|---|---|
| **Session I** | | |
| WEL:215 | Shielded Metal Arc Welding Advanced I | 5.00 |
| WEL:257 | Flux Core Arc Welding | 2.50 |
| **Session II** | | |
| WEL:258 | Shielded Metal Arc Welding Advanced II | 5.00 |
| | | 12.50 |
| **Certificate Total** | | **26.50** |

Gainful employment information for the Welding program is located at www.eicc.edu/gainfulemployment

# Course Descriptions

EASTERN IOWA COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT





# COURSE DESCRIPTIONS

**ACC:111 Introduction to Accounting 3.0 cr.**
Designed for the student who may or may not have had high school bookkeeping desiring to enter office employment. Emphasis is placed on learning the accounting cycle and structured systems and records usually incorporated by small businesses and professional offices. Daily assignments and problems completed utilizing computer accounting software provide 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.)
**Prerequisite:** MAT:053 or minimum math placement score based on college assessment.

**ACC:121 Principles of Accounting I 3.0 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 3.0 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:** RDG:032 or RDG:033, MAT:053; or minimum reading and math placement scores based on college assessment.

**ACC:146 Managerial Accounting 3.0 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 AAS may take ACC:121 instead.

**ACC:161 Payroll Accounting 3.0 cr.**
This introductory course covers the processes of payroll accounting. Topics include methods of computing compensation. 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 3.0 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 managerial accounting activities of controlling costs, cost analysis, and decision making activities.
(59.4 Lec. Hrs.)
**Prerequisite:** ACC:146

**ACC:237 Intermediate Accounting 4.0 cr.**
The in-depth study of selected financial accounting theory and practices. Topics may include professional organizations, structures, financial statements, the time-value of money, inventories, and other current and noncurrent assets and liabilities. As time permits some other specialty topics will be looked at; such as the statement of cash flows, accounting for leases, and revenue recognition principles. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ACC:146

**ACC:265 Income Tax Accounting 4.0 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:142 or ACC:121

**ACC:311 Computer Accounting 3.0 cr.**
Transfers manual accounting skills to a micro-computer 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 from scratch. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ACC:121

**ACC:312 Computer Accounting 4.0 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 2.0 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, ACC:121, or ACC:142

**ADI:111 Sonography Principles & Instrumentation I 2.0 cr.**
This is the first of a two course series. This course familiarizes students with the basic physical principles governing medical ultrasound equipment and its use. This course initially examines the history and development of Diagnostic Medical Sonography as a modality. Emphasis is placed on the properties of acoustic waves and their behavior as they propagate and encounter human tissue. The instruments used to generate and receive sound waves for medical imaging purposes are studied with respect to their design and operating characteristics. (59.4 Lec. Hrs.)

**ADI:211 Sonography Principles & Instrumentation II 2.0 cr.**
This course examines the hemodynamics of blood flow in the human body and the physical principles of Doppler ultrasound techniques. Continuous wave, pulsed wave, color flow, power Doppler, as well as emerging technologies will be explored. Students will evaluate both gray scale and color images as well as spectral tracings as they study data acquisition methods and learn to identify normal versus abnormal display patterns associated with the vascular system. Quality assurance standards and methods of equipment testing are emphasized as image and display characteristics are evaluated. The relationship between intensity levels and exposure time are also addressed as they relate to the potential for bioeffects in human tissue. (39.6 Lec. Hrs.)
**Prerequisite:** ADI:111

**ADI:256 Cardiac Sonography I 4.0 cr.**
This course provides an introductory exposure to the field of Cardiac Sonography and the role of the echocardiographer in a healthcare setting. The student will be introduced to relevant terminology as well as sonographer safety issues. The study of embryology, anatomy, and function of the heart and peripheral vascular system will play a vital role in understanding the cardiovascular system and how it relates to cardiac function. Patient assessment, correlation of pertinent laboratory and other medical procedures will be discussed. Students will learn basic imaging techniques and develop a standard protocol for examination of the adult heart. Normal sonographic appearances and anatomy recognition will be emphasized.
(79.2 Lec. Hrs.)

**ADI:262 Sectional Anatomy for Diagnostic Imaging 3.0 cr.**
This course covers the fundamentals of sectional anatomy for the commonly imaged planes of the human body. Units of study include: Cranium and Facial Bones, Brain, Neck, Spine, Thorax, Abdomen, Pelvis, Upper Extremity, and Lower Extremity. Line drawings, Computed Tomography (CT) images, Magnetic Resonance (MR) images, and ultrasound pictures are used to illustrate body parts in the coronal, sagittal, and/or axial planes. (59.4 Lec. Hrs.)
**Prerequisite:** BIO:114

# COURSE DESCRIPTIONS

**ADI:266 Cardiac Sonography II 4.0 cr.**
As a continuation of ADI:256, this course introduces the student to cardiovascular disease processes and pathophysiology. Risk factors, signs and symptoms, as well as medical, surgical, and interventional treatment options will be discussed. The appearance of pathology will be correlated with changes seen on sonographic images of the cardiovascular system. Spectral and color Doppler techniques used in evaluation of the heart with respect to pathology and diagnosis will be presented. (79.2 Lec. Hrs.)
**Prerequisite:** ADI:256

**ADI:276 Cardiac Sonography III 4.0 cr.**
As a continuation of ADI 266, this course continues the study of cardiovascular disease processes in the adult patient. Advanced imaging techniques and new advances in the field will be explored. Students will also be introduced to professional governing agencies and explore opportunities for professional growth and development.
(79.2 Lec. Hrs.)

**ADI:277 Cardiac Imaging Interpretation & Critique 2.0 cr.**
This course provides students the opportunity to further study concepts essential to quality patient care and sonographic exam performance. A wide variety of cardiac case studies will be presented and critiqued with emphasis on identification of normal anatomy, recognition of pathologic processes, and technical exam quality. Pathology-specific clinical history and physical assessment, imaging protocols and formulation of a preliminary exam interpretation will be discussed. (39.6 Lec. Hrs.)

**ADI:286 Cardiac Sonography IV 4.0 cr.**
As a continuation of ADI 276, this course emphasizes the clinical applications of cardiac sonography pertaining to basic fetal and pediatric examinations and the diagnosis of congenital heart disease. Students will investigate various correlative modalities used to examine the heart including magnetic resonance imaging, nuclear medicine, computed tomography and cardiac catheterization. Review sessions in preparation for certification examinations will be provided.
(79.2 Lec. Hrs.)

**ADI:321 Abdominal Sonography I 5.0 cr.**
This course introduces students to basic sonographic terminology, imaging planes and techniques as well as sonographer safety issues. Normal anatomy and physiology of the upper abdominal organs, anatomical variations and pathologies will be studied with respect to their sonographic appearances. Emphasis is also placed on the acquisition of pertinent clinical history and physical findings and the evaluation of laboratory and related imaging reports. (99.0 Lec. Hrs.)

**ADI:326 Abdominal Sonography II 4.0 cr.**
As a continuation of ADI:321, this course covers anatomy and physiology and common pathologies of select abdominal organs as well as various superficial structures. Scanning protocols and normal versus abnormal sonographic findings associated with each procedure are studied. (79.2 Lec. Hrs.)
**Prerequisite:** ADI:321

**ADI:330 Sonography Interpretation & Critique 2.0 cr.**
This course provides students the opportunity to further study concepts essential to quality patient care and sonographic exam performance. A wide variety of case studies will be presented and critiqued with emphasis on identification of normal anatomy, recognition of pathologic processes, and technical exam quality. Pathology-specific clinical history and physical assessment, imaging protocols and formulation of a preliminary exam interpretation will be discussed. (39.6 Lec. Hrs.)

**ADI:349 Vascular Technology 4.0 cr.**
This course will introduce students to basic vascular anatomy, hemodynamics and the use of sonography in evaluation of the vascular system. Clinical applications with regards to pathophysiology, patient signs and symptoms and findings related to common types of vascular disease will be presented. Emphasis will also be placed on the concepts essential to the performance and interpretation of vascular exams. (99.0 Lec. Hrs.)

**ADI:357 OB/GYN Sonography 6.0 cr.**
This course will introduce students to the sonographic evaluation of the non-gravid and gravid uterus. In gynecologic sonography students will assemble a comprehensive knowledge of anatomy, physiology, pathophysiology, and the sonographic appearance of the embryologic, pre-menarchal, menarchal, and post-menopausal female reproductive system. Obstetrical imaging focuses on fetal development and sonographic appearances of fetal and extrafetal anatomy throughout the gestational period. This course emphasizes an understanding of the fertilization process, clinical indications for obstetrical sonography and the sonographic appearances of the normal and abnormal gravid uterus specific to each trimester of pregnancy. (118.8 Lec. Hrs.)

**ADI:800 Sonography Practicum I 6.75 cr.**
This course provides the student with 3-4 days per week of clinical experience in affiliate hospitals, clinics, and/or imaging centers. Students will observe and gain introductory hands-on scanning experience on a variety of sonographic procedures under direct supervision of a staff sonographer. Students will observe laboratory demonstrations and perform standard exam protocols. Emphasis in the lab will focus on ergonomic safety, gaining proficiency in basic abdominal imaging techniques as well as identification of normal anatomy and pattern recognition. (133.65 Lec. Hrs. / 39.6 Lab Hrs. / 74.25 Clinical Hrs.)

**ADI:803 CT Practicum 6.75 cr.**
This course provides the echocardiography student with 3-4 days per week of clinical experience in affiliate hospitals, clinics, and/or imaging centers. Students will observe and gain introductory hands-on scanning experience on a variety of cardiac sonographic procedures under direct supervision of a staff sonographer. Students will observe laboratory demonstrations and perform standard exam protocols. Emphasis in the lab will focus on ergonomic safety, gaining proficiency in basic cardiac imaging techniques as well as identification of normal anatomy and pattern recognition. (133.65 Lec. Hrs. / 39.6 Lab Hrs. / 74.25 Clinical Hrs.)

**ADI:805 Sonography Practicum II 6.0 cr.**
As a continuation of ADI:800, this course provides the student with 4 days per week of clinical experience in affiliate hospitals, clinics, and/or imaging centers. Students will continue to gain hands-on scanning experience on a variety of sonographic procedures under direct supervision of a staff sonographer. Emphasis will be placed on ergonomic safety, gaining proficiency in a variety of imaging techniques and protocols, as well as identification of normal and abnormal anatomy and pattern recognition. In addition students will be required to perform select basic imaging and technical competencies. (356.4 Clinical Hrs.)

**ADI:808 Cardiac Sonography Clinical Education II 6.0 cr.**
As a continuation of ADI:803, this course provides the student with 4 days per week of clinical experience in affiliate hospitals, clinics, and/or imaging centers. Students will continue to gain hands-on scanning experience on a variety of cardiac sonographic procedures under direct supervision of a staff sonographer. Emphasis will be placed on ergonomic safety, gaining proficiency in a variety of imaging techniques and protocols, as well as identification of normal and abnormal anatomy and pattern recognition. In addition students will be required to perform select basic imaging and technical competencies. (356.4 Clinical Hrs.)

**ADI:811 Sonography Clinical Education III 6.75 cr.**
This course involves 3-4 days per week of clinical experience in affiliate hospitals, clinics, and/or imaging centers. Clinical assignments are made based on the student's clinical education needs, experience, and competency level. Students will advance their skill in exam performance, image interpretation, and analyzing the technical quality of the exam. In addition the student will be required to perform select basic imaging and technical competencies. In the lab setting students will be exposed to advanced scanning techniques and procedures. Emphasis in the lab will focus on ergonomic safety and demonstrating scanning proficiency in various techniques. (133.65 Lec. Hrs. / 39.6 Lab Hrs. / 74.25 Clinical Hrs.)

# COURSE DESCRIPTIONS

**ADI:814 Cardiac Sonography Clinical Education III 6.75 cr.**
This course involves 3-4 days per week of clinical experience in affiliate hospitals, clinics, and/or imaging centers. Clinical assignments are made based on the student's clinical education needs, experience, and competency level. Students will advance their skill in exam performance, image interpretation, and analyzing the technical quality of the exam. In addition the student will be required to perform select basic imaging and technical competencies. In the lab setting students will be exposed to advanced scanning techniques and procedures. Emphasis in the lab will focus on ergonomic safety and demonstrating scanning proficiency in various techniques. (133.65 Lec. Hrs. / 39.6 Lab Hrs. / 74.25 Clinical Hrs.)

**ADI:817 Sonography Clinical Education IV 6.75 cr.**
This final clinical course provides 3-4 days per week of scanning experience in affiliate hospitals, clinics, imaging centers, and specialty clinics. Rotations are assigned to provide students with the opportunity to refine their skills in performing exams and scrutinizing the technical quality of the procedure. Advanced scanning techniques and procedures with integration of patient history and physical findings to determine the course of the examination will be emphasized. Continued growth and demonstration of an increasing level of competence relating to critical thinking skills and problem solving will be developed. Students will demonstrate an increasing level of speed and efficiency in performance of exams. Successful completion of professional and technical competencies are required as outlined in the program handbook. This course will also include labs which will focus on advanced scanning techniques and exam performance. (133.65 Lec. Hrs. / 39.6 Lab Hrs. / 74.25 Clinical Hrs.)

**ADI:824 Cardiac Sonography Clinical Education IV 6.75 cr.**
This final clinical course provides 3-4 days per week of scanning experience in affiliate hospitals, clinics, imaging centers, and specialty clinics. Rotations are assigned to provide students with the opportunity to refine their skills in performing exams and scrutinizing the technical quality of the imaging procedure. Advanced scanning techniques and procedures with integration of patient history and physical findings to determine the course of the examination will be emphasized. Continued growth and demonstration of an increasing level of competence relating to critical thinking skills and problem solving will be developed. Students will demonstrate an increasing level of speed and efficiency in performance of exams. Successful completion of professional and technical competencies are required as outlined in the program handbook. This course will also include labs which will focus on advanced scanning techniques and exam performance. (133.65 Lec. Hrs. / 39.6 Lab Hrs. / 74.25 Clinical Hrs.)

**ADM:105 Introduction to Keyboarding 1.0 cr.**
This course is designed for the student with little or 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 2.0 cr.**
This course is 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. (39.6 Lec. Hrs.)

**ADM:149 Transcription 3.0 cr.**
This course emphasizes the development of efficient machine transcription skill. 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.)
**Prerequisite:** ADM:105, ADM:122, and ADM:157

**ADM:157 Business English 3.0 cr.**
This course is designed to help the students sharpen their communication skills. The student will study and upgrade their skills in the four basic areas of grammar and usage, punctuation, spelling, and proofreading and editing. (59.4 Lec. Hrs.)

**ADM:179 Records Management 3.0 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, RDG:033; or minimum English and reading placement scores based on college assessment.

**ADM:222 Career Capstone 3.0 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, and MGT:151

**ADM:254 Business Professionalism 1.0 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 once. (19.8 Lec. Hrs.)

**ADM:255 Business Professionalism II 1.0 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 once. (19.8 Lec. Hrs.)
**Prerequisite:** ADM:254

**ADM:936 Occupational Experience 3.0 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:** Complete approximately half of the credit hours required for graduation in the degree program or consent of instructor. Minimum Grade Point Average of 2.0.

**ADM:940 Leadership Seminar 2.0 cr.**
This course is designed to develop self and professional growth in the area of leadership. Included during this course will be an emphasis on soft skills needed in today's workplace. (39.6 Lec. Hrs.)

**ADN:109 Introduction to Health Concepts 10.0 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 accepted into the Associate Degree Nursing program.
**Corequisite:** ADN:220, BIO:168

**ADN:220 Pharmacology 2.0 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 accepted into the Associate Degree Nursing program.
**Corequisite:** ADN:109, BIO:168

# COURSE DESCRIPTIONS

### ADN:301 Holistic Health-Illness Concepts 9.0 cr.

This course is designed to further develop the concepts of acid-base, metabolism, cellular regulation, oxygenation, fluid and electrolytes, inflammation, infection, health-wellness-illness, caring interventions, teaching and learning, managing care, safety, health policy, quality improvement, informatics, elimination, intracranial regulation, perfusion, sensory perception, professional behaviors, thermoregulation, immunity, mobility, comfort, clinical decision making, and collaboration. Upon completion, students will be able to provide safe nursing care incorporating the concepts identified in this course.
(99.0 Lec. Hrs. / 237.6 Clinical Hrs.)
**Prerequisite:** Complete ADN:109 and ADN:220 with a grade of C or better.
**Corequisite:** BIO:151, BIO:173

### ADN:302 Holistic Family Health Concepts 10.0 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, communication, caring interventions, managing care, metabolism, teaching and learning, and safety. Stress/coping, cognition, self, violence, professional behaviors, health policy, and informatics 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.)
**Prerequisite:** Complete ADN:109 and ADN:220 with a grade of C or better.
**Corequisite:** BIO:151, BIO:173

### ADN:432 Nursing the Childbearing Family 5.0 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 upon 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 are examined.
(59.4 Lec. Hrs. / 118.8 Clinical Hrs.)
**Prerequisite:** BIO:151, BIO:173, PNN:166, PNN:211, PNN:512, PSY:111, and PSY:121 with a grade of C or better.

### ADN:442 Nursing of Children and Families 5.0 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 upon 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.)
**Corequisite:** BIO:151, BIO:173, PNN:166, PNN:211, PNN:512, PSY:111, and PSY:121 with a grade of C or better.

### ADN:451 Health System Concepts 3.0 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.)
**Prerequisite:** Complete ADN:109, ADN:220, BIO:151 and BIO:173 with a grade of C or better.

### ADN:452 Complex Health Concepts Mod A 5.0 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 Clinical Hrs.)
**Prerequisite:** Complete ADN:301, ADN:302, and ADN:451 with a grade of C or better.

### ADN:453 Complex Health Concepts Mod B 5.0 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 Clinical Hrs.)
**Prerequisite:** Complete ADN:452 with a grade of C or better.

### ADN:473 Nursing in Mental Health 5.0 cr.

Mental Health Nursing is one of three courses that allow a student to articulate to the associate degree level of nursing education. The course focuses upon the maladaptive neurobiological 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.)
**Prerequisite:** BIO:151, BIO:173, PNN:166, PNN:211, PNN:512, PSY:111, and PSY:121 with a grade of C or better.

### ADN:541 Concepts in Clinical Nursing Module 2A 6.0 cr.

Concepts in Clinical Nursing 2 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.)
**Prerequisite:** Complete ADN:432, ADN:442, ADN:473, BIO:186, ENG:105, and SOC:110 with a grade of C or better.

# COURSE DESCRIPTIONS

**ADN:542 Concepts in Clinical Nursing Module 2B** **7.0 cr.**
Concepts in Clinical Nursing 2 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. (99.0 Lec. Hrs. / 118.8 Clinical Hrs.)
**Prerequisite:** Complete ADN:541 with a grade of C or better.

**ADN:811 Comprehensive Nursing** **5.0 cr.**
Comprehensive Nursing is an exit course for associate degree nursing students, which builds upon 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 individual 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.)
**Prerequisite:** Complete ADN:542 with a grade of C or better.

**ADN:905 Preceptorship** **2.5 cr.**
Preceptorship is an exit course for associate degree nursing students, which builds upon concepts taught in previous nursing courses. The concepts of individual, healthcare and nursing are closely examined. Emphasis is placed on the use of the nursing process to meet the health needs of individual and groups across the life span. Upon completion, students should be able demonstrate specific strategies to meet the challenges of role transition from student to professional practitioner. (19.8 Lec. Hrs. / 89.1 Clinical Hrs.)
**Prerequisite:** Complete ADN:453 with a grade of C or better.

**AGA:154 Fundamentals of Soil Science** **3.0 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** **3.0 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 Production** **3.0 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** **3.0 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 fertilizers materials on the environment with practical application to production. Agriculture and horticulture soil and fertilizer management will be discussed. (29.7 Lec. Hrs.)
**Prerequisite:** AGA:351, 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. (29.7 Lec. Hrs.)
**Prerequisite:** AGC:942

**AGA:373 Integrated Crop Management** **2.0 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: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.)

**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. (29.7 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. (29.7 Lec. Hrs.)

**AGB:103 Agricultural Economics** **1.5 cr.**
This course describes how the economic system in the United States affects the agricultural industry and how the agricultural industry affects the economic system. (29.7 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, service analysis and getting the most out of the human and financial resources employed by a retail agribusiness firm. (34.65 Lec. Hrs.)
**Prerequisite:** AGB:105

# COURSE DESCRIPTIONS

**AGB:108 Human Relations I** **1.5 cr.**
Designed to help the student prepare for employment, satisfactory work performance, coworker relations, employer-employee relations, work habits and attitudes, and the procedures for applying and interviewing for a job. (29.7 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. (36.0 Lec. Hrs.)

**AGB:143 Applied Agribusiness Accounting I** **1.25 cr.**
This course is an introduction to the accrual accounting system. Emphasis is given to the accounting cycle and basic accounting principles and practices used by companies in the input supply sector of the agriculture industry. (24.75 Lec. Hrs.)

**AGB:144 Applied Agribusiness Accounting II** **1.0 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. Accounting for sales and purchases will be a primary focus. (19.8 Lec. Hrs.)
**Prerequisite:** AGB:143

**AGB:180 Agribusiness Ethics** **1.5 cr.**
This course will introduce students to business ethics within the field of agriculture. (29.7 Lec. Hrs.)

**AGB:190 Customer Relations in Agriculture** **1.5 cr.**
This course will introduce students to customer relations within Agribusiness. (29.7 Lec. Hrs.)

**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. (29.7 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. (36.0 Lec. Hrs.)
**Prerequisite:** AGB:191

**AGB:193 Agricultural Sales III** **1.25 cr.**
A continuation of Agricultural Sales I and Agricultural Sales II (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. (24.0 Lec. Hrs.)
**Prerequisite:** AGB:192

**AGB:195 Upselling in Agriculture** **1.0 cr.**
This course introduces students to Upselling in Agriculture. (19.8 Lec. Hrs.)

**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:** AGB:861

**AGB:232 Livestock and Grain Marketing** **3.0 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. (59.4 Lec. Hrs.)
**Prerequisite:** AGB-231

**AGB:280 Business Law for Agriculture** **1.5 cr.**
In this course, 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. Specific laws will be addressed pertaining to the products and services a business represents. (29.7 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. (29.7 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 – 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. (29.7 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. (29.7 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 presents the fundamental principles and strategies of a diverse risk management portfolio including crop insurance, liability issues and personal finance. (29.7 Lec. Hrs.)

**AGB:357 Agribusiness Marketing and Retailing** **3.0 cr.**
This course provides the student with knowledge required to understand and execute marketing promotions. It equips students with the ability to identify and construct successful public relations campaigns and evaluate advertising communication used in agribusiness. (59.4 Lec. Hrs.)

**AGC:861 Farm Experience I** **3.0 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.)

# COURSE DESCRIPTIONS

**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.)
**Prerequisite:** AGC:861 or consent of instructor

**AGC:864 Farm Experience III 3.0 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.)
**Prerequisite:** 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.)
**Prerequisite:** AGC:864 or consent of instructor

**AGC:915 Alpha Mu Sigma I 1.0 cr.**
Designed to help the student develop a working knowledge of parliamentary procedures, develop the ability to successfully conduct meetings, develop leadership qualities, and develop and foster relationships with other students, Postsecondary Agriculture Students (PAS) chapters, and industry on state and national level. (19.8 Lec. Hrs.)

**AGC:916 Alpha Mu Sigma II 1.0 cr.**
This course is designed to further help students develop a working knowledge of parliamentary procedures, develop the ability to successfully conduct meetings, develop leadership qualities, and develop and foster relationships with other students, Postsecondary Agriculture Student Organization (PAS), and industry on a state and national level. (19.8 Lec. Hrs.)

**AGC:918 Seminar I 1.0 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 first of four sequential courses that are required for graduation from the Farm Management Program. (19.8 Lec. Hrs.)

**AGC:919 Seminar II 1.0 cr.**
This course is designed to offer the student an opportunity to present and discuss current topics, 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 organization. This is the second of two sequential courses that are required for graduation from the Farm Management Program.(19.8 Lec. Hrs.)
**Prerequisite:** AGC:918

**AGC:941 Employment Experience I 3.0 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 appropriate wages during these periods. (237.6 Co-op Hrs.)
**Prerequisite:** Must be a student in the Agribusiness program; or consent of instructor.

**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 appropriate wages during these periods. ( 277.2 Co-op Hrs.)
**Prerequisite:** AGC:941. Must be a student in the Agribusiness program.

**AGC:943 Employment Experience III 3.0 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 appropriate wages during these periods. ( 237.6 Co-op Hrs.)
**Prerequisite:** AGC:942. Must be a student in the Agribusiness program.

**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 appropriate wages during these periods. (277.2 Co-op Hrs.)
**Prerequisite:** AGC:943. Must be a student in the Agribusiness program.

**AGF:120 Floral Plant Identification and Care I 2.0 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 2.0 cr.**
Introduces the student to design theory. Emphasis is placed on the development of special techniques in basic design as it applies to flowers, foliages and accessories. Hands-on work with floral design is completed in the three medias of fresh, silk and dried. (39.6 Lec. Hrs.)

**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. (29.7 Lec. Hrs.)

**AGM:157 Machinery Management 3.0 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. (29.7 Lec. Hrs.)

**AGM:423 Equipment & Diesel Performance 2.0 cr.**
This 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.)

**AGP:243 Precision Agricultural Applications 3.0 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.)

**AGS:119 Advanced Animal Science 2.0 cr.**
This course is designed to provide students with an understanding of the practices, management programs, labor requirements, reproduction programs, gestation periods, sanitation, health, and disease control concerns of livestock management. The student will also gain background knowledge needed to comprehensively advise livestock producers on livestock production enterprises. (39.6 Lec. Hrs.)

# COURSE DESCRIPTIONS

**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. (29.7 Lec. Hrs.)

**AGS:315 Principles of Animal Nutrition 3.0 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 the stage of growth, development, or function. This course also covers 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: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 3.0 cr.**
This is the first of two courses that together provide the basic knowledge required when 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 is one of two swine courses that together provide a basic foundation required for one planning to operate or become employed by a swine enterprise. Major topics include the fundamentals of swine care in the grower finisher phase, comprehensive management, disease prevention and control. The evaluation of swine, feeding, housing management, sanitation, biosecurity and practices that optimize production efficiency and animal well-being are also covered. This course will also place address the economic, social, environmental and physical demands of swine production sustainability. (29.7 Lec. Hrs.)

**AGS:554 Beef Production 3.0 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.)

**AGV:113 Canine and Feline Nutrition 2.0 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:127

**AGV:114 Microbiology for Veterinary Technicians 3.0 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 Veterinary Technology Animal Anatomy and Physiology I 4.0 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.)
**Prerequisite:** AGV:119, BIO:114

**AGV:119 Veterinary Medical Terminology 2.0 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.)
**Corequisite:** AGV:186

**AGV:127 Animal Anatomy and Physiology II 4.0 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 3.0 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 3.0 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 3.0 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, and CHM:122

**AGV:134 Veterinary Clinic Pathology II 3.0 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

# COURSE DESCRIPTIONS

**AGV:140 Veterinary Pharmacology 3.0 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, and AGV:133

**AGV:146 Large Animal Care 3.0 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, and AGV:159

**AGV:159 Surgical Nursing 3.0 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 3.0 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, and AGV:140

**AGV:182 Diagnostic Imaging 3.0 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, AGV:130

**AGV:184 Lab Animal Medicine 2.0 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 2.0 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 4.0 cr.**
This course is a continuation of Clinical Technology I & II. It includes 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 any areas of concern or techniques in order to prepare for the upcoming national exam.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** AGV:118, AGV:130, and AGV:133

**AGV:933 Internship 1.0 – 6.0 cr..**
During the final semester of the Veterinary Technology Program, each student will complete 250 hours of internship at an approved veterinary practice under the supervision of a licensed veterinarian. Successful completion of this course is required to graduate from the Veterinary Technology program.. (59.4 – 356.4 Clinical Hrs.)
**Prerequisite:** All other courses in the Veterinary Technician program and consent of Program Director.

**ANT:105 Cultural Anthropology 3.0 cr.**
This course is a comparative study of culture and social organization and the study of the effect and influence of language. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**ANT:943 Readings in Anthropology 1.0 – 2.0 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 to two credit hours. This course may be repeated twice for additional credits.
(39.6 – 79.2 Lab Hrs.)

**ART:101 Art Appreciation 3.0 cr.**
Introduction to the history 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:013; or minimum English placement score based on college assessment.

**ART:120 2-D Design 3.0 cr.**
An introduction to the principles and procedures which guide how images and objects are created. This course 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 3.0 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.)

**ART:134 Drawing II 3.0 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 3.0 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.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**ART:144 Painting II 3.0 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

# COURSE DESCRIPTIONS

**ART:157 Printmaking** **3.0 cr.**
Introductory printing course with emphasis in basic printmaking techniques and processes. Printing proficiency in woodblock and serigraph prints will be pursued. Students will be expected to print a minimum of one hour per week outside of class. (59.4 Lec. Hrs.)

**ART:161 Digital Art** **3.0 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.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**ART:163 Sculpture** **3.0 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** **3.0 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** **3.0 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 design and the effects of glaze, color and texture will be stressed. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**ART:174 Ceramics II** **3.0 cr.**
A continuation of ART:173 Ceramics, this course provides the student an opportunity to further explore and develop their artistic vision and technical skills. Students will strengthen the quality of their portfolio. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ART:173

**ART:186 Digital Photography** **3.0 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 Adobe146s 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 Microsoft146s Windows operating system software.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**ART:203 Art History I** **3.0 cr.**
Designed to investigate 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** **3.0 cr.**
Designed to study 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 imagery throughout time. (59.4 Lec. Hrs.)

**ART:927 Honors Study – Art** **1.0 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.)

**ART:949 Special Topics** **2.0 cr.**
Independent study in painting is a course designed to provide the more advanced student an opportunity to explore in greater depth processes and techniques the students has experienced in previous painting courses. (79.2 Lab Hrs.)
**Prerequisite:** ART:143, ART:144

**ASL:151 American Sign Language I** **5.0 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 student participates in exercises that develop a comprehension of sign vocabulary and grammatical patterns of ASL.
(79.2 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** Ability to enroll in ENG:105.

**ASL:181 American Sign Language II** **5.0 cr.**
This course is designed to teach interpersonal communication skills utilizing conversational ASL. Introduction of American Deaf cultural beliefs, values and attitudes, and an appreciation of perspectives and contributions of Deaf Americans in the areas of arts and history will be included. This course will prepare students to use ASL both in and outside of the classroom via interaction with the Deaf Community, establishing a foundation for lifelong language learning.
(79.2 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ASL:151.

**ASL:251 American Sign Language III** **5.0 cr.**
This course expands on basic language skills in American Sign Language (ASL). Students will begin to engage in group conversations, exchange information and communicate with others in a culturally appropriate manner on a wide range of topics. (79.2 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ASL:181

**ASL:281 American Sign Language IV** **4.0 cr.**
This course expands on basic language skills in American Sign Language (ASL). Students will further develop their ability to engage in group conversations, exchange information and communicate with others in a culturally appropriate manner on a wide range of topics.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ASL:251

**ASL:296 American Sign Language V** **4.0 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. / 39.6 Lab Hrs.)
**Prerequisite:** ASL:281

**ASL:297 American Sign Language VI** **4.0 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 Clinical Hrs.)
**Prerequisite:** ASL:296

# COURSE DESCRIPTIONS

**ATR:105 Industrial Robotics 3.0 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 3.0 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:276 Networking for Industry 3.0 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.)

**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, tire & wheel service and gasoline engine operation and repair.
(59.4 Lab Hrs.)
**Corequisite:** AUT:115

**AUT:115 Automotive Shop Safety 1.0 cr.**
This course is designed to acquaint the student with the proper personal and shop safety procedures needed to function in an automotive or truck shop. Students will learn general safety rules and work place safety including "Right to Know" and Occupational Safety and Health Administration (OSHA) Regulations. Basic First Aid will also be discussed. (19.8 Lec. Hrs.)

**AUT:164 Automotive Engine Repair 4.0 cr.**
Basic theory of two-cycle and four-cycle gasoline engines and their application will be introduced. Disassembly, inspection and reassembly of an engine will be experienced as well as cooling, lubrication, induction, exhaust, compression and valve systems discussed. Students will develop competencies in precision measuring and services procedures. (39.6 Lec. Hrs. / 79.2 Lab Hrs.)
**Corequisite:** AUT:115

**AUT:232 Automotive Transmission I 3.0 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. / 39.6 Lab Hrs.)
**Prerequisite:** AUT:115

**AUT:233 Automotive Transmission II 3.0 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 schematics. The student will perform diagnosis of electronically controlled automatic transmissions and transaxles. The student will 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.)
**Prerequisite:** AUT:232

**AUT:304 Automotive Manual Drive Train and Axles 4.0 cr.**
Provides basic knowledge in automotive clutches, standard transmissions, transaxles and differentials. Basic theory, diagnosis and service procedures are covered. Students will be able to correctly disassemble and reassemble standard transmissions, transaxles and differentials in accordance with manufacturers' guidelines.
(49.5 Lec. Hrs. / 89.1 Lab Hrs.)
**Prerequisite:** AUT:115

**AUT:404 Automotive Suspension and Steering 4.0 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 an entry-level suspension and steering specialist.
(49.5 Lec. Hrs. / 89.1 Lab Hrs.)
**Prerequisite**: AUT:115

**AUT:524 Auto Brake Systems And Service 4.0 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 scan tools will be stressed. Students will develop competencies aimed at entry-level skills as a brake specialist. (39.6 Lec. Hrs. / 89.1 Lab Hrs.)
**Prerequisite:** AUT:115

**AUT:606 Basic Auto Electricity/ Electrn 3.0 cr.**
In this course the student is introduced to basic electrical and electronic 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.)
**Prerequisite:** AUT:115

**AUT:614 Automotive Electrical I 3.0 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.)
**Prerequisite:** AUT:606

**AUT:656 Automotive Electrical II 4.0 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.)
**Prerequisite:** AUT:606, AUT:614

**AUT:704 Auto Heating and Cooling 4.0 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 3.0 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:** AUT:606

# COURSE DESCRIPTIONS

**AUT:811 Engine Performance II 4.0 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. / 79.2 Lab Hrs.)
**Prerequisite:** AUT:802

**AUT:817 Auto Engine Performance III 3.0 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 drivability problems. Diagnosis and testing will be discussed and practiced. A review of fuel, ignition and computer system testing will also be included.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** AUT:811

**AUT:911 Cooperative/Internship 4.0 cr.**
Cooperative/Internship will integrate classroom theory with on-the-job training. The College will assist the student in securing employment 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.
(316.8 Co-op Hrs.)
**Prerequisite:** Complete minimum of 12 EICC credit hours with at least two AUT courses. Minumum Grade Point Average of 2.0 and consent of faculty coordinator.

**BCA:120 Computer Orientation 1.0 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.
(14.85 Lec. Hrs. / 9.9 Lab Hrs.)

**BCA:129 Basic Word Processing 2.0 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; using templates; cutting and pasting text within and between documents; and creating headers, footers; footnotes and endnotes in reports; and creating tables with a graph.
(39.6 Lec. Hrs.)
**Prerequisite:** ADM:105 or consent of instructor

**BCA:130 Advanced Word Processing 2.0 cr.**
This course is designed to give the student advanced applications of an industry standard word processing software. Topics to be covered may include the production of documents using headers and footers, footnotes and endnotes, find and replace, advanced level tables and charts applications, columnar reports, outlines, forms and templates. (39.6 Lec. Hrs.)
**Prerequisite:** BCA:129

**BCA:147 Basic Spreadsheets 2.0 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 the database functions of spread-sheets. (39.6 Lec. Hrs.)

**BCA:148 Advanced Spreadsheets 2.0 cr.**
This class is designed to take the student 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 2.0 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; stablish 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. (29.7 Lec. Hrs. / 19.8 Lab Hrs.)
**Prerequisite:** BCA:120 or CSC:110

**BCA:188 Computer Fundamentals for Technicians 3.0 cr.**
This course will cover micro-computer operating systems, hardware and application software. Spreadsheets, database management, word processing, graphs and operating within DOS & Windows. Lab exercises will follow lecture and class discussion. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**BCA:220 Integrated Computer Business Applications 2.0 cr.**
This is an advanced course in microcomputer software applications. Students will plan and create spreadsheets, databases, presentations and world processing documents using integrated systems software that allows for data transfer among applications. (39.6 Lec. Hrs.)
**Prerequisite:** BCA:130, BCA:147 BCA:165, and CSC:110; or consent of instructor. Ability to register for college level reading and writing courses as determined by appropriate college placement tests.

**BCA:226 Integrated Software Applications 3.0 cr.**
This is an advanced course in microcomputer software applications. Students will plan and create spreadsheets, databases, presentations and word processing documents using integrated systems software that allows for data transfer among applications. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite**: ADM:130, BCA:134, and CSC:110

**BCA:250 Desktop Publishing 3.0 cr.**
This course takes the student beyond the basic commands of word processing while gaining knowledge and practice in desktop publishing by integrating both 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 letterheads, business cards, flyers, newsletters, brochures and certificates.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** BCA:130

**BCA:711 Introduction to Microsoft PowerPoint 1.0 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 1.0 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. (19.8 Lec. Hrs.)
Test Out Available.
**Prerequisite:** BCA:106, BCA:118

# COURSE DESCRIPTIONS

**BCA:732 Getting Organized with Outlook 1.0 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 workgroups 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. (19.8 Lec. Hrs.)
Test Out Available.
**Prerequisite:** BCA:120 or CSC:110. Ability to register for college level reading and writing courses as determined by appropriate college placement tests.

**BIO:105 Introductory Biology 4.0 cr.**
An introduction to the science of biology. Topics include the scientific method, basic chemistry, cells (structure, function, energy transformation 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 is not intended to replace or substitute for BIO:114 or BIO:115.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** RDG:032 or RDG:033; or minimum reading placement scores based on college assessment.

**BIO:114 General Biology IA 4.0 cr.**
This course is an introduction to the basic principles of biology. Topics studied include chemical applications in biology, cellular biology, bioenergetics, cell division, and genetics.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite**: HIT:139, MAT:053, and RDG:032 or RDG:033; or minimum math and reading placement scores based on college assessment.

**BIO:115 General Biology IIA 4.0 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 4.0 cr.**
This course is 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. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite**: ENG:013, MAT:053; or minimum English and math placement scores based on college assessment.

**BIO:133 Ecology 3.0 cr.**
Introduction to ecological concepts; the interdependence of organisms the totality and patterns or relations between organisms and their environment. (59.4 Lec. Hrs.)

**BIO:136 Field Ecology 1.0**
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 Hrs.)

**BIO:137 Field Ecology 2.0 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 Lec. Hrs. / 39.6 Lab Hrs.)

**BIO:138 Field Ecology 3.0 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 Lec. Hrs. / 79.2 Lab Hrs.)

**BIO:139 Field Ecology 4.0 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. (39.6 Lec. Hrs. / 79.2 Lab Hrs.)

**BIO:151 Nutrition 3.0 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. (59.4 Lec. Hrs.)
**Prerequisite:** RDG:032 or RDG:033 and MAT:041, MAT:047, MAT:053, or MAT:065; or minimum reading and math placement score based on college assessment.

**BIO:157 Human Biology 4.0 cr.**
This course is designed for students who are not majoring in a science or health-related field. 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** RDG:032 or RDG:033; or minimum reading placement score based on college assessment.

**BIO:163 Essentials of Anatomy and Physiology 4.0 cr.**
A one-semester course covering the fundamentals of human anatomy and physiology. Units of study include basic chemistry, cell structure and function, tissues and the systems of the body (integumentary, skeletal, muscular, nervous, sensory, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive). This course is not equivalent to or intended to replace BIO:168 and/or BIO:173.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** RDG:033 or minimum reading placement score based on college assessment.

**BIO:168 Human Anatomy and Physiology I 4.0 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. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** BIO:114 or one year of high school biology within the last five years. CHM:110, CHM:122, CHM:165, orCHM:179; or one year of high school chemistry within the last five years.

**BIO:173 Human Anatomy and Physiology II 4.0 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, digestive / metabolism, urinary, and reproductive.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** BIO:168

# COURSE DESCRIPTIONS

**BIO:186 Microbiology** **4.0 cr.**
This course is 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.)
**Prerequisite:** BIO:114 or BIO:168

**BIO:226 Local Flora** **3.0 cr.**
This course examines the identification, ecology, and distribution of common native and exotic trees, shrubs, flowers, and other plants of the Upper Midwest. (59.4 Lec. Hrs.)
**Prerequisite:** BIO:115

**BIO:255 Neuroanatomy** **3.0 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.)
**Prerequisite:** BIO:173

**BIO:280 Biology Projects** **1.0 cr.**
Study of special problems and research into a specific area of biology. (39.6 Lab Hrs.)
**Prerequisite:** Consent of instructor

**BIO:741 PLTW — Principles of Biomedical Science** **3.0 cr.**
This course provides an introduction to the biomedical sciences utilizing hands-on projects and problems. Students investigate concepts of biology and medicine as they explore health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. Students will investigate lifestyle choices, medical treatments, and demonstrate how the development of disease is related to changes in human body systems. (59.4 Lec. Hrs.)
**Prerequisite**: Complete high school Biology with grade of C or better.

**BIO:921 Field Biology** **4.0 cr.**
Study of organismic interactions with biotic and abiotic components of the environment. Includes observation, collection, identification and preservation of local flora and fauna.
(59.4 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** BIO:114

**BIO:927 Honors Study** **1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**BUS:102 Introduction to Business** **3.0 cr.**
This course is designed to introduce the student to American contemporary business, its nature and environment. A survey course providing exposure to the social responsibilities of business, management, production, human resources, marketing, finance, quantitative methods, world business law. Recommended to be taken early in business program. (59.4 Lec. Hrs.)

**BUS:106 Employment Strategy** **2.0 cr.**
Students will complete assignments focused on their individual 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.)
**Prerequisite:** ADM:105, ADM:157

**BUS:110 Business Math and Calculators** **3.0 cr.**
This course is a review of math fundamentals and their application to business. Topics covered include multiplication, division, fractions, percentage, interest, discounts, etc. (59.4 Lec. Hrs.)

**BUS:130 Introduction to Entrepreneurship** **3.0 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** **3.0 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** **3.0 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** **3.0 cr.**
Provides a foundation of accepted personal and business behavior in office 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** **1.0 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** **1.0 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** **3.0 cr.**
Through this course the student will study 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** **3.0 cr.**
This course provides the student with a basic understanding of business law. Topics may include an introduction to the legal environment (ethics, property and constitutional law); contracts; sales; employer/employee relations (including agency); consumer protection; product liability; torts; criminal law 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** **3.0 cr.**
This course is a continuation of BUS:185. Topics may include personal property and bailments, criminal procedure, partnerships, authority of partners, corporations, real property, bankruptcy, labor and environmental law, landlord tenant relationships and other selected legal topics. (59.4 Lec. Hrs.)
**Prerequisite:** BUS:185

# COURSE DESCRIPTIONS

**BUS:210 Business Statistics 3.0 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.)
**Prerequisite:** MAT:156

**BUS:293 Principles of Workforce Competitive Advantage 3.0 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 3.0 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 Impact of RFID on the Supply Chain 3.0 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 3.0 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. (19.8 Lec. Hrs.)
**Prerequisite:** BUS:300

**BUS:908 Cooperative Education 1.0 – 3.0 cr.**
Cooperative 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 EICCD 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. (79.2.2 – 237.6 Co-op Hrs.)
**Prerequisite:** Consent of instructor

**BUS:927 Honors Study 1.0 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.)

**CAD:196 Architectural Drafting 3.0 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.)

**CAD:263 SolidWorks – Assembly Modeling 3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** CAD:286
**Corequisite**: DRF:132

**CAD:264 SolidWorks – Detailing 4.0 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:286 SolidWorks – Modeling 3.0 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.)
**Corequisite:** DRF:131

**CAD:287 SolidWorks – Applications 3.0 cr.**
This is an advanced course dealing with real life manufacturing situations that students will be faced with while using 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 3.0 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

**CFR:100 Introduction to Computer Forensics 3.0 cr.**
This course is designed to to aquaint 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.)
**Prerequisite:** NET:107

**CHM:110 Introduction to Chemistry 3.0 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 Introduction to General Chemistry or CHM:165/166 General Chemistry I. 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:053 or minimum math placement score based on college assessment.

# COURSE DESCRIPTIONS

**CHM:122 Introduction to General Chemistry** **4.0 cr.**
Introduction to General Chemistry is the first course in a sequence of two introductory chemistry courses with lab. An elementary approach to chemical principles and laboratory practices is taken. Emphasis is placed on the nature of matter, bonding, nomenclature, equations, acids and bases and chemistry as applied to everyday life. This course is intended primarily to fulfill laboratory science requirements and to fulfill chemistry requirements for nursing, dental hygiene, and some home economics and agricultural programs. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** MAT:053 or minimum math placement score based on college assessment.

**CHM:132 Introduction to Organic and Biochemistry** **4.0 cr.**
Introduction to Organic and Biochemistry is a continuation of CHM:122.A study of aliphatic and aromatic compounds, their chemistry and uses in consumer products will be discussed. Example compounds include 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 General Chemistry I** **4.0 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, chemical bonding, and thermochemistry. The five credit-hour course also covers crystal structures and treats the topics listed in greater detail. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** CHM:110, CHM:122, or high school chemistry. MAT:073 or minimum math placement score based on college assessment.

**CHM:166 General Chemistry I** **5.0 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, chemical bonding, and thermochemistry. The five credit-hour course also covers crystal structures and treats the topics listed in greater detail. (79.2 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** CHM:110, CHM:122, or high school chemistry. MAT:073 or minimum math placement score based on college assessment.

**CHM:175 General Chemistry II** **4.0 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 Lec. Hrs. / 39.6 Lab Hrs.)
**Recommended:** MAT:121
**Prerequisite:** CHM:165 or CHM:166

**CHM:176 General Chemistry II** **5.0 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.
(79.2 Lec. Hrs. / 39.6 Lab Hrs.)
**Recommended:** MAT:121
**Prerequisite:** CHM:165 or CHM:166

**CHM:261 Organic Chemistry I** **4.0 cr.**
Study includes the classes of organic compounds: aliphatic hydrocarbons, aromatic hydrocarbons, alcohols and phenols. Attention is also on 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 mechanisms.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CHM:175 or CHM:176

**CHM:263 Organic Chemistry I** **5.0 cr.**
Study includes the classes of organic compounds: aliphatic hydrocarbons, aromatic hydrocarbons, alcohols and phenols. Attention is also on 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 mechanisms.
(79.2 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CHM:172 or CHM:176

**CHM:271 Organic Chemistry II** **4.0 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 Lab Hrs.)
**Prerequisite:** CHM:261 or CHM:263

**CHM:273 Organic Chemistry II** **5.0 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.
(79.2 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CHM:261 or CHM:263

**CHM:281 Chemistry Projects** **1.0 cr.**
Chemistry Projects is an individual chemical project, laboratory-oriented course with a written report required at end of semester unless taken as a year-long project. (39.6 Lab Hrs.)
**Prerequisite:** CHM:165, CHM:166, CHM:261, or CHM:263

**CHM:282 Chemistry Projects** **2.0 cr.**
Chemistry Projects is an individual chemical project, laboratory-oriented course with a written report required at end of semester unless taken as a year-long project. (79.2 Lab Hrs.)
**Prerequisite:** CHM:165, CHM:166, CHM:261, or CHM:263

**CIM:200 Registry Organization & Operations** **3.0 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.)
**Prerequisite:** Completion of HIT diploma, CIM first year coursework or consent of instructor.

**CIM:205 Cancer Pathophysiology** **3.0 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 Primaries/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.)
**Prerequisite:** BIO:173, HIT:150

# COURSE DESCRIPTIONS

**CIM:210 Oncology Coding and Staging Systems** **4.0 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 Diseases in Oncology, 3rd Ed. (ICD-O-3) topography codes and International Classification of Disease, 9th Ed. (ICD-9) morphology nomenclature and classification systems. American Joint Committee on Cancer (AJCC) staging, Surveillance, Epidemiology, & End Results (SEER) Summary staging, Collaborative Staging (CS), 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.)
**Prerequisite:** Completion of HIT diploma, CIM first year coursework, or consent of instructor.

**CIM:215 Abstracting Principles & Practices I** **2.0 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 & staging of site-specific cancer information and use of CNExT cancer registry software from C/NET Solutions will be introduced. (79.2 Lab Hrs.)
**Prerequisite:** Completion of HIT diploma or consent of instructor. CIM:200, CIM:210.

**CIM:220 Abstracting Principles & Practices II** **2.0 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 staging 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** **2.0 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.)
**Prerequisite:** Completion of HIT diploma, CIM first year coursework, or consent of instructor.

**CIM:250 Cancer Statistics & Epidemiology** **3.0 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.)
**Prerequisite:** Completion of HIT diploma, CIM first year coursework, or consent of instructor.

**CIM:260 CIM Seminar** **1.0 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.)
**Prerequisite:** Consent of instructor

**CIM:270 Cancer Registry Practicum** **4.0 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.

**CIS:121 Introduction to Programming Logic** **3.0 cr.**
Introduction to structured programming logic using a variety of methods to solve programming problems. Topics covered include flowcharting, pseudocode, hierarchy charts, truth tables, and logic constructs. The application of these tools will be to the COBOL and Visual Basic languages. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**CIS:138 Introduction to PC Programming** **2.0 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. (29.7 Lec. Hrs. / 19.8 Lab Hrs.)

**CIS:140 Introduction to Game Design** **3.0 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:073 and RDG:032 or RDG:033; or minimum math and reading placement scores based on college assessment.

**CIS:148 3D Modeling and Character Animation** **3.0 cr.**
This course will give students a hands-on, example based introduction to modeling and animation process for use in 3D games. Students will use industry standard software to develop their models and will be exposed to topics such as mesh modeling, rigging and skinning, character animation, texturing and texture mapping. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** MAT:073

**CIS:149 Advanced MS Access** **3.0 cr.**
This course will teach students to use MS-Access to create advanced forms and reports, to create and use macros, to implement Graphical User Interfaces (GUIs) and automation in a MS-Access database, to integrate MS-Access with other applications and to administer a MS-Access database and use SQL statements in MS-Access development environment. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CSC:110

**CIS:161 C++** **3.0 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, arrays, functions, and function templates. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** MAT:073 and RDG:032 or RDG:033; or minimum math and reading placement scores based on college assessment.

**CIS:164 Advanced C++** **3.0 cr.**
This course is designed to give students a basic understanding of the C++ language. Topics covered include the Visual C++ environment, controls, properties, events, ActiveX controls, menus, dialog boxes, SDI applications, MDI applications, file access, and classes. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:161

**CIS:169 C#** **3.0 cr.**
This course is designed to introduce the student to the C# Language. The course will cover C# basics and object-oriented programming techniques in the .NET environment. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:121, MAT:063

**CIS:170 Java** **2.0 cr.**
This course is designed for a beginning programming course. The course covers Java classes, methods, and objects, decisions, looping, strings and string buffer, arrays, applets and graphics. (29.7 Lec. Hrs. / 19.8 Lab Hrs.)

**CIS:171 Java** **3.0 cr.**
This course provides an introduction to Object Oriented Programming. Students will learn how to create classes, objects, and applications using the Java language. Topics also include the language fundamentals, the Java language API (Application Programming Interface API). (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:121

# COURSE DESCRIPTIONS

**CIS:172 Java** **4.0 cr.**
This course introduces students to the Java programming language using its Object Oriented Programming features. Students learn how to use existing and create their own classes and objects and develop solutions to common real world-based problems using applications developed in Java. Students will also learn to create interactive elements and GUI elements. The use of the java.awt library components, event-handling model, containers and layout managers will also be emphasized. File handling techniques and multi-threading will be introduced and practiced, along with JavaBeans. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:121

**CIS:185 Oracle Academy: Database Design** **5.0 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

**CIS:186 Oracle Academy: Database Development with SQL** **5.0 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

**CIS:196 Oracle Database Programming with PL/SQL** **5.0 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** **3.0 cr.**
Students will learn how to evaluate, design, construct and maintain web pages and web sites. Topics include: HTML, SHTML, DHTML, graphics, animation, and FTP. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** RDG:032 or RDG:033; or minimum reading placement scores based on college assessment.

**CIS:211 Web Development II** **3.0 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.)
**Prerequisite:** CIS:210

**CIS:222 Games and Simulations I** **3.0 cr.**
Design and development of computer games and simulations on various platforms (Windows, Mac, Android, Tablet, etc.). Includes the design of the user interface, animation and software development techniques. Students will use industry standard development tools.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:169

**CIS:224 Server Side Scripting** **4.0 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, and CIS:606

**CIS:248 3D Modeling and Character Animation II** **3.0 cr.**
This is a second course in 3D modeling and animation and will give students a hands-on and example based introduction to modeling and animation process for use in 3D games. Students will use industry standard software to develop their models and will be exposed to topics such as mesh modeling, rigging and skinning, character animation, texturing and texture mapping.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:148

**CIS:251 Fundamentals of Web Design I** **3.0 cr.**
Students will learn how to design web sites focusing on the overall web site production processes with particular emphasis on design elements involving layout, navigation, accessibility and interactivity. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:210

**CIS:274 E-Commerce Design** **3.0 cr.**
An overview of technologies relevant to electronic commerce, programming languages, security, databases and archiving, web authoring tools, multimedia, transaction processing, search engines, and data mining, topics include storefronts, web servers, web hosting, site development, transaction systems, security, order management and integration with supply chain technology. This course covers the design, development, and implementation and management of electronic commerce solutions.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**CIS:280 Client Side Scripting** **3.0 cr.**
In this course students will make a survey of scripting languages and learn to use JavaScript client-side scripting language resources and techniques and Visual Basic Script language to create interactive web sites, Web programming, data processing and application extension, including programming concepts as they apply to scripting. Course includes design and completion of small projects to illustrate the content learned and provide extensibility for future use.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:210

**CIS:307 Introduction to Databases** **3.0 cr.**
This course provides the student with an overview in 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 or RDG:033; or minimum reading score based on college assessment.

**CIS:322 Games and Simulations II** **3.0 cr.**
Builds upon work done in Games and Simulations I and includes designing for test, software architecture design, object-oriented practices for game play, performance tuning, debugging, asset management and coding best practices.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:148, CIS:222

**CIS:331 Microsoft SQL Server** **3.0 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

# COURSE DESCRIPTIONS

**CIS:353 Database Models and Design Strategies 3.0 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:450 PLTW – Computer Science Principles 3.0 cr.**
CSE implements the College Board's CS Principles framework. Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science, although we encourage students without prior computing experience to start with Introduction to Computer Science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation. The course aligns with CSTA 3B standards.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** EGT:400

**CIS:451 PLTW – Computer Science Applications 3.0 cr.**
This course focuses on further developing computational thinking skills through the medium of AndroidT App development for mobile platforms. The course utilizes industry-standard tools such as Android Studio, JavaT programming language, XML, and device emulators. Students collaborate to create original solutions to problems of their own choosing by designing and implementing user interfaces and Web-based databases. The course curriculum is a College Board-approved implementation of AP CS A.
(19.8 Lec. Hrs. / 79.2 Lab Hrs.)

**CIS:504 Structured Systems Analysis 3.0 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 and good communication skills will be emphasized.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** Complete at least two programming language courses or equivalent work experience.

**CIS:606 Visual BASIC.NET I 3.0 cr.**
This hands-on course provides a strong foundation in essential aspects of Visual Basic.NET. It will include user interface design, logic development, and object-oriented programming techniques. Students will develop business applications for Windows and Web with multiple forms, arrays, and simple data access. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**CIS:607 Visual BASIC.NET II 3.0 cr.**
This course covers the use of ADO.NET and ASP.NET in creating multi-tier applications with database connections and Web based resources. Students will also write and consume Web Services, create User Controls, write HTML help files, and create sophisticated reports using Crystal Reports. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:606

**CIS:608 Visual BASIC.NET III 3.0 cr.**
In this third course, students will develop a comprehensive, professional application. Good programming standards, object-oriented techniques, multi-tier approach, database connectivity, project management, deployment, evaluation, and maintenance will be emphasized. Students will explore trends in Visual Basic.NET as they participate in the developer's communities.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:607

**CIS:624 .NET Development II 3.0 cr.**
Extends students' knowledge of Microsoft .NET and related tools. Emphasizes the use of SQL and ADO.NET for the creation of stand-alone and distributed database applications to solve common business problems. Covers issues related to n-tier design, network communications, error handling and the production of flexible database reports.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:169

**CIS:626 .NET Development III 3.0 cr.**
Provides a practical introduction to Internet programming with Microsoft .NET. Emphasizes development of websites and web services with ASP.NET and related tools. Focuses on creating multi-tier business web applications. Includes basic ASP.NET web controls and script integration, along with server-side issues such as authentication, state management and database connectivity. (39.6 Lec. Hrs.)
**Prerequisite:** CIS:624

**CIS:653 Operating System and User Software Support 3.0 cr.**
This course will prepare the student to support end-user application. The foundational principles of end-user support including client operating system and application software, hardware and software installation, system configuration, problem diagnosis and resolution and computer security. The courses in the program provide an intensive, classroom-based, hands-on skills development. The demonstration of hands-on skills is critical to employers. Students completing the program are prepared for a variety of industry certification exams as well as entry-level employment technical interviews.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** NET:305

**CIS:704 UNIX/LINUX 3.0 cr.**
This course is designed to give students a basic understanding of the UNIX operating system, commands, and system administrative duties required when administering a UNIX-based system.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** NET:114, NET:303

**CIS:711 Audio Programming for Games 3.0 cr.**
In this course, students create sound effects and music for games. Topics include: composing dynamic music, 3D sound, real- time voice chat.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:140

**CIS:750 Project Management 3.0 cr.**
This course is designed to provide students exposure to project management and its importance to improving success in information technology projects. Topics addressed in the course will include triple constraints of project management, project life cycle, cost estimates, value management and motivation theory, and team building. Tools and techniques important to project management will also be presented, including project selection methods, work breakdowns, network diagrams, critical path analysis and scheduling. Students will have the opportunity to utilize software to help plan and manage an information technology project. (59.4 Lec. Hrs.)
**Prerequisite:** CIS:210, NET:167, or NET:612

**CLS:121 Studies in Non-Western Culture 3.0 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. (59.4 Lec. Hrs.)

**CLS:150 Latin American History and Culture 3.0 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.
(59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite**: ENG:013 or minimum English placement score based on college assessment.

**CLS:200 International Study 1.0 – 3.0 cr.**
This course provides students with the opportunity to pursue studies in such areas as history, art, politics, music, literature, foreign language, and occupational program areas.
(19.8 - 59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

**CLS:927 Honors Independent Study 1.0 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.)

**CNS:105 Conservation 2.0 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:109 Wildlife Ecology 3.0 cr.**
Study of the application of wildlife ecology and management techniques, censuring, capture and marking of wildlife, habitat evaluation, habitat restoration, Iowa game laws, life history studies and the application of wildlife management principles as they relate to important ecological and recreational resources. (59.4 Lec. Hrs.)

**CNS:131 Wildlife Habitat Management 2.0 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 2.0 cr.**
Study of the application of wildlife management techniques, censuring, capture and marking of wildlife, habitat evaluation, Iowa gaming laws, life history studies, and the application of wildlife management principles as they relate to important recreational resources. (39.6 Lec. Hrs.)
**Prerequisite:** BIO:114, BIO:133

**CNS:137 Fisheries Management 2.0 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.)

**CNS:150 Occupations in Conservation 1.0 cr.**
Orientation to the careers/career opportunities in conservation and ecology. (19.8 Lec. Hrs.)

**CNS:901 Wilderness Experience 2.0 cr.**
Designed to provide 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 gain some basic skills of canoeing, water safety, camping, fishing, wilderness survival, map reading, and the use of a compass. Additional fees may be charged. (79.2 Lab Hrs.)

**CNS:930 Employment Experience 2.0 cr.**
Provides on-the-job training in the student's chosen area. (158.4 Co-op Hrs.)

**COM:102 Communication Skills 3.0 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 communication. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**COM:140 Introduction to Mass Media 3.0 cr.**
Introductory course examining the history, evolution, and relationships of the media in and their 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.)

**CON:170 Building Construction Techniques I 6.0 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. (39.6 Lec. Hrs. / 230.4 Lab Hrs.)

**CON:171 Building Construction Techniques II 6.0 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.
(39.6 Lec. Hrs. / 230.4 Lab Hrs.)
**Prerequisite:** CON:170

**CON:175 Residential Construction Applications 6.0 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. / 158.4 Lab Hrs.)

**CRJ:100 Introduction to Criminal Justice 3.0 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 3.0 cr.**
This is 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 3.0 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 3.0 cr.**
A study of the substantive criminal law, its historical background and development, the basic elements of criminal law, including criminal intent and criminal capacity. (59.4 Lec. Hrs.)

**CRJ:138 Administration of Justice 3.0 cr.**
A study of the administration of Criminal Justice.
(59.4 Lec. Hrs.)

**CRJ:141 Criminal Investigation 3.0 cr.**
An introduction to the art of criminal investigation and case preparation. Topics include interrogation, gathering information and evidence, informants, homicide investigation, and fingerprinting and other selected evidence. (59.4 Lec. Hrs.)

**CRJ:142 Criminalistics 3.0 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 3.0 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 3.0 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 3.0 cr.**
This course will consider history, principles, and management of private security. Topics will include physical 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.)

# COURSE DESCRIPTIONS

**CRJ:209 Vice and Drug Control 3.0 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 3.0 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:256 Law Enforcement Physical Conditioning 2.0 cr.**
A course in Law Enforcement Physical Training. This course will prepare a student for entry level positions in law enforcement, corrections and other criminal justice employment. It is designed to improve the student's chances of passing a law enforcement physical training test. Included in the activities will be stretching, weight training, lifting, running and other physical skills training. Some self-defense training may also be included. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)

**CRJ:295 Contemporary Issues in Criminal Justice 3.0 cr.**
Devoted to exploration and analysis of contemporary issues in criminal justice. Class discussions, lectures, and readings in conjunction with an individual research paper. Guest speakers and field trips when appropriate. (59.4 Lec. Hrs.)
**Prerequisite:** CRJ:200

**CRJ:924 Honors Project 1.0 cr.**
This course is designed to integrate academic study and community service. By volunteering at least 33 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.)

**CRJ:927 Honors Study – Criminal Justice 1.0 cr.**
This course is designed to provide the student with the opportunity to obtain a greater understanding of 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 beginning of the semester. (39.6 Lab Hrs.)

**CRJ:928 Independent Study 1.0 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. (39.6 Lab Hrs.)
**Prerequisite:** Minimum of 6 credits (at the 100 level or above) in the discipline (CRJ).

**CRJ:941 Practicum 3.0 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. (118.8 Lab Hrs.)
**Prerequisite:** Minimum Grade Point Average of 2.0 and permission of faculty member, Department Coordinator, and Dean.

**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. (59.4 Lab Hrs.)

**CRR:113 Welding Survey 2.0 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. (59.4 Lec. Hrs.)
**Prerequisite:** CRR:140
**Corequisite:** CRR:322

**CRR:114 Welding Systems and Techniques 2.0 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 1.0 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 3.0 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. (59.4 Lec. Hrs.)

**CRR:200 Plastic Repair 1.0 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. (39.6 Lab Hrs.)

**CRR:322 Basic Metal Bumping and Repair 5.0 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. (59.4 Lec. Hrs. / 79.2 Lab Hrs.)

**CRR:405 Nonstructural Panel Repair and Replacement 5.0 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. (59.4 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** CRR:113, CRR:322

# COURSE DESCRIPTIONS

**CRR:452 Trim and Component Panel Service** **2.0 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.
(19.8 Lec. Hrs. / 39.6 Lab Hrs.)

**CRR:507 Structural Panel Repair and Replacement** **5.0 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.
(59.4 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** CRR:114, CRR:405

**CRR:605 Mechanical Service** **3.0 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. (19.8 Lec. Hrs. / 79.2 Lab Hrs.)

**CRR:612 Steering/Suspension** **3.0 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.)

**CRR:674 Electrical Service** **4.0 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 & 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** **3.0 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.)
**Corequisite:** MAT:104

**CRR:799 Spray Techniques and Surface Coatings II** **1.0 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** **3.0 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** **5.0 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** **5.0 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 and two 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 Techniques** **2.0 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. An in-depth study and comparative analysis will be conducted of 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 Cooperative Education** **3.0 cr.**
Cooperative Education Experience will integrate classroom theory with on-the-job training.
The College will assist the student in securing employment 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 credit hours with EICC with at least two courses in the chosen major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area. (237.6 Co-op Hrs.)
**Prerequisite:** Consent of instructor

**CSC:107 Computer Literacy** **3.0 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.)
*This course satisfies a general education requirement for Computer Skills.*

**CSC:110 Introduction to Computers** **3.0 cr.**
An introduction to computers including operating systems, word processing, spreadsheets/worksheets, database, presentation programs, email, the internet, and certain related computer concepts. It will include student computer projects.
(59.4 Lec. Hrs.)
*This course satisfies a general education requirement for Computer Skills.*

# COURSE DESCRIPTIONS

**CSC:112 Computer Fundamentals for Technicians I/A** **2.0 cr.**
This course is a basic computer class developed around the Windows operating system and Microsoft Office Suite of software. Specifically, Word and Excel. Students will learn to use Windows Explorer to create folders and manage files. Students will also use Word to create documents containing graphics and bulleted lists as well as use styles and themes to add character to documents. Word will also be used to create research documents based on the MLA style of writing documentation. Using Excel students will create spreadsheets containing formulas and graphs or charts. Spreadsheet formatting is also covered. During this learning process students will be required to access the Internet to navigate web pages and download files needed for assignments. These files will be extracted to folders created on flash drives or other storage devices. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)

**CSC:113 Computer Fundamentals for Technicians I/B** **2.0 cr.**
This course is a basic computer class developed to follow CSC-112, Computer Fundamentals for Technicians I/A. Developed around the Windows operating system and Microsoft Office 2013, the emphasis of this course will be the use of Microsoft Access and PowerPoint. Knowledge and skills gained from CSC-112 will be put to practice and students will use Microsoft Access to create and edit database information. Students will use Access (Database Management System) to create databases as well as add, change, or delete data. Queries, questions, and forms will also be created. PowerPoint will also be used allowing to students to learn to create powerful and dynamic professional presentations.
(19.8 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CSC:112

**CSC:450 PLTW – Computer Science and Software Engineering** **3.0 cr.**
CSE implements the College Board's CS Principles framework. Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science, although we encourage students without prior computing experience to start with Introduction to Computer Science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation. The course aligns with CSTA 3B standards. (59.4 Lec. Hrs.)
**Prerequisite:** EGR:400

**CSC:451 PLTW – Computer Science Applications** **3.0 cr.**
This course focuses on further developing computational thinking skills through the medium of AndroidT App development for mobile platforms. The course utilizes industry-standard tools such as Android Studio, JavaT programming language, XML, and device emulators. Students collaborate to create original solutions to problems of their own choosing by designing and implementing user interfaces and Web-based databases. The course curriculum is a College Board-approved implementation of AP CS A.
(19.8 Lec. Hrs. / 79.2 Lab Hrs.)

**CSC:927 Honors Study – Computer Science** **1.0 cr.**
This course is designed to provide the student with the opportunity to obtain a greater understanding of 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 beginning of the semester. (39.6 Lab Hrs.)

**CSP:110 Infection Control and Health Regulations** **2.0 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.)

**CSP:115 Instrument Use, Care, and Handling** **3.0 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.)
**Prerequisite:** CSP:110, MAT:053 or minimum math placement score based on college assessment.
**Corequisite:** CSP:120

**CSP:120 Sterile Processing and Distribution** **3.0 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.)
**Prerequisite:** CSP:110, minimum math placement score based on college assessment.
**Corequisite:** CSP:115

**CSP:210 Clinical Practicum** **2.0 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 Clinical Hrs.)
**Prerequisite:** CSP:115, CSP:120

**DEA:111 Preventive Dentistry** **1.0 cr.**
This course is designed to provide the student with practical skills for the disease prevention of the oral cavity with the use of fluorides, home health care aids and through patient education. Students will also participate in community service projects promoting preventive oral health care.
(19.8 Lec. Hrs.)

**DEA:202 Head and Neck Anatomy** **2.0 cr.**
This course will introduce the student to gross anatomy of the head and neck with emphasis on the maxilla, mandible, and oral tissues, neuromuscular and circulatory function, supporting structures and the temporomandibular joint. This course will also serve as an introductory anatomy and physiology course to explore the ten body systems. (39.6 Lec. Hrs.)

**DEA:211 Nutrition for Dental Assisting** **1.0 cr.**
This course provides information on nutrition and dental health as well as overall health, healthy eating habits, eating disorders, and functions of the major nutrients. Students will also participate in community service projects promoting preventive oral health including nutrition as it applies to dental health and diet analysis and counseling. (19.8 Lec. Hrs.)

**DEA:215 Preventive Dentistry and Nutrition** **2.0 cr.**
This course is designed to provide the student with practical skills for disease prevention of the oral cavity with the use of fluorides, home health care aids and through patient education. Students will also participate in community service projects promoting preventive oral health including nutrition as it applies to dental health and diet analysis and counseling. (39.6 Lec. Hrs.)
**Prerequisite:** Admission into the Dental Assisting Program.**Corequisite:** DEA:201, DEA:257, and DEA:293

**DEA:257 Dental Anatomy** **3.0 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 supportative tissue. (59.4 Lec. Hrs.)

**DEA:268 Pharmacology and Emergency Procedures for Dental Assisting** **2.0 cr.**
This course is a study of the nature, action and uses of drugs seen in a dental setting. The student will also 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** **1.0 cr.**
This course provides the student with an introduction to the general principles of oral pathology with an emphasis on the specifics of disease of both local and systemic origins. (19.8 Lec. Hrs.)

# COURSE DESCRIPTIONS

**DEA:293 Microbiology and Infection Control** **2.0 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.)

**DEA:297 Ethics/Jurisprudence Seminar** **1.0 cr.**
Includes the study of the ethics and legal responsibilities of the dental profession as well as the functions and jurisprudence of the auxiliary personnel. (19.8 Lec. Hrs.)
**Prerequisite:** DEA:507

**DEA:334 Dental Radiography I** **2.5 cr.**
This course includes radiation physics; biological effects; radiation safety and protection; properties of x-ray film and techniques of exposing; processing; mounting and evaluation of both film and digital radiographs. (19.8 Lec. Hrs. / 59.4 Lab Hrs.)

**DEA:336 Dental Radiography II** **2.5 cr.**
This course will build on the foundation acquired in Radiology I for Dental Assistants. It will include practical experience in exposing, processing, and evaluating dental films. The student receives practical experience working with dental training phantom (DXTTR). (19.8 Lec. Hrs. / 59.4 Lab Hrs.)

**DEA:405 Dental Materials** **4.0 cr.**
This course will emphasize the physical properties, manipulation and application of dental materials used in dentistry. (39.6 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** Admission into the Dental Assisting Program

**DEA:507 Principles of Dental Assisting** **6.0 cr.**
This course provides the student with knowledge in four-handed dentistry; ergonomics for the dental team; dental equipment; dental armamentarium; instrumentation; illumination; oral evacuation; tissue retraction; fundamental chairside concepts; and techniques and intraoral skills.
(59.4 Lec. Hrs. / 118.8 Lab Hrs.)
**Prerequisite:** Admission into the Dental Assisting Program

**DEA:522 Dental Assisting II Lab** **2.0 cr.**
This course presents instruction on the principles of intra-oral skills. It includes techniques with fulcrum and instrumentation, assisting the dentist with dental sealants application, taking alginate impressions, coronal polish and fluoride application. (79.2 Lab Hrs.)
**Prerequisite:** DEA:201, DEA:257, DEA:293, DEA:304, DEA:305, DEA:421, DEA:425, DEA:520, and DEA:521
**Corequisite:** DEA:215, DEA:268, DEA:285, DEA:576, and DEA:605

**DEA:576 Dental Assisting Clinic I** **3.0 cr.**
Application of knowledge and skill as students rotate through dental offices, clinical and hospital clinics. General and specialty practices are included in rotations. (178.2 Clinical Hrs.)

**DEA:577 Dental Assisting Clinic II** **4.0 cr.**
Application of knowledge and skill as students rotate through dental offices, clinical and hospital clinics. General and specialty practices are included in rotations. (237.6 Clinical Hrs.)
**Prerequisite:** DEA:576

**DEA:592 Seminar for Dental Assisting** **1.0 cr.**
This course will include lectures, conferences, reports and discussion of procedures and experiences encountered during dental practicum. It will also acquaint the student with the history and structure of dental auxiliary organizations. Prerequisites: All first semester Dental Assisting courses. (19.8 Lec. Hrs.)
**Prerequisite:** DEA:257, DEA:293
**Corequisite:** DEA-211, DEA-268, and DEA:702

**DEA:605 Dental Specialties** **4.0 cr.**
Covers the dental specialties of endodontics, periodontics, pediatric dentistry, oral surgery, orthodontics, fixed prosthodontics, and removable prosthodontics. (79.2 Lec. Hrs.)

**DEA:615 Clinical Dental Assisting** **5.0 cr.**
Basic concepts of chairside assisting are covered with emphasis on the role of the team in delivery systems. Terminology, instruments, equipment and basic procedures are covered. Emphasis on operative dentistry, dental specialties and advanced functions. The laboratory phase develops students' competencies in clinical assisting.
(297.0 Clinical Hrs.)
**Prerequisite:** DEA:507
**Corequisite:** DEA:616

**DEA:616 Dental Assisting Clinical Practicum Seminar** **1.0 cr.**
Discussion and problem-solving from clinical practice. Provides an awareness of types of office situations and discussion of clinical aspects of dental assisting and dentistry. Oral reports and weekly evaluations are required. (19.8 Lec. Hrs.)
**Corequisite:** DEA:615

**DEA:702 Dental Office Procedures** **2.0 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.)
**Prerequisite:** DEA:257

**DEA:810 RDA Expanded Functions I** **2.0 cr.**
This course provides theoretical concepts and skills to expand the dental assistant's scope of practice to include occlusal registration, gingival retraction, final impression, and provisional restorations. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** Certified by the Dental Assistant National Board or possess two years documented clinical Iowa registered dental assisting experience and complete a written assessment at 75% competency.

**DEA:820 RDA Expanded Functions II** **1.0 cr.**
This course provides theoretical concepts and skills to expand the dental assistant's scope of practice to include application of cavity liners, desensitizing agents, bonding systems, placement and removal of dry socket medication, placement of periodontal dressing, and testing pulp vitality. (9.9 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** Certified by the Dental Assistant National Board or possess two years documented clinical Iowa registered dental assisting experience and complete a written assessment at 75% competency.

**DEA:830 RDA Nitrous Oxide Monitoring** **1.0 cr.**
This course is designed to provide theoretical concepts and skills to expand the dental assistant's scope of practice to include monitoring of nitrous oxide inhalation analgesia.
(9.9 Lec. Hrs. / 19.8 Lab Hrs.)
**Prerequisite:** Certified by the Dental Assistant National Board or possess two years documented clinical Iowa registered dental assisting experience and complete a written assessment at 75% competency.

**DRA:101 Introduction to Theatre** **3.0 cr.**
This course is a survey of the elements of theatre. The course covers units on audience/performer relationships, dramatic forms, dramatic literature, history of the theatre, dramatic theory and criticism, and technical theatre. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*

**DRA:103 Children's Puppet Theatre** **3.0 cr.**
An exploration into all elements of theater with emphasis on the audience as receptive and perceptive participants. This will be accomplished through the development and performance of a puppet theatre show. (59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

**DRA:110 Introduction to Film** **3.0 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area. May be counted as either Humanities or Fine Arts, but not both.*

**DRA:117 Film Topics** **3.0 cr.**
This course offers an in-depth study of various topics in film studies. The purpose of the course is to provide understanding of how film and society interact through in-depth analysis of one significant area of film study. Topics offered and studied can include genre theory and specific genres (horror, science fiction, social drama, etc.), film adaptation of particular forms of literature, moral themes regularly present in film, documentary film, eras in film, etc. Whatever the area focused on for critical analysis, all film topics will study the relationship between the topic and culture producing the films, will identify operating principles and relevant contextual forces, and will apply these concepts to the study of specific films. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**DRA:130 Acting I** **3.0 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 Acting II** **2.0 cr.**
A continuation of Acting I, students will further explore the techniques in the art of acting with special emphasis on movement and dramatic interpretation. For DRA:132 the student will publicly perform a monologue or finished scene from a play as a final project. (39.6 Lec. Hrs.)
**Prerequisite:** DRA:130 or consent of instructor

**DRA:132 Acting II** **3.0 cr.**
A continuation of Acting I, students will further explore the techniques in the art of acting with special emphasis on movement and dramatic interpretation. For DRA:132 the student will publicly perform a monologue or finished scene from a play as a final project. (59.4 Lec. Hrs.)
**Prerequisite:** DRA:130 or consent of instructor

**DRA:136 Rehearsal and Performance** **2.0 cr.**
Preparation for participation in a major play production. Late registration permitted. May be repeated up to a total of 4 credit hours. (79.2 Lab Hrs.)

**DRA:137 Rehearsal and Performance** **3.0 cr.**
Preparation for participation in a major play production. Late registration permitted. May be repeated up to a total of 4 credit hours. (118.8 Lab Hrs.)

**DRA:172 Technical Theatre Lab** **2.0 cr.**
Through this course students gain practical experience in all aspects of technical theatre while working on college productions. May be repeated up to eight credits. (79.2 Lab Hrs.)

**DRA:173 Technical Theatre Lab** **3.0 cr.**
Through this course students gain practical experience in all aspects of technical theatre while working on college productions. May be repeated up to eight credits. (118.8 Lab Hrs.)

**DRA:237 Acting Lessons** **1.0 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 up to three credits. (19.8 Lec. Hrs.)

**DRA:250 Directing** **3.0 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.)

**DRA:927 Honors Study – Drama** **1.0 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.)

**DRF:131 Basic Drafting and Design I** **3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Corequisite:** CAD:286 or consent of instructor

**DRF:132 Basic Drafting and Design II** **3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** DRF:131

**DRF:161 Descriptive Geometry** **3.0 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. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** DRF:132

**DRF:331 Mechanical Drafting and Design I** **3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** DRF:132

**DRF:332 Mechanical Drafting and Design II** **3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** DRF:331

**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.)
**Corequisite:** AUT:115

**DSL:151 Truck Electrical Systems** **2.0 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. / 39.6 Lab Hrs.)
**Prerequisite:** AUT:115
**Corequisite:** AUT:614

# COURSE DESCRIPTIONS

**DSL:201 Basic Gas Engine Performance 2.0 cr.**
This course is designed as a basic ignition and fuel systems course. Basic ignition system theory, operation and diagnosis will be covered. Basic fuel system theory and operation will be covered. Lab time will be used to learn the use of diagnostic equipment in troubleshooting and repair of ignition and fuel systems. (19.8 Lec. Hrs. / 59.4 Lab Hrs.)

**DSL:340 Diesel Engine Repair 5.0 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 experiences. (59.4 Lec. Hrs. / 118.8 Lab Hrs.)

**DSL:435 Diesel Fuel Systems I 3.0 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.)
**Prerequisite:** AUT:115, AUT:614

**DSL:437 Diesel Fuel Systems II 4.0 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 3.0 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 transmission. Safety procedures will be stressed as will as basic maintenance and adjustment procedures. (39.6 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** AUT:115, MAT:104

**DSL:507 Heavy Duty Drive Train II 3.0 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, differentials and axles. Safety procedures will be stressed as well as basic maintenance and adjustment procedures. (39.6 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** DSL:505

**DSL:519 Automatic Drive Train 4.0 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 2.0 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. (39.6 Lec. Hrs.)
**Prerequisite:** MAT:104

**DSL:625 Heavy Duty Alignment 3.0 cr.**
This course goes into 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.)
**Prerequisite:** AUT:115

**DSL:629 Heavy Duty Brakes and Service 3.0 cr.**
Acquaints the student with the principles of diagnosising 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 experiences. (39.6 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** AUT:115

**DSL:710 Heating, Air Conditioning and Refrigeration 4.0 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.)

**DSL:815 Preventative Maintenance 1.0 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, AUT:614

**DSL:905 Cooperative Experience 2.0 cr.**
Cooperative Experience will integrate classroom theory with on-the-job training. The College will assist the student in securing employment 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 credit hours with EICCD with at least two courses in the chosen major and maintenance of a grade point average of 2.0 or higher. Eligibility requirements and credit hours available vary by program area. (158.4 Co-op Hrs.)
**Prerequisite:** Consent of instructor

**ECE:103 Introduction to Early Childhood Education 3.0 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:053, and RDG:032 or RDG:033

**ECE:133 Child Health, Safety, and Nutrition 3.0 cr.**
Fouses 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 chidlhood settings. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:013, MAT:053, and RDG:032 or RDG:033; or minimum English, math, and reading scores based on college assessment.

**ECE:158 Early Childhood Curriculum I 3.0 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. Fifteen hours of observation of children ages birth – age 8 are required. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:013, MAT:053, and RDG:032 or RDG:033; or minimum English, math, and reading scores based on college assessment.

# COURSE DESCRIPTIONS

**ECE:159 Early Childhood Curriculum II 3.0 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. Fifteen hours of observation of children ages birth - age 8 are required. (59.4 Lec. Hrs.)
**Prerequisite:** ECE:158

**ECE:168 Science and Math Activities for Young Children 3.0 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, ECE:159

**ECE:169 Art and Music Activities for Young Children 3.0 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.)
**Prerequisite:** ECE:243

**ECE:170 Child Growth and Development 3.0 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:053, and RDG:032 or RDG:033; or minimum English, math, and reading scores based on college assessment.

**ECE:193 Dynamics of the Family 3.0 cr.**
Explores the critical relationships 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 of families in modern society. (59.4 Lec. Hrs.)
**Prerequisite:** ECE:103

**ECE:221 Infant/Toddler Care and Education 3.0 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:133, ECE:193

**ECE:243 Early Childhood Guidance 3.0 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:053, and RDG:032 or RDG:033; or minimum English, math, and reading scores based on college assessment.

**ECE:290 Early Childhood Program Administration 3.0 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.)
**Prerequisite:** ECE:133, ECE:193

**ECE:920 Field Experience/ECE 2.0 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. (158.4 Co-op HRs.)
**Prerequisite:** ECE:159, ECE:170 and ECE:243

**ECN:110 Introduction to Economics 3.0 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.
(59.4 Lec. Hrs.)

**ECN:120 Principles of Macroeconomics 3.0 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.
(59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Social Sciences Area.*

**ECN:130 Principles of Microeconomics 3.0 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Social Sciences Area.*

**ECN:943 Readings 1.0 – 2.0 cr.**
Designed to provide the student with additional readings in Economics, allowing the student to obtain a greater understanding of the various problem areas of this disciple. (Arranged)
(39.6 - 79.2 Lab Hrs.)
**Prerequisite:** ECN:120 or ECN:130

**EDU:110 Exploring Teaching 3.0 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 for the prospective student. Students qualifying for the program will be assigned to selected elementary, middle, and secondary schools for practical classroom experience. (19.8 Lec. Hrs. / 79.2 Lab Hrs.)
**Corequisite:** EDU:212

**EDU:125 Making a Difference 3.0 cr.**
The emphasis of this course is introducing the student to the careers related to education, particularly teacher and para-educator 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:150 Directed Observation 1.0 cr.**
The course will involve directed observation, which will be structured through journal articles and INTASC Standards. Students will observe in a preschool, elementary or secondary classroom for 40 hours. The class will meet weekly to debrief and discuss observational experiences. (19.8 Lec. Hrs.)
**Prerequisite:** EDU:212

**EDU:212 Educational Foundations 3.0 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.)

# COURSE DESCRIPTIONS

**EDU:213 Introduction to Education 3.0 cr.**
This course presents a broad overview of the field of education, including foundations of American education, roles of teachers and students, history and philosophy and curriculum. Students will complete a 50-hour practicum at the elementary, middle or high school level. Recommended for students who plan to major in education. (59.4 Lec. Hrs.)

**EDU:220 Human Relations for the Classroom Teacher 3.0 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:235 Children's Literature 3.0 cr.**
This course is 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

**EDU:245 Exceptional Learner 3.0 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. This course is required for teacher certification in Iowa and Illinois. (59.4 Lec. Hrs.)

**EDU:255 Technology in the Classroom 3.0 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. (59.4 Lec. Hrs.)

**EDU:927 Honors Study 1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**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 3.0 cr.**
This course 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

**EGR:180 Statics 3.0 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. (59.4 Lec. Hrs.)
**Prerequisite:** MAT:210, PHY:212

**EGR:280 Dynamics 3.0 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. (59.4 Lec. Hrs.)
**Prerequisite:** EGR:180, MAT:210, and PHY:212

**EGR:285 Introduction to Electrical Science 3.0 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.)
**Prerequisite:** MAT:210, PHY:222
**Corequisite:** MAT:216

**EGR:290 Thermodynamics 3.0 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 thermodynamics 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.)
**Prerequisite:** CHM:165, MAT:210 and PHY:212

**EGR:380 Mechanics of Deformable Bodies 3.0 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.)
**Prerequisite:** EGR:180, MAT:210 and PHY:212

**EGR:400 PLTW – Introduction to Engineering Design 3.0 cr.**
See EGT:400 (59.4 Lec. Hrs.)
**Prerequisite:** MAT:073 or one year of high school algebra

**EGR:410 PLTW – Principles of Engineering 3.0 cr.**
See EGT:410 (59.4 Lec. Hrs.)
**Prerequisite:** MAT:073 or one year of high school algebra

**EGR:420 PLTW – Digital Electronics 3.0 cr.**
See EGT:420 (59.4 Lec. Hrs.)
**Prerequisite:** EGT:400 or EGT:410, and MAT:073 or minimum math placement score based on college assessment.

**EGR:430 PLTW – Aerospace Engineering 3.0 cr.**
See EGT:430 (59.4 Lec. Hrs.)
**Prerequisite:** EGT:400 or EGT:410

**EGR:440 PLTW – Biotechnical Engineering 3.0 cr.**
See EGT:440 (59.4 Lec. Hrs.)
**Prerequisite:** EGT:400 or EGT:410, and MAT:073 or minimum math placement score based on college assessment.

**EGR:450 PLTW – Computer Integrated Manufacturing 3.0 cr.**
See EGT:450 (59.4 Lec. Hrs.)
**Prerequisite:** EGT:400 or EGT:410, MAT:073 or better or minimum math placement score based on college assessment.

# COURSE DESCRIPTIONS

**EGR:460 PLTW – Civil Engineering and Architecture 3.0 cr.**
See EGT:460 (59.4 Lec. Hrs.)
**Prerequisite:** EGT:400 or EGT:410, MAT:073 or better or minimum math placement score based on college assessment.

**EGR:470 PLTW – Engineering Design and Development 3.0 cr.**
See EGT:470 (59.4 Lec. Hrs.)
**Prerequisite:** EGT:400 or EGT:410

**EGT:117 Fluid Power Fundamentals 2.0 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. Also pressure intensifiers, air-over-oil systems, rotary actuators and flow dividers are presented in their applications. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** MAT:706

**EGT:133 Hydraulics/Pneumatics I 2.0 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 4.0 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.)
**Prerequisite:** EGT:133 or consent of instructor

**EGT:137 Fluid Power Control 4.0 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 Fluid Power Maintenance 4.0 cr.**
This course covers maintenance and troubleshooting of mechanisms used to drive fluid power equipment. Proper installation and alignment of drives are demonstrated in labs. Maintenance and troubleshooting of fluid power components are covered. Students disassemble and reassemble components to learn proper maintenance procedures. (39.6 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** EGT:117

**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

**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 PLTW – Introduction to Engineering Design 3.0 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:073 or one year of high school algebra

**EGT:410 PLTW – Principles of Engineering 3.0 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:073 or one year of high school algebra

**EGT:420 PLTW – Digital Electronics 3.0 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.)
**Prerequisite:** EGT:400 or EGT:410, and MAT:073 or minimum math placement score based on college assessment.

**EGT:430 PLTW – Aerospace Engineering 3.0 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:** EGT:400 or EGT:410

**EGT:440 PLTW : Biotechnical Engineering 3.0 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.)
**Prerequisite:** EGT:400 or EGT:410, and MAT:073 or minimum math placement score based on college assessment.

**EGT:450 PLTW – Computer Integrated Manufacturing 3.0 cr.**
This course builds on computer 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.)
**Prerequisite:** EGT:400 or EGT:410, and MAT:073 or minimum math placement score based on college assessment.

# COURSE DESCRIPTIONS

**EGT:460 PLTW – Civil Engineering and Architecture** **3.0 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.)
**Prerequisite:** EGT:400 or EGT:410, and MAT:073 or minimum math placement score based on college assessment.

**EGT:470 PLTW – Engineering Design and Development** **3.0 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 or EGT:410

**ELE:101 Industrial Safety** **1.0 cr.**
This course provides training in all aspects of safety in the industrial environment.
(9.9 Lec. Hrs. / 19.8 Lab Hrs.)

**ELE:115 Basic Electricity I** **2.0 cr.**
This is a course covering basic electrical terminology and symbols, Ohm's Law, Power Law, direct current, series circuits, parallel circuits, combinational circuits, inductance and magnetism. Also testing, measurements, introduction to alternating current and basic troubleshooting are covered as well. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)

**ELE:124 Tools/Adapters/ Instrumentation** **2.0 cr.**
This course covers the safe use of hand tools, conduit bending and soldering, use of analog and digital meters, analog and digital oscilloscopes. High voltage testing of motors is also presented.
(19.8 Lec. Hrs. / 39.6 Lab Hrs.)

**ELE:145 Basic Electronics I/B** **1.5 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 given on the use of lab instruments and measuring devices.
(19.8 Lec. Hrs. / 19.8 Lab Hrs.)
**Corequisite:** ELE:115, ELE:124

**ELE:216 DC Circuit Analysis** **3.0 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 given on the use of lab instruments and measuring devices.
(19.8 Lec. Hrs. / 79.2 Lab Hrs.)
**Corequisite:** MAT:705

**ELE:217 AC Circuit Analysis** **3.0 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 & Power Distribution** **3.0 cr.**
A course that covers the concepts for electrical, motor and electromechanical 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 three-phase power distribution is included.
(19.8 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** ELE:217

**ELE:226 Programmable Logic Control** **3.0 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.)
**Prerequisite:** CSC:113, ELE:216, and ELE:225; or consent of instructor

**ELE:227 Process Control** **3.0 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.)
**Prerequisite:** ELE:144, MAT:722

**ELE:228 Micro-Controllers** **3.0 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 & Specifications** **3.0 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

**ELT:123 Programmable Logic Controllers** **3.0 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:125 Advanced PLC** **3.0 cr.**
This course is a continuation of Programmable Logic Controllers (PLCs). Data manipulation, sequencers, troubleshooting, networking techniques, and ControlLogix™ controllers will be covered. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ELT:123

**ELT:177 Microcontrollers** **3.0 cr.**
This course is an 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.)

**ELT:309 Digital Circuits** **3.0 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. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ELT:312

**ELT:312 Solid State Devices & Systems** **3.0 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

# COURSE DESCRIPTIONS

**EMS:202 Emergency Medical Technican** **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. (173.25 Lec. Hrs. / 29.7 Clinical Hrs. / 19.8 Co-op Hrs.)
**Prerequisite:** Eighteen years of age at the time of enrollment. Register and attend AHA Healthcare Provider CPR certification one week prior to the start of the course. Recommend ability to read, write, and speak English at the college level. Must be able to physically perform the required skills. (A functional analysis of EMT including detailed information on the physical demands is available from the program coordinator.)

**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. (217.8 Lec. Hrs. /118.8 Clinical Hrs. / 158.4 Co-op Hrs.)
**Prerequisite:** EMS-202. Must possess a current American Heart Association, Healthcare Provider CPR card which validates training in obstructed airway, AED and CPR for adults, children, and infants.

**EMS:810 Advanced Cardiac Life Support** **1.0 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** **1.0 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 Prehospital Professionals** **1.0 cr.**
The Pediatric Education for the Pre-Hospital Provider (PEPP) course is an intensive program 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 four-year certification period. (19.8 Lec. Hrs.)

**EMS:817 Basic Cardiac Life Support Instructor** **1.0 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.)
**Prerequisite:** EMS:238

**EMS:818 Neonatal Resuscitation** **1.0 cr.**
The Neonatal Resuscitation Provider (NRP) course is a certification program that utilizes the Standards and Guidelines of the American Academy of Pediatrics and the American Heart Association. This program is designed to be an intensive program 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 that 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 two-year certification period. (19.8 Lec. Hrs.)

**EMS:820 Prehospital Trauma Life Support** **1.0 cr.**
The Pre-Hospital Trauma Life Support (PHTLS) 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 card for a four-year certification period. (19.8 Lec. Hrs.)

**END:111 Introduction to Electroneurodiagnostics** **6.0 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.

**END:211 Electronics and Instrumentation** **4.0 cr**
ourse will provide the basics in electronics and instrumentation for the electroneurodiagnostic student. The student will learn appropriate precautions to ensure electrical safety. The student will study the instrumentation of digital EEG equipment with regard to calibration, high frequency filter, low frequency filter, 60 Hz filter, sensitivity settings, analog to digital conversion, and basic computer language. The student will learn how to compute voltage, frequency, and duration of waveforms. Differential amplifiers will be studied as well as polarity convention, resistance and impedance. (79.2 Lec. Hrs.)

**END:301 Electroneurodiagnostics I** **6.0 cr.**
This course is a continuation of Introduction to END (END:111). Terminology will be expanded. EEG tracings will be reviewed. The student will learn to interpret basic normal and abnormal EEG patterns, maturation of the EEG, variations that occur on the EEG, the International Classification of Seizure Disorders, and treatments used for seizures. 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.)
**Prerequisite:** BIO:168, END:111

# COURSE DESCRIPTIONS

**END:320 Electroneurodiagnostics II 2.0 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, the various types of headaches and their relationship to the electroencephalogram (EEG), identification of electrocerebral inactivity (brain death) through specific EEG recording criteria, and pattern recognition of the elctrocardiogram (ECG) on the EEG. Clinical records will be evaluated. (39.6 Lec. Hrs.)
**Prerequisite:** BIO:173, END:301, and END:800

**END:330 Electroneurodiagnostic Clinical Science 2.0 cr.**
Introduces students to electroneurodiagnosis, neurophysiology, functional neuroanatomy, normal and abnormal conditions and correlates. Includes electroencephalographic (EEG) signs of cerebral disorders. Studies specific neurological disease entities; integrates EEG patterns for cerebral disorders and diagnosis. (39.6 Lec. Hrs.)
**Corequisite:** END:301

**END:331 Neuroanatomy for END 2.0 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, and END:800

**END:340 Electroneurodiagnostics III 3.0 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 condition. (59.4 Lec. Hrs.)
**Prerequisite:** END:820

**END:345 Special Studies 4.0 cr.**
This course is designed to prepare the student with skills needed to provide long term monitoring for epilepsy, including recordings from scalp and implanted grid, strip and depth electrodes that have been surgically placed. Additionally, this course will introduce students to evoked potentials and nerve conduction testing, as well as give students exposure to advanced testing procedures done in neurodiagnostic laboratories. (79.2 Lec. Hrs.)

**END:401 Nerve Conduction Studies 2.0 cr.**
This course is designed to prepare students with the beginning skills needed to perform Nerve Conduction Studies. (39.6 Lec. Hrs.)

**END:402 Nerve Conduction Studies 4.0 cr.**
This course is designed to prepare students with the beginning skills needed to perform Nerve Conduction Studies. (79.2 Lec. Hrs.)
**Prerequisite:** END:331
**Corequisite:** END:840

**END:510 Polysomnography 4.0 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.)
**Prerequisite:** END:331, END:340, and END:840

**END:800 Clinical Practicum I 2.0 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
**Corequisite:** BIO:173, END:301

**END:820 Clinical Practicum II 4.0 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:** END:320, END:800

**END:840 Clinical Practicum III 4.0 cr.**
This course is a continuation of Clinical Practicums I and II. It will focus on the student performing EEG's 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.)
**Prerequisite:** END:820

**END:860 Clinical Practicum IV 8.0 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, and analyze and compile data for physician interpretation. Opportunities for reinforcement of prior learning of EEG's will also be incorporated into this course. (475.2 Clinical Hrs.)
**Prerequisite:** END:840

**ENG:013 Basic Writing 3.0 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 required of students whose diagnostic or assessment scores indicate a need for preperatory work in composition. (59.4 Lec. Hrs.)

**ENG:064 Language Skills 1.0 – 3.0 cr.**
An 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.)

**ENG:105 Composition I 3.0 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 and in writing non-fiction prose, with emphasis on narration, exposition, and persuasion. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Communications Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**ENG:106 Composition II 3.0 cr.**
An advanced writing and reading course focusing on logic in thought and communication. Emphasis is on reasoning and argument, research skills, and academic writing style. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Communications Area.*
**Prerequisite:** ENG:105 or ENG:107

# COURSE DESCRIPTIONS

**ENG:107 Composition I: Technical Writing** **3.0 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 Writing 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 Composition I and is recommended for students in technical, business, and science programs. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Communications Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**ENG:108 Composition II: Technical Writing** **3.0 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, the course meets the objectives of EN 110. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Communications Area.*
**Prerequisite:** ENG:105 or ENG:107

**ENG:221 Creative Writing** **3.0 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.)
**Prerequisite:** ENG:105 and a General Education Literature course

**ENG:230 Creative Writing: Fiction** **3.0 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.)
**Prerequisite:** ENG:106 or ENG-108

**ENG:238 Creative Writing: Nonfiction** **3.0 cr.**
The practice of creating and marketing non-fiction prose. Emphasis is on the writing of expository (non-fiction) essays. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:106 or ENG:108

**ENG:927 Honors Study** **1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**ENG:928 Independent Study** **1.0 – 3.0 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. 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. (39.6 - 118.8 Lab Hrs.)
**Prerequisite:** Minimum of 6 credits (at the 100 level or above) in the discipline (ENG).

**ENV:111 Environmental Science** **4.0 cr.**
In this course common environmental problems will be surveyed, with discussion as to their possible causes, consequences, and remedies. An emphasis will be placed on objective analyses of issues and arguments related to environmental concerns. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area. May be counted as either Life Sciences or Physical Sciences, but not both.*
**Prerequisite:** RDG:032 or RDG:033, or minimum reading placement score based on college assessment.

**ENV:115 Environmental Science** **3.0 cr.**
In this course common environmental problems will be surveyed, with discussion as to their possible causes, consequences, and remedies. An emphasis will be placed on objective analyses of issues and arguments related to environmental concerns. (59.4 Lec. Hrs.)
**Prerequisite:** RDG:032 or RDG:033, or minimum reading placement score based on college assessment.

**ENV:137 Studies in Energy and the Environment** **1.0 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.)
**Prerequisite:** RDG:032 or RDG:033, or minimum reading placement score based on college assessment.

**ENV:139 Energy and the Environment** **4.0 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. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** RDG:032 or RDG:033, or minimum reading placement score based on college assessment.

**ENV:145 Conservation Biology** **4.0 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.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** ENV:111

**ENV:153 Introduction to Sustainable Careers** **3.0 cr.**
Students will examine Iowa's trends in the types of renewable energy (RE) technologies currently employing Iowa workers, along with the knowledge and skills needed by Iowa's RE workers.
(59.4 Lec. Hrs.)

**ENV:910 Environmental Science Internship** **2.0 cr.**
This course provides students with the opportunity to learn hands-on experiences in fields related to environmental science. (158.4 Co-op Hrs.)

**ENV:927 Honors Study** **1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**ESL:113 Basic ESL Grammar** **2.0 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.)

# COURSE DESCRIPTIONS

**ESL:121 Basic ESL Writing 1.0 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.)

**ESL:122 Basic ESL Listening Comprehension 1.0 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.)

**ESL:123 Basic ESL Speaking 1.0 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.)
**Recommended:** ESL:113, ESL:124
**Corequisite:** ESL:121, ESL:122

**ESL:124 Basic ESL Reading 1.0 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.)
**Recommended:** ESL:113, ESL:121, ESL:122, and ESL:123

**ESL:125 Low Intermediate ESL Grammar 2.0 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.)
**Recommended:** ESL:126, ESL:127, ESL:128, and ESL:129

**ESL:126 Low Intermediate ESL Listening Comprehension 1.0 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.)
**Recommended:** ESL:125, ESL:127, ESL:128, and ESL:129

**ESL:127 Low Intermediate ESL Speaking 1.0 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.)
**Recommended:** ESL:125, ESL:126, ESL:128, and ESL:129

**ESL:128 Low Intermediate ESL Reading 1.0 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.)
**Recommended:** ESL:125, ESL:126, ESL:127, and ESL:129

**ESL:129 Low Intermediate ESL Writing 1.0 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.)
**Recommended:** ESL:125, ESL:126, ESL:127, and ESL:128

**ESL:130 Intermediate ESL Grammar 2.0 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.)
**Recommended:** ESL:134, ESL:136, ESL:137, and ESL:138

**ESL:134 Intermediate ESL Writing 1.0 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.)
**Recommended:** ESL:130, ESL:136, ESL:137, and ESL:138

**ESL:136 Intermediate ESL Listening Comprehension 1.0 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.)
**Recommended:** ESL:130, ESL:134, ESL:137, and ESL:138

**ESL:137 Intermediate ESL Speaking 1.0 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.)
**Recommended:** ESL:130, ESL:134, ESL:136, and ESL:138

**ESL:138 Intermediate ESL Reading 1.0 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.)
**Recommended:** ESL:130, ESL:134, ESL:136, and ESL:137

**ESL:140 High Intermediate ESL Grammar 2.0 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.)
**Recommended:** ESL:141, ESL:146, ESL:147, and ESL:148

**ESL:141 High Intermediate ESL Writing 1.0 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.)
**Recommended:** ESL:140, ESL:146, ESL:147, and ESL:148

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**ESL:146 High Intermediate ESL Listening Comprehension 1.0 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.)
**Recommended:** ESL:140, ESL:141, ESL:147, and ESL:148

**ESL:147 High Intermediate ESL Speaking 1.0 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.)
**Recommended:** ESL:140, ESL:141, ESL:146, and ESL:148

**ESL:148 High Intermediate ESL Reading 1.0 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.)
**Recommended:** ESL:140, ESL:141, ESL:146, and ESL:147

**ESL:240 Low Advanced ESL Communicative Competence 1.0 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 Lec. Hrs. / 19.8 Lab Hrs.)

**ESL:241 Low Advanced ESL Communicative Competence 2.0 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. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)

**ESL:242 Low Advanced ESL Communicative Competence 3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)

**ESL:243 Low Advanced ESL Communicative Competence 4.0 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. (39.6 Lec. Hrs. / 79.2 Lab Hrs.)

**ESL:244 Low Advanced ESL Grammar/Writing 3.0 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 3.0 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 Advanced ESL Communicative Competence 1.0 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 Lec. Hrs. / 19.8 Lab Hrs.)
**Recommended:** ESL:253

**ESL:255 Advanced ESL Communicative Competence 2.0 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. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)
**Recommended:** ESL:253

**ESL:256 Advanced ESL Communicative Competence 3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Recommended:** ESL:253

**ESL:260 High Advanced ESL Grammar/Writing 3.0 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.)
**Recommended:** ESL:261, ESL:928

**ESL:261 High Advanced ESL Communicative Competence 1.0 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 Lec. Hrs. / 19.8 Lab Hrs.)
**Recommended:** ESL:260, ESL:928

**ESL:262 High Advanced ESL Communicative Competence 2.0 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. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)
**Recommended:** ESL:260, ESL:928

**ESL:263 High Advanced ESL Communicative Competence 3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Recommended:** ESL:260, ESL:928

**ESL:928 Independent Study 1.0 – 3.0 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. Student will complete a project or a research paper under the guidance of a faculty member. (39.6 – 118.8 Lab Hrs.)
**Prerequisite:** Minimum of 6 credits (at the 100 level or above) in the discipline (ESL).

**FIN:106 AIB Principles of Banking 3.0 cr.**
This course presents basic economic principles as they relate to banking. It provides the essential understanding necessary to further banking study. (59.4 Lec. Hrs.)

**FIN:121 Personal Finance 3.0 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:053 or minimum math placement score based on college assessment.

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**FIN:130 Principles of Finance** **3.0 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, ECN:120

**FIN:180 Intro to Investments** **3.0 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.)

**FLC:141 Elementary Chinese I** **4.0 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.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** RDG:033 or minimum reading placement score based on college assessment.

**FLF:141 Elementary French I** **4.0 cr.**
This is 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. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

**FLF:142 Elementary French II** **4.0 cr.**
This course is 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 history, literature and culture of France. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLF:141

**FLF:231 Intermediate French I** **3.0 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 and literature. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLF:142 or 2 years high school French

**FLF:232 Intermediate French II** **4.0 cr.**
Provides a reinforcement of basic skills with emphasis on conversation and composition, literacy readings, and review of grammar as needed. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLF:231 or 3 years of high school French

**FLF:241 Intermediate French I** **4.0 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. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLF:142

**FLF:242 Intermediate French II** **4.0 cr.**
Thorough, continuing review of language structures with ongoing emphasis of the language skills of reading, writing, speaking, and listening. Focus on cultural literacy with parallel grammatical development. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLF:241 or consent of instructor

**FLG:141 Elementary German I** **4.0 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. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

**FLG:142 Elementary German II** **4.0 cr.**
A continuation of FLG:141 German I. This course provides a review of basic material and pronunciation plus introduction of new grammatical structures. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLG:141 or 1-2 years of high school German

**FLI:141 Elementary Italian I** **3.0 cr.**
Introduces the basic grammar and pronunciation of the Italian language. This is a course for students with little or no knowledge of the Italian language. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013, RDG:032 or RDG:033; or minimum English and reading placement scores based on college assessment.

**FLS:141 Elementary Spanish I** **4.0 cr.**
Beginning Spanish with emphasis on understanding, speaking, reading and writing. Supplemented by cultural readings and multimedia presentations. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

**FLS:142 Elementary Spanish II** **4.0 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. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLS:141

**FLS:231 Intermediate Spanish I** **3.0 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLS:142 or 2 years of high school Spanish

**FLS:232 Intermediate Spanish II** **3.0 cr.**
Designed to complete the second-year college Spanish coursework 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. Exams will test oral, cultural, comprehension and written skills. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLS:142 or 2 years of high school Spanish

**FLS:241 Intermediate Spanish I** **4.0 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. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLS:231 or consent of instructor

**FLS:242 Intermediate Spanish II** **4.0 cr.**
Designed to complete the second-year college Spanish coursework 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. Exams will test oral, cultural, comprehension and written skills. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** FLS:231 or consent of instructor

# COURSE DESCRIPTIONS

**GEO:121 World Regional Geography 3.0 cr.**
A survey course of basic geographical knowledge. Students will be introduced to geographical principles and concepts thus providing them with the tools to study both physical and human geography. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**GEO:126 Cultural Geography 3.0 cr.**
This course is an introduction to cultural geography through the study of global patterns of many aspects of human culture, including population, language, religion, urban and rural settlement, and ways of economic livelihood. (59.4 Lec. Hrs.)

**GIS:111 Intro to Geographic Information Systems 3.0 cr.**
The focus of this class will be on the basic processes and applications of Geographic Information Systems. The class will cover, among other things, file formats, data bases, spatial analysis and use of GIS data and decision-making. (59.4 Lec. Hrs.)

**GLS:100 Contemporary World Issues 3.0 cr.**
This course is an interdisciplinary approach to the study of issues affecting life in the modern world. It 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 among others. Instruction will be primarily discussion oriented and will utilize guest lectures, outside reading and projects, and limited lecture.
(59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

**GLS:120 Education Experience Abroad 1.0 – 3.0 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.
(19.8 – 59.4 Lec. Hrs.)
**Prerequisite:** ENG:013 and RDG:032 or RDG:033; or minimum English and reading placement scores based on college assessment; or consent of instructor.

**GRA:103 Introduction to Macintosh 1.0 cr.**
This specialized course is designed for students entering the graphic arts technology program. Students will be introduced to basic computing concepts including: cross-platform explanations of common operating systems, working with files, accessing and submitting information across networks, font and file management, and basic troubleshooting. (19.8 Lec. Hrs.)

**GRA:134 Digital Photography 3.0 cr.**
This is an introductory course is on 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 and prints from their work. (59.4 Lec. Hrs.)

**GRA:150 Introduction to Web Design 3.0 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.)
**Prerequisite:** GRA:103, GRA:220

**GRA:164 Digital 3-D and Animation 3.0 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.)
**Prerequisite:** GRT:162, GRT:220

**GRA:173 Typography 3.0 cr.**
This course explores the fundamental principles of Typography and its role in visual communication. Students will explore both the form and function of typography in design through lectures and demonstrations. Emphasis is placed on the history of type, anatomy of letter forms and appropriate uses of type. (59.4 Lec. Hrs.)

**GRA:232 Digital Photography 3.0 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 and prints from their work. A professional quality digital single lens reflex (DSLR) camera is required.
(59.4 Lec. Hrs.)

**GRA:272 Advanced Photography 3.0 cr.**
Through practice with subject matter and materials both assigned and of their own choosing, students will learn to determine the most effective approach (creative and technical) that should be taken for conveying a pictorial message that will stimulate a response in the viewer.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** GRT:220, GRT:230, and JOU:172

**GRA:900 Portfolio 3.0 cr.**
This course provides a highly individualized learning experience within the areas of electronic prepress, multi-media, web design, graphic design, animation, graphic arts management, photography, or game development. Specific advanced tasks and projects are identified and customized for the student. Students will assemble and create a high quality portfolio highlighting the skills and personal style they have developed while completing the Graphic Arts Technology Program.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** Complete all courses from the first three semesters of the Graphic Arts program; or consent of instructor.

**GRD:415 Indesign I 3.0 cr.**
In this course, students will gain an in-depth working knowledge of Desktop Publishing layout software, 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. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** RDG:033 or minimum reading placement based on college assessment.

**GRD:430 Indesign II 3.0 cr.**
This course will cover advanced topics in design and layout. Students will further develop their skills by completing advanced graphic design projects. In addition, quality control, attention to detail, setting up electronic files correctly, and choosing an appropriate paper will be emphasized.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** GRD:415

**GRD:459 Illustrator 3.0 cr.**
This course introduces students to the tools and concepts used in designing and creating images using illustration software. Students will use illustration software to create common line art applications such as logos, charts and graphs, and more complex illustrations.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**GRD:463 Photoshop 3.0 cr.**
This course will introduce students to the appropriate software for working with bitmap images. Image acquisition by scanning, manipulation for tonal and color correction as well as retouching and image output to print and web formats as it applies to Graphic Arts industry will be emphasized. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** MAT:073 or minimum math placement based on college assessment.

# COURSE DESCRIPTIONS

**GRT:107 Introduction to Graphics Arts Technology 3.0 cr.**
This course provides students with 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 multimedia. (59.4 Lec. Hrs.)

**GRT:108 Introduction to Graphic Arts Technology 4.0 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 3.0 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 3.0 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.)
**Prerequisite:** GRA:103, GRT:108

**GRT:130 Quality Concepts and Regulations for the Graphic Arts 2.0 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:155 Web Prototyping 3.0 cr.**
In this course students will learn how to create custom graphics, mockups, wireframes and prototypes for web sites using Adobe Fireworks. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**GRT:160 Electronic Pre-Press 3.0 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. (19.8 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** GRT:121

**GRT:162 Introduction to 3D Modeling 3.0 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 Multimedia and the Internet 3.0 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.)
**Prerequisite:** GRT:130, GRT:220
**Corequisite:** GRT:110, GRT:250

**GRT:165 Multimedia and the Internet II 3.0 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

**GRT:169 Color Theory 2.0 cr.**
This course is 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.)

**GRT:211 Content Management Systems 3.0 cr.**
This specialized course will introduce intermediate concepts in web design. Students will learn how to use content management software (Joomla!) to develop, maintain, and hand off client websites. Students will also learn how to use a front-end design framework to customize the appearance of sites. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** GRA:150, GRT:220

**GRT:215 Advanced Pre-Press Techniques 3.0 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 3.0 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 Acrobat 3.0 cr.**
This specialization course will introduce the student to various means of image creating and manipulation. The principles of scanning, software systems and color control through means of composites will be addressed. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** EGT:160

**GRT:230 Advanced Electronic Color Control 3.0 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 relate to the creating and capture, manipulation and targeting of bitmap images for print and the Web. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** GRT:220

**GRT:235 Color Correction II 3.0 cr.**
In this advanced course students will explore advanced topics in color correction using LAB color space. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** GRT:220, GRT:230

**GRT:237 Packaging Design 3.0 cr.**
This course will explore methods and techniques for the design and assembly of three- dimensional product packages and defines the role of packaging in product identification, presentation, and production. The unique challenges of adapting typography, illustration, design and materials to three-dimensional forms are explored. A combination of traditional hands-on skills such as straight edges, drafting, illustration, drawing and digital skills tools such as Adobe Photoshop, Illustrator and InDesign will be necessary to complete most projects. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** GRD:415

**GRT:245 Issues in Graphic Arts Technology 3.0 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. This course will cover graphic design, web design, illustration, animation and other areas of specialty. (59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

**GRT:264 Authoring and Web Design II 3.0 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 2.0 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 three terms of the Graphic Arts program.

**GRT:268 Authoring 3.0 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:280 iOS Applications 3.0 cr.**
This course covers the creation of simple iOS Apps for Apple devices. Student will need access to an Apple computer and portable device (iPhone and/or iPad). (39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**GRT:402 ePub eBooks 3.0 cr.**
This course covers the creation of hand-coded eBooks then porting them to various portable devices. Student will need access to an eBook reader. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** GRA:150

**GRT:805 Graphic Arts Process Production Co:op 5.0 cr.**
A cooperative learning experience in the area of Graphic Arts. (19.8 Lec. Hrs. / 316.8 Co-op Hr.)

**GRT:949 Special Topics 1.0 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. (39.6 Lab Hrs.)

**HCM:100 Sanitation and Safety 2.0 cr.**
This course provides the student with a solid foundation in food service sanitation and safety. Students are required to the pass the ServSafe Food Protection Manager Certification exam to continue in the Culinary Arts curriculum. (39.6 Lec. Hrs.)

**HCM:116 Fundamentals Of Baking 3.0 cr.**
This course is for a student with very little baking or 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.)

**HCM:125 Basic Cake Decorating 1.0 cr.**
The course is designed to explain and demonstrate the techniques, equipment, and components required to produce a decorated cake. Students will practice decorating layered cakes and tiered cakes. (39.6 Lab Hrs.)

**HCM:154 Basic Food Preparation 2.0 cr.**
This course teaches students the basic skills of grilling, frying, broiling, sautéing, vegetable cookery, recipe conversion, recipe costing, and creating soups and stocks. (19.8 Lec. Hrs. / 59.4 Lab Hrs.)

**HCM:155 Garde Manger 3.0 cr.**
In this course 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.)
**Prerequisite:** HCM:100, HCM:160, and HCM:241

**HCM:156 Intermediate Food Prep 3.0 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 3.0 cr.**
This course will teach 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, the preparation of soups, starches, vegetables, proteins, sushi, healthy alternatives and one-bite foods. (39.6 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** HCM:156, HCM:265

**HCM:180 Food Fundamentals 2.0 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.)

**HCM:182 Intermediate Baking 3.0 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, HCM:116

**HCM:183 Advanced Baking 3.0 cr.**
This course is for a student with experience in baking. The students will hone their skills, learn new recipes and create their own desserts. The students will use what they have learned in Fundamentals of Baking and Intermediate Baking to further their education in Advanced Baking. (19.8 Lec. Hrs. / 79.2 Lab Hrs.)

**HCM:199 Batch Cooking 2.0 cr.**
This course is designed to further enhance students' training in quantity cooking. (19.8 Lec. Hrs. / 59.4 Lab Hrs.)

**HCM:212 Industry Management 3.0 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:224 Artisan Breads 2.0 cr.**
This course is designed to further enhance students' advanced level of baking breads. (79.2 Lab Hrs.)
**Prerequisite:** HCM:182

**HCM:233 Menu Planning & Nutrition 3.0 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 a nutritionally sound menu using classical tools/preparation methods. (59.4 Lec. Hrs.)
**Prerequisite:** HCM:154

**HCM:241 Menu Planning and Sales Promotion 3.0 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. (59.4 Lec. Hrs.)
**Prerequisite:** HCM:154

**HCM:255 Purchasing 3.0 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, HCM:265

# COURSE DESCRIPTIONS

**HCM:265 Mathematics for Hospitality 3.0 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.)

**HCM:280 Food Cost Accounting 3.0 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 3.0 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 3.0 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 3.0 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 3.0 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 3.0 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 3.0 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 3.0 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 3.0 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 a kitchen steward. (960 Practicum Hrs.)

**HCM:502 Culinary Practicum II 3.0 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 a breakfast cook. (960 Practicum Hrs.)
**Prerequisite:** HCM:501

**HCM:503 Culinary Practicum III 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 vegetable cookery. (480 Practicum Hrs.)
**Prerequisite:** HCM:502

**HCM:504 Culinary Practicum IV 3.0 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 broiler/grill cook. (960 Practicum Hrs.)
**Prerequisite:** HCM:503

**HCM:505 Culinary Practicum V 3.0 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:504

**HCM:506 Culinary Practicum VI 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:505

**HCM:507 Culinary Practicum VII 3.0 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:506

**HCM:508 Culinary Practicum VIII 3.0 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:507

**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 3.0 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 3.0 cr.**
This course is designed to train students in a supervisory capacity. Topics of problem solving, team playing, delegating of duties and evaluating performances are included in this course. (59.4 Lec. Hrs.)
**Prerequisite:** HCM:319

**HCM:931 Hospitality Internship 1.0 – 3.0 cr.**
Through internship course work 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 – 237.6 Co-op Hrs.)

**HCM:932 Internship 2.0 cr.**
Through this internship course work 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. (158.4 Co-op Hrs.)
**Prerequisite:** HCM:335

# COURSE DESCRIPTIONS

**HCM:957 Hospitality Lab I** **2.0 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. (79.2 Lab Hrs. )

**HCM:958 Hospitality Lab II** **2.0 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. (79.2 Lab Hrs.)

**HCM:959 Hospitality Lab III** **3.0 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.)

**HCM:962 Hospitality Practicum III** **3.0 cr.**
This course includes on-the-job training necessary to fulfill the U.S. Department of Labor required hours developed for completion of the journeyman certification. Students will work at a sponsoring site and document hours and work processes. (667.0 Practicum Hrs.)

**HCM:964 Hospitality Practicum V** **3.0 cr.**
This course includes on-the-job training necessary to fulfill the U.S. Department of Labor required hours developed for completion of the journeyman certification. Students will work at a sponsoring site and document hours and work processes. (667.0 Practicum Hrs.)

**HCM:965 Hospitality Practicum VI** **3.0 cr.**
This course includes on-the-job training necessary to fulfill the U.S. Department of Labor required hours developed for completion of the journeyman certification. Students will work at a sponsoring site and document hours and work processes. (667.0 Practicum Hrs.)

**HCR:116 Domestic Heating** **5.0 cr.**
This course covers installation, troubleshooting, maintenance and repair of gas, fuel oil, electric furnaces, and heat pumps. This course will also cover temperature, humidity, air filtering, and air movement for a complete home conditioning system. (49.5 Lec. Hrs. / 99.0 Lab Hrs.)
**Prerequisite:** HCR:308, HCR:405
**Corequisite:** HCR:441, HCR:851, and MAT:104

**HCR:118 Domestic Heating/ Apprenticeship** **3.0 cr.**
This course is an apprenticeship that covers installation, troubleshooting, maintaining, repairing of gas, fuel oil, electric furnaces and heat pumps. This course will also address temperature, humidity, air filtering and air movement for a complete home conditioning system. (59.4 Lec. Hrs.)

**HCR:260 HVAC Trade Skills I** **3.0 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 tool 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.)
**Corequisite:** HCR:308, HCR:405, and HCR:851

**HCR:261 HVAC Trade Skills II** **3.0 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 tool 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 with sheet metal shops everywhere.
(39.6 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** HCR:260

**HCR:271 Advanced Domestic Heating and Air Conditioning** **5.0 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
**Corequisite:** HCR:880

**HCR:291 Commercial Systems** **3.0 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. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** HRC:116, HCR:441

**HCR:292 Commercial Systems/ Apprenticeship** **2.0 cr.**
This apprenticeship course covers commercial HVAC systems. (39.6 Lec. Hrs.)

**HCR:308 Refrigeration Fundamentals** **5.0 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.)

**HCR:309 Refrigeration Fundamentals/ Apprenticeship** **3.0 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.)

**HCR:320 Light Commercial Refrigeration** **6.0 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

**HCR:321 Light Commercial Refrigeration/Apprenticeship** **4.0 cr.**
This course covers 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 and boiler systems, compressors and pumps. This course will cover the use, installation, diagnosis and maintenance of the systems listed above. (79.2 Lec. Hrs.)

**HCR:405 Basic Electricity for HVAC Tech** **5.0 cr.**
This course covers those concepts and procedures that will enable the student to work successfully in the 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. (59.4 Lec. Hrs. / 79.2 Lab Hrs.)

**HCR:406 Basic Electricity/ Apprenticeship** **3.0 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** **5.0 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.)
**Prerequisite:** HCR:260, HCR:308, and HCR:405

# COURSE DESCRIPTIONS

**HCR:442 HVAC Controls and Circuitry/ Apprenticeship 3.0 cr.**
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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)

**HCR:525 Welding for HVAC/R Trades 3.0 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 4.0 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

**HCR:804 Controls for HVAC/ Apprenticeship 3.0 CR.**
This course is an apprenticeship course that addresses electrical symbols, transformers, single-phase motors, three-phase motors, motor starters, and electronic devices for the heating, ventilation, and air conditioning (HVAC) field. Hands-on, competency-based labs are included with classroom instruction. (59.4 Lec. Hrs.)

**HCR:805 Environmental Controls and Equipment 5.0 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 the certification test required for EPA section 608 will be discussed. Geothermal design, installation and service is also included in this course.
(59.4 Lec. Hrs. / 118.8 Lab Hrs.)
**Prerequisite:** HCR:116

**HCR:811 Computer Aided Control System Design 3.0 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:441

**HCR:812 Environmental Controls & Equipment/Apprenticeship 3.0 cr.**
This course covers laws, and enforcement of the Clean Air Act, 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 also be included in this course. (59.4 Lec. Hrs.)

**HCR:851 HVAC-R Industry Safety 2.0 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.)

**HCR:852 HVAC/R Industry Safety/ Apprenticeship 2.0 CR.**
This apprenticeship course covers controls for HVAC/R industry safety standards. (39.6 Lec. Hrs.)

**HCR:860 HVAC Mgmt and Business Fundamentals 3.0 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.)
**Prerequisite:** HCR:116

**HCR:880 Industry Competency Exam (ICE) - Residential 1.0 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, HCR:308, HCR:405, and HCR:441
**Corequisite:** HCR:271

**HCR:885 Light Commercial Exam 1.0 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 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.)
**Prerequisite:** HCR:260, HCR:271, and HCR:880

**HIS:117 Western Civilization I: Ancient and Medieval 3.0 cr.**
A survey course in Western Civilization from ancient history into the age of absolutism. The civilization 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**HIS:118 Western Civilization II: Early Modern 3.0 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, science and architecture are integrated into the political and social history of Europe, from about 1450 to the end of the eighteenth century. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**HIS:119 Western Civilization III: The Modern Period 3.0 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 are integrated into the political and social history of Europe and its impact on the modern world. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**HIS:120 Readings in Western Civilization 1.0 – 2.0 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.
(39.6 – 79.2 Lab Hrs.)
**Prerequisite:** ENG:105 and HIS:117, HIS:118, or HIS:119

# COURSE DESCRIPTIONS

**HIS:151 U.S. History to 1877 3.0 cr.**
The study of political, cultural, social and economic developments in North American colonies and the United States from discovery through Reconstruction. Historical perspective and critical analysis are emphasized. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**HIS:152 U.S. History since 1877 3.0 cr.**
The study of the political, cultural, social, and economic developments from 1877 to the present. Historical perspective and critical analysis are emphasized. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**HIS:211 Modern Asian History 3.0 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*

**HIS:224 Nazi Germany 3.0 cr.**
This course 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 Holocaust. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**HIS:231 Contemporary World Affairs 3.0 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Cultural/Historical Perspectives Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**HIS:257 African American History 3.0 cr.**
Designed to assist the students in developing an understanding of institutional racism in an historical context. Emphasis is placed on slave culture, social role of newly freed blacks, and community changes in the Twentieth Century. (59.4 Lec. Hrs.)

**HIS:269 The 1960's and the Vietnam War 3.0 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. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment, and HIS:152; or consent of instructor.

**HIS:271 American Frontier History 3.0 cr.**
The course is a study of European migration to North America, with a focus upon the interaction within settlements on the frontier. Emphasis is upon political, cultural, and economic developments in the North American Atlantic seaboard 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 U.S. History 1.0 – 2.0 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 that can be attained by normal course work.
(39.6 - 79.2 Lab Hrs.)
**Prerequisite:** HIS:151 or HIS:152

**HIS:927 Honors Study 1.0 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 plan and complete an Honors project or research paper for the course. The specifics for Honors project or paper will be contracted with the instructor and the Honors Committee at the beginning of the semester. (39.6 Lab Hrs.)

**HIT:120 Pharmacology for HIT 1.0 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 Health Care Professionals 3.0 cr.**
Designed for Allied Health Care profession majors. The course covers general development of skills involving computations of fractions, decimals, percents, ratios, proportions, basic algebra equations, mean, median, and 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 data dispersion interpretation and analysis involving range, variance, and standard deviation. Applied topics such as patient accounts, Medicare and non-Medicare insurance billing, payroll, and computing FTEs in healthcare staffing will help build the applied math skills needed in healthcare supervision and management. (59.4 Lec. Hrs.)

**HIT:150 Principles of Disease 2.0 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.)
**Prerequisite:** HIT:120 or HSC:113

**HIT:160 Principles of Disease II 3.0 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 3.0 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

**HIT:251 Coding II 3.0 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:** HIT:250

**HIT:252 Coding III 3.0 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 and reimbursement software. Students will learn valid reimbursement optimization techniques. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** HIT:251, HIT:254

# COURSE DESCRIPTIONS

**HIT:270 ICD-10 Procedural Coding 2.0 cr.**
This course introduces students to the 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.
(39.6 Lec. Hrs. )
**Prerequisite:** BIO:163, HIT:120, and HSC:113

**HIT:312 Health Informatics and Information Management Systems 3.0 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:** Complete all HIT first year coursework or consent of instructor.
**Corequisite:** HIT:451

**HIT:370 Health Records in Acute Care 3.0 cr.**
This course introduces students to the Health Information Management profession. Topics covered 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 Alternate Care Settings 3.0 cr.**
This course is a continuation of HIT:370 Health Records in Acute Care. Students will take a 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 2.0 cr.**
This course will introduce health information management 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. Clinical Documentation Improvement (CDI) is not about how to code in ICD-10 but rather 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:250 or HIT:253

**HIT:422 Medico-Legal Ethics 3.0 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 END Program Director approval.

**HIT:440 Quality Management 3.0 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:** Complete all HIT first year coursework or consent of instructor.

**HIT:451 Allied Health Statistics 3.0 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:** Complete all HIT first year coursework or consent of instructor.

**HIT:485 Medical Billing and Reimbursement Systems 3.0 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:** Complete all HIT first year coursework or consent of instructor.
**Corequisite:** HIT:251

**HIT:596 HIT Practicum I 2.0 cr.**
This course 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 Clinical Hrs.)
**Prerequisite:** CSC:110, HIT:370, and HSC:113

**HIT:601 Medical Transcription 2.0 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.)
**Prerequisite:** CSC:110, HIT:120, and HSC:113

**HIT:620 Advanced Medical Transcription 1.0 cr.**
This course is a continuation of HIT 601: Medical Transcription. In-depth medical reports dictated by real physicians will be provided including radiology, pathology, orthopedic, cardiovascular and gastrointestinal operative reports. Emphasis will be placed on accuracy of spelling and format. The SUM Program software for advanced students will be used. (39.6 Lab Hrs.)
**Prerequisite:** HIT:601

# COURSE DESCRIPTIONS

**HIT:946 Seminar** **1.0 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:** Complete all first, second, third, and fourth term HIT coursework; or consent of instructor.

**HON:926 Honors Seminar** **3.0 cr.**
Required for the completion of SCC's Honors Program, 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:** ENG:013 or minimum English placement score based on college assessment.

**HSC:102 Introduction to Health Occupations** **4.5 cr.**
This course will provide learning opportunities for students interested in obtaining skills in the health care field. Those interested in the allied health medical field will receive experience from trained allied health educational professionals in various lab departments. Through observation and practical lab experiences, students will be guided as they think about career choices. Students will attend class in a lab setting and will be assigned a hands-on activity. The following areas will be scheduled for lab rotations in the Allied Health Fields: Radiology, END, Surgical Technology, HIT, Dental Assisting and Cancer Information Management. (34.65 Lec. Hrs. / 108.9 Lab Hrs.)

**HSC:105 Introduction to Health Occupations** **1.0 cr.**
This course will provide learning opportunities for students interested in obtaining skills in the health care field. Those interested in the allied health medical field will receive experience from trained allied health educational professionals in various lab departments. Through observation and practical lab experiences, students will be guided as they think about career choices. Students will attend class in a lab setting and will be assigned a hands-on activity. The following areas will be scheduled for lab rotations in the Allied Health Fields: Radiology, END, Surgical Technology, HIT, Dental Assisting and Cancer Information Management. (39.6 Lab Hrs.)

**HSC:106 Contemporary Health Issues** **3.0 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** **2.0 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.)

**HSC:125 Survey of Anatomy for Allied Health** **2.0 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.)
**Corequisite:** HSC:113

**HSC:172 Nurse Aide** **3.0 cr.**
This 75-hour course meets the training of The Omnibus Budget Reconciliation Act of 1987 (OBRA) for aides working in nursing facilities (NF) and skilled nursing facilities (SNF). Emphasizes the achieving of a basic level of knowledge and demonstrating skills to provide safe, effective resident/client care. Students must be 16 years of age to attend clinical.
(49.5 Lec. Hrs. / 9.9 Lab Hrs. / 14.85 Clinical Hrs.)

**HSE:100 Occupational Safety** **3.0 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** **3.0 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** **3.0 cr.**
This course is a nontechnical introduction to common general manufacturing processes that involve hazardous materials and wastes, with emphases 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.)

**HSE:200 Waste and Remediation** **3.0 cr.**
This course provides a study of the U.S. Environmental Protection Agency (EPA) regulations pertaining to hazardous waste management. There is 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 including reading, interpreting, and applying sections from the Code of Federal Regulations. (59.4 Lec. Hrs.)

**HSE:205 Air and Water Quality** **3.0 cr.**
This course provides a detailed study of the U.S. Environmental Protection Agency (EPA) 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 waste water. This support includes reading, interpreting, and applying sections from the Code of Federal Regulations. (59.4 Lec. Hrs.)

**HSE:210 Contingency Planning/Incident Management** **3.0 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.
(59.4 Lec. Hrs.)
**Prerequisite:** HSE:280

**HSE:225 Legal Aspects of Occupational Safety and Health** **3.0 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 (OSHA) regulations. Additionally, students are introduced to the professional code of ethics of a safety person.
(59.4 Lec. Hrs.)
**Prerequisite:** HSE:100

# COURSE DESCRIPTIONS

### HSE:230 Transportation of Hazardous Materials 3.0 cr.
This course provides a detailed study of the U.S. Department of Transportation (DOT) Hazardous Materials Regulations. Additionally, students will be introduced to certain Environmental Protection Agency (EPA) regulations pertinent to hazardous materials transportation. 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, HSE:200

### HSE:250 Special Topics (Fire Prevention and Ergonomics) 4.0 cr.
**FIRE PREVENTION**
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 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 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. (79.2 Lec. Hrs.)
**Prerequisite:** CHM:132, HSE:100

### HSE:251 Ergonomics 2.0 cr.
This course will address different means to reduce the number and severity of musculoskeletal disorders or cumulative trama 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, HSE:100

### HSE:252 Fire Prevention 2.0 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, HSE:100

### HSE:261 Regulation and Compliance – Warehousing and Distribution 3.0 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.)

### HSE:270 Sampling & Monitoring Procedures 4.0 cr.
This course introduces the student to a variety of sampling procedures used in industry and emergency response. Topics to be covered include: sampling and monitoring devices, industrial hygiene monitoring, water and waste stream monitoring, outside air sampling, soil sampling, and radiation sampling. Emphasis will be placed on how to collect and preserve representative samples, interpret laboratory results, and comply with relevant federal regulations.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** HSE:110

### HSE:275 Worker Compensation/ Incident Investigation 3.0 cr.
The first part of this course will provide the student 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 3.0 cr.
This course provides a review of human health effects from various 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.)
**Prerequisite:** CHM:132, HSE:100, and HSE:105

### HSE:285 Industrial Hygiene 3.0 cr.
This course will provide the necessary information to the students to allow them to establish and maintain a basic industrial hygiene program. 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. (59.4 Lec. Hrs.)
**Prerequisite:** HSE:270

### HSE:290 Electrical Safety 3.0 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.)

### HUM:105 Working in America 3.0 cr.
This is 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. On the one hand, the course recognizes that scientific and technological literacy remains an essential aspect of what it means to be an educated person in the twenty-first century. On the other hand, the course acknowledges that, regardless of culture, race, gender, age, and other factors, there are basic human characteristics of responding to new situations. It focuses on the idea that the shared experiences of living in a body, having the conscious awareness that we do, being able to communicate that knowledge and share the experience of life with others—and knowing that bodies don't live forever are the same simply by virtue of our being born human. (59.4 Lec. Hrs.)

### HUM:110 Changes and Choices 3.0 cr.
This course offers students an opportunity to explore ways in which the Humanities are integral in their personal and work lives, especially as they face change and make decisions. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

# COURSE DESCRIPTIONS

**HUM:135 Humanities of the Early World** **3.0 cr.**
This course surveys the major cultural achievements and ideas of Western Civilization from Ancient Greece and Rome through the Middle Ages. Art, architecture, music, literature, and drama are presented as they reflect the world view of each historical era. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*

**HUM:136 Humanities of the Renaissance** **3.0 cr.**
This course surveys the major cultural achievements and ideas of Western Civilization from the Renaissance through the 18th Century. Art, architecture, music, literature, and drama are presented as they reflect the world view of each historical era. (59.4 Lec. Hrs. )
*This course satisfies a general education requirement in the Arts and Humanities Area.*

**HUM:137 Humanities of the Modern World** **3.0 cr.**
This course surveys the major cultural achievements and ideas of Western civilization from the 19th to the 21st Century. Art, architecture, music, literature, and drama are presented as they reflect the world view of each historical era.
(59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*

**HUM:183 Living with Space, Time and Technology** **3.0 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**HUM:287 Leadership Development Studies** **3.0 cr.**
This 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 or minimum English placement score based on college assessment.

**HUM:924 Honors Project** **1.0 cr.**
This course is designed to integrate academic study and community service. By volunteering at least 33 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:** HUM:926 or HUM:927

**IND:134 Print Reading** **2.0 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** **3.0 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** **3.0 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** **3.0 cr.**
This course will introduce students to 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:148 Mechanisms** **3.0 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 student's understanding.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** IND:149

**IND:149 Applied Mechanics** **3.0 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

**IND:158 Sheet Metal Fabrication** **3.0 cr.**
This course provides 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. / 39.6 Lab Hrs.)
**Prerequisite:** IND:134

**IND:159 Bearings and Lubrication** **2.0 cr.**
This course provides a study of friction, force and lubrication of industrial equipment; preventive maintenance, troubleshooting and replacement of bearings. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)

**IND:188 Mechatronic Applications** **3.0 cr.**
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, IND:136

**IND:222 Geometric Tolerancing and Dimensioning** **3.0 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.)

**INF:250 eHealth Standards and Clinical Terminologies** **3.0 cr.**
This course introduces the standards, terminologies and structured languages used in health information management. Health informatics is the information science concerned with the management of all aspects of health data and information through the application of computers and computer technology. (59.4 Lec. Hrs.)
**Prerequisite:** CSC:110

# COURSE DESCRIPTIONS

**INF:255 eHealth Data Management 3.0 cr.**
This course will introduce the implementation and transfer of health resources and health care by electronic means. How health information is delivered to health professionals and consumers through internet and telecommunications as well as how data is analyzed within a healthcare delivery system. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CSC:110

**INF:260 eHealth Information Security and Privacy 3.0 cr.**
This course will discuss eHealth privacy, security and the laws that regulate eHealth as well as an update on current laws and regulations in regards to Health Information. (59.4 Lec. Hrs.)
**Prerequisite:** CSC:110

**INF:265 Applied System Analysis and Design in eHealth 3.0 cr.**
This course will discuss the implementation and importance of health information systems and technology. Understand systems management as well as data analysis within a health information system. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CSC:110

**INF:270 Health Informatics Practicum 2.0 cr.**
This is a supervised 96 hour professional practice experience designed to give the student exposure to advance level functions in various healthcare and health IT settings. (118.8 Clinical Hrs.)
**Prerequisite:** INF:250, INF:255, INF:260, and INF:265

**ITP:121 Introduction to Interpreting I 4.0 cr.**
This course introduces students to the historical and theoretical aspects of sign language interpreting. This course will cover basic skills and techniques with opportunity for application and practice in both American Sign Language (ASL) and English.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ASL:151

**ITP:124 Introduction to Interpreting II 3.0 cr.**
This course gives students 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. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ASL:284, ITP:121

**ITP:129 Deaf Studies 4.0 cr.**
This course introduces students to 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 made aware of the contributions and contemporary lives of deaf people in America. (79.2 Lec. Hrs.)
**Prerequisite:** Ability to enroll in ENG:105

**ITP:131 Social Aspects of Deaf Culture 4.0 cr.**
This course 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.)
**Prerequisite:** Ability to enroll in ENG:105

**ITP:135 Introduction to Language 3.0 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 more esepecially 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.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ITP:141

**ITP:141 English Vocabulary/ Grammar for Interpreters 4.0 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. / 39.6 Lab Hrs.)

**ITP:142 Comparative Discourse Analysis 3.0 cr.**
This course is designed to introduce students to discourse analysis theory and practice. Students will develop strategies to analyze texts in ASL and English which will improve their understanding of how context, identity and culture impact communication. (59.4 Lec. Hrs.)

**ITP:209 Interpreting Skills Lab 1.0 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. (39.6 Lab Hrs.)
**Prerequisite:** ASL:251

**ITP:230 Transliteration I 4.0 cr.**
This course examines the methodology of transliteration used to produce a signed message in English word order for use in educational and technical situations. It focuses on the manually coded English systems of Conceptually Accurate Signed English (C.A.S.E.) and Signing Exact English (S.E.E. II). (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ITP:121

**ITP:231 Transliteration II 3.0 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. / 39.6 Lab Hrs.)
**Prerequisite:** ITP:230

**ITP:253 Practical Issues 3.0 cr.**
This course will focus on specific skills and vocabulary needed for interpreting in a variety of settings. Practice utilizing team interpreting skills will be incorporated into the lab setting.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** ITP:121

**ITP:256 Interpreter Certification Preparation 2.0 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, and ITP:230

**ITP:941 Practicum 2.0 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:** ITP:124, ITP:230

**JOU:120 Beginning Newswriting 3.0 cr.**
This course presents the fundamentals of newswriting: copy editing, AP Style, spelling and vocabulary, writing leads, basic news stories, feature news stories, speech and meeting coverage, and public affairs reporting. (59.4 Lec. Hrs.)

**JOU:123 Intermediate Newswriting 3.0 cr.**
This course helps students refine newswriting skills by an introduction to more complex newswriting experiences such as interviews, feature stories, sports-writing and interpretive writing.
(59.4 Lec. Hrs.)
**Prerequisite:** JOU:120

**JOU:172 Intermediate Photography 3.0 cr.**
This course acquaints the student with photography and darkroom techniques with particular emphasis on control. Various techniques will be demonstrated and the student will experience the use of the necessary chemicals, papers, and films to achieve negative and print excellence.
(59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

**JOU:932 Journalism Internship 3.0 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 of the news. The student will learn to maintain a daily beat, write news articles, and observe operations of the news organization. (237.6 Co-op Hrs.)
**Prerequisite:** JOU:123

**JOU:941 Practicum 1.0 – 3.0 cr.**
This course provides hands-on experience in the writing, editing, producing, circulating and advertising of student publications. The student may have the option to gain experience in the field of broadcasting, particularly television. Emphasis in the area includes writing for radio and television, the aspects of producing, directing, working with television cameras, videotape and cable television. Up to six hours credit is given in either print or broadcast. (237.6 Co-op Hrs.)

**LIT:101 Introduction to Literature 3.0 cr.**
This course 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:105 or ENG:107

**LIT:110 American Literature to Mid:1800's 3.0 cr.**
This course provides 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

**LIT:111 American Literature since Mid:1800's 3.0 cr.**
This course introduces 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:105 or ENG:107

**LIT:135 Film as Literature 3.0 cr.**
This course 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:161 The Short Story 3.0 cr.**
This course is 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.)
**Prerequisite:** ENG:105 or ENG:107

**LIT:180 Mythology 3.0 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 ENG:107

**LIT:183 Masterpieces: Neoclassical to Modern 3.0 cr.**
This course is 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:105 or ENG:107

**LIT:185 Contemporary Literature 3.0 cr.**
This course focuses on works written since World War II. The effects of culture, environment and mass media on literature and its four major genres (short fiction, poetry, novel and drama) are explored in detail through critical reading and writing. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:105 or ENG:107

**LIT:195 Nature of Evil in Literature 3.0 cr.**
This course is a study of the social idea of evil as it is reflected in literature through the centures (from Paradise Lost to the Exorcist). (59.4 Lec. Hrs.)
**Prerequisite:** ENG:105 or ENG:107

**LIT:200 Studies in Literary Form 3.0 cr.**
This literature appreciation course offers an introduction to the major literary genres: the short story, poetry, drama and the novel. Emphasis is on developing an appreciation of literature through learning the basic elements of each genre and applying those elements as tools of literary interpretation. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:105 or ENG:107

**LIT:210 The Graphic Novel 3.0 cr.**
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:927 Honors Study 1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**LIT:928 Independent Study 1.0 – 3.0 cr.**
This course is designed to provide the student an opportunity to explore in greater depth an area(s) of individual interest within the discipline. The student will complete a project or a research paper under the guidance of a faculty member. (39.6 – 118.8 Lab Hrs.)
**Prerequisite:** Complete of 6 credits (at the 100 level or above) in the discipline.

**LIT:943 Readings 1.0 – 3.0 cr.**
This course is designed to provide the student with additional readings in literature, allowing that student to obtain a greater understanding of the literature discipline through combining texts with other educational opportunities. (19.8 – 59.4 Lec. Hrs.)

**MAT:037 Introduction to Applied Math Topics Module I 1.0 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 1.0 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:** Complete MAT:037 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

# COURSE DESCRIPTIONS

**MAT:039 Introduction to Applied Math Topics Module III** **1.0 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:** Complete MAT:038 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:053 Pre-Algebra** **4.0 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. (39.6 Lec. Hrs. / 79.2 Lab Hrs.)

**MAT:063 Elementary Algebra** **4.0 cr.**
This course provides students with the elementary topics in algebra and is designed for those with background in the subject. Topics covered include basic algebraic concepts, linear equations in one and two variables, linear inequalities, graphing equations, exponents and polynomials, factoring, and rational expressions.
(39.6 Lec. Hrs. / 79.2 Lab Hrs.
**Recommended:** A graphing calculator
**Prerequisite:** Complete MAT:053 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:065 Math Literacy** **6.0 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. Students majoring in science, technology, engineering, math, business, or elementary education should not enroll in this course. (118.8 Lec. Hrs.)
**Prerequisite:** Complete MAT:053 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:066 Algebra I** **4.0 cr**
This course provides students with the beginning topics in a two-part algebra sequence. Topics covered include basic algebraic concepts, linear equations in one and two variables, linear inequalities, graphing equations, exponents and polynomial rules, functions, and beginning exponential and logarithmic functions. (79.2 Lec. Hrs.)
**Prerequisite:** Complete MAT:053 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:067 Algebra II** **4.0 cr**
This course is for students with a background in a beginning algebra course. Topics covered include factoring, rational expressions, systems of linear equations and inequalities, inequalities and absolute value equations, rational exponents and radicals, quadratic equations and inequalities, and exponential and logarithmic functions. A scientific calculator is required. (79.2 Lec. Hrs.)
**Prerequisite:** Complete MAT:066 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:069 Accelerated Algebra** **6.0 cr.**
This 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:** Complete MAT:053 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:073 Elementary Algebra II** **4.0 cr.**
This course provides students with a review of fundamental concepts in Elementary Algebra. Topics covered in this course include 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.
(39.6 Lec. Hrs. / 79.2 Lab Hrs.)
**Recommended:** A graphing calculator
**Prerequisite:** Complete MAT:063 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:104 Applied Math Topics** **3.0 cr.**
This course presents algebra, geometry, trigonometry, and finance math as it applies to specific career and technical applications. Mathematical ideas and procedures will be presented first, followed by applications with the various career and technical fields. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** Complete MAT:039 or MAT:053 or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years..

**MAT:110 Math for Liberal Arts** **3.0 cr.**
This course is designed for the liberal arts student. The course covers a broad spectrum of topics designed to help the student 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. The following topics may be included, number theory, social choice and decision making, applications of logarithms, applications of mathematics in the arts, and geometry. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Mathematics Area.*
**Prerequisite:** Complete MAT:065, MAT:066, MAT:069, or MAT:073 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:117 Math for Elementary Teachers** **3.0 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 for elementary education majors only. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Mathematics Area for Elementary Education majors only.*
**Prerequisite:** Complete MAT:067 or MAT:073 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

# COURSE DESCRIPTIONS

**MAT:121 College Algebra** **4.0 cr.**
This course is designed for students majoring in business, science, math, or 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:** Complete MAT:067 or MAT:073 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:128 Precalculus** **4.0 cr.**
This course is intended to prepare students for calculus or advanced science courses. The course covers logarithms and exponential functions, trigonometric functions, complex numbers, analytic geometry, and topics in the theory of equations. A graphing calculator is required. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Mathematics Area.*
**Prerequisite:** Complete MAT:121 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:140 Finite Math** **3.0 cr.**
This course is designed for students studying business, and some of the social and life sciences. Topics covered in this course include sets, functions, finance, matrices, systems of linear equations, linear programming, exponential and logarithmic functions,and sequences and series. A graphing calculator is required.
(59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Mathematics Area.*
**Prerequisite:** Complete MAT:067 or MAT:073 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:142 Technical Mathematics I** **1.5 cr.**
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.)

**MAT:143 Technical Mathematics II** **1.5 cr.**
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.)
**Prerequisite:** MAT:142

**MAT:144 Technical Mathematics III** **1.5 cr.**
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.)
**Prerequisite:** MAT:143

**MAT:145 Technical Mathematics IV** **1.5 cr.**
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.)
**Prerequisite:** MAT:144

**MAT:156 Statistics** **3.0 cr.**
This is a course for business, economics, mathematics, science and social sciences students. The course focuses on obtaining, presenting and organizing statistical data. Course topics covered include descriptive measures, probability, probability distributions, binomial distributions, normal distributions, sampling distributions, confidence intervals, hypothesis testing, linear regression, and correlation. A graphing calculator with statistics functions is required. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Mathematics Area.*
**Prerequisite:** Complete MAT:065, MAT:066, or MAT:073 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:165 Business Calculus** **3.0 cr.**
This course is designed for students in business, social sciences, or life sciences. Topics include limits, derivatives, applications of the derivative related to business, social science, and the life sciences, integration, and applications of the integral related to business, social science, and the life sciences. A graphing calculator is required. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Mathematics Area.*
**Prerequisite:** Complete MAT:121 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:210 Calculus I** **4.0 cr.**
This course is the first in a three-part calculus series. The purpose of the sequence is to provide students enrolled in science, math, engineering, or computer science with a foundation in calculus and analytical geometry. Topics include analytical geometry, limits, differentiation, applications of the derivative, integration and applications of the integral. A graphing calculator is required. (79.2 Lec. Hrs.)
*This course satisfies a general education requirement in the Mathematics Area.*
**Prerequisite:** Complete MAT:128 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:216 Calculus II** **4.0 cr.**
This course is the second in a three-part calculus series. It is a continuation of topics taught in MAT-210 Calculus I. Topics include applications of the definite integral, differentiation and integration of inverse trigonometric and hyperbolic functions, methods of integration, improper integrals, infinite sequences and series, parametric equations, polar coordinate equations, and conic sections. A graphing calculator is required. (79.2 Lec. Hrs.)
**Prerequisite:** Complete MAT:210 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:219 Calculus III** **4.0 cr.**
This course is the final course in a three-part calculus. It is a continuation of the topics taught in MAT-216 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:** Complete MAT:216 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

# COURSE DESCRIPTIONS

**MAT:227 Differential Equations with Laplace** **4.0 cr.**
This course is designed primarily for science, mathematics and engineering majors. Topics include ordinary differential equations, differential operators, series solutions, matrices and systems of linear differential equations, Laplace Transforms, numerical techniques and applications. A graphing calculator is required. (79.2 Lec. Hrs.)
**Prerequisite:** Complete MAT:216 with a grade of C- or better or minimum math placement score based on college assessment within the last two years. Immediate prerequisite course must have been completed within the last two years.

**MAT:705 Industrial Math and Measurement I** **2.0 cr.**
This course is 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, and must have a COMPASS math score of 24 or above.

**MAT:706 Industrial Math and Measurement II** **2.0 cr.**
This course is the second in a two-course sequence 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.)
**Prerequisite:** MAT:734

**MAT:743 Technical Math** **3.0 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** **3.0 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 and trigonometry. (59.4 Lec. Hrs.)
**Prerequisite:** MAT:743

**MAT:927 Honors Study** **1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**MFG:105 Machine Shop Measuring** **3.0 cr.**
This course will cover a variety of precision measurement devices that are used in manufacturing processes. These devices include machinist's scale, dividers, spring calipers, combination square, hermaphrodite calipers, vernier calipers, dial calipers, digital caliper, 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.)
**Prerequisite:** MAT:733, MFG:186

**MFG:106 Workplace Safety** **3.0 cr.**
This course introduces students to the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces. Students completing this course will be eligible to test for the OSHA-10 Card for General Industry.
(59.4 Lec. Hrs.)

**MFG:111 Machinery's Handbook** **1.0 cr.**
This course studies The Machinery Handbook, the number one reference and application guidebook used by machinists of all levels in modern manufacturing. General information, using math tables, gear and thread information, and speeds and feeds will be covered. (19.8 Lec. Hrs.)
**Prerequisite:** MAT:734

**MFG:112 Drills and Saws** **2.0 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.)
**Prerequisite:** MAT:733, MFG:105
**Corequisite:** MFG:116

**MFG:113 Vertical/Horizontal Mills** **5.5 cr.**
This course will teach students how to master the basic and advanced skills needed 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:192

**MFG:114 Surface Grinding** **2.75 cr.**
This course covers basic off-hand and flat stock grinding techniques in both wet and dry applications and 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. (24.75 Lec. Hrs. / 59.4 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 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** **1.0 cr.**
This course will introduce the student to the history and advances of carbide tooling. Indexable inserts; drilling, milling, and turning with carbide tools; basic tooling applications of carbides and coated carbide tools are also covered. Students will develop the necessary knowledge to understand and effectively utilize different types of machine tooling. (19.8 Lec. 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 and internal tapers methods. (9.9 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** MFG:115

# COURSE DESCRIPTIONS

**MFG:118 Machine Tool Project** **4.0 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.
(19.8 Lec. Hrs. / 118.8 Lab Hrs.)
**Prerequisite:** MFG:112, MFG:117

**MFG:140 Geometric Dimensioning and Tolerance** **1.0 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** **2.0 cr.**
This course will introduce students to the Cautesian 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** **1.0 cr.**
This course is fundamental to the safe operation of all machine tools within the 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 equipment safety will be covered.
(19.8 Lec. Hrs.)

**MFG:190 Metallurgy** **2.0 cr.**
This course teaches students the basic theory of ferrous and non-ferrous metals. In addition, this course focuses on how metals differ in terms of hardness, brittleness, durability, resistance to corrosion, machinability and weldability.
(19.8 Lec. Hrs. / 39.6 Lab Hrs.)

**MFG:192 Blueprint Reading** **3.0 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** **2.0 cr.**
This course introduces students to the proper use of Computer Numeric Control (CNC) turning centers in the manufacturing setting. Various projects will strengthen students' proper use and troubleshooting of this equipment in the manufacturing setting. (19.8 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** MFG:151

**MFG:205 Mill Programming** **2.0 cr.**
This course will introduce students to Computer Numeric Control (CNC) programming concepts in manufacturing settings. Topics 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 student's 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** **2.0 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

**MFG:223 CAD/CAM** **2.0 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.)
**Prerequisite:** MFG:186, MFG:192

**MFG:224 Coordinate Measuring Machine (CMM)** **1.0 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.)
**Prerequisite:** MFG:186, MFG:192

**MFG:229 CNC Project** **4.0 cr.**
This capstone course provides students with the opportunity to integrate all skills gained in Computer Numerical Control (CNC) programming and machining courses to design, build and produce an instructor approved project. Emphasis will be placed on accuracy and the proper use of equipment and tools while following safe work practices. (158.4 Lab Hrs.)
**Prerequisite:** MFG:111, MFG:118, MFG:140, MFG:190, MFG:223, and MFG:239

**MFG:239 Lathe Programming** **2.0 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** **3.0 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. (29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequistie:** MFG:186

**MFG:372 SolidWorks/MasterCam Applications** **3.0 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** **1.0 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.)

# COURSE DESCRIPTIONS

**MFG:927 Honors Study 1.0 cr.**
This course is designed to provide the student with the opportunity to obtain a greater understanding of a topic in this subject. Thestudent 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 beginning of the semester. (39.6 Lab Hrs.)

**MGT:101 Principles of Management 3.0 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 or RDG:033, or minimum reading placement score based on college assessment.

**MGT:110 Small Business Management 3.0 cr.**
This course 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 3.0 cr.**
This course places emphasis 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 Communication I 3.0 cr.**
This course prepares students for the types of written communication essential to management and supervision success. (59.4 Lec. Hrs.)

**MGT:165 Principles of Quality 3.0 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.)

**MGT:170 Human Resource Management 3.0 cr.**
This course provides 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:188 Personnel Adm/Indus Relations 3.0 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 3.0 cr.**
This course is a capstone 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:** Complete first year coursework in the Business Management AAS degree program or consent of instructor.

**MGT:260 Introduction to Business Logistics 3.0 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.)

**MGT:261 Principles of Transportation Management 3.0 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.)

**MGT:263 Principles of Distribution and Warehouse Management 3.0 cr.**
This course introduces students to distribution and warehouse management including warehouse site selection, warehouse layout and design, safety issues & the overall warehouse operations. Presentation of warehouse project illustrating students understanding of warehouse issue. (59.4 Lec. Hrs.)

**MGT:265 International Transportation and Logistics 3.0 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.)

**MGT:267 Principles of Cargo Security 3.0 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 3.0 cr.**
This course 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.)
**Prerequisite:** HSE:261, MGT:260, MGT:261, MGT:265, and MGT:269

**MGT:269 Introduction to Inventory Management 3.0 cr.**
This course focuses on the role of inventory management in the supply chain. Students will be exposed to the concepts, principles, problems and procedures 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:910 Supply Chain Internship 3.0 cr.**
This course provides students with a coop opportunity where they will be able to experience projects related to Supply Chain and Logistics within a business setting.(237.6 Co-op Hrs.)

# COURSE DESCRIPTIONS

**MGT:927 Honors Study** **1.0 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 beginning of the semester. (39.6 Lab. Hrs.)

**MGT:928 Independent Study** **3.0 cr.**
This course is 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.
(19.8 Lec. Hrs. / 79.2 Lab Hrs.)

**MKT:110 Principles of Marketing** **3.0 cr.**
This course provides a picture of basic marketing principles and practices; focuses upon customer-driven strategies to attract, keep, and grow targeted customers. Concepts covered include: Web selling and diversity issues, along with the global marketplace, branding, pricing, and ethical issues. A hands-on application project is also included. (59.4 Lec. Hrs.)

**MKT:140 Principles of Selling** **3.0 cr.**
This course presents information regarding careers in selling, sales management, preparation needed for selling and sales presentations. Films and presentations by professional sales personnel will enhance the learning experience. (59.4 Lec. Hrs.)

**MKT:150 Principles of Advertising** **3.0 cr.**
This course 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** **3.0 cr.**
This course 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** **2.0 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 organization for which they work. These skills are vital for every job since identifying and satisfying customer needs is an essential part of every business organization.
(39.6 Lec. Hrs.)

**MMS:111 Video Production I** **3.0 cr.**
This course introduces students to electronic remote video camera operation and editing. Special attention is given to shot selection framing composition, and lighting. Weekly projects are evaluated by students and instructor in group process. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**MMS:115 TV Studio Production** **3.0 cr.**
This course introduces students to principles, procedures and techniques of television production. Emphasis is placed on the basic design and functions of TV production equipment. (59.4 Lec. Hrs.)

**MUA:101 Applied Voice** **1.0 cr.**
This course 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. (39.6 Lab Hrs.)

**MUA:120 Applied Piano** **1.0 cr.**
This course advances students from their present ability to a higher and more proficient level. There is no prerequisite and students need only have the desire and interest to learn to play the piano.
(39.6 Lab Hrs.)

**MUA:147 Applied Intrumental** **1.0 cr.**
In this course students will be able to further their musical and technical skills on a particular instrument. (39.6 Lab Hrs.)

**MUS:100 Music Appreciation** **3.0 cr.**
This course introduces students to 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 is required. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*

**MUS:120 Music Theory I** **3.0 cr.**
This course introduces students to the basic elements of music, music reading and elementary ear training. Notation skills are emphasized. (59.4 Lec. Hrs.)

**MUS:123 Music Theory II** **4.0 cr.**
This course introduces students to techniques and materials of diatonic music, including melodic, harmonic and structural analysis. Students will learn 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** **2.0 cr.**
This course is designed for students to play with a community orchestra and participate in performances throughout the semester. An audition is required for selection into the orchestra.
(79.2 Lab Hrs.)

**MUS:151 Pop Singers** **1.0 cr.**
This course is designed for pop singers to perform musical numbers with choreography; sacred and secular numbers, either a cappella or with instrumental accompaniment. They will perform many civic and school concerts throughout the year. An audition is required for selection for the group.
(39.6 Lab Hrs.)

**MUS:154 Chorus** **1.0 cr.**
This course is 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. (39.6 Lab Hrs.)

**MUS:158 Civic Chorale** **1.0 cr.**
This course is 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.
(39.6 Lab Hrs.)

**MUS:162 Instrumental Ensembles** **1.0 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** **3.0 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** **3.0 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** **4.0 cr.**
This course provides further study in diatonic techniques and initial study of 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** **4.0 cr.**
This course is 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

**MUS:927 Honors Study** **1.0 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.)

**NET:104 Essentials I: PC Hardware and Software** **4.0 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:053 or MAT:104, and RDG:045 or minimum reading score based on college assessment.

**NET:105 Printer Maintenance and Repair** **3.0 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.)
**Prerequisite:** NET:104, NET:107, and NET:114

**NET:114 Foundation of Information Technology** **3.0 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. / 39.6 Lab Hrs.)

**NET:155 Introduction to Wireless Networks** **3.0 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:** Complete ENG:013 or minimum English placement scores based on college assessment, MAT:069 or MAT:073 or minimum math placement scores based on college assessment. and NET:114 or NET:255.

**NET:167 Computer Systems and Troubleshooting** **4.0 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** **5.0 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** **5.0 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.)
**Prerequisite:** ENG:013, MAT:053, and RDG:033; or minimum English, math, and reading placement scores based on college assessment.

**NET:224 Cisco Routers** **5.0 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** **5.0 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 Wide Area Networks** **5.0 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.)
**Prerequisite:** NET:224, NET:234

**NET:255 Networking for Home and Small Business** **5.0 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.)

# COURSE DESCRIPTIONS

**NET:256 Networking at a Small-to-Medium Business or Internet Service Provider** **5.0 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** **5.0 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** **5.0 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 competition 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 Copper, Fiber and Wireless Connectivity** **3.0 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:114

**NET:298 Networking II** **5.0 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)** **3.0 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:** NET:114, NET:244, NET:303, and RDG:032 or RDG:033,

**NET:302 Health Information Networking** **3.0 cr.**
This course equips students with knowledge and skills that can be applied toward entry-level specialist careers in healthcare networking. It is a blended curriculum with both online and classroom learning. This course 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** **3.0 cr.**
This course will prepare the student for supporting and using Windows Operating System Platform in a business setting. Topics include: installation, administration of resources, troubleshooting, networking, optimization, and security.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** MAT:069 or MAT:073, RDG:033; or minimum math and reading placement scores based on college assessment.

**NET:305 Introduction to Network Operating Systems** **3.0 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 of this course include: installation, administration of resources, troubleshooting, networking, optimization, and security.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**NET:313 Windows Server** **3.0 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 systems, 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, RDG:033 or minimum reading placement score based on college assessment.

**NET:398 Networking III** **5.0 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

**NET:420 Introduction to Linux OS** **3.0 cr.**
This course will teach students how to become proficient with using a Linux Operating System
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**NET:474 Certification Preparation** **1.0 cr.**
This course is designed as a review and final preparation for students taking Information Technology certification tests. (19.8 Lec. Hrs.)

# COURSE DESCRIPTIONS

**NET:487 Network+ Exam Preparation 1.0 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 to 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:033; or math and reading placement scores based on college assessment.

**NET:489 A+ Exam Preparation 1.0 cr.**
The A+ Certification course will prepare 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 Lab Hrs.)
**Prerequisite:** MAT:069 or MAT:073, and RDG:033; or math and reading placement scores based on college assessment.

**NET:498 Networking IV 5.0 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 3.0 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:** NET:214 or NET:258, and RDG:033 or minimum reading scores based on college assessment.

**NET:619 Network Attacks: Detection, Analysis & Countermeasures 3.0 cr.**
This course 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 3.0 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 3.0 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 (SAN), 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 Server Area Networks. (59.4 Lec. Hrs.)
**Prerequisite:** NET:305

**NET:652 Microsoft Exchange Server 3.0 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 1.0 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, MAT:069 or MAT:073; or minimum English and math placement scores based on college assessment.

**NET:728 Basic Home Networking 1.0 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, MAT:069 or MAT:073; or minimum English and math placement scores based on college assessment.

**NET:785 Fundamentals of Desktop Support 3.0 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 analysis, 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.)

# COURSE DESCRIPTIONS

**NET:851 Innovations in Technology 3.0 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, NET:303

**NET:860 Information Technology Specialist Capstone 3.0 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:** Consent of instructor

**NET:910 Co-op Work Experience 2.0 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. (158.4 Co-op Hrs.)
**Prerequisite:** Completion of at least 12 EICC credit hours with at least two CIS or NET courses. Minimum Grade Point Average of 2.0.

**NET:927 Honors Study 1.0 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.)

**NET:932 Internship 1.0 – 3.0 cr.**
This course 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. The course is open to students who have completed 75% of their degree of study prior to participation. Prior to registering for the course, 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:** Consent of instructor

**PEA:102 Aerobic Fitness I 1.0 cr.**
Designed for students who would like to develop a degree of skill sufficient for leisure time participation. (39.6 Lab Hrs.)

**PEA:117 Bowling I 1.0 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 1.0 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 1.0 cr.**
Designed for students who would like to develop a degree of skill sufficient for leisure time participation. (39.6 Lab Hrs.)

**PEA:143 Physical Conditioning I 1.0 cr.**
Designed for students who would like to develop a degree of skill sufficient for leisure time participation. (39.6 Lab Hrs.)

**PEA:154 Racquetball I 1.0 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 1.0 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 1.0 cr.**
Designed for students who would like to develop a degree of skill sufficient for leisure time participation. (39.6 Lab Hrs.)

**PEA:185 Weightlifting I 1.0 cr.**
Designed for students who would like to develop a degree of skill sufficient for leisure time participation. (39.6 Lab Hrs.)

**PEA:187 Weight Training I 1.0 cr.**
A course in physical fitness with emphasis on weight training. (39.6 Lab Hrs.)

**PEC:100 Introduction to Coaching 2.0 cr.**
Introductory course dealing with the responsibilities, duties and problems in coaching the interscholastic athlete and the interscholastic team. (39.6 Lab Hrs.)

**PEC:101 Introduction to Coaching 3.0 cr.**
Introductory course dealing with the responsibilities, duties and problems in coaching the interscholastic athlete and the interscholastic team. (59.4 Lec. Hrs.)

**PEH:102 Health 3.0 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 1.0 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 3.0 cr.**
This course teaches first aid practices and problems relationg to shock, contusions, hemorrhages, fractures, poisoning and other related injuries and illnesses. (59.4 Lec. Hrs.)

**PHI:101 Introduction to Philosophy 3.0 cr.**
While remaining traditional in its scope of philosophical issues and contemporary in its perspective; this course is designed to provide a solid introduction to philosophy as the love and pursuit of the wisdom needed to understand the true natures and the true values of the basic issues of life. Particular emphasis is placed on providing students with vivid illustrations of the enduring nature and value of philosophy, by showing them how philosophy can be adequately applied to contemporary issues of social concern through exposure to the interactive approach, group discussions, presentations, debates, etc., as well as contemporary thinkers who have applied wise reasoning to such issues. (59.4 Lec. Hrs.)
*This course satisfies a genearl education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

# COURSE DESCRIPTIONS

**PHI:105 Introduction to Ethics 3.0 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.
(59.4 Lec. Hrs.)
*This course satisfies a genearl education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**PHI:110 Introduction to Logic 3.0 cr.**
This course provides a study of the argumentative use of language and of the methods for distinguishing correct from incorrect reasoning. Topics studied include: the multiple uses of language and their governing conventions, the language of argument and informal fallacies, and the close analysis of actual arguments. The formal analysis of argument is introduced through work on categorical syllogisms and propositional logic. The relation of formal analysis to everyday argument is examined as the course emphasis is on the effective use of the latter. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**PHI:927 Honors Study 1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**PHS:120 Exploring Physical Science 4.0 cr.**
This course provides 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 determined by the instructor.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*

**PHS:152 Astronomy 4.0 cr.**
This is 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.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*

**PHS:166 Meteorology, Weather and Climate 4.0 cr.**
This course is designed to introduce students 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.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*

**PHS:172 Physical Geology 4.0 cr.**
This is 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.
(59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*

**PHS:929 Individual Projects 1.0 cr.**
This course is designed to meet the needs of the individual student. The course goals will vary with the particular student. For example, the student's goal might be to supplement their science course to meet credit requirements at transfer institutions and to broaden the student's perspective concerning these courses. (39.6 Lab Hrs.)

**PHY:110 Survey of Physics I 3.0 cr.**
This is 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.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** MAT:073

**PHY:111 Survey of Physics II 3.0 cr.**
This is 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 1.0 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. (14.85 Lec. Hrs. / 29.7 Lab Hrs.)
**Prerequisite:** MAT:143

**PHY:135 Applied Physics II 1.0 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.
(14.85 Lec. Hrs. / 29.7 Lab Hrs.)
**Prerequisite:** PHY:130

**PHY:162 College Physics I 4.0 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. (59.4 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Prerequisite:** MAT:073 or two years of high school Algebra.

**PHY:172 College Physics II 4.0 cr.**
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

# COURSE DESCRIPTIONS

**PHY:185 Conceptual Physics Fundamentals I** **2.0 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.
(14.85 Lec. Hrs. / 49.5 Lab Hrs.)
**Prerequisite:** MAT:706

**PHY:186 Conceptual Physics Fundamentals II** **2.0 cr.**
This course is a continuation of PHY:185. 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.
(14.85 Lec. Hrs. / 49.5 Lab Hrs.)
**Prerequisite:** PHY:185

**PHY:212 Classical Physics I** **5.0 cr.**
The first course in a sequence of two physics courses for students in physics, other physical sciences, math, and engineering. Course topics include the fundamentals of mechanics, Newton's Laws of Motion, energy, momentum, periodic motions, fluids, rotation, and thermal physics. Calculus is applied to physics concepts.
(79.2 Lec. Hrs. / 39.6 Lab Hrs.)
*This course satisfies a general education requirement in the Natural Sciences Area.*
**Corequisite:** MAT:210

**PHY:222 Classical Physics II** **5.0 cr.**
This course is 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, PHY:212, or consent of instructor.

**PHY:929 Individual Projects** **1.0 cr.**
This course is designed to meet the needs of the individual student. The course goals will vary with the particular student. For example, the student's goal might be to supplement their courses in physics to meet credit requirements at transfer institutions and to broaden the student's perspective concerning these courses. (39.6 Lab Hrs.)

**PNN:165 Nursing Fundamentals Module A** **5.0 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 individuals 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 the individual 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.
(59.4 Lec. Hrs. / 118.8 Clinical Hrs.)

**PNN:166 Nursing Fundamentals Module B** **5.0 cr.**
This 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 individuals 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 the individual 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.
(59.4 Lec. Hrs. / 118.8 Clinical Hrs.)
**Prerequisite:** PNN:165, PNN:210 with a grade of C or better.

**PNN:210 Pharmacology Module A** **1.0 cr.**
This course introduces the student to the basic principles of pharmacology, dosage calculation, and medication administration. Emphasis is placed on nursing responsibilities in drug therapy, including the safe administration of all drugs.
(19.8 Lec. Hrs.)
**Prerequisite:** High School graduate or GED equivalent.

**PNN:211 Pharmacology Module B** **1.0 cr.**
This course provides the student with the rationale for medications given to individual clients, and the effects that drugs have on various systems of the body. Emphasis is placed on nursing responsibilities in drug therapy, including the safe administration of all drugs. (19.8 Lec. Hrs.)
**Prerequisite:** PNN:210 with a grade of C or better.

**PNN:511 Concepts in Clinical Nursing Module A** **4.0 cr.**
This course introduces students to the nursing process in the perioperative management of clients, the nursing management of individuals with nutrition and metabolic alterations, and the nursing management of individuals with activity and exercise alterations. Emphasis will be placed on adaptation to common stressors, the resultant health-illness responses and the transformation of caring into therapeutic nursing interventions. A lifespan approach to health restoration and rehabilitation will be used.
(59.4 Lec. Hrs. / 59.4 Clinical Hrs.)
**Prerequisite:** BIO:168, PNN:166, PNN:211, and PSY:111 with a grade of C or better.

**PNN:512 Concepts in Clinical Nursing Module B** **5.0 cr.**
This course introduces students to the nursing management of individuals with elimination alterations, of individuals with cognitive and perceptual alterations, and of individuals with multi-system alterations. Emphasis will be placed on adaptation to common stressors, the resulting health-illness responses and the transformation of caring into therapeutic nursing interventions. A lifespan approach to health restoration and rehabilitation will be used. (59.4 Lec. Hrs. / 118.8 Clinical Hrs.)
**Prerequisite:** BIO:168, PNN:166, PNN:211, PNN:511, and PSY:111 with a grade of C or better.

**PNN:641 Transition to Practice** **6.0 cr.**
This course examines the concepts of caring, health, environment, person and nursing. Emphasis is placed in meeting the spiritual, psychosocial emotional and physical needs of clients by the practical nurse team member. 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. (79.2 Lec. Hrs. / 118.8 Clinical Hrs.)
**Prerequisite:** BIO:151, BIO:173, PNN:512, PSY:111, and PSY:121 with a grade of C or better.

**POL:110 Introduction to Political Science** **3.0 cr.**
This course will introduce students to the basic concepts of political science. (59.4 Lec. Hrs.)

# COURSE DESCRIPTIONS

**POL:111 American National Government 3.0 cr.**
This course is 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Social Sciences Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**POL:112 American State and Local Government 3.0 cr.**
This course provides 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 policymaking by state and local governments. (59.4 Lec. Hrs.)

**POL:121 International Relations 3.0 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 or minimum English placement score based on college assessment.

**POL:125 Comparative Government and Politics 3.0 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:927 Honors Study 1.0 cr.**
This course is designed to provide the student with the opportunity to obtain a greater understanding of a topic in Political Science. The student will go beyond what is covered and expected in other classes of Political Science. 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.)
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**POL:943 Readings in American Government 1.0 – 2.0 cr.**
This course is 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 than can be attained by normal course work.
(39.6 – 79.2 Lab Hrs.)
**Prerequisite:** POL:111

**POL:949 Special Topics 1.0 – 3.0 cr.**
Special Topics for Political Science.
(19.8 – 59.4 Lec. Hrs.)

**PSY:111 Introduction to Psychology 3.0 cr.**
This course is an examination of the fundamentals of behavior. It is 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.
(59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Social Sciences Area.*

**PSY:121 Developmental Psychology 3.0 cr.**
This course is 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.)

**PSY:211 Psychology of Adjustment 3.0 cr.**
This course is 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 & Organizational Psychology 3.0 cr.**
This course is a study of psychology as a guide to relationship of people in industry. This course is 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 preventative means are studied. (59.4 Lec. Hrs.)

**PSY:222 Child Psychology 3.0 cr.**
This course 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 3.0 cr.**
This course deals with the interplay of biological factors, human interactions, cultural forces, and social structures which shape the growing child from conception through adolescence.
(59.4 Lec. Hrs.)

**PSY:224 Adolescent Psychology 3.0 cr.**
This course is a comprehensive examination of the physical, cognitive, and psychosocial dynamics of the developmental period between the ages of 11 and 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 3.0 cr.**
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.)

**PSY:236 Psychology of Personality 3.0 cr.**
This course provides 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.)

**PSY:241 Abnormal Psychology 3.0 cr.**
This course is 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

**PSY:246 Introduction to Counseling Skills 3.0 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.)

**PSY:251 Social Psychology 3.0 cr.**
This course is designed as an evaluation of the theories and the research if individual behavior in the social environment. Topics will include social influence processes, social influence, group behavior, leadership, conformity and attitude formation, and social cognition. (Same as SOC:251) (59.4 Lec. Hrs.)
**Prerequisite:** PSY:111 or SOC:110; or consent of instructor.

**PSY:261 Human Sexuality 3.0 cr.**
This course is an 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.)

# COURSE DESCRIPTIONS

**PSY:262 Psychology of Gender 3.0 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.)

**PSY:281 Educational Psychology 3.0 cr.**
This course is designed for individuals who are or will be working in a vocational environment, which 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:924 Honors Project 1.0 cr.**
This course is designed to integrate academic study and community service. By volunteering at least 33 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.)

**PSY:927 Honors Study 1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**PSY:943 Readings in Psychology 1.0 cr.**
This course is 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. (39.6 Lab Hrs.)

**RAD:100 Introduction to Radiography and Patient Care 5.0 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.)

**RAD:123 Radiographic Procedures I 5.0 cr.**
This course familiarizes the first-semester student with patient positioning, 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.)

**RAD:143 Radiographic Procedures II 5.0 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

**RAD:183 Special Procedures 3.0 cr.**
This course is an integrated study 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 their clinical practicum and special rotations. Preparation, precautions, and administration of contrast media will be explored. (59.4 Lec. Hrs.)
**Prerequisite:** RAD:143

**RAD:210 Clinical Education I 4.0 cr.**
The radiography student will be assigned to the 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 Radiographic Procedures I. They will learn routine procedures performed in the assigned clinical affiliate and apply procedures introduced in Imaging. Film critique will be integrated throughout the course. Students will meet requirements and competencies in the areas specified in the clinical procedure manual.
(237.6 Clinical Hrs.)
**Prerequisite:** RAD:100, RAD:123, and RAD:350

**RAD:220 Clinical Education II 3.0 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 those 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.
(178.2 Clinical Hrs.)
**Prerequisite:** RAD:210

**RAD:300 Radiographic Exposure 4.0 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

**RAD:350 Imaging 3.0 cr.**
This course explores the principles of automatic processing, digital radiography, image intensification and fluoroscopy. Film characteristics and composition, screens and grids are investigated. Learning experiences are provided in the energized laboratory when appropriate.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**RAD:500 Clinical Education III 6.0 cr.**
The student will be assigned to a different clinical affiliate where he 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. (356.4 Clinical Hrs.)
**Prerequisite:** RAD:220

# COURSE DESCRIPTIONS

**RAD:510 Clinical Education IV 6.0 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.
(356.4 Clinical Hrs.)
**Prerequisite:** RAD:500

**RAD:540 Clinical Education V 3.0 cr.**
The student 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. (178.2 Clinical Hrs.)
**Prerequisite:** RAD:510

**RAD:750 Radiographic Pathology 3.0 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.)
**Prerequisite:** RAD:500, RAD:761, and RAD:800

**RAD:761 Film Evaluation 3.0 cr.**
This is the first of a two course sequence. This course is designed to emphasize principles of film evaluation as it relates to techniques, 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.)
**Prerequisite:** RAD:183, RAD:220

**RAD:790 Film Evaluation II 2.0 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, 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. (39.6 Lec. Hrs.)
**Prerequisite:** RAD:761

**RAD:800 Physics for Radiographers 3.0 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.)
**Prerequisite:** RAD:183, RAD:220, and RAD:300

**RAD:850 Radiation Protection and Biology 3.0 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.)
**Prerequisite:** RAD:500, RAD:761, and RAD:800

**RAD:890 Quality Assurance 1.0 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 is investigated in the laboratory.
(9.9 Lec. Hrs. / 19.8 Lab Hrs.)
**Prerequisite:** RAD:510

**RAD:946 Seminar 2.0 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.)
**Prerequisite:** RAD:510, RAD:790, and RAD:850
**Corequisite:** RAD:540, RAD:890

**RDG:032 Introduction to College Reading 2.0 cr.**
This is an 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 rate and general vocabulary. This course is required of students whose diagnostic or assessment scores indicate a need for supplemental work in reading. Satisfactory completion of course material and/or significant improvement on the reading post-test must be met to earn a passing grade. (39.6 Lec. Hrs.)
**Prerequisite:** ENG:064 or RDG:045

**RDG:033 Introduction to College Reading 3.0 cr.**
This is an 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 rate and general vocabulary. This course is required of students whose diagnostic or assessment scores indicate a need for supplemental work in reading. Satisfactory completion of course material and/or significant improvement on the reading post-test must be met to earn a passing grade. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:064 or RDG:045

**RDG:045 Keys to Reading 3.0 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.)

**REL:101 Survey of World Religions 3.0 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 people146s 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.
(59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Arts and Humanities Area.*
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**SDV:107 Health Science College Experience 1.0 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 1.0 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 Strategies for Academic Success 2.0 cr.**
This course provides 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, learning styles, time and money management, stress reduction, setting goals, self-esteem and college policies and procedures. This course is suggested for students whose diagnostic or assessment scores indicate a need to review study skills for success in college level courses. (39.6 Lec. Hrs.)

# COURSE DESCRIPTIONS

**SDV:114 Strategies for Academic Success** **3.0 cr.**
This course provides 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, learning styles, time and money management, stress reduction, setting goals, self-esteem and college policies and procedures. This course is suggested for students whose diagnostic or assessment scores indicate a need to review study skills for success in college level courses. (59.4 Lec. Hrs.)

**SDV:129 Transition to College** **1.0 cr.**
This course 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 Career Exploration** **1.0 cr.**
This course is 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 Lec. Hrs.)

**SDV:131 Career Exploration** **2.0 cr.**
This course is 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. (39.6 Lec. Hrs.)

**SDV:174 Critical and Creative Thinking** **3.0 cr.**
This course will provide training in thinking, decision-making, problem analysis and problem solving. The student will apply critical and creative thinking strategies to problems on a variety of personal, occupational, and cultural situations. (59.4 Lec. Hrs.)

**SDV:188 Understanding Chemical Dependency** **2.0 cr.**
This course is a study of a broad range of chemical, 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** **1.0 cr.**
In this course 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. (19.8 Lec. Hrs.)

**SDV:220 Honors Colloquium** **2.0 cr.**
This course 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 proceses. Academic departments and guests will have opportunities to present enriching activities. (39.6 Lec. Hrs)

**SER:100 Introduction to Renewable Energy Applications** **2.0 cr.**
This course 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** **3.0 cr.**
This course provides 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** **3.0 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** **3.0 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:706, SER:100

**SER:105 Residential RE Mounting & Tower Systems** **3.0 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:706, SER:100

**SER:108 Inverters, Chargers and Storage Devices** **3.0 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:706, SER:100

**SER:109 Monitoring and Maintenance** **3.0 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 commerical solar photovoltaic systems.
(19.8 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** MAT:706, SER:100

**SER:306 Sustainable Energy Capstone** **3.0 cr.**
This course is project-based and provides students with the opportunity to develop a business plan and to demonstrate their knowledge of the concepts through the designing and developing of a renewable energy project.
(19.8 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** SER:102, SER:103, SER:104, SER:105, and SER:108

**SOC:110 Introduction to Sociology** **3.0 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Social Sciences Area.*

# COURSE DESCRIPTIONS

**SOC:115 Social Problems** **3.0 cr.**
This course is designed to assist the student in the examination of major social problems: personality integration, mental illness, crime and delinquency, alcoholism and drug addiction, family disorganization, problems of the aged, and racial problems. (59.4 Lec. Hrs.)

**SOC:120 Marriage and Family** **3.0 cr.**
This course is 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** **3.0 cr.**
This course is an introduction to the American social welfare system, the social work profession, and some of the ways social workers help people. 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, not just the poor. (59.4 Lec. Hrs.)
**Prerequisite:** ENG:013 or minimum English placement score based on college assessment.

**SOC:220 Sociology of Aging** **3.0 cr.**
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** **3.0 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** **3.0 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) (59.4 Lec. Hrs.)

**SOC:251 Social Psychology** **3.0 cr.**
This course is designed as an evaluation of the theories and the research if individual behavior in the social environment. Topics will include social influence processes, social influence, group behavior, leadership, conformity and attitude formation, and social cognition. (Same as PSY:251) (59.4 Lec. Hrs.)
**Prerequisite:** PSY:111

**SOC:261 Human Sexuality** **3.0 cr.**
This course is an 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:927 Honors Study** **1.0 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 beginning of the semester. (39.6 Lab Hrs.)

**SOC:941 Practicum – Social Work** **1.0 – 3.0 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.)
**Prerequisite:** Minimum Grade Point Average of 2.0 or consent of instructor.

**SOC:943 Readings** **1.0 – 3.0 cr.**
This course is 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

**SPC:111 Public Speaking** **2.0 cr.**
This course is an 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. (39.6 Lec. Hrs.)
*This course satisfies a general education requirement in the Communications Area.*

**SPC:112 Public Speaking** **3.0 cr.**
This course is an 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. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Communications Area.*

**SPC:114 Advanced Public Speaking** **2.0 cr.**
This course provides an application of the principles, theory, process and analysis of various methods of speaking including persuasion, composition, audience analysis, propaganda and logical, ethical, and emotional proofs to change attitudes. (39.6 Lec. Hrs.)

**SPC:120 Intercultural Communications** **3.0 cr.**
This course is an 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** **3.0 cr.**
This course will help you become more aware of who you are and how you relate to and communicate with other people. Elements will include: self esteem, disclosure, perception, listening, verbal and nonverbal communication, persuasion, assertiveness, copin (59.4 Lec. Hrs.)

**SPC:170 Professional Communication** **3.0 cr.**
This course is an introduction to the principles of professional communication. Components include interpersonal, dyad, small group and large group discussion, extemporaneous and impromptu speaking – informative and persuasive. (59.4 Lec. Hrs.)
*This course satisfies a general education requirement in the Communications Area.*

**SUR:122 Introduction to Surgical Technology** **4.0 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. / 39.6 Lab Hrs.)

**SUR:225 Surgical Technology II** **4.0 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.)
**Prerequisite:** CSP:110, SUR:122, and minimum math placement score based on college assessment.
**Corequisite:** SUR:421 and SUR:518

**SUR:330 Surgical Technology Specialties** **3.0 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

# COURSE DESCRIPTIONS

**SUR:421 Surgical Technology Pharmacology 1.0 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 clocks, history, and team member roles during anesthesia. (19.8 Lec. Hrs.)
**Prerequisite:** CSP:110, SUR:122, and minimum math placement score based on college assessment.
**Corequisite:** SUR:225 and SUR:518

**SUR:450 Advanced Concepts in Surgical Technology 4.0 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.)
**Prerequisite:** SUR:330, 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 be participating in the following activities: preparation, aseptic technique, prioritization of duties, use of time, professional/personal habits, safety/ethical aspects, and skill set. (148.5 Clinical Hrs.)
**Prerequisite:** CSP:110, SUR:122, amd minimum math placement score based on college assessment.
**Corequisite:** SUR:225, 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, use of time, professional/personal habits, safety/ethical aspects, and skill set.
(386.1 Clinical Hrs.)
**Prerequisite:** SUR:518
**Corequisite:** SUR:330

**TDT:111 Commercial Drivers License Regulations 3.0 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.)
**Prerequisite:** To enroll, the student must provide a copy of their driving record for the past five years, a current physical form verifying completion of a Department of Transportation physical, and verification of a drug screening test.

**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.)
**Prerequisite:** To enroll, the student must provide a copy of their driving record for the past five years, a current physical form verifying completion of a Department of Transportation physical, and verification of a drug screening test.

**TDT:130 Commercial Vehicle Operation 7.0 cr.**
Professional Commercial Vehicle Operators not only need the necessary information to be successful, but they must be able to operate the tractor-trailer combination in a proficient and safe manner. This seven credit hour course continues to deliver the information necessary to become a commercial vehicle operator and also develops 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; proof of completion of the Commercial Drivers License written exams in general knowledge, air brakes, and combination vehicles.

**TDT:131 Commercial Vehicle Operation 5.0 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, proof of completion of the Commercial Drivers License written exams in general knowledge, air brakes, and combination vehicles, a current physical form verifying completion of a Department of Transportation physical, and verification of a drug screening test.

**WDV:101 Intro HTML and CSS 3.0 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:132 Mobile Application Development 3.0 cr.**
This course will introduce students to the skills required for building both web based and native mobile applications (apps). Students will explore when and why an app makes sense over a mobile web site and develop a range of small apps that take advantage of native device functionality. The differences between mobile OS will be explored along with the various distribution methods and publishing requirements currently available.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:169

**WDV:155 Web Prototyping 3.0 cr.**
In this course students will learn how to create custom graphics, mockups, wireframes and prototypes for web sites using Adobe Fireworks.
(39.6 Lec. Hrs. / 39.6 Lab Hrs.)

**WDV:221 JavaScript 3.0 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 3.0 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 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** CIS:210, NET:303

**WDV:245 Content Management Systems I 3.0 cr.**
This hands-on course teaches how to plan, design, and produce complete commercially oriented website applications using professional, open source, database-driven web content management software (Joomla). Students will learn to install, modify, and maintain CMS software. Custom site templates will be created using a combination of HTML, CSS, and a front-end development framework. (39.6 Lec. Hrs. / 39.6 Lab Hrs.)
**Recommended:** Students must be comfortable writing custom HTML and CSS code, be able to purchase a domain name and hosting services from a third-party provider (approx. $100, 2014 dollars), and be able to work both autonomously and in teams.
**Prerequisite:** WDV:101

# COURSE DESCRIPTIONS

**WDV:261 Flash** **3.0 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.)
**Recommended:** Basic computer competency. Some experience using Mac OS X is useful but not required.

**WEL:123 Welding Symbols** **1.0 cr.**
In this course students will learn the various symbols used in welding.
(19.8 Lec. Hrs.)

**WEL:124 Maintenance Welding** **3.0 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 also covered 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. Learns 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 Weld-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.)
**Corequisite:** MFG:186

**WEL:127 Shielded Metal Arc Welding-Mod** **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.)
**Prerequisite:** MFG:186

**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.)

**WEL:136 Oxy-Acetylene Welding and Cutting** **4.25 cr.**
This course will provide the student with the basic fundamentals of oxy-acetylene welding, cutting, and brazing. It will familiarize the student with the safe operation of the cutting torch, use of different sizes of torch tips, and various weld joints and positions. (9.9 Lec. Hrs. / 148.5 Lab Hrs.)

**WEL:192 Gas Tungsten Arc Welding** **2.5 cr.**
This course focuses on gas tungsten arc welding (TIG) and other related processes. Topics such as process variation, welding in various positions, principle of operation, shielding gases, and filler rods will be studied. Safety and practical application of these welding processes will be stressed.
(39.6 Lec. Hrs. / 79.2 Lab Hrs.)
**Prerequisite:** MFG:186

**WEL:215 Shielded Metal Arc Weld-Adv 1** **5.0 cr.**
This course will familiarize the student with welding structural steel 1" thick in the flat, vertical up, horizontal, and overhead positions using 7018 and 6010 electrodes. (9.9 Lec. Hrs. / 178.2 Lab Hrs.)
**Prerequisite:** WEL:126

**WEL:216 Shielded Metal Arc Weld-Adv 2** **4.5 cr.**
This course provides training to develop the manual skills necessary to produce quality single V-groove welds (open root) in all positions. This course is designed using E6010 and E7018 electrodes on medium thickness carbon steel.
(9.9 Lec. Hrs. / 158.4 Lab Hrs.)
**Prerequisite:** WEL:215

**WEL:219 Layout and Fabrication** **3.0 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.)
**Prerequisite:** WEL:215

**WEL:256 Gas Metal Arc Welding Basic** **4.5 cr.**
This course covers safety and Gas Metal Arc Welding (GMAW) techniques in flat, horizontal, vertical and overhead positions. A variety of hands-on projects/experiments integrates and reinforces theoretical concepts in the laboratory setting.
(39.6 Lec. Hrs. / 99.0 Lab Hrs.)
**Corequisite:** MFG:186

**WEL:257 Flux Core Arc Welding** **2.5 cr.**
This course provides training to develop the manual skills on carbon steels using small diameter and large diameter flux cored electrodes (with and without shielding gas) in all positions on fillet and groove welds. (19.8 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** MFG:186

**WEL:258 Shielded Metal Arc Welding Advanced II** **5.0 cr.**
This course provides training to develop the manual skills necessary to produce quality single V-groove welds (open root) in all positions. This course is designed using E6010 and E7018 electrodes on medium thickness carbon steel.
(39.6 Lec. Hrs. / 118.8 Lab Hrs.)
**Prerequisite:** WEL:215

**WEL:259 Oxy-Acetylene Arc Welding** **1.0 cr.**
This course uses a variety of hands-on projects/experiments to integrate and reinforce theoretical concepts of oxyacetylene welding in the laboratory setting. (9.9 Lec. Hrs. / 19.8 Lab Hrs.)
**Prerequisite:** MFG:186

**WEL:274 Shielded Metal Arc Welding I: SENSE1** **3.0 cr.**
This course focuses on safety, amperage settings, polarity and the proper selection of electrodes for the shielded metal arc welding process. Students will perform American Welding Society compliant welds on carbon steel, using visual and destructive methods for determining weld quality. This course aligns to SENSE (Schools Excelling through National Skills Education) Level 1.
(29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Corequisite:** MFG:186

**WEL:275 Shielded Metal Arc Welding II: SENSE1** **3.0 cr.**
This course focuses on safety, amperage settings, polarity and the proper selection of electrodes for the shielded metal arc welding process. Students will perform American Welding Society compliant welds on carbon steel, using visual and destructive methods for determining weld quality. This course aligns to SENSE (Schools Excelling through National Skills Education) Level 1.
(29.7 Lec. Hrs. / 59.4 Lab Hrs.)
**Prerequisite:** WEL:274

**WEL:331 Welding Fundamentals** **2.0 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. / 39.6 Lab Hrs.)

**WEL:416 Advanced Gas Metal Arc Welding (GMAW)** **2.0 cr.**
This course will build advanced skills in Gas Metal Arc Welding. Topics such as spray arc, short-circuit, and pulse welding, process variation, out of position welding, principle of operation, shielding gases, filler metals, and base metals will be covered. Safety and practical application of these welding processes will be stressed.
(19.8 Lec. Hrs. / 39.6 Lab Hrs.)
**Prerequisite:** WEL:256

**WEL:431 Shielded Metal Arc Welding A** **2.5 cr.**
This course covers the first half of WEL126. Basic shielded metal arc welding procedures in the flat position will be taught through a variety of hands-on projects and experiments that integrate and reinforce theoretical concepts in the laboratory setting. (9.9 Lec. Hrs. / 79.2 Lab Hrs.)

**WEL:432 Shielded Metal Arc Welding B** **2.25 cr.**
This course covers the second half of WEL126. Basic shielded metal arc welding procedures in the flat position will be taught through a variety of hands-on projects and experiments that integrate and reinforce theoretical concepts in the laboratory setting. (9.9 Lec. Hrs. / 69.3 Lab Hrs.)
**Prerequisite:** WEL:431

**WEL:949 Special Topics** **1.0 – 6.0 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
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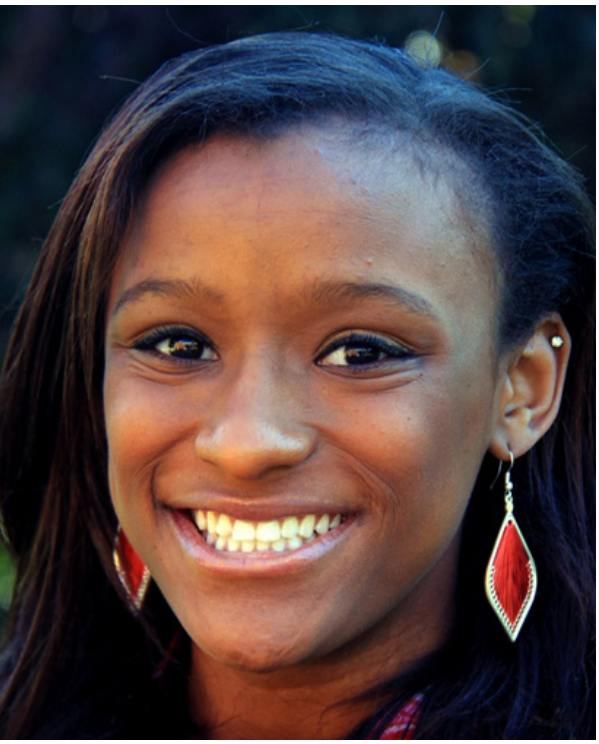

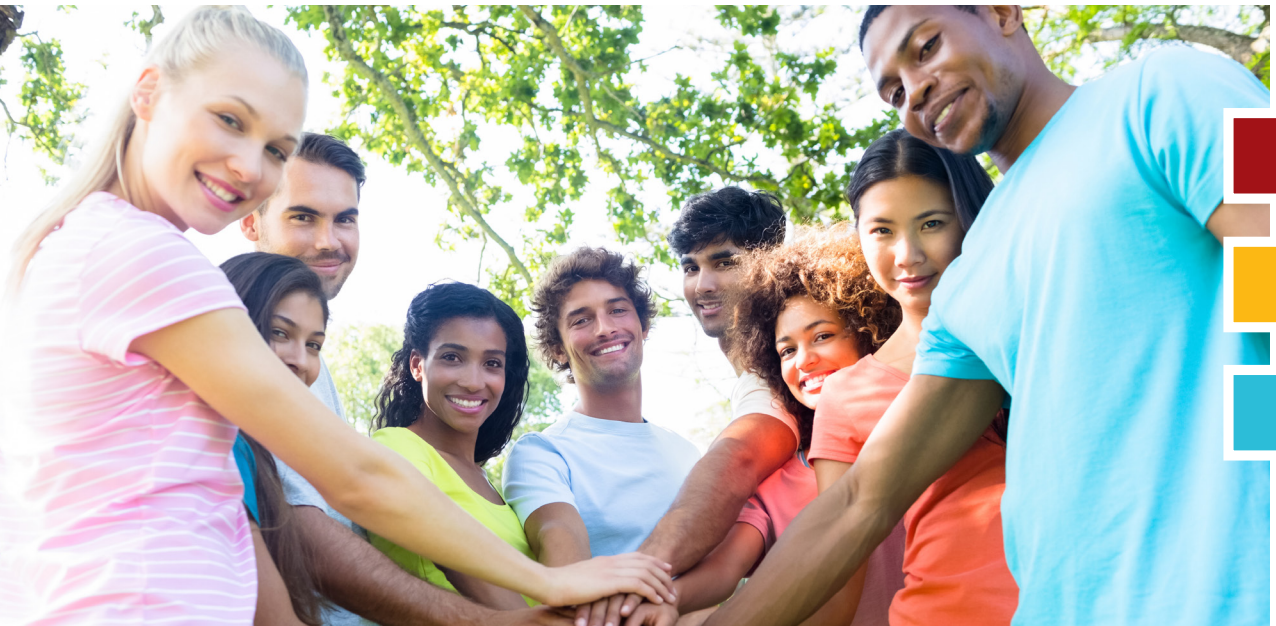

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**Amrik, Sumita**
SCC
Accounts Clerk II

**Anderson, Heather**
SCC
Early Childhood ED/Interpreter Training, Department Coordinator
BA, Augustana College
MS, Western Illinois University

**Anderson, Lorene**
SCC
VA Certifying Official

**Anderson, Rachel**
MCC
Child Care Aide

**Anson, Michael**
MCC
Maintenance/Custodian

**Appenzeller, Lisa**
DO
Operations Administrative Assistant, CE

**Archer, Diana**
SCC
Administrative Assistant

**Archer, Seth**
CCC
Instructor, English Communications and Film
BA, MA North Dakota State University

**Arends, Paula**
Iow@Work
Workforce Investment Act/PACE Director

**Arends, Tom**
SCC
Auto Tech Instructor
AS, Accounting

**Aronson, Mark**
SCC
Biology Instructor
BA, BM, University of Iowa
MA, University of Montana

**Asleson, Laura**
SCC
Account Clerk I

**Aye, Julianne**
DO
Urban Center Manager

**Babbitt, Kevin**
SCC
Speech/Theatre Instructor
MA, Missouri State University
PhD, University of Missouri–Columbia

**Bailey, Michelle**
SCC
Assistant Dean of Library/Learning Resources

**Bainbridge, Bruce**
BTC
Industrial Engineering Technology/Drafting Instructor
BS, University of Wisconsin

**Bair, Andrew**
SCC
Maintenance/Custodian

**Baker, John**
Faculty Emeritus
BA, Aurora College
MA, PhD, University of Iowa

**Baldwin, Dan**
SCC
English Instructor
BA, Northeast Missouri State University
MA, Western Illinois University

**Ballou, Heather**
ATEEC
Interactive Learning Lab Education Coordinator

# PERSONNEL DIRECTORY

**Balmer, Elizabeth**
DO
Accountant for Economic Development Programs

**Banker, Christopher**
BTC
Assistant Director/Career Link

**Barkdoll, Kirk**
Staff Emeritus

**Barleen, Steven**
CCC
History Instructor
PhD, Northern Illinois University

**Barwick, William**
MCC
Financial Aid Specialist

**Batten, Alexander**
BTC
Iow@Work Navigator/Advisor

**Battern, Erika**
MCC
Executive Assistant

**Baxley, Linda**
ATEEC
Director

**Beck, Michael**
ATEEC
Instructional Designer

**Bedell, Honey**
DO
Chief of Staff

**Behrends, Rose Mary**
SCC
Administrative Assistant II

**Beinke, Jane**
CCC
Executive Assistant

**Benson, Bret**
Kahl
Business Management/Accounting, Management Instructor, Accounting, Specialist and Administrative and Office Support Instructor
AA, Black Hawk College
BA, MBA Western Illinois University

**Berkey, Joan**
SCC
Nursing Instructor
BSN, University of Iowa
MSN, Walden University

**Bielski, Anthony**
Kahl
Concurrent Enrollment Project Managerr

**Bielski, Gina**
CCC
Speech Instructor
BA, MA, Eastern Illinois University

**Bishop, Chad**
MCC
Media Production Specialist

**Bloom, Elizabeth**
Iow@Work
Employment & Training Counselor

**Bolton, Catarina**
DO
Customer Care Specialist

**Bonte, John**
Faculty Emeritus
BA, St. Olaf College
PhD, Iowa State University

**Bonte, Martha**
Faculty Emeritus
BA, St. Olaf College
MS, Iowa State University

**Boyer, Richard**
MCC
Science Department Coordinator, Biology/Anatomy/Physiology Instructor
Doctorate, Palmer College of Chiropractic

**Braden, Adrienne**
DO
A/P Clerk / HR Coordinator

**Brammall, Raymond**
SCC
Automotive Instructor
AAS, Blackhawk College
AAS, Scott Community College

**Brattvett, James**
DO
Associate Director Economic Development

**Briones, Mary**
DO
Curriculum & Talent Manager for Health & Public Safety Programs, CE

**Britt, Renae**
MCC
Library Technician II

**Brodersen, Jill**
SCC
Mathematics Instructor
BA, St. Ambrose University
MSM, Iowa State University

**Brodersen, Sarah**
SCC
Administrative Assistant, TRiO Support Center

**Brown, Martha**
CCC
English Instructor
MA, Bard College

**Buckley, Gary**
SCC
Psychology Instructor
BS, Northeast Missouri State University
MA, Assumption College

**Buehner, Colleen**
BTC
Business Solutions Consultant & Customer Service Representative, CE

**Bumann, Theresa**
SCC
Nursing Instructor
AA, Indiana Wesleyan University

**Burden, James**
BTC
Welding Instructor

**Burken, Craig**
CCC
Welding Instructor
AA, Clinton Community College

**Burr, Pat**
MCC
Music Instructor
MA, University of Notre Dame

**Burt, Andrew**
SCC
English Instructor
AA, Seward County Community College
BA, MA, Emporia State University
PhD, Capella University

**Butler, Carrie**
SCC
Administrative Assistant, Financial Aid

# PERSONNEL DIRECTORY

**Calderon, Elias**
MCC
Custodian I

**Calderon-Flores, Anabelia**
MCC
Career Services/Academic Advisor

**Campbell, Alan**
DO
Associate Director of Communications

**Capion, Ann**
SCC
Accounting Instructor
MA, University fo Northern Iowa

**Carr, Eric**
SCC
Social Science Instructor
BA, University of Texas at Austin
MPA, Texas Tech University
MA, Rice University

**Carson, David**
SCC
TRiO Director

**Carton, Theresa**
SCC
Academic Advisor

**Cartwright, James**
Kahl
Assistant Director of Server Services

**Castillo, Mandy**
Iow@Work

**Caves, Christine**
Iow@Works/MCC
WIOA Employment and Training Counselor

**Cawiezell, Pat**
Staff Emeritus

**Cetanyan, Bethann**
DO
Operations Specialist for Allied Health, CE

**Cheak, Patrick**
CCC
Graphic Arts Instructor
BS, MFA, Southern Illinois University

**Chhim, Leakhena**
MCC
Accounts Clerk I

**Clark, Alicia**
CCC
Evening College Assistant

**Clarquist, Donna**
SCC
Health Information Technology Instructor
AAS, Illinois Central College
BA, Western Illinois University

**Clement, Thalia**
CCC
Resource Development Assistant

**Clausen, Emily**
CCC
Academic Advisor/Risk Coordinator

**Coiner, Kathleen**
SCC
Psychology Instructor
BS, University of Iowa
MS, Central Missouri State University

**Cole, Janet**
Kahl
IT Help Desk Manager

**Cole, Wayne**
SCC
Job Placement/Student Success Specialist

**Compton, James**
MCC
English/Literature/Communications Instructor
BA, University of Illinois
MA, Northern Illinois University

**Conway, Kathleen**
SCC
Faculty Mentor

**Cook, Victoria**
MCC
Accounts Clerk I

**Cornmesser, Rhonda**
SCC
Sonography Clinical Coordinator

**Cottle, Jodi**
Iow@Work

**Cottle, Timothy**
DO
Senior Manager of Curriculum & Talent Development, CE

**Cram Rahlf, Shelly**
MCC
Dean of Student Development

**Craterfield, Mollye**
DO
Manager of Communications Systems

**Cribbs, Torial**
DO
Switchboard/Records Clerk

**Crownover, John**
Kahl
Evening College Assistant

**Cunningham, Carol**
Faculty Emeritus
BA, University of Northern Iowa
MA, Northeast Missouri State University
CPS

**Dabeet, John**
MCC
Business Department Coordinator, Economics/Statistics Instructor
BA, Bethlehem University, PA
MPA, Kutztown University, PA

**Darsidan, Charlotte**
CCC
Library Specialist

**Davis-Day, Donna**
DO
Sr. Executive Assistant to Vice Chancellor of Workforce Development

**DeClerck, Terri**
SCC
Nursing Instructor, Eve/Weekend Facilitator
AAS, Scott Community College
BSN, University of Illinois
MSN, Walden University

**DeWeerdt, Dustin**
BTC
Intermediary Network Coordinator (QC Career Connections)

**DeWinter, Naomi**
MCC
President

**Diamond, Bruce**
ATEEC
Administrative Assistant

**Dieckman, Julia**
MCC
Agronomy Instructor
MS, Iowa State University

**Dierksen, Mary**
CCC
Lead Custodian

# PERSONNEL DIRECTORY

**Docherty, Melonee**
ATEEC
Lead Instructional Designer Advanced Technology Environmental

**Dolan, Janice**
Iow@Work
Operations Coordinator

**Doucette, Donald**
DO
Chancellor

**Drahos, Daniel**
MCC
Vet Tech Program Veterinarian
BS, DVM, Iowa State University

**Drake, Joshua**
DO
Virtual Reality Training initiatives Project Manager

**Drucker, Nancy**
SCC
Financial Aid Specialist

**Drury, Melanie**
DO
Account to Business Services

**Dugan, Nancy**
DO
Assistant Director of Institutional Research

**Dunn, Russ (Armond)**
SCC
Biology Instructor
BS, Western Michigan University
MS, Iowa State University

**Duran, Denise**
SCC
Surgical Technology Instructor
Gwinnett Technical College

**Dykstra, Amy**
CCC
Administrative Assistant I

**Edwards, Michael**
Kahl
Computer Technician Support Specialist

**Egli, Shannon**
CCC
Anatomy and Physiology/Biology Instructor
MS, Des Moines University

**Eich, Lauri**
DO
Senior Manager of Operations, CE

**Einfeldt, Angela**
MCC
Child Care Aide

**Eis, Jenny**
Kahl
Computer Technology Support Specialist

**Eisenman, Ann**
CCC
Assistant to the President/Foundation Director

**Elias, James**
MCC
Business Instructor
BS, University of South Dakota
MBA, St. Ambrose University

**Elliott, Heather**
MCC
Interim Learning Tree Preschool Manager

**Endress, Mathew**
CCC
Academic Advisor/Student Support Coordinator

**Evans, Heather**
CCC
Admissions Coordinator

**Fall, Michael**
SCC
Evening College Assistant

**Farley, Karen**
DO
Associate Director of Marketing

**Farrier, Katherine**
MCC
Academic Advisor

**Feller, Andrea**
Iow@Works/CCC
WIOA Employment and Training Counselor

**Feller, Jody**
CCC
Custodian I

**Finch, Paula**
MCC
Psychology Instructor
AA, Scott Community College
BA, Marycrest International University
MS Ed., Western Illinois University

**Finn, Laurie**
DO
Director of Resource Development

**Flanders, Cindy**
SCC
Business Administration and Speech Department Coordinator/Instructor
BA, JD, MA University of Iowa

**Foley, Amy**
SCC
English Instructor
BA, St Ambrose University
PhD, State University of New York–Story Brook

**Forbes, Johnna**
Iow@Work
Information Specialist/Iowa Works Employment and Training Counselor

**Ford, Randolph**
SCC
Chemistry Instructor
BS, St. Cloud State University
MS, University of Minnesota–Minneapolis

**Franklin, Kelly**
Kahl
Sr. Executive Assistant to Vice Chancellor of Education & Training

**Frad,Corinne**
MCC
Accounting Instructor
BA, Oklahoma Panhandle State University
MBA, Upper Iowa University

**Fuller, Jené**
DO
Operations Administrative Assistant, CE

**Gainer, Suzanne**
SCC
Math Emporium Lab Supervisor/ Developmental Math Instructor
BSME, University of Iowa

**Gallagher, Ruth**
SCC
Developmental Education Instructor
M.S.Ed, Western Illinois University

**Gangopadhyay, Bhaswati**
SCC
Physical Science & Computer Science Department Coordinator/Physics Instructor
BS, MS, University of Calcutta
MS, PhD, Rensselaer Polytechnic Institute

# PERSONNEL DIRECTORY

**Ganzer, Karen**
SCC
Nursing Instructor
RN, Lutheran Hospital School of Nursing
BSN, University of St. Francis
MSN.ED, University of Phoenix

**Garedew, Aynalem**
CCC
Custodian

**Garnica, Nicole**
SCC
Education Instructor
BA, Cornell College
MA, Drake University

**Gayman, Sandra**
Kahl
Associate Director of Database Services

**Geerts, Susan**
CCC
Financial Aid Specialist

**Geiken, Rebecca**
SCC
Military and Veteran Student Affairs Facilitator

**Gekas, James**
Kahl
Associate Director of Web-based Services

**Ghrist, Angela**
**SCC**
Biology Instructor
AA, outheastern Community College
BA, University of Iowa
MS, Iowa State University

**Gibson, JoAnn**
DO
College Customer Service Specialist, Call Center

**Glanz, Bryan**
ATEEC
Web Designer/Web Server Specialist

**Gleason, Molly**
Kahl
Student Services Advisor

**Gomez, Jesse**
MCC
Custodian I

**Gonzalez, Ezequiel**
SCC
HVAC Instructor
AA, Scott Community College

**Goodall, Debora**
Kahl
Dean of Continuing Education

**Goodman, Terri**
Kahl
Tech Support Assistant, Curriculum

**Gosnell, Debby**
CCC
GED/ABE Instructor

**Grager, Rachel**
CCC
Switchboard/Receptionist, Maquoketa Center

**Graves, Sarah**
DO
Employment and Training Counselor

**Green, Jenifer**
CCC
Executive Assistant to Dean of Student Development

**Guemmer, Laureen**
CCC
Administrative and Office Support Instructor
BA, Northwestern College
MA, University of Northern Iowa

**Hackney, Cathy**
SCC
Administrative Assistant, Nursing Department

**Haferbier, Gayla**
CCC
Switchboard/Receptionist, Maquoketa Center

**Hafner, Beth**
CCC
English/Journalism Instructor
BA, MA Western Illinois University

**Halterman, Jeff**
Kahl
Assistant Dean of Curriculum

**Hamerlinck, Shawn**
CCC
Humanities/Social Sciences Instructor
BA, Loras College
MA, Loyola University

**Hanan, Darrell**
Facutly Emeritus
A.A.S., Southeastern Community College
BT, University of Northern Iowa
ASE, Master Certified

**Hanne, Gloria**
ATEEC
Project Coordination Specialist

**Hanzelin, Amy**
DO
Associate Director of Business Services

**Harfst, Steve**
BTC
Engineering Technology Program Instructor (DOL)
AA, Scott Community College

**Harris, Marcus**
CCC
Academic Advisor/Job Placement Coordinator

**Harris, Stephanie**
DO
College Customer Service Specialist, Call Center

**Harrison, Nicole**
DO
Web Specialist

**Harwood, Kristine**
SCC
Mathematics Instructor
MA, University of Northern Iowa
MSM, Iowa State University

**Hasselroth, Margaret**
BTC
Quad City Career Connections Program Specialist

**Haugland, Jane**
SCC
Associate Director of Financial Aid

**Havill, Jayln**
MCC
Agri-Business Instructor
AAS, Muscatine Community College
BS, Northwest Missouri State University

**Hayes, Eric**
DO
Maintenance

# PERSONNEL DIRECTORY

**Hegland, Lysa**
SCC
Assistant to the President/Foundation Director

**Helig, Kyle**
Kahl
Help Desk Technician

**Henderson, Jill**
SCC
Accountin Clerk I

**Henning, Angela**
MCC
Information Technology Instructor
AAS, Muscatine Community College
BA, MS, St. Ambrose University

**Herrig, Amy**
SCC
PACE Career Navigator

**Herrington, Tishly**
DO
Assistant Director of Admissions and Youth Outreach

**Hess, Susan**
Kahl
Assistant Dean

**Higgins, Tracy**
DO
Data Entry/Records Clerk

**Hilbert, Heidi**
Kahl
Dean of e-Learning

**Hill, Blaine**
MCC
Maintenance Custodian

**Hill, Monica**
SCC
Financial Aid Specialist

**Hilton, Brian**
SCC
History Instructor
BA, University of Tennessee
MA, PhD, Texas A&M University

**Hitchcock, Raymond**
SCC
Truck Driving Program Facilitator

**Hixon, Barbara**
SCC
Biology Instructor
AS, Holyoke Community College
BS, MS, PhD, University of Massachusetts-Amherst

**Holmes, Michelle**
SCC
Administrative Assistant, Testing Center

**Holmon-Ellis, Thea**
SCC
Transition Advisor

**Hoover, Tammy**
Kahl
Information Center Specialist

**Horan, Sherry**
SCC
Developmental Education Instructor
BA, MA, University of Northern Iowa

**Horst, David**
CCC
Director of Horticulture, Bickelhaupt Arboretum

**Horst, Richard**
BTC
Director of Development

**Hoyt, Haleigh**
SCC
Transition Advisor

**Humbarger, Hans**
SCC
Mathematics Instructor
BS, Purdue University
MA, University of Wisconsin at Madison

**Hunter, Kenneth**
SCC
Department Coordinator-Transportation/Diesel Instructor
AA, Scott Community College

**Huntington, Benjamin**
MCC
Manager of Academic Advising & Student Success

**Ihne, Merie**
Faculty Emeritus
BS, MS, University of Wyoming

**Ikoba, Jonathan**
SCC
Social Science Department Coordinator/Economics Instructor
BS, University of Liberia
MS, University of Cincinnati
MA, PhD, Northern Illinois University

**Ingelson, Jeannine**
SCC
Financial Aid Officer

**Jackson, Carrie**
SCC
Health Informatics Program Facilitiator
BS, University of Cincinnati

**Jackson, Larry**
Kahl
Special Needs Specialist

**Jacobs, Jan**
SCC
Director/Radiologic Technology Instructor
AAS, Carl Sandburg College
BS, University of St. Francis
MA, St. Xavier University

**Jarvis, Joseph**
CCC
High School Liaison

**Jepson, Cathryn**
BTC
Administrative Assistant

**Johnson, Amy**
CCC
Library Assistant

**Johnson, Bridget**
WDC
Career Navigator - District ABE/GED

**Johnson, Kenneth**
MCC
Physics/Physical Sciences/Environmental
MS, University of Iowa

**Kabat Lensch, Ellen**
DO
Executive Director for Resource Development & Innovation

**Kahl, Susan**
MCC
Administrative Assistant I

**Kanzaki, Kelly**
SCC
Library Technician II

# PERSONNEL DIRECTORY

**Kaufmann, Jeffrey**
MCC
History/Psychology Instructor, Social Science Department Coordinator
BA, MA, PhD, University of Iowa

**Keel, Nancy**
Faculty Emeritus
BA, Wartburg College
MA, University of Denver

**Kelley, Katherine**
Kahl
English Instructor
BA, University of Iowa
MA, Western Illinois University

**Kelly, Christina**
WDC
Adult Basic Education Instructor

**Kelly, Jennifer**
Kahl
Manager of e-Learning Operations

**Kettering, Ben**
BTC
Electrical/Department Chair Instructor
BSEE, University of Illinois
MSEE, Bradley University

**Khedr, Lesa**
MCC
English Instructor
BSE, Emporia State University, KS
MA, New Mexico State University

**Kimble, Angelique**
SCC
Transition Academic Advisor

**Kindle, Joan**
Kahl
Vice Chancellor for Education and Training

**King, Kelsey**
SCC
Admissions Coordinator

**Kistler, Art**
MCC
MITC Faculty

**Kline, Lisa**
SCC
Registration

**Knight, Gabriel**
Kahl
Business Coordinator/Instructor
MBA, St. Ambrose University

**Koch, Gerhard (Jeff)**
Faculty Emeritus (posthumously)
BA, Earlman College
MS, University of Iowa

**Koenes, Ann**
CCC
Administrative Assistant II

**Kothenbeutel, Leland**
SCC
Maintenance

**Kothenbeutel, Nancy**
Staff Emeritus

**Kramer, Chris**
MCC
Welding Instructor
AAS, Southeastern Community College

**Kress, Cynthia**
MCC
Secretarial Services Assistant, CE

**Kristianto, Yvonne**
MCC
Financial Aid Specialist

**Kunde, Susan**
CCC
Lab Assistant I/Math and Science

**Kurriger, Kathy**
MCC
Lab Assistant II

**Lafollette, Iris**
Staff Emeritus

**Lammers, Susan**
BTC
Logistics and Transportation Instructor
MBA, St. Ambrose University

**Lance, Lionel**
Kahl
Computer Technology Support Specialist

**Lane, David**
MCC
Speech and Theatre Instructor
BBA, University of Iowa
MA, Fonatbonne University, MO

**Lange, Brandon**
MCC
Chemistry Instructor
BA, Concordia College, MN
MS, University of Illinois, Urbana-Champaign

**Larson, Marcia**
CCC
Academic Advisor/ADA Liaison/Retention Specialist

**Lathrop, Marcia**
CCC
Developmental Education Instructor
BS, Judson Baptist College
MA, City University

**Lauritsen, John**
Kahl
Maintenance/Custodian

**Lawler, Ann**
SCC
Mathematics Department Coordinator/Instructor
AA, Southeastern Community College
BA, MA, University of Iowa

**Lawson, Jennifer**
SCC
TRiO Tutor - Mentee

**Lear, Randy**
MCC
Evening College Assistant

**Legel, Christopher**
CCC
Graphic Arts/Multimedia Instructor
BA, University of Wisconsin-Madison
BS, St. Ambrose University

**Leesemann-Johnson, Katja**
Kahl
e-Learning Specialist

**Leonard, Anthony**
SCC
Financial Aid Specialist

**Levsen, Gail**
CCC
Sr. Executive Assistant to President/Vice Chancellor of Student Development

**Liljequist, James**
Kahl
Computer Technology Support Specialist, MCC

**Lillibridge, Heather**
Kahl
Help Desk Specialist

**Lindberg, John**
SCC
Geography Instructor
BA, MS, St. Cloud State University

# PERSONNEL DIRECTORY

**Lindbom, Richard**
WDC
Security Officer for Davenport Police Department

**Lipnick, Robert**
SCC
Humanities Department Coordinator/Art Instructor
BS, University of Maryland
MFA, University of Notre Dame

**Liske, Kristen**
DO
Administrative Assistant (for EMSC and IT)

**Longstreth, Lynn**
MCC
Financial Aid Officer

**Loving, Amy**
ATEEC
Nahant Marsh Eco-Education Assistant

**Lucewich, Georgeann**
SCC
Financial Aid Specialist

**Lueders, Karen**
CCC
Assistant I to President for Administration

**Luikart, Nancy**
MCC
Assistant Dean for Library Services

**Lyons, James**
SCC
Auto Tech - ACR Lab Assistant

**MacLearn, Becky**
CCC
Library Technician

**Madsen-Smtih, Amy**
CCC
Biology/Math/Science Instructor
BA, St. Louis University
MA, Western Illinois University

**Maidlow, Kelly**
SCC
Accounting Clerk II

**Maine, Jill**
DO
Operations Specialist for Allied Health, Long Term Care, CE

**Majchrzak, Robert**
SCC
Assistant Dean of Facilities

**Marlowe, Jane**
CCC
Developmental Education Department Coordinator/Instructor
AA, Mount St. Clare College
BA, Marycrest College
MA, The Franciscan University

**Martin, Michael**
MCPST
Fire Science and Rescue Coordinator

**Martin, Paul**
MCC
Agri-Business Instructor
AAS, Muscatine Community College
BS, Southern Illinois University

**Martin, Robin**
DO
Accounts Receivable Clerk

**Martinez, Laura**
MCC
Child Care Cook/Nutritionist

**Marvin, Daniel**
BTC
Dean of Concurrent Enrollment/CTE

**Matter, Jeanne**
SCC
Radiologic Technology Clinical Coordinator

**Maxwell, Daniel**
SCC
Math Instructor
BS, Pensacola Christian College
BS, Iowa State University
MAT, University of Idaho

**Mayes, Paul**
Faculty Emeritus
BS, MS, Southern Illinois University
PhD, University of Iowa

**McAden, Candace**
Iow@Work

**McAninch, Thomas**
SCC
Criminal Justice/Sociology Instructor
BA, MS, Marshall University
MA, University of Illinois
PhD, Illinois State University

**McConnell, Bradley**
BTC
Industrial Engineering Technology/CAD-ProE Instructor
AAS, Morrison Institute of Technology

**McDonald, Marshall**
Faculty Emeritus
AAS, Muscatine Community College
BS, Southern Illinois University
MS, Southern Illinois University

**McGivern, Joann**
SCC
Sonography Instructor
AA, Carl Sandburg College

**McKenzie, Jamie**
DO
HR Employment Coordinator

**McLaughlin, Lorene**
SCC
Accounting Clerk II

**McRae, Reese**
SCC
Culinary Instructor
AAS, Scott Community College
Certificate, Culinary Institute of America
Certificate, Department of Labor

**Medendorp, Melissa**
CCC
Records Clerk II

**Medina, Maria Elizabeth**
MCC
Admissions Coordinator

**Meissen, Heather**
SCC
Biology Instructor
BS, Iowa State University
MA, University of Missouri

**Melbard, Ryan**
SCC
Mathematics Instructor
BS, MS, University of Wisconsin Platteville
MS, Texas A & M

**Mendoza, Sergio**
DO
Pre-vocational Training Facilitator, CE

**Merrell, Wayne**
BTC
Assistant Director, DOL Grants

**Miller, Carrie**
DO
Operations Administrative Assistant, CE

**Miller, Lisa**
CCC
Dean of Student Development

# PERSONNEL DIRECTORY

**Miller, Sandra**
MCC
Custodian I

**Minner, Jeffrey**
CCC
Custodian I

**Mirocha, Kenneth**
SCC
Facilities Manager

**Mitchell, Robin**
MCC
Manager of Registration and Records

**Moeller, Karen**
DO
Payroll Specialist

**Mommsen, Mardell**
CCC
Manager of Registration and Records

**Moorhead, Ruth**
MCC
Lab Assistant I

**Morgan, Dan**
Faculty Emeritus
BA, Stanford University
MA, PhD, University of Minnesota

**Morgan, John**
MCPST
Coordinator/Trainer for Health, Safety, and Environmental Program

**Morgan, LaVetta**
BTC
Student Services Assistant

**Morrissey, Becky**
MCC
Custodian I

**Murphey, David**
WDC
HSE Testing Supervisor

**Murphy, Kevin**
Kahl
Pool Administrator/Risk Manager/IMPACC

**Murray, Nathan**
SCC
Mail Room/Copy Center Clerk

**Myers, Sally**
CCC
Assistant Dean of Library Services

**Naab, Jill**
SCC
Student Engagement & Leadership Coordinator

**Neavor, Heather**
DO
Customer Care Specialist

**Nelson, Craig**
BTC
Renewable Energy Instructor
AAS, Scott Community College

**Nelson, Samantha**
CCC
English Instructor
BA, St. Ambrose University
MA, Bradley University

**Nelson, Shelby**
SCC
Sr. Executive Assistant to President

**Newberry, Shelby**
SCC
Academic Transfer Advisor, TRiO Support Center

**Newell, Stephanie**
SCC
English Instructor
AA, Iowa Western Community College
BA, University of Iowa
MA, University of Nebraska

**Newman, Isaac**
SCC
Psychology/Sociology Instructor
AAS, Saulk Valley Community College
BA, BS, MA, Western Illinois University

**Nichol, Barbara**
SCC
Dental Assisting Instructor
AA, Scott Community College
RDA, CDA

**Nichols, Jana**
SCC
Nursing Instructor A.D.N.
BSN, St. Ambrose University

**Nielsen, Alice**
Faculty Emeritus
BA, Morningside College
MA, University of South Dakota

**Nodarse, Tammy**
CCC
Nursing Instructor
RN, Allen School of Nursing
BSN, Clarke University

**Noord, James**
Kahl
IT Instructor
MA, Capella University

**O'Brien, Michael**
BTC
Curriculum & Talent Manager for Manufacturing Programs, CE

**Oatis, Rashandra**
Kahl
Accounts Clerk II

**Ohlendorf, Vernon**
Faculty Emeritus
BA, Augustana College
MA, University of Iowa

**Okwumabua, Nkemdilim (Kemi)**
CCC
Student Engagement and Leadership Coordinator

**Othmer, Morgan**
SCC
Resource Development Assistant

**Osmers, Roberta**
Kahl
IT Instructor

**Otto, Roxanne**
CCC
Information Center Receptionist / Test Center Monitor

**Paarmann, Tiffany**
DO
Employee Benefits & Compensation Manager

**Paasch, Kathy**
CCC
Computer Technology Support Specialist

**Paper, Teresa**
SCC
President

**Patzer, Koralee**
DO
Accounts Payable Clerk

# PERSONNEL DIRECTORY

**Paul, Joan**
MCC
Preschool Teacher
BA, Marycrest College

**Perales, Elida**
MCC
Academic Advisor/Testing Site Supervisor

**Perkins, Ty**
SCC
Associate Dean of Students

**Petersen, Catherine**
SCC
Special Needs Specialist for ACCESS Programs

**Peterson, Melissa**
MCC
Child Care Aide

**Petrillo, Dominique**
ATEEC
HSET Trainer/Program Facilitator

**Pezley, Kathy**
BTC
Career Coordinator

**Phillips, Jan**
Faculty Emeritus
BA, Marycrest College
MA, University of Iowa

**Pickard, Jeremy**
MCC
Dean of Instruction

**Pint, Anna**
SCC
Math Instructor
MA, University of Northern Iowa

**Plautz, Penny**
CCC
Maquoketa Center Facilitator

**Plummer, Julie**
DO
Assistant Director, Iowa Waste Exchange/ EICC Sustainability Manager

**Plummer, Linda**
SCC
Academic Advisor

**Poston, Brandy**
SCC
Executive Assistant to Dean of Operations

**Powell, Lisa**
MCC
English Instructor
BA, University of South Carolina
MFA, University of Alabama

**Rakus, Jay**
SCC
Radiologic Technology Instructor/Clinical Coordinator
BA, Western Illinois University
BA, Nebraska Methodist College

**Ramos, Karen**
DO
CE Registration Center

**Ramsey, Lindsey**
Kahl
Regents Transfer Advisor

**Rathmann, Tom**
Kahl
e-Learning Advisor

**Reid, Jeffrey**
CCC
Maintenance Custodian

**Reidenouer, Cheryl**
MCC
PACE Career Navigator

**Rieck, Tyné**
DO
Curriculum & Talent Manager for Business & IT Programs, CE

**Ripslinger-Atwater, Marie**
MCC
Biology Instructor
BS, PhD, Palmer College of Chriopractic
MS, New York Chiropractic College

**Rissler, Sarah**
WDC
Lead ABE Instructor

**Ritter, Brian**
ATEEC
Facilitator, Nahant Marsh/Eco. Education

**Roba, William**
Faculty Emeritus
BA, Augustana College
MA, Cornell University
PhD, University of Iowa

**Robb, Gregg**
BTC
CNC Instructor

**Roebuck, Diane**
SCC
Interpreter Training Instructor
BA, Maryville College

**Roeder, Gale**
DO
Curriculum & Talent Manager for Community Programming & Summer Camps, CE

**Rogal, Allison**
MCC
Developmental Math Instructor
BS, University of Iowa

**Rome, Becky**
Iow@Work

**Rooff-Steffen, Kay**
MCC
Humanities/Fine Arts, Department Coordinator, Humanities/Communication/ Spanish Instructor
BA, University of Northern Iowa
MA, University of Iowa

**Rud, Virginia**
MCC
Program Director - Veterinary Technology
AAS, National American University, SD

**Rummery, Mary**
MCC
Custodian I

**Rush, Katy**
SCC
Financial Aid Specialist

**Sachsenmaier, Tamara**
CCC
Iowa Works Employment and Training Counselor

**Sampson, Justin**
CCC
Bursar

**Sandstrom, Christine**
SCC
Biology Instructor
BA, Augustana College
MS, Northern Illinois University

**Sankar, Raji**
SCC
Tutor/Mentor Specialist, TRiO Support Center

# PERSONNEL DIRECTORY

**Schadt, Robert**
CCC
Academic Advisor/Student Support Coordinator

**Schaver, Amanda**
CCC
Administrative Assistant I

**Schmit, Matthew**
SCC
Dean of Operations

**Schmitz, Brian**
CCC
Chemistry Instructor
PhD, University of Rhode Island

**Schneider, Scott**
WDC
Dean of Adult Education

**Schnoor, Dennis**
CCC
Business Solutions Consultant, CE

**Schnoor, Karen**
CCC
Evening College Assistant, Maquoketa Center

**Schoenfelder, Michelle**
SCC
Executive Assistant to Dean of Instruction

**Schofield, Bradly**
Kahl
Maintenance/Custodian

**Schony, Anna**
SCC
Speech Instructor
BA, MA, Western Illinois University

**Schroeder, Dawn**
DO
Customer Care Specialist

**Schueller, Jennifer**
WDC
Building Manager

**Schuerr, Ashley**
SCC
Biology Lab Assistant I

**Schwager, Aleesha**
DO
Account Clerk II

**Scott, Bradley**
SCC
Director of Culinary Arts and Hospitality
ACF Certified

**Seaman, Dennis**
BTC
Learning Center Mentor

**Sederquist, Gail**
Kahl
IT Web-Based Program/Data Analyst

**Serpliss, Ronald**
CCC
Dean of the College

**Shoemaker, Sabrina**
Iow@Work
Iowa Works Employment and Training Counselor

**Short, Marion**
CCC
Custodian I

**Shovlain, Joseph**
CCC
Academic Advisor/Volleyball Coach

**Simmons, Stephanie**
SCC
Electroneurodiagnostic Technology Instructor
BS, Kaplan University

**Simon, Sandra**
SCC
Dental Assisting Instructor
Diploma, Scott Community College

**Singh, Kanchan**
SCC
Mathematics Instructor
BE.d, University of Calgary
MS, University of Western Ontario

**Smith, Robyn**
CCC
Art Instructor
BA, MA, University of Iowa

**Smith, Tonya**
MCC
Child Care Aide

**Snyder, Erin**
DO
Director of Enrollment Management & Strategic Communications

**Solheim, Christine**
Kahl
Department Coordinator/Administrative and Office Support Instructor
AA, Scott Community College
BA, Mount St. Clare College
MS, Western Illinois University

**Spies, Fank**
Faculty Emeriitus
AAS, Scott Community College
ASE Master Certified

**Stanley, Diane**
SCC
Hospitality Program Instructor/Facilitator
AA, Black Hawk College

**Stradt-Johnson, Kristen**
SCC
Academic Advisor

**Strausse, Lorraine**
DO
Accounts Payable Clerk

**Sullivan, Debora**
DO
Director of Human Resources

**Swanson, Doris**
DO
Sr. Executive Assistant to Chancellor

**Swanson, Scott**
SCC
Manager of ESL and Foreign Languages

**Sweborg, Jennifer**
DO/WDC
PACE Career Navigator/Employment and Training Counselor

**Tandon, Suteesh**
DO
Chief Financial Officer

**Tayh, Jamal**
SCC
Physics Instructor
BS, Tanta University - Egypt
MS, Eastern Michigan University
PhD, Northern Illinois University

T**eague, Mary**
Staff Emeritus

**Temple, James**
DO
Curriculum & Talent Manager for EMS & Public Safety Programs, CE

# PERSONNEL DIRECTORY

**Teney, Stephen**
CCC
Business Instructor
PhD, University of South Dakota

**Thiede, Teresa**
CCC
Financial Aid Officer

**Thompson, Julie**
DO
Manager of Communications Systems

**Thoms, Peggy**
CCC
Psychology Instructor
BA, Cole College
MA, Loras College

**Tieso, Ramon**
SCC
Nursing Instructor
MA, Grand Canyon University

**Toohill, Mary**
SCC
Athletic Facilitator

**Trotter, William**
MCC
Mathematics Instructor
BS, University of Massachusetts – Boston
MS, Western Illinois University

**Trudell, Susan Hamilton**
Faculty Emeritus
BA, Augustana College
MAT, University of Iowa

**Tunnicliff, Melita**
SCC
Library Technician II

**Turnis, Shirley**
CCC
Mathematics Instructor
BS, University of Dubuque
MSM, Iowa State University
MA, Franciscan University

**Ullrick, Jennifer**
DO
College Customer Service Specialist, Call Center

**Umennachi, Nnachi**
Faculty Emeritus
BA, Bigard Memorial Seminary–Nigeria
MA, PhD, University of Nebraska

**Valle, Edward**
SCC
Auto Collision Repair Instructor
AAS, Scott Community College

**Vargas, Rebecca**
MCC
Academic Advisor

**Veldman, Denise**
Kahl
Assistant Director of Computer Support

**Vesselovskaia, Tamara**
Kahl
Administrative and Office Support Instructor
AAS, Scott Community College
MA, Nizhny Novgorod State Linguistic University, Russia

**Vickers, Karen**
CCC
President/Vice Chancellor of Student Development

**Vogel, Keith**
Kahl
Facilities Manager

**Volkl, Paul**
MCC
Engineering Technology Instructor
BA, Hamilton Technical College

**Voss, Bob**
Kahl
Twin State Consultant/Contractor for Colleague

**Wade, Mark**
CCC
Facilities Manager

**Walker, Jason**
MCC
Adult Basic Education Instructor Lead Teacher
MA, Western Illinois University

**Wallace, David**
CCC
Mechatronics Technology Instructor
AAS, Clinton Community College

**Warner, Chris**
Kahl
Manager of Network Technology

**Warner, Robert**
MCC
Facilities Manager

**Watson, Katherine**
MCC
Business Solutions Consultant, CE

**Weis, Janice**
SCC
Disabilities Resource Person

**Weiser, Frank**
Kahl
Assistant Director of Media Services

**Welch, Ryan**
CCC
Math/Science Instructor
BA, MS, University of Northern Iowa

**Westmoreland, Shana**
SCC
Executive Assistant to the Dean of Students

**Whipple, Christine**
CCC
Nursing Instructor
BSN, University of Maryland/Walter Reed Medical Army Institute of Nursing

**Wiegel, Lisa**
MCC
Sr. Executive Assistant to President

**Wiesman, Carol**
DO
CE Registration Center

**Williams, Andrea**
SCC
Speech Instructor
BA, MA, University of Northern Iowa

**Williams, Glenn**
CCC
Information Technology Instructor
AA, BA, BS, University of Maryland

**Wilson, LaDrina**
SCC
Dean of Student Development

**Wood, Elizabeth**
CCC
Mathematics Instructor
BS, Western Illinois University
MS, University of Illinois

**Young, Christine**
MCC
Custodian I

**Young, Melody**
Iow@Work
Iowa Works Employment and Training
Counselor

**Youngs, Joel**
Kahl
Associate Director of Business and Industry

**Zettel, Susan**
DO
Graphic Technician

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